



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **C32/CCD Clinical Summary**

(BJMD)

## **Technical Manual**

Version 1.0 Patch 1  
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# Table of Contents

|            |                                              |           |
|------------|----------------------------------------------|-----------|
| <b>1.0</b> | <b>Introduction.....</b>                     | <b>1</b>  |
| 1.1        | Purpose .....                                | 1         |
| 1.2        | Scope .....                                  | 1         |
| 1.3        | Technical Information .....                  | 2         |
| 1.4        | Architecture .....                           | 2         |
| <b>2.0</b> | <b>Orientation .....</b>                     | <b>5</b>  |
| <b>3.0</b> | <b>Implementation and Maintenance .....</b>  | <b>6</b>  |
| 3.1        | General Information .....                    | 6         |
| 3.2        | System Requirements .....                    | 6         |
| 3.3        | Package–Wide Variables.....                  | 6         |
| 3.4        | Security Keys.....                           | 6         |
| <b>4.0</b> | <b>Menu Diagram.....</b>                     | <b>7</b>  |
| <b>5.0</b> | <b>Routines .....</b>                        | <b>8</b>  |
| 5.1        | Routine List.....                            | 8         |
| 5.2        | Routines with Description .....              | 8         |
| 5.3        | Function List .....                          | 8         |
| 5.3.1      | \$\$SPACE^BJMDECK .....                      | 8         |
| <b>6.0</b> | <b>Files and Tables.....</b>                 | <b>9</b>  |
| 6.1        | File List .....                              | 9         |
| 6.2        | File Access .....                            | 9         |
| 6.3        | Cross References .....                       | 9         |
| 6.4        | Table File .....                             | 10        |
| 6.5        | Callable Routines.....                       | 11        |
| 6.6        | External Relations.....                      | 11        |
| 6.7        | Exported Options .....                       | 11        |
| <b>7.0</b> | <b>Internal Relations .....</b>              | <b>12</b> |
| <b>8.0</b> | <b>Archiving and Purging .....</b>           | <b>13</b> |
| <b>9.0</b> | <b>Documentation Process.....</b>            | <b>14</b> |
| 9.1        | %INDEX Option .....                          | 14        |
| 9.2        | List File Attributes Option.....             | 14        |
| 9.3        | List Class Documentation for a Package ..... | 15        |
| 9.4        | Web Service API.....                         | 15        |
| 9.4.1      | Web Service .....                            | 15        |
| 9.4.2      | Web Service Glossary.....                    | 17        |
| 9.4.3      | WSDL .....                                   | 17        |
| 9.4.4      | Sample Response: Valid .....                 | 19        |
| 9.4.5      | Sample Response: Error .....                 | 20        |
| 9.4.6      | Error Codes.....                             | 21        |

|             |                                                          |           |
|-------------|----------------------------------------------------------|-----------|
| 9.4.7       | Additional Web Service Resources .....                   | 21        |
| <b>10.0</b> | <b>SAC Requirements Exemptions.....</b>                  | <b>23</b> |
| <b>11.0</b> | <b>Templates, Forms, and Protocols .....</b>             | <b>24</b> |
| 11.1        | Print Templates.....                                     | 24        |
| 11.2        | Sort Templates .....                                     | 24        |
| 11.3        | Input Templates .....                                    | 24        |
| 11.4        | List Templates .....                                     | 24        |
| 11.5        | Forms .....                                              | 24        |
| 11.6        | Protocols.....                                           | 24        |
| <b>12.0</b> | <b>C32 Ensemble/Cache Class Development .....</b>        | <b>25</b> |
| 12.1        | Description of Development Environment.....              | 25        |
| 12.2        | C32 Server Requirements .....                            | 25        |
| 12.3        | Creation of C32 Databases, Namespaces and Mappings ..... | 25        |
| 12.3.1      | Create the C32 Ensemble Namespace .....                  | 25        |
| 12.3.2      | Choosing the Namespace Name.....                         | 25        |
| 12.3.3      | Naming the Ensemble Database.....                        | 26        |
| 12.3.4      | Choosing the Storage Location .....                      | 26        |
| 12.3.5      | Creating a New Ensemble/Cache Database .....             | 27        |
| 12.3.6      | Creating a New Ensemble Namespace.....                   | 31        |
| 12.3.7      | Creating New Global Mappings.....                        | 33        |
| 12.3.8      | Creating New Package Mappings .....                      | 35        |
| 12.4        | Managing C32 Ensemble Production .....                   | 38        |
| 12.4.1      | Stopping the C32 Production.....                         | 39        |
| 12.4.2      | Restarting the C32 Production .....                      | 41        |
| 12.5        | Deployment of C32 Cache and Ensemble Classes .....       | 43        |
| 12.6        | List of C32 Data Elements .....                          | 44        |
| 12.6.1      | Person .....                                             | 44        |
| 12.6.2      | Support.....                                             | 45        |
| 12.6.3      | Information Source .....                                 | 47        |
| 12.6.4      | Healthcare provider .....                                | 48        |
| 12.6.5      | Condition .....                                          | 49        |
| 12.6.6      | Allergy .....                                            | 50        |
| 12.6.7      | Encounter .....                                          | 51        |
| 12.6.8      | Vital Sign .....                                         | 51        |
| 12.6.9      | Immunization .....                                       | 52        |
| 12.6.10     | Insurance Provider .....                                 | 53        |
| 12.6.11     | Procedure.....                                           | 56        |
| 12.6.12     | Medication.....                                          | 56        |
| 12.6.13     | Result.....                                              | 60        |
| 12.7        | List of C32 Classes.....                                 | 61        |
| <b>13.0</b> | <b>Assembly Checklist.....</b>                           | <b>82</b> |
|             | <b>Glossary.....</b>                                     | <b>87</b> |

|                                               |           |
|-----------------------------------------------|-----------|
| <b>Contact Information .....</b>              | <b>90</b> |
| <b>14.0 Appendix A – C32/CCD Schemas.....</b> | <b>91</b> |
| 14.1 C32_CDA.xsd .....                        | 91        |
| 14.2 C32_POCD_MT000040.xsd: .....             | 91        |
| 14.3 datatypes.xsd:.....                      | 122       |
| 14.4 voc.xsd: .....                           | 177       |
| 14.5 NarrativeBlock.xsd:.....                 | 215       |
| 14.6 SDTC_Extension.xsd:.....                 | 224       |

## Preface

The purpose of this manual is to provide technical security information about the C32/CCD Clinical Summary version 1.0 patch 1 (BJMD) package. The BJMD package is designed to generate industry standard Continuity of Care Documents (CCD) in HITSP ((Heathcare Information Technology Standards Panel) C32 format (version 2.5 using C83 v2.0 rules). These documents can be transmitted to Indian Health Service (IHS) Health Information Exchange (HIE) C32 repositories and to the Electronic health Record (EHR) Graphical User Interface (GUI) using Web Services (WS).

## 1.0 Introduction

The C32/CCD Clinical Summary (BJMD) software is a component of the IHS Resource and Patient Management System (RPMS). It provides facilities for generating industry standard Continuity of Care Documents (CCD) in HITSP (Healthcare Information Technology Standards Panel) C32 format (version 2.5 using C83 v2.0 rules). CCD/C32 Clinical Summary documents are subsequently transmitted to IHS C32 repositories or to the EHR GUI using Web Services (WS). C32/CCD Clinical Summary documents will be referred to as “C32 documents” and the C32/CCD Clinical Summary software will be referred to as the “C32 software” from this point on.

### 1.1 Purpose

C32 documents can serve a variety of purposes, including enabling clinician access to patient data in an emergency scenario, quality reporting, biosurveillance, patient access to the patient's own data via a Personal Health Record (PHR) system, and medication/allergy reconciliation.

Each C32 document consists of two components: a human readable part known as a “Narrative Block,” which can be displayed by any web browser, and a machine-readable part intended for automated data processing. The machine readable part may contain more detailed information than the human readable part.

### 1.2 Scope

A C32 document is an XML document summarizing current and pertinent historical information about an individual patient’s health care record at a given facility. The current IHS implementation of the C32 standard supports the following 13 C32 modules:

- Allergies
- Conditions (Problems)
- Encounters
- Healthcare Providers
- Immunizations
- Information Source
- Insurance Providers
- Medications
- Person Information (Demographics)

- Procedures
- Results
- Support
- Vital Signs

## 1.3 Technical Information

This manual provides IHS site managers with a technical description of the BJMD routines, files, menus, cross references, globals, Cache classes, Ensemble productions, and other necessary information required to effectively manage the system.

All routines, files, options, Cache classes and keys are namespaced, starting with the letters BJMD. The file number range for this package is 90601 – 90609.99. All C32 Cache and Ensemble classes, productions and data transformations are contained in Cache class package BJMD.

As part of this project, all Fileman files were mapped to Cache classes using Intersystems' Fileman-to-Class (FM2C) mapper. The resulting Fileman-derived classes are contained in Cache class package BFMC. The version of the FM2C tool that was used to generate BFMC classes was 1.18. Only one change was made to the Intersystems-provided version of FM2C: the point at which classes are split was changed from 900 properties to 400 properties. This change was needed to allow FM2C-generated classes to compile under Ensemble 2010.x. Note that this change may not be needed under Ensemble 2011.x, which raised the maximum number of properties per class.

The following settings were used to create FM2C-generated classes:

```
set fmSettings("package")="BFMC"
set fmSettings("tableNameFormat")="<FILENAME>_<FILENUMBER>"
set fmSettings("childTableNameFormat")="SUB_<FILENAME>_<FILENUMBER>"
do $SYSTEM.OBJ.FM2Class.All(.fmSettings,.classCount)
```

## 1.4 Architecture

C32 processing can be initiated in one of two ways. If EHR version 1.1 patch 8 has been installed and configured at the site, then authorized EHR users will be able to request C32 documents for display within the EHR GUI client. If the site is a part of the IHS HIE, then C32 documents will be generated nightly for all patients whose data has changed during the previous 24 hours and sent to the IHS HIE C32 repositories.

To accommodate requests from the EHR GUI, Ensemble has a Web Services process listening for requests for C32 documents. When Ensemble receives a request, it creates a new entry in the C32 queue, records the ID of the patient for whom a C32 document was requested, and sets the entry status to “R” (for “Request”).

If the site is a part of the IHS HIE, a nightly Taskman task called BJMD NHIE PUSH JOB is automatically scheduled to run every night at the time specified by the site manager in option **Edit C Messaging Site Parameters**. When this task runs, it finds all patients whose data has changed since the last time it ran and creates new requests in the C32 queue. Note that when BJMD NHIE PUSH JOB runs for the first time, it creates new C32 requests for *all* patients in the RPMS database.

The only difference between C32 requests created by these two mechanisms is that requests created by BJMD NHIE PUSH JOB have a special flag in the body of the request so that Ensemble knows where to send the resulting C32 document.

The C32 queue is monitored by BJMD BACKGROUND JOB, the main C32 generator. It is a persistent Taskman job started at Taskman startup time or manually from menu option **Manage C Messaging transmissions**. It constantly runs in the background until the site manager chooses to stop C Messaging. Once this Taskman job finds a new C32 request with the status of **R** in the C32 queue, it changes the request’s status to **CS** (for Compile Started.) It then extracts all relevant RPMS data for the specified patient and adds it to the body of the C32 request. Depending on the amount of eligible data in the patient’s records, it may take anywhere from under a second to over 10 seconds to extract all needed data from RPMS. Once the extraction process for the patient is finished, BJMD BACKGROUND JOB changes the status of the request to **CE** (for Compile Ended). It then checks the C32 queue for other outstanding requests with the status of **R**. If it doesn’t find any, it goes into hibernation for anywhere between 0.1 and 2 seconds, the exact value depending on the site-specific C32 settings maintained by the site manager as described in section 12.3 Managing C32 Ensemble Production of this document.

The C32 queue is also monitored by the C32 Ensemble production running in the C32 namespace. When the C32 production finds a new request whose status is set to **CE**, it retrieves the C32 data from the body of the request and transforms it into a valid C32 document. It then transmits this document to its final destination using Web Services and changes the status of the request to **T** (for “Transmitted”).

If a site is a part of the IHS HIE, then the site manager has been provided with the URL of the associated C32 repository. Ensemble will use this URL to send C32 documents to the repository.

The main features of the C32 architecture at the sites that participate in the IHS HIE are:

- All C32 processing occurs at night, thus minimizing its impact on RPMS performance.
- All outside requests for C32 documents are served by a separate C32 repository, thus insulating RPMS from potentially unpredictable load spikes.

## 2.0 Orientation

The C32 package has one RPMS menu used by site managers, C MESSAGING MENU, which comprises the following four menu options:

1. Edit C Messaging Site Parameters [BJMD EDIT SITE PARAMETERS]
2. Generate C32 for a single patient [BJMD C32ONEGEN]
3. Generate C32 documents for all patients in RPMS [BJMD C32ALLGEN]
4. Manage C Messaging transmissions [BJMD C MESS MGR]

The C32 package contains no menu options accessible by end users.

The following steps are needed to set up C32 at an RPMS site:

1. Enable Long Strings within Ensemble
2. Install the BFMC Kernel Installation and Distribution System (KIDS) build
3. Confirm that the post-installation Taskman task for BFMC has completed
4. Install the BJMD KIDS build
5. Optionally set up e-mail notifications
6. Disable journaling for the C32 database
7. Configure the C32 CSP application
8. Set up site-specific C32 parameters
9. Start C Messaging

See the Installation Guide for details on the installation and configuration steps.

## 3.0 Implementation and Maintenance

The C32/CCD Clinical Summary application is designed to work with RPMS through Ensemble-based Web Services (WS), Cache Objects and Fileman-to-Class Mapper (FM2C).

### 3.1 General Information

The following table shows the prerequisite patch requirements.

| Package and Version | Associated Patch Designation(s) | Brief Patch Description                                                                                                                                                                     |
|---------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pharmacy 7          | APSP*7.0*1007                   | Among other things, added Medications Instructions (^DD(52.0113)) to Outpatient Pharmacy and field DISPENSE UNIT NCPDP CODE (^DD(50,9999999.145)) to the Drug file. Both are needed by C32. |

### 3.2 System Requirements

| Module                | Minimum Version       |
|-----------------------|-----------------------|
| VA FileMan (DI)       | v22.0 Patch 1002      |
| VA Kernel (XU)        | v8.0 Patch 1015       |
| IHS/VA Utilities (XB) | v3.0 through Patch 11 |
| Taxonomy (ATX)        | v5.1 through Patch 10 |

### 3.3 Package–Wide Variables

The following package-wide variables are used in BJMD classes: %DFN, %BJMDQID. These variable names start with %, which ensures that they have a process-wide scope when Cache ObjectScript procedures are used. Their use significantly simplifies C32 error trapping.

### 3.4 Security Keys

BJMD doesn't introduce new security keys.

## 4.0 Menu Diagram

The C32 package has one RPMS menu used by site managers, **C MESSAGING MENU**, which comprises the following four menu options:

1. Edit C Messaging Site Parameters [BJMD EDIT SITE PARAMETERS]
2. Generate C32 for a single patient [BJMD C32ONEGEN]
3. Generate C32 documents for all patients in RPMS [BJMD C32ALLGEN]
4. Manage C Messaging transmissions [BJMD C MESS MGR]

The C32 package contains no menu options accessible by end users.

## 5.0 Routines

### 5.1 Routine List

|          |         |          |          |          |          |
|----------|---------|----------|----------|----------|----------|
| BJMDCLAS | BJMDECK | BJMDEDIT | BJMDPAT  | BJMDPOST | BJMDPUSH |
| BJMDTSK  | BJMDTX  | BJMDTXA  | BJMDTXAB | BJMDTXAC | BJMDTXAD |

### 5.2 Routines with Description

| Routine  | Description                                                                                                                                               |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| BJMDCLAS | Exports and imports Cache/Ensemble classes via KIDS builds. Uses Cache-standard compression and Base64 encryption to compress class definitions.          |
| BJMDECK  | BJMD environment check routine                                                                                                                            |
| BJMDEDIT | Edit C Messaging site-specific parameters                                                                                                                 |
| BJMDPAT  | Routine for one patient upload, all patients upload and C Messaging Manager options                                                                       |
| BJMDPOST | Main post-installation routine which sets up taxonomies and calls other post-installation routines                                                        |
| BJMDPUSH | Taskman task active only if the site participates in the IHS HIE. Identifies recently modified patient records that need to have C32 document regenerated |
| BJMDTSK  | Taskman task that monitors the C32 queue for new requests and extracts data from RPMS                                                                     |
| BJMDTX   | Taxonomy program created by ^ATXSTX                                                                                                                       |
| BJMDTXA  | Taxonomy program created by ^ATXSTX                                                                                                                       |
| BJMDTXAB | Taxonomy program created by ^ATXSTX                                                                                                                       |
| BJMDTXAC | Taxonomy program created by ^ATXSTX                                                                                                                       |
| BJMDTXAD | Taxonomy program created by ^ATXSTX                                                                                                                       |

### 5.3 Function List

#### 5.3.1 \$\$\$SPACE^BJMDECK

This function checks whether there is enough space in the database to upload all C32 documents if the site is a part of the IHS HIE.

- Input Parameter Description: NS: Namespace name
- Output Description: space per patient (in K) ^ total space (in K) ^ patient count ^ currently used space ^ current free space in database ^ maximum space ^ disk space

## 6.0 Files and Tables

### 6.1 File List

| File # | Filename                    | Description                                                                                       |
|--------|-----------------------------|---------------------------------------------------------------------------------------------------|
| 90606  | C MESSAGING MESSAGE TYPE    | This file contains message-type specific parameters                                               |
| 90607  | C MESSAGING SITE PARAMETERS | This file contains site-specific C Messaging parameters.                                          |
| 90608  | CACHE CLASS TRANSPORT       | This file contains packed Cache and Ensemble classes which are sent to the sites in a KIDS build. |

### 6.2 File Access

| File # | Filename                    | Global        | RD | WR | LYG | DD | DEL |
|--------|-----------------------------|---------------|----|----|-----|----|-----|
| 90606  | C MESSAGING MESSAGE TYPE    | ^BJMDS(90606, | @  | @  | @   | @  | @   |
| 90607  | C MESSAGING SITE PARAMETERS | ^BJMDS(90607, | @  | @  | @   | @  | @   |
| 90608  | CACHE CLASS TRANSPORT       | ^BJMDCLS(     | @  | @  | @   | @  | @   |

### 6.3 Cross References

#### 90606 (C Messaging Message Type)

.01 Message Type

B Regular type cross reference

#### 90607 (C Messaging Site Parameters)

.01 Home Site

B Regular type cross reference

#### 90608 (Cache Class Transport)

.01 Package

B regular type cross reference

#### 90608.11 Class

.01 Class

B regular type cross reference

## 6.4 Table File

### File: 90606 C Messaging Message Type

Global: ^BJMDS(90606

| Field # | Field Name                     | Subscript | Piece | Type |
|---------|--------------------------------|-----------|-------|------|
| .01     | MESSAGE TYPE                   | D0,0      | 1     | S    |
| .02     | LAST PUSH DATE TIME STAMP      | "         | 2     | D    |
| .03     | DESCRIPTION                    | "         | 3     | F    |
| .04     | DAYS KEEP TRANSMISSION ENTRIES | "         | 4     | N    |
| .05     | ENABLED?                       | "         | 5     | S    |
| 1       | *REPOSITORY LOCATION           | D0,1      | 1     | F    |

### File: 90607 C Messaging Site Parameters

Global: ^BJMDS(90607

| Field # | Field Name                     | Subscript | Piece | Type |
|---------|--------------------------------|-----------|-------|------|
| .01     | HOME SITE                      | D0,0      | 1     | N    |
| .02     | BACKGROUND JOB DELAY           | "         | 2     | N    |
| .03     | *ENSEMBLE PRODUCTION DELAY     | "         | 3     | N    |
| .04     | *LAST PUSH DATE TIME STAMP     | "         | 4     | D    |
| .05     | RECORD GLOBAL REFERENCES       | "         | 5     | S    |
| .06     | *DAYS KEEP TRANSMISSION ENTR   | "         | 6     | N    |
| .07     | C MESSAGING ENABLED            | "         | 7     | S    |
| .08     | DATE C MESSAGING INSTALLED     | "         | 8     | D    |
| .09     | TIME TO RUN NIGHTLY TASK       | "         | 9     | F    |
| ,1      | FILEMAN CLASSES LOAD DATE      | "         | 10    | D    |
| 1       | *REPOSITORY LOCATION           | D0,1      | 1     | F    |
| 2       | INSTALL ERROR MESSAGE 90607.02 |           |       |      |
| .01     | INSTALL ERROR MESSAGE          | D0,2,D1,0 | 1     | W    |

### File: 90608 CACHE CLASS TRANSPORT

Global: ^BJMDCLS(

| Field # | Field Name                    | Subscript  | Piece | Type |
|---------|-------------------------------|------------|-------|------|
| .01     | PACKAGE NAME                  | D0,0       | 1     | F    |
| .02     | *INSTALL WHERE                | "          | 2     | S    |
| .04     | *PATH                         | "          | 4     | F    |
| 1.01    | *RPMS FILENAME                | D0,1       | 1     | F    |
| 1.02    | RPMS STATUS                   | "          | 2     | S    |
| 1.03    | RPMS DATE/TIME INSTALLED      | "          | 3     | D    |
| 2.01    | *ENSEMBLE FILENAME            | D0,2       | 1     | F    |
| 2.02    | *ENSEMBLE STATUS              | "          | 2     | S    |
| 2.03    | *ENSEMBLE DATE/TIME INSTALLED | "          | 3     | D    |
| 10      | XML 90608.01                  |            |       |      |
| .01     | XML                           | D0,10,D1,0 | 1     | W    |
| 11      | CLASS 90608.011               |            |       |      |

| Field # | Field Name | Subscript  | Piece | Type |
|---------|------------|------------|-------|------|
| .01     | CLASS      | D0,11,D1,0 | 1     | F    |

No special integration agreements exist between BJMD and any other package at this time.

## 6.5 Callable Routines

There are no remote procedure calls used by C32.

## 6.6 External Relations

Required RPMS software:

| Module                            | Minimum Version         |
|-----------------------------------|-------------------------|
| VA FileMan (DI)                   | v22.0 Patch 1002        |
| VA Kernel (XU)                    | v8.0 Patch 1015         |
| IHS/VA Utilities (XB)             | v3.0 through Patch 11   |
| Taxonomy (ATX)                    | v5.1 through Patch 10   |
| IHS Pharmacy Modifications (APSP) | V7.0 through Patch 1007 |

## 6.7 Exported Options

| Option Name              | Description                                                                                                                                               |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| BJMD EDIT SITE PARAMETER | Option to edit C Messaging Site Parameters, accessible by the site manager                                                                                |
| BJMD BACKGROUND JOB      | Main C Messaging background processor, runs continuously when C Messaging is running.                                                                     |
| BJMD NHIE PUSH JOB       | Nightly job that identifies patient records for which C Messaging documents need to be regenerated. Only active at sites that participate in the IHS HIE. |

## 7.0 Internal Relations

The following package-wide variables are used by all BJMD classes: %DFN, %BJMDQID. These variable names start with %, that ensures that they have a process-wide scope when Cache ObjectScript procedures are used. Their use significantly simplifies C32 error trapping.

## 8.0 Archiving and Purging

There are three types of purging included in this package as described below:

1. Temporary compile structures that are stored in persistent class BJMD.Xfer.Queue are automatically purged at midnight by an Ensemble Task manager task. This task is created by the C32 installation process. The number of days that these compile structures are kept in the database is determined by the value of parameter DAYS KEEP TRANSMISSION ENTRIES defined by the site manager in menu option BJMD EDIT SITE PARAMETERS.
2. The bodies of C32 documents are purged immediately upon transmission to their destination. This is done to conserve disk space because C32 documents can be large. Note that for C32 documents generated in response to requests from the EHR GUI, a compressed version of each transmitted C32 document is kept in on file. They can be viewed by the site manager in the C32 Audit Log.
3. Ensemble logs are automatically purged every Sunday morning by an Ensemble Task manager task. This task is created by the C32 installation process.

## 9.0 Documentation Process

This section describes a few methods to generate C32 system technical documentation.

### 9.1 %INDEX Option

This option analyzes the structure of a routine to determine in part if the routine adheres to RPMS programming standards. The %INDEX output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

Running **%INDEX** for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist in the selected routines and to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run **%INDEX** for the C32 package, type BJMD\* and then 'BJMD.\* at the "Routine(s)?>" prompt. The second line is needed to exclude \*.INT routines generated by Cache classes because %INDEX would not recognize them as valid MUMPS routines.

### 9.2 List File Attributes Option

This VA FileMan option allows users to generate documentation pertaining to files and file structure. Using the standard format of this option yields the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files that point to the file specified

- Input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- “Help” prompt
- Cross-references
- Input transform
- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

- All cross-references for the file selected
- Global location of each field in the file
- Input, print, and sort templates

For a comprehensive listing of C32 package files, please refer to Section 6.0.

## 9.3 List Class Documentation for a Package

A list of all Cache classes in a package is available in the Class Reference tool within Ensemble’s online documentation and in the Class Browser available in Ensemble Studio. Both lists can be further expanded to view a list of class methods, properties, queries and parameters, and examine built-in documentation for each method, property, query, or parameter.

## 9.4 Web Service API

This section summarizes the Web Service API provided for requesting C32 documents from the EHR GUI and, eventually, other outside applications. Its goal is to assist RPMS sites and outside developers in understanding what the Web Service is and how to use it to retrieve C32 documents from RPMS.

### 9.4.1 Web Service

The C32 Web Service provides an API for requesting and retrieving a C32 document from RPMS. The associated WSDL file defines the parameters of the Web Service, including the format of the request and response SOAP messages and the location of the Web Service.

To access the Web Service, it is necessary to develop a Web Client. Instructions for developing a Web Client are beyond the scope of this document. However, there are a number of tools available for generating a Web Client from a WSDL for major platforms, such as Java and .NET. Once a Web Client has been developed it may be used to request a C32 document by means of sending a SOAP request containing a Patient ID to the Web Service and receiving a SOAP response containing the C32 document.

The Web Service is accessed via HTTP. HTTPS (HTTP Secure, or HTTP over SSL/TLS) is not currently supported, so it is the responsibility of the site to address security between the Web Client and the Web Service.

A sample SOAP request is provided below. There are two required elements in the request: the ReplyTo address and the patient ID. Because the Web Service responds asynchronously, it is necessary to provide a ReplyTo address – the IP address and port of a listener that will receive the response SOAP message. The patient ID is the patient IEN in the RPMS namespace. It is a unique identifier within an RPMS namespace, but might not be unique across namespaces. To ensure the correct patient record is retrieved, there is one Web Service for each RPMS namespace; the Web Client must access the Web Service corresponding to the RPMS namespace that contains the patient IEN being requested. An optional message ID might be included in the request message. If present in the request, it will be included in the RelatesTo element of the response to allow the Web Client to match responses with their corresponding requests.

A portion of a sample SOAP response is provided below. The response header section contains several elements, including a message ID; a RelatesTo ID, containing the message ID of the request message; and the To address element, containing the address the response is sent to. The response body section contains the actual C32 document. The document contains information about the patient's demographics, support persons, conditions, allergies, encounters, vital signs, immunizations, insurance providers, procedures, medications, and results. Detailing each of the data elements in the C32 document is beyond the scope of this document. While all of the information is encoded in XML, some of the information is also encoded in HTML "narrative blocks" to allow it to be used in generating a Web page to make it easier for a person to read the information.

A sample error response is provided below. It differs from the non-error response in that it contains error information instead of a C32 document. The error information consists of two elements. The first is the error code, that can be used by the web Client to determine the cause of the error. The second is the error text, that supplements the error code, providing more information about the cause of the error. Because the error text might vary, it is recommended that the Web Client use the error code when determining whether the error was the result of an insufficient SOAP request message. Note that some errors, such as missing Reply-To information, might not be able to be reported to the Web Client.

## 9.4.2 Web Service Glossary

### API

Application Programming Interface; an interface provided by a software application to allow other applications to interact with it.

### HTTP

Hypertext Transfer Protocol; a widely used communication protocol on the World Wide Web.

### SOAP

Simple Object Access Protocol; the communication protocol and message format used in communicating with web services.

### Web Client

An application that consumes (accesses) a Web Service.

### Web Service

An API that allows communication with an application via SOAP messages over HTTP.

### WSDL

Web Service Description Language; a file that describes a Web Service's API.

### XML

Extensible Markup Language; a set of rules for encoding data in a machine-readable form.

## 9.4.3 WSDL

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
xmlns:s="http://www.w3.org/2001/XMLSchema" xmlns:s0="urn:h17-org:v3"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" targetNamespace="urn:h17-
org:v3">
  <types>
    <s:schema elementFormDefault="qualified" targetNamespace="urn:h17-org:v3">
      <s:element name="RetrieveDocument">
        <s:complexType>
          <s:sequence>
            <s:element minOccurs="0" name="PatientID" type="s:string"/>
          </s:sequence>
        </s:complexType>
      </s:element>
    </s:schema>
  </types>
```

```

<message name="RetrieveDocumentSoapIn">
  <part name="parameters" element="s0:RetrieveDocument"/>
</message>
<portType name="C32DocumentRepositoryServiceSoap">
  <operation name="RetrieveDocument">
    <input message="s0:RetrieveDocumentSoapIn"/>
  </operation>
</portType>
<binding name="C32DocumentRepositoryServiceSoap"
type="s0:C32DocumentRepositoryServiceSoap">
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http"
style="document"/>
  <operation name="RetrieveDocument">
    <soap:operation soapAction="urn:hl7-
org:v3/BJMD.Prod.Service.DocumentRepository.RetrieveDocument" style="document"/>
    <input>
      <soap:body use="literal"/>
    </input>
  </operation>
</binding>
<service name="C32DocumentRepositoryService">
  <port name="C32DocumentRepositoryServiceSoap"
binding="s0:C32DocumentRepositoryServiceSoap">
    <soap:address
location="http://10.24.196.43:57772/csp/c32gold5/BJMD.Prod.Service.DocumentRepositor
y.cls"/>
  </port>
</service>
</definitions>

```

#### WSDL Generation Considerations

The following change to the Ensemble-generated WSDL is required to produce a WSDL that corresponds to the web service response:

Replace:

```

<service name="C32DocumentRepositoryService">
  <port name="C32DocumentRepositoryServiceSoap"
binding="s0:C32DocumentRepositoryServiceSoap">
    <soap:address
location="http://10.24.196.43:57772/csp/c32gold5/BJMD.Prod.Service.DocumentRepositor
y.cls"/>
  </port>
</service>

```

With:

```

<service name="C32DocumentRepositoryService">
  <port name="C32DocumentRepositoryServiceSoap"
binding="s0:C32DocumentRepositoryServiceSoap">
    <soap:address location="http://(IP
address):(port)/csp/(namespace)/BJMD.Prod.Service.DocumentRepository.cls"/>
  </port>
</service>

```

#### Sample Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:hl7-org:v3">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>urn:hl7-
org:v3/BJMD.Prod.Service.DocumentRepository.RetrieveDocument</wsa:Action>
    <wsa:ReplyTo>

```

```

<wsa:Address>http://1.2.3.4:5000</wsa:Address>
</wsa:ReplyTo>
<wsa:MessageID>uuid:874a751e-f8d2-48e8-862a-45b0ea44ac40</wsa:MessageID>
</soapenv:Header>
<soapenv:Body>
<urn:RetrieveDocument>
<urn:PatientID>3</urn:PatientID>
</urn:RetrieveDocument>
</soapenv:Body>
</soapenv:Envelope>

```

Figure 9-1: Instructions

#### 9.4.4 Sample Response: Valid

```

POST / HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; Cache;)
Host: 10.24.79.1:5005
Connection: Close
Accept-Encoding: gzip
SOAPAction:
MIME-Version: 1.0
Content-Length: 53880
Content-Type: multipart/related; type="application/xop+xml"; boundary=--
boundary5345.9411764705882355361.529411764705882--;
start="<0.F5A09256.7C2D.47A6.9E10.EE7B83ED7B3D>"; start-info="text/xml"

---boundary5345.9411764705882355361.529411764705882--
Content-Type: application/xop+xml; type="text/xml"; charset="UTF-8"
Content-Transfer-Encoding: 8bit
Content-Id: <0.F5A09256.7C2D.47A6.9E10.EE7B83ED7B3D>

<?xml version="1.0" encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/'
xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
xmlns:s='http://www.w3.org/2001/XMLSchema'
xmlns:wsa='http://www.w3.org/2005/08/addressing'>
<SOAP-ENV:Header>
<wsa:Action>urn:anonOutInOp</wsa:Action>
<wsa:MessageID>urn:uuid:F3A0FD17-A818-4B77-B310-C0EBB357632F</wsa:MessageID>
<wsa:RelatesTo>uuid:8bb1bb98-423e-4715-868e-96279b928e8a</wsa:RelatesTo>
<wsa:ReplyTo>
<wsa:Address
xsi:type="s:string">http://www.w3.org/2005/08/addressing/anonymous</wsa:Address>
</wsa:ReplyTo>
<wsa:To>http://1.2.3.4:5000</wsa:To>
</SOAP-ENV:Header>
<SOAP-ENV:Body>
<PatientRecordReceiverRequest>
<DocumentResponse xmlns:s01="urn:hl7-org:v3" xsi:type="s01:DocumentResponse">
<s01:ClinicalDocument xsi:type="s01:ClinicalDocument">
<xop:Include href="cid:1.F5A09256.7C2D.47A6.9E10.EE7B83ED7B3D"
xmlns:xop="http://www.w3.org/2004/08/xop/include"/>
</s01:ClinicalDocument>
</DocumentResponse>
</PatientRecordReceiverRequest>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
---boundary5345.9411764705882355361.529411764705882--
Content-Id: <1.F5A09256.7C2D.47A6.9E10.EE7B83ED7B3D>

```

```

Content-Transfer-Encoding: binary
CONTENT-TYPE: application/octet-stream

<ClinicalDocument xmlns="urn:h17-org:v3" xmlns:sdct="urn:h17-org:sdct"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:h17-
org:v3
http://xreg2.nist.gov:8080/hitspValidation/schema/cdar2c32/infrastructure/cda/C32_CD
A.xsd">
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"></typeId>
  <templateId root="2.16.840.1.113883.3.27.1776"
assigningAuthorityName="CDA/R2"></templateId>
  <templateId root="2.16.840.1.113883.10.20.1"
assigningAuthorityName="CCD"></templateId>
  <templateId root="2.16.840.1.113883.3.88.11.32.1"
assigningAuthorityName="HITSP/C32"></templateId>
  <id root="2.16.840.1.113883.3.72" extension="1000028665"
assigningAuthorityName="NIST Healthcare Project"></id>
  <code code="34133-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Summarization of episode note">
  </code>
  <title>Continuity of Care Document - CCD for JAMICE FRENCH at DEMO
HOSPITAL</title>
<!-- The rest of the document has been removed for brevity. -->
</ClinicalDocument>
----boundary5345.9411764705882355361.529411764705882----
```

Figure 9-2: Sample Response

## 9.4.5 Sample Response: Error

```

POST / HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; Cache;)
Host: 10.24.79.1:5005
Connection: Close
Accept-Encoding: gzip
SOAPAction:
MIME-Version: 1.0
Content-Length: 1328
Content-Type: multipart/related; type="application/xop+xml"; boundary=--
boundary4383.7647058823529415537.823529411764706--;
start="<0.52130F09.3DDF.4E77.BE11.CEE45DF296F4>"; start-info="text/xml"

----boundary4383.7647058823529415537.823529411764706--
Content-Type: application/xop+xml; type="text/xml"; charset="UTF-8"
Content-Transfer-Encoding: 8bit
Content-Id: <0.52130F09.3DDF.4E77.BE11.CEE45DF296F4>

<?xml version="1.0" encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/'
xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
xmlns:s='http://www.w3.org/2001/XMLSchema'
xmlns:wsa='http://www.w3.org/2005/08/addressing'>
  <SOAP-ENV:Header>
    <wsa:Action>urn:anonOutInOp</wsa:Action>
    <wsa:MessageID>urn:uuid:8973364F-A5DD-41F4-A751-164065F17259</wsa:MessageID>
    <wsa:RelatesTo>uuid:8bb1bb98-423e-4715-868e-96279b928e8a</wsa:RelatesTo>
    <wsa:ReplyTo>
      <wsa:Address
xsi:type="s:string">http://www.w3.org/2005/08/addressing/anonymous</wsa:Address>
    </wsa:ReplyTo>
```

```

<wsa:To>http://1.2.3.4:5000</wsa:To>
</SOAP-ENV:Header>
<SOAP-ENV:Body>
<PatientRecordReceiverRequest>
<DocumentResponse xmlns:s01="urn:hl7-org:v3" xsi:type="s01:DocumentResponse">
<s01:Error xsi:type="s01:Error">
<s01:ErrorCode xsi:type="s:string">201</s01:ErrorCode>
<s01:ErrorText xsi:type="s:string">ProcessRequest: C32Populate returned error: ERROR
#5001: C32Populate: Unable to open a VA PATIENT record for patient -
1</s01:ErrorText>
</s01:Error>
</DocumentResponse>
</PatientRecordReceiverRequest>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
----boundary4383.7647058823529415537.823529411764706----

```

Figure 9-3: Sample Response

## 9.4.6 Error Codes

| Code | Description                                                       |
|------|-------------------------------------------------------------------|
| 101  | No WS-Addressing in request.                                      |
| 102  | No Reply-To element in request.                                   |
| 103  | Invalid Reply-To value in request.                                |
| 110  | Web service disabled for push sites. (No longer valid)            |
| 111  | C32 disabled.                                                     |
| 120  | No Patient ID value in request.                                   |
| 130  | Unable to instantiate Queue record.                               |
| 201  | Error in data extraction.                                         |
| 202  | Unable to save extracted data.                                    |
| 203  | Error trapped by BJMDTSK (background processor).                  |
| 301  | Error in data transformation.                                     |
| 302  | Error in document generation business process.                    |
| 303  | Error in document transmission.                                   |
| 310  | Document in "Compile Started" status for more than 10000 seconds. |

## 9.4.7 Additional Web Service Resources

### W3Schools

SOAP tutorial: <http://www.w3schools.com/soap/default.asp>

Web services tutorial: <http://www.w3schools.com/webservices/default.asp>

WSDL tutorial: <http://www.w3schools.com/wsdl/default.asp>

XML tutorial: <http://www.w3schools.com/xml/default.asp>

**Wikipedia**

API: [http://en.wikipedia.org/wiki/Application\\_programming\\_interface](http://en.wikipedia.org/wiki/Application_programming_interface)

HTTP: [http://en.wikipedia.org/wiki/Hypertext\\_Transfer\\_Protocol](http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)

HTTPS: [http://en.wikipedia.org/wiki/HTTP\\_Secure](http://en.wikipedia.org/wiki/HTTP_Secure)

SOAP: <http://en.wikipedia.org/wiki/SOAP>

Web service: [http://en.wikipedia.org/wiki/Web\\_service](http://en.wikipedia.org/wiki/Web_service)

WSDL: [http://en.wikipedia.org/wiki/Web\\_Services\\_Description\\_Language](http://en.wikipedia.org/wiki/Web_Services_Description_Language)

XML: <http://en.wikipedia.org/wiki/XML>

## 10.0 SAC Requirements Exemptions

SAC exemption request for use of Cache Objects.

|                                                                                                                                                                                                                                                                                                                            |                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Request for Exemption to RPMS Programming Standards                                                                                                                                                                                                                                                                        |                              |
| Package: BJMD - C32                                                                                                                                                                                                                                                                                                        |                              |
| Date: May 2010                                                                                                                                                                                                                                                                                                             |                              |
| Program: N/A                                                                                                                                                                                                                                                                                                               |                              |
| Line Number: N/A                                                                                                                                                                                                                                                                                                           |                              |
| Applicable Standard: Section 2 of the 2009 SAC                                                                                                                                                                                                                                                                             |                              |
| Paragraph 2.2.1 states that "The 1995 ANSI/MDC X11.1 standards, Sections 1 and 2, will be adhered to unless explicitly modified by this document".                                                                                                                                                                         |                              |
| Reason for Exemption:                                                                                                                                                                                                                                                                                                      |                              |
| The work order and the requirements for the C32 application required the use of Intersystems' Cache Objects technology for "a practical proof of concept for the development of an object-oriented methodology". Cache Objects, developed in the late 1990s, are outside of the scope of the 1995 ANSI/MDC X11.1 standard. |                              |
| SACC Review                                                                                                                                                                                                                                                                                                                |                              |
| Date:                                                                                                                                                                                                                                                                                                                      |                              |
| Recommend                                                                                                                                                                                                                                                                                                                  | APPROVAL____ DISAPPROVAL____ |
| Duration:                                                                                                                                                                                                                                                                                                                  |                              |
| Comments:                                                                                                                                                                                                                                                                                                                  |                              |
| OIT Action                                                                                                                                                                                                                                                                                                                 |                              |
| Date:                                                                                                                                                                                                                                                                                                                      |                              |
| Request                                                                                                                                                                                                                                                                                                                    | APPROVED____ DISAPPROVED____ |
| Comments:                                                                                                                                                                                                                                                                                                                  |                              |
| Director, DIT                                                                                                                                                                                                                                                                                                              |                              |

Figure 10-1: SAC Exemption Request for use of Cache Objects

## **11.0 Templates, Forms, and Protocols**

### **11.1 Print Templates**

There are no print templates in this package.

### **11.2 Sort Templates**

There are no sort templates in this package.

### **11.3 Input Templates**

There are no input templates in this package.

### **11.4 List Templates**

There are no list templates in this package.

### **11.5 Forms**

There are no forms in this package.

### **11.6 Protocols**

There are no protocols in this package.

## 12.0 C32 Ensemble/Cache Class Development

### 12.1 Description of Development Environment

The C32 application was developed using Cache Objects, Fileman-to-Class mapper (FM2C: versions below 1.0 were known as “Fileman-to-Cache” mapper) version 1.18, and Ensemble productions and data transformations. All new classes created for the C32 application exist within the namespace BJMD. Fileman-derived classes are contained in Cache class package BFMC.

All C32 Cache and Ensemble classes, including FM2C-created classes, are delivered in two KIDS builds and are stored in a regular Fileman file in packed, compressed, and Base-64 encoded XML format. The KIDS post-install routine unpacks, uncompresses, decodes, and installs C32 classes in the designated Ensemble namespace using class package mapping.

### 12.2 C32 Server Requirements

The C32 application requires Ensemble 2009.1.6 or 2010.2.3 to run. It doesn't run under Ensemble 2009.1.3, 2009.1.4, 2010.1, 2011.1 or higher at this time. C32 doesn't require a specific version of the operating system (OS). The C32 software requires a valid station number in the 8000–9000 range. The C32 software will not be installed if there is no valid station number for all active stations.

### 12.3 Creation of C32 Databases, Namespaces and Mappings

The CCD/C32 package adds a new Ensemble database, namespace, CSP application and global/package mappings to each RPMS namespace on the system. The new database and its settings are created by the KIDS build automatically and should not require manual intervention. The following section describes, for reference purposes, how the same settings can be created manually.

#### 12.3.1 Create the C32 Ensemble Namespace

Note that if the C32 namespace(s) have already been created for you by the Area Offices, you should skip this step. Also note that RPMS users can remain on the system during this operation.

#### 12.3.2 Choosing the Namespace Name

The C32 software resides in a separate Ensemble namespace. There is one C32 namespace for every RPMS namespace in the instance, so if you have multiple RPMS namespaces running within the same Ensemble instance, you will need to create a separate C32 namespace for each RPMS namespace.

To determine the name of the new namespace, concatenate “C32” with the name of the RPMS namespace associated with it. For example, if your RPMS namespace is called “TST”, then the C32 namespace should be called “C32TST”. If you have a second RPMS namespace called “CHI”, then its associated C32 namespace should be called “C32CHI” and so on. The screenshots in this Installation Guide use “TST” as the name of the currently existing RPMS namespace and “C32TST” as the name of the new C32 namespace.

Note that this naming convention is relied upon by the C32 software. The C32 software will not work if the C32 namespace is called something else.

### 12.3.3 Naming the Ensemble Database

Each C32 namespace will have an underlying Ensemble/Cache database. To avoid confusion, you should name it the same as the associated C32 namespace unless you have a specific reason to use a different name.

By now you should have come up with the names of the C32 database(s) and namespace(s) for your site. Below is a spreadsheet which you can populate with this information and print out for future reference. For sites with multiple RPMS namespaces, use one row per RPMS namespace:

| RPMS namespace name | C32 namespace name | C32 database name | OS directory for C32 database |
|---------------------|--------------------|-------------------|-------------------------------|
|                     |                    |                   |                               |
|                     |                    |                   |                               |
|                     |                    |                   |                               |

### 12.3.4 Choosing the Storage Location

See the “Disk Space” section of the C32 installation guide for instructions on estimating how much disk space will be needed to accommodate the new C32 database(s). Note that the C32 pre-installation environment check will make sure that the directory has at least 500Mb of free space.

Based on the estimated disk space requirements and on how much disk space you have available on your storage subsystem, select the disk drive (if running Windows) or file system (if running Unix) where each new C32 database will be installed. Select the directory path and name that you will be using on that drive/file system. If the directory doesn’t exist, create it and make sure that Ensemble can read/write from/to it.

### 12.3.5 Creating a New Ensemble/Cache Database

1. Access the Ensemble System Management Portal (SMP) and sign on as the administrator.
2. Select “Configuration” in the leftmost column.
3. When the Configuration page comes up, select “Local Databases” in the leftmost column.
4. When the “Local Databases” page comes up, select “Create New Database” at the top of the page.
5. When the “Database Wizard” pop-up page appears, enter the name of the database that you came up with in section “Naming the Ensemble database” above, e.g. “C32TST.” If you are using a remote connection to connect to the SMP, you may need to type slowly since every letter is processed separately. SMP tries to use the entered letters to build the default name of the OS directory in the field “Database directory.” If you are typing too fast, some letters will be lost:

Database Wizard - Mozilla Firefox

http://10.24.196.43:57772/csp/sys/mgr/UtilSysDatabaseWizard.csp?IsRemote=0&\$NAMESPACE=&

## Database Wizard

This wizard will help you create a new database.

Enter the name of your database:

Database directory:

You may create an Encrypted Database if Encryption is activated.

Encrypt Database? ☐ (Encryption is not activated)

< Back   Next >   Finish   Cancel

Done

6. By the time you are done typing the name of the database, SMP will display the default directory name where Ensemble will store the main CACHE.DAT file for this database. (This functionality may not be available depending on your browser settings.) Change this directory to the directory that you came up with in section “Choosing the storage location.”
7. Check the “Encrypt database?” check-box if your site uses database encryption.
8. Click on the “Next” button at the bottom of the pop-up page.
9. When the next page appears, enter “15” in the field “Initial Size (MB).”
10. Select “No” in the “Journal globals” drop-down list. This is a very important setting, so double check that you selected "No":

Database Wizard - Mozilla Firefox

http://10.24.196.43:57772/csp/sys/mgr/UtilSysDatabaseWizard.csp?IsRemote=0&\$NAMESPACE=&

## Database Wizard

Enter details about the database.

How big do you want the initial database to be?

**Initial Size (MB):**

Block size is the size of the blocks that the databases uses.

**Block size for this database will be:**

Do you wish to journal globals in this database?

**Journal globals:**

< Back   Next >   Finish   Cancel

Done

S3Fox

11. Click on the “Next” button at the bottom of the pop-up page.
12. When the next page appears, choose the database resource for this new database.  
If your site does not have a policy on database resources, accept the default, “Use the default resource, %DB\_%DEFAULT”:

Database Wizard - Mozilla Firefox

http://10.24.196.43:57772/csp/sys/mgr/UtilSysDatabaseWizard.csp?IsRemote=0&\$NAMESPACE=&

## Database Wizard

Database resources control access to the contents of Caché databases.

What is the database resource for this database?

**I want to**

- ☒ Use the default resource, %DB\_%DEFAULT
- ☐ Use an existing resource
- ☐ Create a new resource

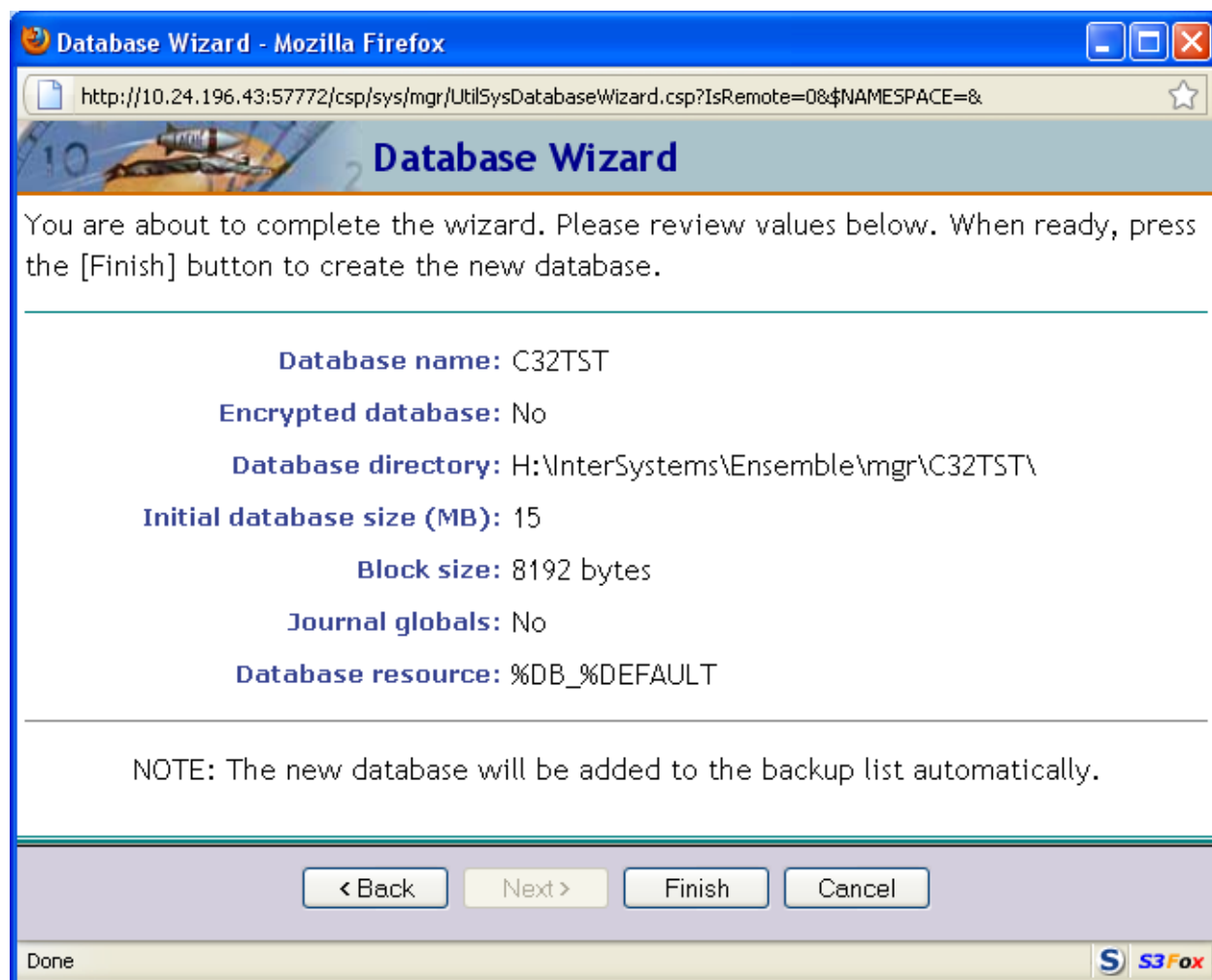
**Database Resource:** %DB\_%DEFAULT

< Back   Next >   Finish   Cancel

Done

S3Fox

13. Click on the “Next” button at the bottom of the pop-up page.
14. When the final pop-up page appears, review the values and, if they match your intent, select “Finish” at the bottom of the pop-up page. If you identify any mistakes or discrepancies, go back using the “Back” button and correct them:



15. It may take a few seconds for Ensemble to create the database. When it finishes, you will see the new database in the list of “Local Databases.”
16. If your Ensemble instance hosts multiple RPMS namespaces, make sure to repeat these steps for all new C32 databases that you need to create.

### 12.3.6 Creating a New Ensemble Namespace

1. Access the Ensemble SMP and sign on as the administrator.
2. Select “Configuration” in the leftmost column.
3. When the Configuration page comes up, select “Namespaces” in the leftmost column.
4. When the “Namespaces” page comes up, select “Create New Namespace” at the top of the page.

5. When the “New Namespace” page comes up, enter the name of the namespace that you came up with in section “Choosing the namespace name” in field “Name of the namespace.”
6. Keep the default, “Local Database,” as the response to the question “The default database for this namespace is a.”
7. Select the database that you created in step “Creating a new Ensemble/Cache database” from the drop-down list next to the question that reads “Select an existing database.”
8. Do not select anything from the drop-down list for “Copy namespace mappings from.”:

9. Select “Save” at the bottom of the page.
10. If your Ensemble instance hosts multiple RPMS namespaces, make sure to repeat these steps for all new C32 namespaces that you need to create.
11. It will take Ensemble a few seconds to create the new namespace.

### 12.3.7 Creating New Global Mappings

1. Access the Ensemble SMP and sign on as the administrator.
2. Select “Configuration” in the leftmost column.
3. When the Configuration page comes up, select “Namespaces” in the leftmost column.
4. The “Namespaces” page will be displayed. In the leftmost column, find the **RPMS** namespace associated with the new C32 namespace that you created in section “Creating a New Ensemble Namespace.” Note that this should be the pre-existing RPMS namespace, not the newly created C32 namespace.
5. Select “Global Mappings” for the identified namespace:

Global Mappings - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.24.196.43:57772/csp/sys/mgr/%25CSP.UI.Portal.Mappings.cls?MapType=Gbl&ID1=TST&ID2=1

Google

INTERSYSTEMS Global Mappings

Licensed to: Vangent, Inc.

Home | About | Help | Logout

Server: VDENMIHSDBD01

Instance: ENSEMBLE

User: AMIKHAYL

[Home] > [Configuration] > [Namespaces] > [Global Mappings]

Go to:

New Global Mapping Save Changes Cancel Changes

The global mappings for namespace TST are displayed below:

| Name                   | Global   | Subscript      | Database | Edit                 | Delete                 |
|------------------------|----------|----------------|----------|----------------------|------------------------|
| %Z*                    | %Z*      |                | TST      | <a href="#">Edit</a> | <a href="#">Delete</a> |
| %z*                    | %z*      |                | TST      | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg               | CacheMsg |                | TST      | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("Confirm")    | CacheMsg | ("Confirm")    | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("Ens")        | CacheMsg | ("Ens")        | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsBPL")     | CacheMsg | ("EnsBPL")     | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsColumns") | CacheMsg | ("EnsColumns") | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsDICOM")   | CacheMsg | ("EnsDICOM")   | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsDemo")    | CacheMsg | ("EnsDemo")    | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsEDI")     | CacheMsg | ("EnsEDI")     | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsEDIHL7")  | CacheMsg | ("EnsEDIHL7")  | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsEDISEF")  | CacheMsg | ("EnsEDISEF")  | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsEDIX12")  | CacheMsg | ("EnsEDIX12")  | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsWP")      | CacheMsg | ("EnsWP")      | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsXPAT")    | CacheMsg | ("EnsXPAT")    | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("EnsebXML")   | CacheMsg | ("EnsebXML")   | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("Ensemble")   | CacheMsg | ("Ensemble")   | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("RuleEditor") | CacheMsg | ("RuleEditor") | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
| CacheMsg("Workflow")   | CacheMsg | ("Workflow")   | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |

Done

S3 Fox

6. When the “Global Mappings” page comes up, select the “New Global Mapping” button at the top of the page.
7. Select the name of the Cache database that you came up with in section “Naming the Ensemble database” from the drop-down list next to “Global database location.”

8. Enter **BJMD.Xfer.\*** in the “Global name” field. Make sure that you include the asterisk.
9. Do not enter anything in the “Global subscripts to be mapped” field:

Global Mapping - Mozilla Firefox

http://10.24.196.43:57772/csp/sys/mgr/UtilConfigGblMapping.csp?\$ZEN\_POPUP=1&\$ID1=TST&IsNew=1&\$ID2=

## Global Mapping

Map a new global in namespace TST:

**Global database location:** C32TST

**Global name:** BJMD.Xfer.\*

Global subscripts to be mapped:

Subscript reference must begin with an open parenthesis.  
[Click here to see examples.](#)

Advanced

Apply OK Close

Done S3Fox

10. Select “Apply” at the bottom of the pop-up page.
11. Select “Close” at the bottom of the pop-up page.
12. You will be back on the “Global Mappings” page. Select “Save Changes” at the top of the page.
13. Click on “Namespaces” in the blue line which reads “[Home] > [Configuration] > [Namespaces] > [Global Mappings]” at the top of the page. This will return you to the “Namespaces” page.
14. In the leftmost column, find the name of the C32 namespace that you came up with in section “Choosing the namespace name.” Note that this is the name of the newly created C32 namespace rather than the name of the RPMS namespace which you selected in step 4 of this section.
15. Select “Global Mappings” for the identified namespace.

16. When the “Global Mappings” page comes up, select the “New Global Mapping” button at the top of the page.
17. Select the name of the **RPMS** database associated with this C32 namespace from the drop-down list next to “Global database location.”
18. Enter **BJMDS** in the “Global name” field.
19. Do not enter anything in the “Global subscripts to be mapped” field:

Global Mapping - Mozilla Firefox

http://10.24.196.43:57772/csp/sys/mgr/UtilConfigGblMapping.csp?\$ZEN\_POPUP=1&\$ID1=C32TST&IsNew=1&\$II

## Global Mapping

Map a new global in namespace C32TST:

Global database location: TST

Global name: BJMDS

Global subscripts to be mapped:

Subscript reference must begin with an open parenthesis.  
Click here to see examples.

Advanced

Apply OK Close

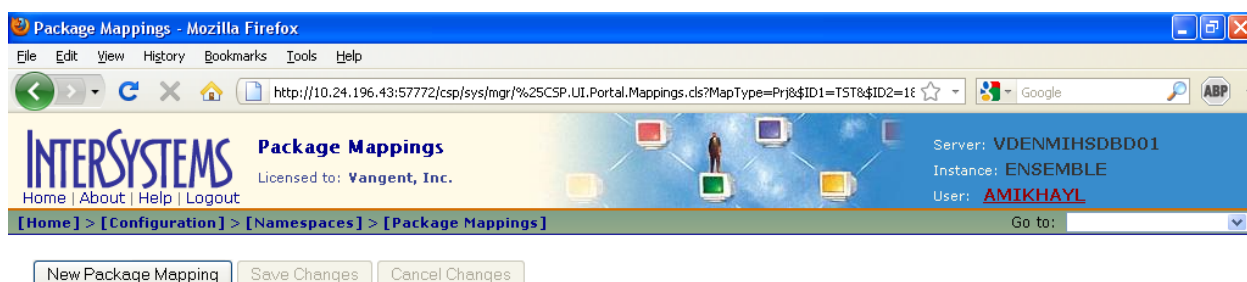
Done S3Fox

20. Select “Apply” at the bottom of the pop-up page.
21. Select “Close” at the bottom of the pop-up page.
22. You will be back on the “Global Mappings” page. Select “Save Changes” at the top of the page.
23. Make sure to execute steps 1-22 for every C32 namespace that you added to your Ensemble instance.

### 12.3.8 Creating New Package Mappings

1. Access the Ensemble SMP and sign on as the administrator.

2. Select “Configuration” in the leftmost column.
3. When the Configuration page comes up, select “Namespaces” in the leftmost column.
4. In the leftmost column, find the **RPMS** namespace associated with the new C32 namespace that you created in section “Creating a New Ensemble Namespace.” Note that this should be the pre-existing RPMS namespace, not the newly created C32 namespace.
5. Select “Package Mappings” for the identified namespace.
6. When the “Package Mappings” page comes up, select the “New Package Mapping” button at the top of the page:



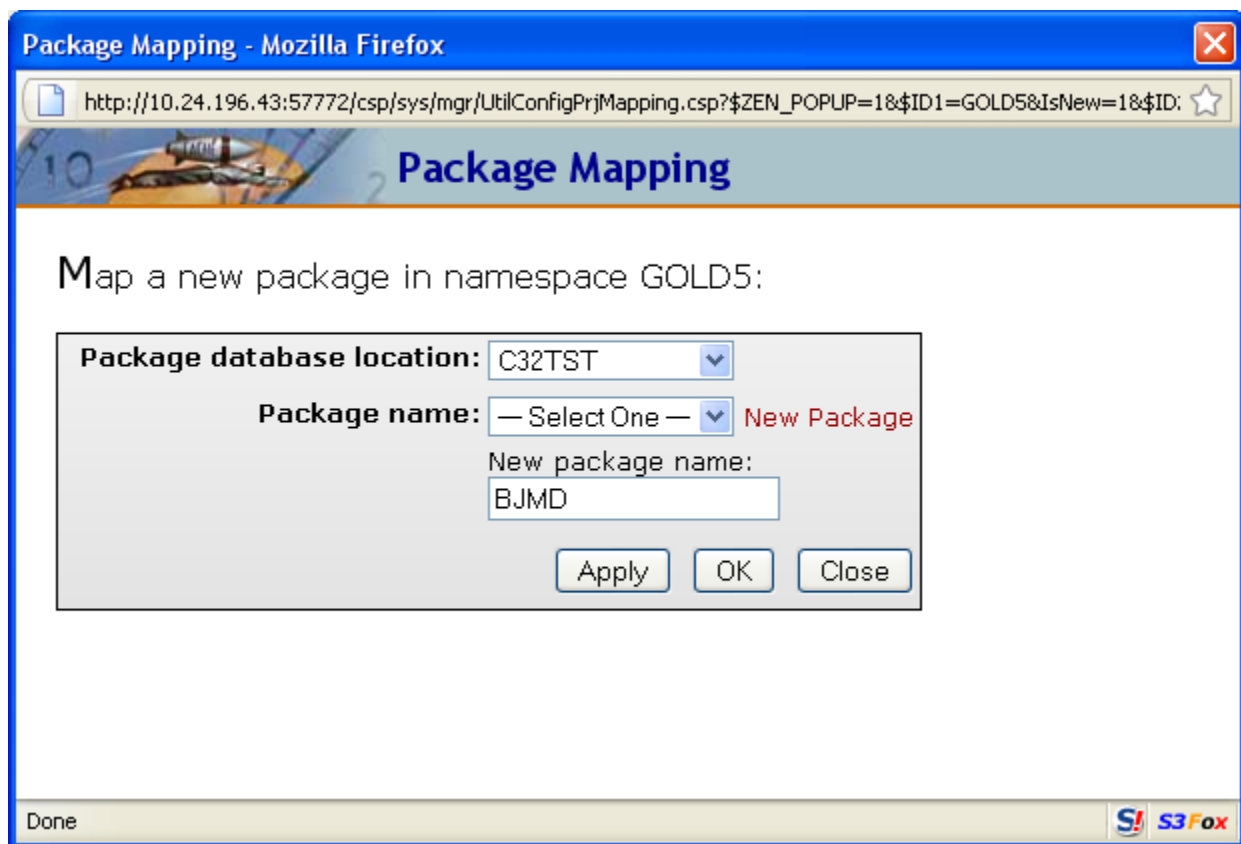
The package mappings for namespace TST are displayed below:

|  | Name      | Package   | Database | Edit                 | Delete                 |
|--|-----------|-----------|----------|----------------------|------------------------|
|  | CSPX      | CSPX      | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
|  | Ens       | Ens       | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
|  | EnsLib    | EnsLib    | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |
|  | EnsPortal | EnsPortal | ENSLIB   | <a href="#">Edit</a> | <a href="#">Delete</a> |



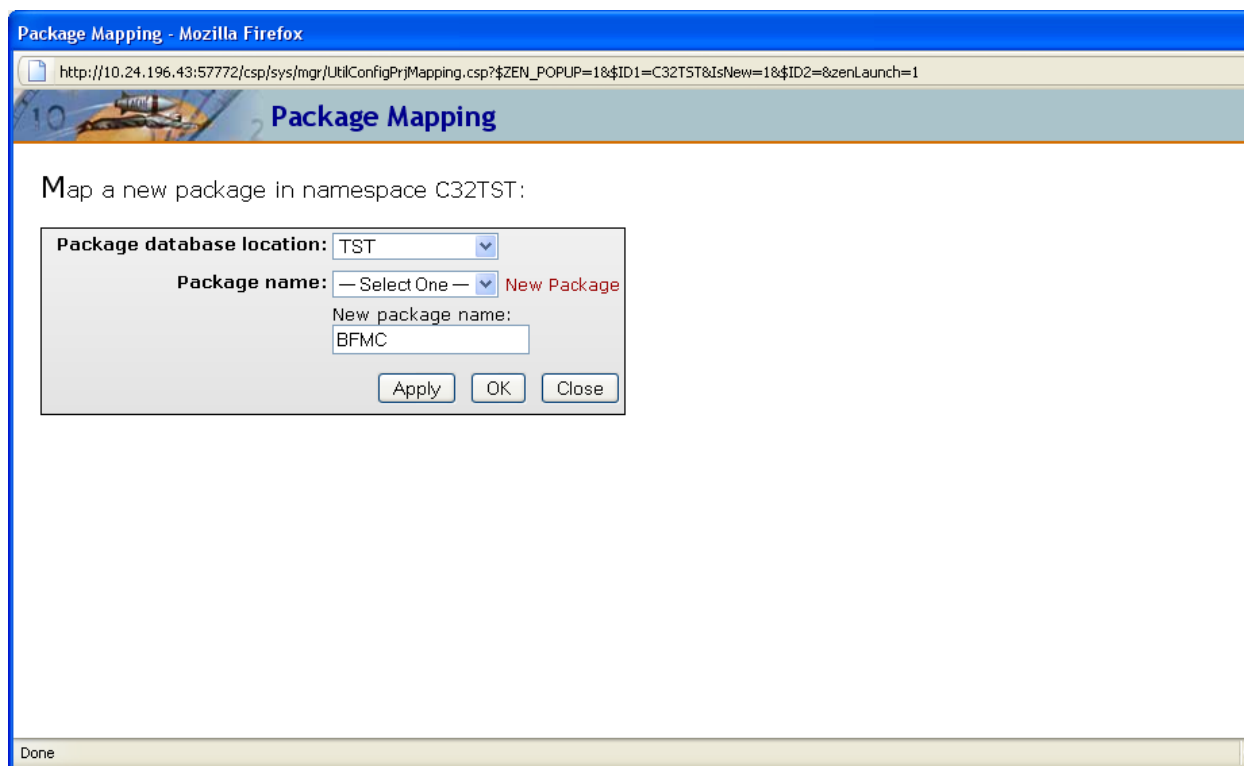
7. Select the newly created C32 namespace associated with this RPMS namespace from the drop-down list next to the words “Package database location.”
8. Click on the words “New Package” on the line which starts with words “Package name.” Note that “New Package” is not underlined or highlighted, so it may not look like a regular hyperlink at first sight.

9. A new field called “New package name” will appear. Enter **BJMD** and select “Apply” at the bottom of the pop-up page:



10. Select the “Close” button at the bottom of the pop-up page.
11. You will be back on the “Package Mappings” page. Select “Save Changes” at the top of the page.
12. Select “[ Namespaces ]” in the thin blue line which reads “[Home] > [Configuration] > [Namespaces] > [Global Mappings]” at the top of the page.
13. You will be back on the “Namespaces” page. Find the name of the newly created C32 namespace in the leftmost column.
14. Select “Package Mappings” for the identified namespace.
15. When the “Package Mappings” pop-up page comes up, select the “New Package Mapping” button at the top of the page.
16. Select the associated RPMS namespace for this C32 namespace from the drop-down list next to the words “Package database location.”

17. Click on the words “New Package” on the line that starts with words “Package name.” Note that “New Package” is not underlined or highlighted, so it may not look like a regular hyperlink at first sight.
18. A new field called “New package name” will appear. Enter **BFMC** and select “Apply” at the bottom of the pop-up page:



19. Select the “Close” button at the bottom of the pop-up page.
20. You will be back on the “Package Mappings” page. Select “Save Changes” at the top of the page.
21. Make sure to execute steps 1-20 for every C32 namespace that you added to your Ensemble instance.
22. At this point the new C32 database(s) and namespace(s) are fully configured. Use your site’s backup configuration process to add the newly added database(s) to the list of backed up databases.

## 12.4 Managing C32 Ensemble Production

As described in the “Architecture” section of this document, C32 documents are generated using the C32 Ensemble production in response to requests from the EHR GUI client. In addition, if the site participates in the IHS HIE, C32 documents are generated nightly and sent to outside repositories.

The C32 Ensemble production is automatically started when Ensemble starts up. During normal business operations, the C32 Ensemble production will remain running and will not require maintenance. If you ever find that you need to bring the C32 Ensemble production up or down manually, you will need to follow the instructions below:

### 12.4.1 Stopping the C32 Production

In order to stop a running C32 production, take the following steps:

1. Sign on to the Ensemble SMP as the administrator.
2. On the main SMP page, select **Ensemble Management Portal** at the bottom of the leftmost column.
3. In the top right corner you will see the word “Namespace” and a drop-down list of all namespaces defined within the Ensemble instance. Select the namespace that you defined previously. The page will be refreshed and you will see the name of the namespace prominently displayed at the top of the page.

|                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE:</b> Ensemble namespaces can look almost identical when viewed on this page, so make sure that you have the right namespace selected.</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------|

At the top of the inner box the words “Ensemble Running” will be displayed.

Ensemble - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.24.196.43:57772/csp/c32gold5/UtilEnsHome.csp?&NAMESPACE=&CSPCHD=0030000100003cume

Google

ABP

Server: VDENMIHSDBD01  
Instance: ENSEMBLE  
User: UnknownUser

Namespace: C32GOLD5 Go to:

Home  
Productions  
System Monitor  
Event Log  
Message Browser  
Business Processes  
Business Rules  
Business Rule Log  
Host Monitor  
Jobs  
Queues  
Maintenance  
Dashboards  
Business Metrics  
Work flow Portal  
Testing Service  
EDI / HL7 Manager  
Logout

Welcome to the Ensemble Management Portal:  
This is the **C32GOLD5** namespace.

| Ensemble Running                                                         |    | Service                                     |                         |
|--------------------------------------------------------------------------|----|---------------------------------------------|-------------------------|
| <b>Stop Production</b>                                                   |    | Last Activity Time: 2010-09-19 13:13:21.807 |                         |
| Production: <a href="#">BJMD.Prod.Production</a> <a href="#">more...</a> |    | Activities Completed: 33,780                |                         |
| Start Time: 2010-09-17 14:04:24.863                                      |    |                                             |                         |
| Job                                                                      |    | Process                                     |                         |
| Total Jobs Running:                                                      | 16 | Last Activity Time:                         | 2010-09-17 14:05:25.004 |
| Jobs OK:                                                                 | 13 | Activities Completed:                       | 0                       |
| Jobs Inactive:                                                           | 3  | Messages in Progress:                       | 0                       |
| Jobs of Other Status:                                                    | 0  | Messages in Queues:                         | 0                       |
| Log                                                                      |    | Operation                                   |                         |
| Last Error Time:                                                         |    | Last Activity Time: 2010-09-19 13:11:04.185 |                         |
| Total Error Count:                                                       | 0  | Activities Completed:                       | 378                     |
|                                                                          |    | Messages in Progress:                       | 0                       |
|                                                                          |    | Messages in Queues:                         | 0                       |

Seconds to refresh: 4

Done

Figure 12-1: Ensemble production in a stopped state

- Click the **Stop Production** button. It might take the production a few seconds to stop. When it stops, you will see the following text appear on the screen:

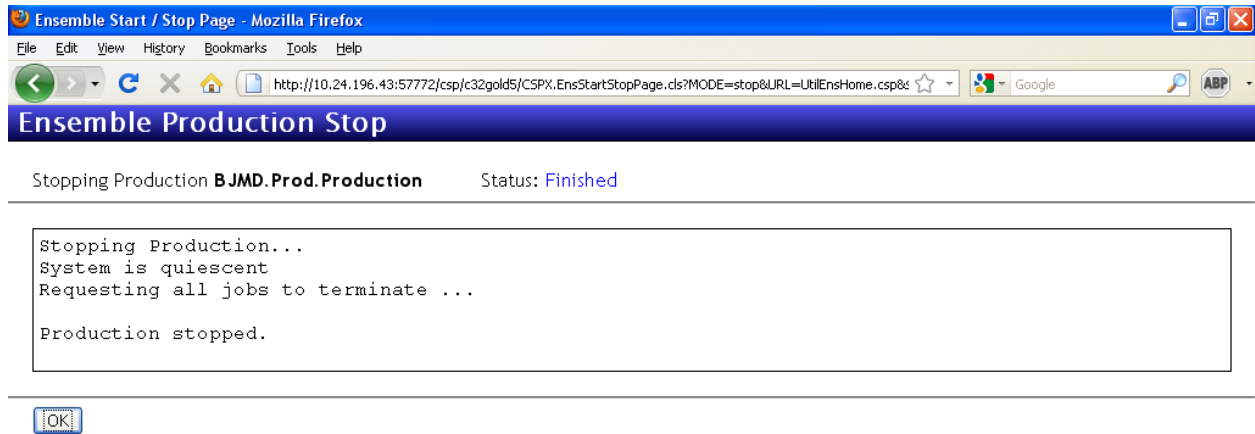


Figure 12-2: Stopping the Ensemble production

There might be additional messages on this screen if it takes Ensemble more than a few seconds to stop all associated processes.

5. Click **OK** to return to the **Ensemble productions** screen.

### 12.4.2 Restarting the C32 Production

If the C32 production ever goes down or you bring it down, you can restart it using the following steps:

1. Sign on to the Ensemble SMP as the administrator.
2. On the main SMP page, select **Ensemble Management Portal** at the bottom of the leftmost column.
3. In the top right corner you will see the word “Namespace” and a drop-down list of all namespaces defined within the Ensemble instance. Select the namespace where your C32 Ensemble production is located. The application will refresh the page and you will see this name prominently displayed at the top of the page.

**NOTE:** Ensemble namespaces can look almost identical when viewed on this page, so make sure that you have the right namespace selected.

At the top of the inner box the words “Ensemble Stopped” will be displayed:

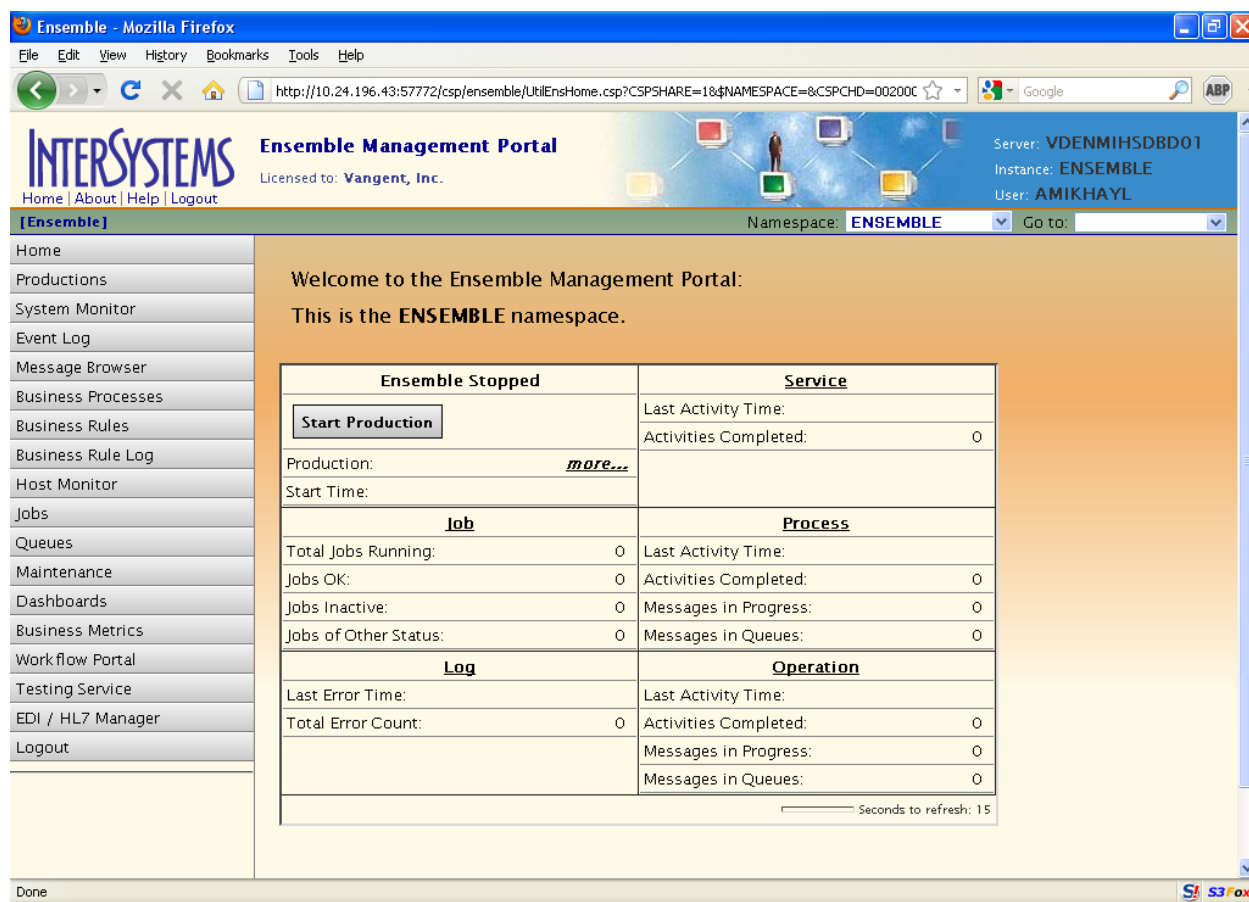


Figure 12-3: Ensemble production in a stopped state

4. Click the **Start Production** button immediately under these words.
5. A pop-up will appear and ask you whether you “really wish to start this production.” Click **OK**.

The following lines should appear on the screen:

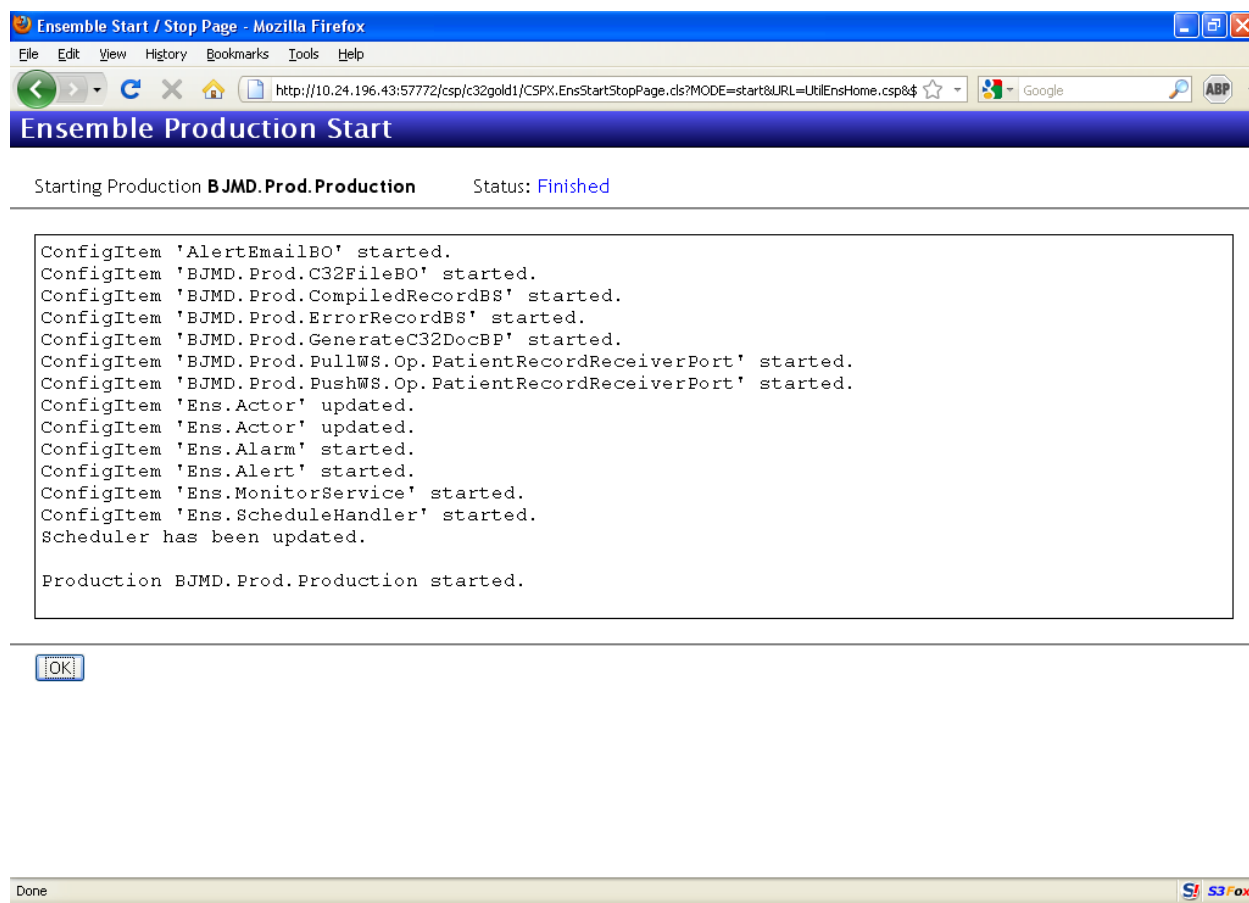


Figure 12-4: Starting the Ensemble production

6. Click **OK** to return to the **Ensemble productions** screen.

Note that the button that used to read “Start Production” now reads “Stop Production.” It will remain in this state as long as the production is running.

## 12.5 Deployment of C32 Cache and Ensemble Classes

All Cache and Ensemble classes included in the CCD/C32 package are delivered to RPMS sites in packed format as global data within a standard KIDS build. When the KIDS build is created, classes are packed into global nodes using `DO EXPORT^BJMDCLAS`, which exports their definitions to a stream as XML, compresses the result, Base64-encodes it and outputs it to a Fileman word processing field in File 90608.

On the receiving end, the post-installation part of the KIDS build invokes `DO IMPORT^BJMDCLAS`, which performs the same operation in reverse. It reads the data from the Fileman word processing field in File 90608, Base64-decodes it, uncompresses the result to a stream and then recreates the class definitions from the stream. Even though the KIDS installation process takes place in the RPMS

namespace, all BJMD classes are compiled in the associated C32 namespace because of package mapping. The installation process also stops the C32 Ensemble production and the C32 generator before installing the C32 software.

## 12.6 List of C32 Data Elements

C32 documents are properly formed XML document that comply with the HITSP C32 2.5 XML schema. Individual data elements are listed below by module

### 12.6.1 Person

| Data Element         | Description                                                                          | C32 Location                                              | Code list                                                                                                                                                                                                     |
|----------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Document Timestamp   | Date/time when the document was created.                                             | effectiveTime                                             |                                                                                                                                                                                                               |
| Person ID            |                                                                                      | recordTarget.patientRole.id                               |                                                                                                                                                                                                               |
| Person Address       | Home address has use attribute "HP", work address "WP", and temporary address "TMP". | recordTarget.patientRole.addr                             |                                                                                                                                                                                                               |
| Telephone Number     | Home phone has use attribute "HP", work phone "WP", and temporary phone "TMP".       | recordTarget.patientRole.telecom                          |                                                                                                                                                                                                               |
| E-mail Address       |                                                                                      | recordTarget.patientRole.telecom                          |                                                                                                                                                                                                               |
| Person Name          |                                                                                      | recordTarget.patientRole.patient.name                     |                                                                                                                                                                                                               |
| Person Alias         | Has use attribute "P".                                                               | recordTarget.patientRole.patient.name                     |                                                                                                                                                                                                               |
| Gender               |                                                                                      | recordTarget.patientRole.patient.administrativeGenderCode | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83135000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83135000</a> |
| Person Date of Birth |                                                                                      | recordTarget.patientRole.patient.birthTime                |                                                                                                                                                                                                               |

| Data Element          | Description         | C32 Location                                              | Code list                                                                                                                                                                                                        |
|-----------------------|---------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marital Status        |                     | recordTarget.patientRole.patient.maritalStatusCode        | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=84222000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=84222000</a> |
| Religious Affiliation | Not currently sent. | recordTarget.patientRole.patient.ReligiousAffiliationCode | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83328001">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83328001</a> |

### 12.6.2 Support

| Data Element                | Description                                                           | C32 Location                                       | Code list                                                                                                                                                                                                        |
|-----------------------------|-----------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Next of Kin 1 (NOK1) record | First participant record where Contact Type is "NOK"                  | participant.associatedEntity.classCode             |                                                                                                                                                                                                                  |
| NOK1 Contact Date           | Not currently sent.                                                   | participant.time                                   |                                                                                                                                                                                                                  |
| NOK1 Contact Relationship   |                                                                       | participant.associatedEntity.code                  | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000</a> |
| NOK1 Contact Address        |                                                                       | participant.associatedEntity.addr                  |                                                                                                                                                                                                                  |
| NOK1 Contact Phone Number   | Home phone has use attribute "HP." Work phone has use attribute "WP." | participant.associatedEntity.telecom               |                                                                                                                                                                                                                  |
| NOK1 Contact Name           |                                                                       | participant.associatedEntity.associatedPerson.name |                                                                                                                                                                                                                  |
| Next of Kin 2 (NOK2) record | Second participant record where Contact Type is "NOK"                 | participant.associatedEntity.classCode             |                                                                                                                                                                                                                  |
| NOK2 Contact Date           | Not currently sent.                                                   | participant.time                                   |                                                                                                                                                                                                                  |

| Data Element                       | Description                                                              | C32 Location                                       | Code list                                                                                                                                                                                                        |
|------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOK2 Contact Relationship          |                                                                          | participant.associatedEntity.code                  | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000</a> |
| NOK2 Contact Address               |                                                                          | participant.associatedEntity.addr                  |                                                                                                                                                                                                                  |
| NOK2 Contact Phone Number          | Home phone has use attribute "HP".<br>Work phone has use attribute "WP". | participant.associatedEntity.telecom               |                                                                                                                                                                                                                  |
| NOK2 Contact Name                  |                                                                          | participant.associatedEntity.associatedPerson.name |                                                                                                                                                                                                                  |
| Emergency Contact 1 (ECON1) record | First participant record where Contact Type is "ECON"                    | participant.associatedEntity.classCode             |                                                                                                                                                                                                                  |
| ECON1 Contact Date                 | Not currently sent.                                                      | participant.time                                   |                                                                                                                                                                                                                  |
| ECON1 Contact Relationship         |                                                                          | participant.associatedEntity.code                  | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000</a> |
| ECON1 Contact Address              |                                                                          | participant.associatedEntity.addr                  |                                                                                                                                                                                                                  |
| ECON1 Contact Phone Number         | Home phone has use attribute "HP".<br>Work phone has use attribute "WP". | participant.associatedEntity.telecom               |                                                                                                                                                                                                                  |
| ECON1 Contact Name                 |                                                                          | participant.associatedEntity.associatedPerson.name |                                                                                                                                                                                                                  |
| Emergency Contact 2 (ECON2) record | Second participant record where Contact Type is "ECON"                   | participant.associatedEntity.classCode             |                                                                                                                                                                                                                  |
| ECON2 Contact Date                 | Not currently sent.                                                      | participant.time                                   |                                                                                                                                                                                                                  |
| ECON2 Contact Relationship         |                                                                          | participant.associatedEntity.code                  | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000</a> |

| Data Element               | Description                                                              | C32 Location                                                  | Code list                                                                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ECON2 Contact Address      |                                                                          | participant.associatedEntity.addr                             |                                                                                                                                                                                                                  |
| ECON2 Contact Phone Number | Home phone has use attribute "HP".<br>Work phone has use attribute "WP". | participant.associatedEntity.telecom                          |                                                                                                                                                                                                                  |
| ECON2 Contact Name         |                                                                          | participant.associatedEntity.associatedPerson.name            |                                                                                                                                                                                                                  |
| Guardian (GUARD) record    | Guardian record.<br>Contact Type is "GUARD".                             | recordTarget.patientRole.patient.guardian.classCode           |                                                                                                                                                                                                                  |
| GUARD Contact Relationship |                                                                          | recordTarget.patientRole.patient.guardian.code                | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83340000</a> |
| GUARD Contact Address      |                                                                          | recordTarget.patientRole.patient.guardian.addr                |                                                                                                                                                                                                                  |
| GUARD Contact Phone Number | Home phone has use attribute "HP".<br>Work phone has use attribute "WP". | recordTarget.patientRole.patient.guardian.telecom             |                                                                                                                                                                                                                  |
| GUARD Contact Name         |                                                                          | recordTarget.patientRole.patient.guardian.guardianPerson.name |                                                                                                                                                                                                                  |

### 12.6.3 Information Source

| Data Element           | Description                         | C32 Location                                       | Code list |
|------------------------|-------------------------------------|----------------------------------------------------|-----------|
| Author Time            | Date/time the document was created. | author.time                                        |           |
| Author Name            |                                     | author.assignedAuthor.representedOrganization.name |           |
| Reference              | Not currently sent.                 |                                                    |           |
| Reference Document ID  | Not currently sent.                 |                                                    |           |
| Reference Document URL | Not currently sent.                 |                                                    |           |

| Data Element            | Description | C32 Location                                          | Code list |
|-------------------------|-------------|-------------------------------------------------------|-----------|
| Information Source Name |             | informant.assignedEntity.representedOrganization.name |           |

#### 12.6.4 Healthcare provider

| Data Element            | Description         | C32 Location                                                              | Code list                                                                                                                                                                                                        |
|-------------------------|---------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Provider ID             |                     | documentationOf.serviceEvent.performer.assignedEntity.id                  |                                                                                                                                                                                                                  |
| Date Range              | Not currently sent. | documentationOf.serviceEvent.performer.time                               |                                                                                                                                                                                                                  |
| Provider Role Coded     |                     | documentationOf.serviceEvent.performer.functionCode                       | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83329000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83329000</a> |
| Provider Role Free Text |                     | documentationOf.serviceEvent.performer.functionCode.originalText          |                                                                                                                                                                                                                  |
| Provider Type           |                     | documentationOf.serviceEvent.performer.assignedEntity.code                | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83341000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83341000</a> |
| Provider Address        |                     | documentationOf.serviceEvent.performer.assignedEntity.addr                |                                                                                                                                                                                                                  |
| Provider Phone          |                     | documentationOf.serviceEvent.performer.assignedEntity.telecom             |                                                                                                                                                                                                                  |
| Provider Email          |                     | documentationOf.serviceEvent.performer.assignedEntity.telecom             |                                                                                                                                                                                                                  |
| Provider Name           |                     | documentationOf.serviceEvent.performer.assignedEntity.assignedPerson.name |                                                                                                                                                                                                                  |
| Provider's Patient ID   |                     | documentationOf.serviceEvent.performer.assignedEntity.patient.id          |                                                                                                                                                                                                                  |

## 12.6.5 Condition

| Data Element          | Description         | C32 Location                                                                                                           | Code list                                                                                                                                                                                                        |
|-----------------------|---------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem Date          |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.effectiveTime                       |                                                                                                                                                                                                                  |
| Problem Type          |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.code                                | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83363000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83363000</a> |
| Problem Name          |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.text                                |                                                                                                                                                                                                                  |
| Problem Code          | Not currently sent. | component.structuredBody.component.section.entry.act.entryRelationship.observation.value                               | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83363000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83363000</a> |
| Treating Provider     |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.performer.assignedEntity            |                                                                                                                                                                                                                  |
| Problem Status        |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.entryRelationship.observation.value | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=86715000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=86715000</a> |
| Problem Health Status | Not currently sent. |                                                                                                                        |                                                                                                                                                                                                                  |
| Episode Observations  | Not currently sent. |                                                                                                                        |                                                                                                                                                                                                                  |
| Patient Awareness     | Not currently sent. |                                                                                                                        |                                                                                                                                                                                                                  |
| ICD-9 Code            |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.value.code                          |                                                                                                                                                                                                                  |
| ICD-9 Description     |                     | component.structuredBody.component.section.entry.act.entryRelationship.observation.value.displayName                   |                                                                                                                                                                                                                  |

### 12.6.6 Allergy

| Data Element       | Description         | C32 Location                                                                                                     | Code list                                                                                                                                                                                                        |
|--------------------|---------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Adverse Event Date |                     | component.structuredBody.component.section.entry.observation.effectiveTime                                       |                                                                                                                                                                                                                  |
| Adverse Event Type |                     | component.structuredBody.component.section.entry.observation.code                                                | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=84255000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=84255000</a> |
| Product Free Text  |                     | component.structuredBody.component.section.entry.observation.participant.participantRole.playingEntity.name      |                                                                                                                                                                                                                  |
| Product Code       | Not currently sent. | component.structuredBody.component.section.entry.observation.participant.participantRole.playingEntity.code      |                                                                                                                                                                                                                  |
| Reaction Free Text |                     | component.structuredBody.component.section.entry.observation.entryRelationship.observation.text                  |                                                                                                                                                                                                                  |
| Reaction Code      | Not currently sent. | component.structuredBody.component.section.entry.observation.entryRelationship.observation.code                  |                                                                                                                                                                                                                  |
| Severity Free Text | Not currently sent. |                                                                                                                  |                                                                                                                                                                                                                  |
| Severity Coded     | Not currently sent. |                                                                                                                  |                                                                                                                                                                                                                  |
| Alert Status       | Not currently sent. |                                                                                                                  |                                                                                                                                                                                                                  |
| Interventions      | Not currently sent. |                                                                                                                  |                                                                                                                                                                                                                  |
| ID                 |                     | component.structuredBody.component.section.entry.observation.id.extension                                        |                                                                                                                                                                                                                  |
| NDC                |                     | component.structuredBody.component.section.entry.observation.participant.participantRole.playingEntity.code.code |                                                                                                                                                                                                                  |

### 12.6.7 Encounter

| Data Element                | Description | C32 Location                                                                                              | Code list                                                                                                                                                                                                            |
|-----------------------------|-------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Encounter ID                |             | component.structuredBody.component.section.entry.encounter.id                                             |                                                                                                                                                                                                                      |
| Encounter Type              |             | component.structuredBody.component.section.entry.encounter.code                                           | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=hitsp&amp;itemKey=83350000">http://ushik.ahrq.gov/ViewItemDetails?system=hitsp&amp;itemKey=83350000</a> |
| Encounter Free Text Type    |             | component.structuredBody.component.section.entry.encounter.text                                           |                                                                                                                                                                                                                      |
| Encounter Date/Time         |             | component.structuredBody.component.section.entry.encounter.effectiveTime                                  |                                                                                                                                                                                                                      |
| Encounter Provider          |             | component.structuredBody.component.section.entry.encounter.performer.assignedEntity.assignedPerson.name   |                                                                                                                                                                                                                      |
| Encounter Provider Clinic   |             | component.structuredBody.component.section.entry.encounter.participant.participantRole.playingEntity.name |                                                                                                                                                                                                                      |
| Encounter Provider Location |             | component.structuredBody.component.section.entry.encounter.participant.participantRole.playingEntity.name |                                                                                                                                                                                                                      |

### 12.6.8 Vital Sign

| Data Element       | Description | C32 Location                                                                                   | Code list                                                                                                                                                                                                        |
|--------------------|-------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Result ID          |             | component.structuredBody.component.section.entry.organizer.component.observation.id            |                                                                                                                                                                                                                  |
| Result Date/Time   |             | component.structuredBody.component.section.entry.organizer.component.observation.effectiveTime |                                                                                                                                                                                                                  |
| Vitals Result Type |             | component.structuredBody.component.section.entry.organizer.component.observation.code          | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83353000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83353000</a> |

| Data Element           | Description         | C32 Location                                                                                | Code list                                                                                                                                                                                                        |
|------------------------|---------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Result Status          |                     | component.structuredBody.component.section.entry.organizer.component.observation.statusCode | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83352000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83352000</a> |
| Result Value           |                     | component.structuredBody.component.section.entry.organizer.component.observation.value      |                                                                                                                                                                                                                  |
| Result Interpretation  | Not currently sent. |                                                                                             |                                                                                                                                                                                                                  |
| Result Reference Range | Not currently sent. |                                                                                             |                                                                                                                                                                                                                  |

### 12.6.9 Immunization

| Data Element             | Description                                                                 | C32 Location                                                                                                          | Code list |
|--------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------|
| Refusal                  | Attribute negationInd is "false" for an immunization, "true" for a refusal. | component.structuredBody.component.section.entry.substanceAdministration                                              |           |
| Administered Date        |                                                                             | component.structuredBody.component.section.entry.substanceAdministration.effectiveTime                                |           |
| Medication Series Number | Where the typeCode attribute of the entryRelationship element is "SUBJ."    | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.observation.value          |           |
| Reaction                 | Where the typeCode attribute of the entryRelationship element is "CAUS."    | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.observation.text           |           |
| Performer                |                                                                             | component.structuredBody.component.section.entry.substanceAdministration.performer.assignedEntity.assignedPerson.name |           |

| Data Element           | Description | C32 Location                                                                                                                                                       | Code list                                                                                                                                                                                                             |
|------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coded Product Name     |             | component.structuredBody<br>.component.section.entry.s<br>ubstanceAdministration.co<br>nsumable.manufacturedPr<br>oduct.manufacturedMateri<br>al.code              | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=57983000">http://ushik.ahrq.gov/V<br/>iewItemDetails?system=mdr&amp;itemKey=57983000</a> |
| Free Text Product Name |             | component.structuredBody<br>.component.section.entry.s<br>ubstanceAdministration.co<br>nsumable.manufacturedPr<br>oduct.manufacturedMateri<br>al.code.originalText |                                                                                                                                                                                                                       |
| Drug Manufacturer      |             | component.structuredBody<br>.component.section.entry.s<br>ubstanceAdministration.co<br>nsumable.manufacturedPr<br>oduct.manufacturerOrgani<br>zation.name          |                                                                                                                                                                                                                       |
| Lot Number             |             | component.structuredBody<br>.component.section.entry.s<br>ubstanceAdministration.co<br>nsumable.manufacturedPr<br>oduct.manufacturedMateri<br>al.lotNumberText     |                                                                                                                                                                                                                       |
| Refusal Reason         |             | component.structuredBody<br>.component.section.entry.s<br>ubstanceAdministration.en<br>tryRelationship.act.entryR<br>elationship.observation.co<br>de              | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=84260000">http://ushik.ahrq.gov/V<br/>iewItemDetails?system=mdr&amp;itemKey=84260000</a> |

### 12.6.10 Insurance Provider

| Data Element          | Description | C32 Location                                                                            | Code list                                                                                                                                                                                                             |
|-----------------------|-------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Group Number          |             | component.structuredBody.c<br>omponent.section.entry.act.e<br>ntryRelationship.act.id   |                                                                                                                                                                                                                       |
| Health Insurance Type |             | component.structuredBody.c<br>omponent.section.entry.act.e<br>ntryRelationship.act.code | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=25719000">http://ushik.ahrq.gov/V<br/>iewItemDetails?system=mdr&amp;itemKey=25719000</a> |

| Data Element                                     | Description                                                       | C32 Location                                                                                                                   | Code list                                                                                                                                                                                                         |
|--------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health Plan Insurance Information Source ID      | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Health Plan Insurance Information Source Address | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Health Plan Insurance Information Source Phone   | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Health Plan Insurance Information Source Email   | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Health Plan Insurance Information Source Name    | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Health Plan Coverage Dates                       | Where the typeCode attribute of the participant element is "COV." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.time                                    |                                                                                                                                                                                                                   |
| Member ID                                        | Where the typeCode attribute of the participant element is "COV." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.id                      |                                                                                                                                                                                                                   |
| Patient Relationship to Subscriber               | Where the typeCode attribute of the participant element is "COV." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.code                    | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83272000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83272000</a> |
| Patient Address                                  | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Patient Phone                                    | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Patient Email                                    | Not currently sent.                                               |                                                                                                                                |                                                                                                                                                                                                                   |
| Patient Name                                     | Where the typeCode attribute of the participant element is "COV." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.playingEntity.name      |                                                                                                                                                                                                                   |
| Patient Date of Birth                            | Where the typeCode attribute of the participant element is "COV." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.playingEntity.birthTime |                                                                                                                                                                                                                   |
| Financial Responsibility                         |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.assignedEntity.code                       | <a href="http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83368000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83368000</a>                                                       |
| Subscriber ID                                    | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.id                      |                                                                                                                                                                                                                   |

| Data Element                                           | Description                                                       | C32 Location                                                                                                                   | Code list |
|--------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| Subscriber Address                                     | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.addr                    |           |
| Subscriber Phone                                       | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.telecom                 |           |
| Subscriber Email Address                               | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.telecom                 |           |
| Subscriber Name                                        | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.playingEntity.name      |           |
| Subscriber Date of Birth                               | Where the typeCode attribute of the participant element is "HLD." | component.structuredBody.component.section.entry.act.entryRelationship.act.participant.participantRole.playingEntity.birthTime |           |
| Effective Date of Financial Responsibility (Guarantor) |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.time                                      |           |
| Financial Responsibility Party Address (Guarantor)     |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.assignedEntity.addr                       |           |
| Financial Responsibility Party Phone (Guarantor)       |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.assignedEntity.telecom                    |           |
| Financial Responsibility Party Email (Guarantor)       |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.assignedEntity.telecom                    |           |
| Financial Responsibility Party Name (Guarantor)        |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.performer.assignedEntity.assignedPerson.name        |           |
| Health Plan Name                                       |                                                                   | component.structuredBody.component.section.entry.act.entryRelationship.act.text                                                |           |

## 12.6.11 Procedure

| Data Element | Description                                                                  | C32 Location                                                                                                                                            | Code list |
|--------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Procedure ID |                                                                              | component.structuredBody.component.section.entry.procedure.id.extension                                                                                 |           |
| Date         |                                                                              | component.structuredBody.component.section.entry.procedure.effectiveTime.low.value                                                                      |           |
| Code         | Only the first significant ICD-9 code is reported in the coded data section. | component.structuredBody.component.section.entry.procedure.code.code                                                                                    |           |
| Description  |                                                                              | component.structuredBody.component.section.entry.procedure.text.reference.value                                                                         |           |
| Practitioner |                                                                              | component.structuredBody.component.section.entry.procedure.performer.assignedEntity.assignedPerson.name                                                 |           |
| Location     |                                                                              | component.structuredBody.component.section.entry.procedure.performer.assignedEntity.representedOrganization.asOrganizationPartOf.wholeOrganization.name |           |
| Clinic       |                                                                              | component.structuredBody.component.section.entry.procedure.performer.assignedEntity.representedOrganization.name                                        |           |

## 12.6.12 Medication

| Data Element                | Description         | C32 Location                                                                            | Code list |
|-----------------------------|---------------------|-----------------------------------------------------------------------------------------|-----------|
| Free Text Sig               |                     | component.structuredBody.component.section.entry.substanceAdministration.text.reference |           |
| Indicate Medication Stopped | Not currently sent. |                                                                                         |           |
| Administration Timing       | Not currently sent. |                                                                                         |           |

| Data Element           | Description         | C32 Location                                                                                                                                   | Code list                                                                                                                                                                                                       |
|------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency              |                     | component.structuredBody.component.section.entry.substanceAdministration.effectiveTime                                                         |                                                                                                                                                                                                                 |
| Interval               | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Duration               | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Route                  |                     | component.structuredBody.component.section.entry.substanceAdministration.routeCode                                                             | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83362000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83362000</a>  |
| Dose                   |                     | component.structuredBody.component.section.entry.substanceAdministration.doseQuantity                                                          |                                                                                                                                                                                                                 |
| Site                   | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Dose Restriction       | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Product Form           |                     | component.structuredBody.component.section.entry.substanceAdministration.administrativeUnitCode                                                | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83360000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83360000</a> |
| Delivery Method        | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Coded Product Name     |                     | component.structuredBody.component.section.entry.substanceAdministration.consumable.manufacturedProduct.manufacturedMaterial.code              | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=86654000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=86654000</a> |
| Coded Brand Name       | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |
| Free Text Product Name |                     | component.structuredBody.component.section.entry.substanceAdministration.consumable.manufacturedProduct.manufacturedMaterial.code.originalText |                                                                                                                                                                                                                 |
| Free Text Brand Name   | Not currently sent. |                                                                                                                                                |                                                                                                                                                                                                                 |

| Data Element          | Description                                                              | C32 Location                                                                                                                          | Code list                                                                                                                                                                                                     |
|-----------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drug Manufacturer     |                                                                          | component.structuredBody.component.section.entry.substanceAdministration.consumable.manufacturedProduct.manufacturerOrganization.name |                                                                                                                                                                                                               |
| Product Concentration | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Type of Medication    | Where the typeCode attribute of the entryRelationship element is "SUBJ." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.observation.code                           | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83359000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83359000</a> |
| Status of Medication  | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.observation.value                          | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83349000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83349000</a> |
| Indication            | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Patient Instructions  | Where the typeCode attribute of the entryRelationship element is "SUBJ." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.act.text                                   |                                                                                                                                                                                                               |
| Reaction              | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Vehicle               | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Dose Indicator        | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Order Number          | Not currently sent.                                                      |                                                                                                                                       |                                                                                                                                                                                                               |
| Fills                 | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.repeatNumber                        |                                                                                                                                                                                                               |
| Quantity              | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.quantity                            |                                                                                                                                                                                                               |

| Data Element               | Description                                                              | C32 Location                                                                                                                                            | Code list |
|----------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Order Expiration Date/Time | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.effectiveTime                                         |           |
| Order Date/Time            | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.author.time                                           |           |
| Ordering Provider          | Where the typeCode attribute of the entryRelationship element is "REFR." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.author.assignedAuthor.assignedPerson.name             |           |
| Fulfillment Instructions   | Not currently sent.                                                      |                                                                                                                                                         |           |
| Prescription Number        | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.id                                                    |           |
| Provider                   | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.performer.assignedEntity.representedOrganization.name |           |
| Location                   | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.performer.assignedEntity.addr                         |           |
| Dispense Date              | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.effectiveTime                                         |           |
| Quantity Dispensed         | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.quantity                                              |           |

| Data Element     | Description                                                              | C32 Location                                                                                                 | Code list                                                                                                                                                                                                      |
|------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fill Number      | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.sequenceNumber    |                                                                                                                                                                                                                |
| Fill Status      | Where the typeCode attribute of the entryRelationship element is "COMP." | component.structuredBody.component.section.entry.substanceAdministration.entryRelationship.supply.statusCode | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83357000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83357000</a> |
| Inpatient Status | Represented in the coded section as an "I" or "O" in the medication ID.  | component.structuredBody.component.section.entry.substanceAdministration.id.extension                        |                                                                                                                                                                                                                |
| Medication ID    |                                                                          | component.structuredBody.component.section.entry.substanceAdministration.id.extension                        |                                                                                                                                                                                                                |

### 12.6.13 Result

| Data Element     | Description | C32 Location                                                               | Code list                                                                                                                                                                                                       |
|------------------|-------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Result ID        |             | component.structuredBody.component.section.entry.observation.id            |                                                                                                                                                                                                                 |
| Result Date/Time |             | component.structuredBody.component.section.entry.observation.effectiveTime |                                                                                                                                                                                                                 |
| Result Type      |             | component.structuredBody.component.section.entry.observation.code          | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83243001">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83243001</a> |
| Result Status    |             | component.structuredBody.component.section.entry.observation.statusCode    | Go to the United States Health Information Web Page <a href="http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83352000">http://ushik.ahrq.gov/VViewItemDetails?system=mdr&amp;itemKey=83352000</a> |

| Data Element           | Description | C32 Location                                                                                      | Code list                                                                                                                                                                                                        |
|------------------------|-------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Result Value           |             | component.structuredBody.component.section.entry.observation.value                                |                                                                                                                                                                                                                  |
| Result Interpretation  |             | component.structuredBody.component.section.entry.observation.interpretationCode                   | Go to the United States Health Information Web Page<br><a href="http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83351000">http://ushik.ahrq.gov/ViewItemDetails?system=mdr&amp;itemKey=83351000</a> |
| Result Reference Range |             | component.structuredBody.component.section.entry.observation.referenceRange.observationRange.text |                                                                                                                                                                                                                  |

## 12.7 List of C32 Classes

A list of the new classes used within the C32 application is included below, broken up by sub-package. All of the specified class names exist within the package/namespace BJMD.

| Class Name                                                                                                                                                                                                                                                                        | Description                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BJMD.Audit.Application<br>BJMD.Audit.AuditLog<br>BJMD.Audit.View.C32<br>BJMD.Audit.View.Home<br>BJMD.Audit.View.Log<br>BJMD.Audit.View.Request<br>BJMD.Audit.View.Template                                                                                                        | Classes supporting capturing C32 documents as streams and storing them in Ensemble when the request for C32 generation came from the EHR GUI client. Includes the C32 Audit Log, which allows searching and displaying C32 requests and documents. |
| BJMD.C32Doc.CDA.AD<br>BJMD.C32Doc.CDA.ADXP<br>BJMD.C32Doc.CDA.ANY<br>BJMD.C32Doc.CDA.ANYNonNull<br>BJMD.C32Doc.CDA.ActClass<br>BJMD.C32Doc.CDA.ActClassComposition<br>BJMD.C32Doc.CDA.ActClassCondition<br>BJMD.C32Doc.CDA.ActClassContract<br>BJMD.C32Doc.CDA.ActClassControlAct | Automatically generated classes that support CDA R2 and the CCD/C32 schema.                                                                                                                                                                        |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Description |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.ActClassDocument<br>BJMD.C32Doc.CDA.ActClassEntry<br>BJMD.C32Doc.CDA.ActClassExtract<br>BJMD.C32Doc.CDA.ActClassFinancialContract<br>BJMD.C32Doc.CDA.ActClassObservation<br>BJMD.C32Doc.CDA.ActClassObservationSeries<br>BJMD.C32Doc.CDA.ActClassOrganizer<br>BJMD.C32Doc.CDA.ActClassPublicHealthCase<br>BJMD.C32Doc.CDA.ActClassROI<br>BJMD.C32Doc.CDA.ActClassRoot<br>BJMD.C32Doc.CDA.ActClassSupply<br>BJMD.C32Doc.CDA.ActClinicalDocument<br>BJMD.C32Doc.CDA.ActContainer<br>BJMD.C32Doc.CDA.ActMood<br>BJMD.C32Doc.CDA.ActMoodCompletionTrack<br>BJMD.C32Doc.CDA.ActMoodIntent<br>BJMD.C32Doc.CDA.ActMoodPredicate<br>BJMD.C32Doc.CDA.ActRelationshipAccounting<br>BJMD.C32Doc.CDA.ActRelationshipConditional<br>BJMD.C32Doc.CDA.ActRelationshipCostTracking<br>BJMD.C32Doc.CDA.ActRelationshipExcerpt<br>BJMD.C32Doc.CDA.ActRelationshipFulfills<br>BJMD.C32Doc.CDA.ActRelationshipHasComponent<br>BJMD.C32Doc.CDA.ActRelationshipObjective<br>BJMD.C32Doc.CDA.ActRelationshipOutcome<br>BJMD.C32Doc.CDA.ActRelationshipPertains<br>BJMD.C32Doc.CDA.ActRelationshipPosting<br>BJMD.C32Doc.CDA.ActRelationshipReason<br>BJMD.C32Doc.CDA.ActRelationshipReplacement<br>BJMD.C32Doc.CDA.ActRelationshipSequel<br>BJMD.C32Doc.CDA.ActRelationshipType<br>BJMD.C32Doc.CDA.AdditionalLocator<br>BJMD.C32Doc.CDA.AddressPartType<br>BJMD.C32Doc.CDA.AddressUse<br>BJMD.C32Doc.CDA.ApplicationMediaType<br>BJMD.C32Doc.CDA.AskedButUnknown<br>BJMD.C32Doc.CDA.AudioMediaType<br>BJMD.C32Doc.CDA.BIN<br>BJMD.C32Doc.CDA.BL1<br>BJMD.C32Doc.CDA.BN1<br>BJMD.C32Doc.CDA.BXITCD<br>BJMD.C32Doc.CDA.BXITIVLPQ<br>BJMD.C32Doc.CDA.BinaryDataEncoding<br>BJMD.C32Doc.CDA.BuildingNumber |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Description |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.CD<br>BJMD.C32Doc.CDA.CE<br>BJMD.C32Doc.CDA.CR<br>BJMD.C32Doc.CDA.CS1<br>BJMD.C32Doc.CDA.CV<br>BJMD.C32Doc.CDA.CalendarCycle<br>BJMD.C32Doc.CDA.CalendarCycleOneLetter<br>BJMD.C32Doc.CDA.CalendarCycleTwoLetter<br>BJMD.C32Doc.CDA.Classes<br>BJMD.C32Doc.CDA.CommunicationFunctionType<br>BJMD.C32Doc.CDA.CompressionAlgorithm<br>BJMD.C32Doc.CDA.ContextControl<br>BJMD.C32Doc.CDA.ContextControlAdditive<br>BJMD.C32Doc.CDA.ContextControlNonPropagating<br>BJMD.C32Doc.CDA.ContextControlOverriding<br>BJMD.C32Doc.CDA.ContextControlPropagating<br>BJMD.C32Doc.CDA.Currency<br>BJMD.C32Doc.CDA.DeliveryAddressLine<br>BJMD.C32Doc.CDA.ED<br>BJMD.C32Doc.CDA.EIVL.event<br>BJMD.C32Doc.CDA.EIVLPPDTS<br>BJMD.C32Doc.CDA.EIVLTS<br>BJMD.C32Doc.CDA.EN<br>BJMD.C32Doc.CDA.ENXP<br>BJMD.C32Doc.CDA.EntityClass<br>BJMD.C32Doc.CDA.EntityClassContainer<br>BJMD.C32Doc.CDA.EntityClassDevice<br>BJMD.C32Doc.CDA.EntityClassLivingSubject<br>BJMD.C32Doc.CDA.EntityClassManufacturedMaterial<br>BJMD.C32Doc.CDA.EntityClassMaterial<br>BJMD.C32Doc.CDA.EntityClassNonPersonLivingSubject<br>BJMD.C32Doc.CDA.EntityClassOrganization<br>BJMD.C32Doc.CDA.EntityClassPlace<br>BJMD.C32Doc.CDA.EntityClassRoot<br>BJMD.C32Doc.CDA.EntityDeterminer<br>BJMD.C32Doc.CDA.EntityDeterminerDetermined<br>BJMD.C32Doc.CDA.EntityNamePartQualifier<br>BJMD.C32Doc.CDA.EntityNamePartType<br>BJMD.C32Doc.CDA.EntityNameSearchUse<br>BJMD.C32Doc.CDA.EntityNameUse<br>BJMD.C32Doc.CDA.GLISTPQ<br>BJMD.C32Doc.CDA.GLISTTS<br>BJMD.C32Doc.CDA.GregorianCalendarCycle<br>BJMD.C32Doc.CDA.HXITCE |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.HXITPQ<br>BJMD.C32Doc.CDA.HomeAddressUse<br>BJMD.C32Doc.CDA.II<br>BJMD.C32Doc.CDA.INT1<br>BJMD.C32Doc.CDA.IVLINT<br>BJMD.C32Doc.CDA.IVLMO<br>BJMD.C32Doc.CDA.IVLPPDPQ<br>BJMD.C32Doc.CDA.IVLPPDTS<br>BJMD.C32Doc.CDA.IVLPQ<br>BJMD.C32Doc.CDA.IVLRAL<br>BJMD.C32Doc.CDA.IVLT<br>BJMD.C32Doc.CDA.IVXBINT<br>BJMD.C32Doc.CDA.IVXBMO<br>BJMD.C32Doc.CDA.IVXBPPDPQ<br>BJMD.C32Doc.CDA.IVXBPPDTS<br>BJMD.C32Doc.CDA.IVXBPQ<br>BJMD.C32Doc.CDA.IVXBREAL<br>BJMD.C32Doc.CDA.IVXBTS<br>BJMD.C32Doc.CDA.ImageMediaType<br>BJMD.C32Doc.CDA.IntegrityCheckAlgorithm<br>BJMD.C32Doc.CDA.LicensedEntityRole<br>BJMD.C32Doc.CDA.MO<br>BJMD.C32Doc.CDA.MediaType<br>BJMD.C32Doc.CDA.ModelMediaType<br>BJMD.C32Doc.CDA.MultipartMediaType<br>BJMD.C32Doc.CDA.NamePseudonymUse<br>BJMD.C32Doc.CDA.NameRepresentationUse<br>BJMD.C32Doc.CDA.NoInformation<br>BJMD.C32Doc.CDA.NullFlavor<br>BJMD.C32Doc.CDA.ON<br>BJMD.C32Doc.CDA.OrganizationNamePartQualifier<br>BJMD.C32Doc.CDA.OrganizationNameUse<br>BJMD.C32Doc.CDA.Other<br>BJMD.C32Doc.CDA.PIVLPPDTS<br>BJMD.C32Doc.CDA.PIVLT<br>BJMD.C32Doc.CDA.PN<br>BJMD.C32Doc.CDA.POCDMT000040.Act<br>BJMD.C32Doc.CDA.POCDMT000040.AssignedAuthor<br>BJMD.C32Doc.CDA.POCDMT000040.AssignedCustodian<br>BJMD.C32Doc.CDA.POCDMT000040.AssignedEntity<br>BJMD.C32Doc.CDA.POCDMT000040.AssociatedEntity<br>BJMD.C32Doc.CDA.POCDMT000040.Authenticator<br>BJMD.C32Doc.CDA.POCDMT000040.Author<br>BJMD.C32Doc.CDA.POCDMT000040.AuthoringDevice |             |

| Class Name                                             | Description |
|--------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.POCDMT000040.Authorization             |             |
| BJMD.C32Doc.CDA.POCDMT000040.Birthplace                |             |
| BJMD.C32Doc.CDA.POCDMT000040.ClinicalDocument          |             |
| BJMD.C32Doc.CDA.POCDMT000040.Component1                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Component2                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Component3                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Component4                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Component5                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Consent                   |             |
| BJMD.C32Doc.CDA.POCDMT000040.Consumable                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Criterion                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.Custodian                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.CustodianOrganization     |             |
| BJMD.C32Doc.CDA.POCDMT000040.DataEnterer               |             |
| BJMD.C32Doc.CDA.POCDMT000040.Device                    |             |
| BJMD.C32Doc.CDA.POCDMT000040.DocumentationOf           |             |
| BJMD.C32Doc.CDA.POCDMT000040.EncompassingEncounter     |             |
| BJMD.C32Doc.CDA.POCDMT000040.Encounter                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.EncounterParticipant      |             |
| BJMD.C32Doc.CDA.POCDMT000040.Entity                    |             |
| BJMD.C32Doc.CDA.POCDMT000040.Entry                     |             |
| BJMD.C32Doc.CDA.POCDMT000040.EntryRelationship         |             |
| BJMD.C32Doc.CDA.POCDMT000040.ExternalAct               |             |
| BJMD.C32Doc.CDA.POCDMT000040.ExternalDocument          |             |
| BJMD.C32Doc.CDA.POCDMT000040.ExternalObservation       |             |
| BJMD.C32Doc.CDA.POCDMT000040.ExternalProcedure         |             |
| BJMD.C32Doc.CDA.POCDMT000040.Guardian                  |             |
| BJMD.C32Doc.CDA.POCDMT000040.HealthCareFacility        |             |
| BJMD.C32Doc.CDA.POCDMT000040.InFulfillmentOf           |             |
| BJMD.C32Doc.CDA.POCDMT000040.Informant12               |             |
| BJMD.C32Doc.CDA.POCDMT000040.InformationRecipient      |             |
| BJMD.C32Doc.CDA.POCDMT000040.InfrastructureRoot.typeId |             |
| BJMD.C32Doc.CDA.POCDMT000040.IntendedRecipient         |             |
| BJMD.C32Doc.CDA.POCDMT000040.LabeledDrug               |             |
| BJMD.C32Doc.CDA.POCDMT000040.LanguageCommunication     |             |
| BJMD.C32Doc.CDA.POCDMT000040.LegalAuthenticator        |             |
| BJMD.C32Doc.CDA.POCDMT000040.Location                  |             |
| BJMD.C32Doc.CDA.POCDMT000040.MaintainedEntity          |             |
| BJMD.C32Doc.CDA.POCDMT000040.ManufacturedProduct       |             |
| BJMD.C32Doc.CDA.POCDMT000040.Material                  |             |
| BJMD.C32Doc.CDA.POCDMT000040.NonXMLBody                |             |
| BJMD.C32Doc.CDA.POCDMT000040.Observation               |             |
| BJMD.C32Doc.CDA.POCDMT000040.ObservationMedia          |             |
| BJMD.C32Doc.CDA.POCDMT000040.ObservationRange          |             |

| Class Name                                           | Description |
|------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.POCDMT000040.Order                   |             |
| BJMD.C32Doc.CDA.POCDMT000040.Organization            |             |
| BJMD.C32Doc.CDA.POCDMT000040.OrganizationPartOf      |             |
| BJMD.C32Doc.CDA.POCDMT000040.Organizer               |             |
| BJMD.C32Doc.CDA.POCDMT000040.ParentDocument          |             |
| BJMD.C32Doc.CDA.POCDMT000040.Participant1            |             |
| BJMD.C32Doc.CDA.POCDMT000040.Participant2            |             |
| BJMD.C32Doc.CDA.POCDMT000040.ParticipantRole         |             |
| BJMD.C32Doc.CDA.POCDMT000040.Patient                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.PatientRole             |             |
| BJMD.C32Doc.CDA.POCDMT000040.Performer1              |             |
| BJMD.C32Doc.CDA.POCDMT000040.Performer2              |             |
| BJMD.C32Doc.CDA.POCDMT000040.Person                  |             |
| BJMD.C32Doc.CDA.POCDMT000040.Place                   |             |
| BJMD.C32Doc.CDA.POCDMT000040.PlayingEntity           |             |
| BJMD.C32Doc.CDA.POCDMT000040.Precondition            |             |
| BJMD.C32Doc.CDA.POCDMT000040.Procedure               |             |
| BJMD.C32Doc.CDA.POCDMT000040.Product                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.RecordTarget            |             |
| BJMD.C32Doc.CDA.POCDMT000040.Reference               |             |
| BJMD.C32Doc.CDA.POCDMT000040.ReferenceRange          |             |
| BJMD.C32Doc.CDA.POCDMT000040.RegionOfInterest        |             |
| BJMD.C32Doc.CDA.POCDMT000040.RegionOfInterest.value  |             |
| BJMD.C32Doc.CDA.POCDMT000040.RelatedDocument         |             |
| BJMD.C32Doc.CDA.POCDMT000040.RelatedEntity           |             |
| BJMD.C32Doc.CDA.POCDMT000040.RelatedSubject          |             |
| BJMD.C32Doc.CDA.POCDMT000040.ResponsibleParty        |             |
| BJMD.C32Doc.CDA.POCDMT000040.Section                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.ServiceEvent            |             |
| BJMD.C32Doc.CDA.POCDMT000040.Specimen                |             |
| BJMD.C32Doc.CDA.POCDMT000040.SpecimenRole            |             |
| BJMD.C32Doc.CDA.POCDMT000040.StructuredBody          |             |
| BJMD.C32Doc.CDA.POCDMT000040.Subject                 |             |
| BJMD.C32Doc.CDA.POCDMT000040.SubjectPerson           |             |
| BJMD.C32Doc.CDA.POCDMT000040.SubstanceAdministration |             |
| BJMD.C32Doc.CDA.POCDMT000040.Supply                  |             |
| BJMD.C32Doc.CDA.PDPQ                                 |             |
| BJMD.C32Doc.CDA.PPDTS                                |             |
| BJMD.C32Doc.CDA.PQ                                   |             |
| BJMD.C32Doc.CDA.PQR                                  |             |
| BJMD.C32Doc.CDA.ParticipationAncillary               |             |
| BJMD.C32Doc.CDA.ParticipationIndirectTarget          |             |
| BJMD.C32Doc.CDA.ParticipationInformationGenerator    |             |
| BJMD.C32Doc.CDA.ParticipationInformationRecipient    |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Description |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.ParticipationPhysicalPerformer<br>BJMD.C32Doc.CDA.ParticipationTargetDevice<br>BJMD.C32Doc.CDA.ParticipationTargetDirect<br>BJMD.C32Doc.CDA.ParticipationTargetLocation<br>BJMD.C32Doc.CDA.ParticipationTargetSubject<br>BJMD.C32Doc.CDA.ParticipationType<br>BJMD.C32Doc.CDA.ParticipationVerifier<br>BJMD.C32Doc.CDA.PersonNamePartAffixTypes<br>BJMD.C32Doc.CDA.PersonNamePartChangeQualifier<br>BJMD.C32Doc.CDA.PersonNamePartMiscQualifier<br>BJMD.C32Doc.CDA.PersonNamePartQualifier<br>BJMD.C32Doc.CDA.PersonNameUse<br>BJMD.C32Doc.CDA.PostalAddressUse<br>BJMD.C32Doc.CDA.ProbabilityDistributionType<br>BJMD.C32Doc.CDA.QTY<br>BJMD.C32Doc.CDA.REAL1<br>BJMD.C32Doc.CDA.RTOMOPQ<br>BJMD.C32Doc.CDA.RTOPQPQ<br>BJMD.C32Doc.CDA.RTOQTYQTY<br>BJMD.C32Doc.CDA.RelatedLinkType<br>BJMD.C32Doc.CDA.RoleClass<br>BJMD.C32Doc.CDA.RoleClassAgent<br>BJMD.C32Doc.CDA.RoleClassAssignedEntity<br>BJMD.C32Doc.CDA.RoleClassAssociative<br>BJMD.C32Doc.CDA.RoleClassContact<br>BJMD.C32Doc.CDA.RoleClassDistributedMaterial<br>BJMD.C32Doc.CDA.RoleClassEmployee<br>BJMD.C32Doc.CDA.RoleClassInactiveIngredient<br>BJMD.C32Doc.CDA.RoleClassIngredientEntity<br>BJMD.C32Doc.CDA.RoleClassInvestigationSubject<br>BJMD.C32Doc.CDA.RoleClassIsSpeciesEntity<br>BJMD.C32Doc.CDA.RoleClassLocatedEntity<br>BJMD.C32Doc.CDA.RoleClassManufacturedProduct<br>BJMD.C32Doc.CDA.RoleClassMutualRelationship<br>BJMD.C32Doc.CDA.RoleClassOntological<br>BJMD.C32Doc.CDA.RoleClassPartitive<br>BJMD.C32Doc.CDA.RoleClassPassive<br>BJMD.C32Doc.CDA.RoleClassRelationshipFormal<br>BJMD.C32Doc.CDA.RoleClassRoot<br>BJMD.C32Doc.CDA.RoleClassServiceDeliveryLocation<br>BJMD.C32Doc.CDA.RoleClassSpecimen<br>BJMD.C32Doc.CDA.RoleLinkType<br>BJMD.C32Doc.CDA.SC<br>BJMD.C32Doc.CDA.SLISTPQ |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Description |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.SLISTTS<br>BJMD.C32Doc.CDA.ST1<br>BJMD.C32Doc.CDA.SXCMCD<br>BJMD.C32Doc.CDA.SXCMINT<br>BJMD.C32Doc.CDA.SXCMMO<br>BJMD.C32Doc.CDA.SXCMPPDPQ<br>BJMD.C32Doc.CDA.SXCMPPDTS<br>BJMD.C32Doc.CDA.SXCMPQ<br>BJMD.C32Doc.CDA.SXCMREAL<br>BJMD.C32Doc.CDA.SXCMTS<br>BJMD.C32Doc.CDA.SXPRTS<br>BJMD.C32Doc.CDA.SetOperator<br>BJMD.C32Doc.CDA.State<br>BJMD.C32Doc.CDA.StreetAddressLine<br>BJMD.C32Doc.CDA.StreetName<br>BJMD.C32Doc.CDA.StrucDoc.Br<br>BJMD.C32Doc.CDA.StrucDoc.Caption<br>BJMD.C32Doc.CDA.StrucDoc.Col<br>BJMD.C32Doc.CDA.StrucDoc.Colgroup<br>BJMD.C32Doc.CDA.StrucDoc.Content<br>BJMD.C32Doc.CDA.StrucDoc.Footnote<br>BJMD.C32Doc.CDA.StrucDoc.FootnoteRef<br>BJMD.C32Doc.CDA.StrucDoc.Item<br>BJMD.C32Doc.CDA.StrucDoc.LinkHtml<br>BJMD.C32Doc.CDA.StrucDoc.List<br>BJMD.C32Doc.CDA.StrucDoc.Paragraph<br>BJMD.C32Doc.CDA.StrucDoc.RenderMultiMedia<br>BJMD.C32Doc.CDA.StrucDoc.Sub<br>BJMD.C32Doc.CDA.StrucDoc.Sup<br>BJMD.C32Doc.CDA.StrucDoc.Table<br>BJMD.C32Doc.CDA.StrucDoc.Tbody<br>BJMD.C32Doc.CDA.StrucDoc.Td<br>BJMD.C32Doc.CDA.StrucDoc.Text<br>BJMD.C32Doc.CDA.StrucDoc.Tfoot<br>BJMD.C32Doc.CDA.StrucDoc.Th<br>BJMD.C32Doc.CDA.StrucDoc.Thead<br>BJMD.C32Doc.CDA.StrucDoc.Title<br>BJMD.C32Doc.CDA.StrucDoc.TitleContent<br>BJMD.C32Doc.CDA.StrucDoc.TitleFootnote<br>BJMD.C32Doc.CDA.StrucDoc.Tr<br>BJMD.C32Doc.CDA.TEL<br>BJMD.C32Doc.CDA.TN<br>BJMD.C32Doc.CDA.TS1<br>BJMD.C32Doc.CDA.TelecommunicationAddressUse |             |

| Class Name                                         | Description |
|----------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.TemporallyPertains                 |             |
| BJMD.C32Doc.CDA.TextMediaType                      |             |
| BJMD.C32Doc.CDA.TimingEvent                        |             |
| BJMD.C32Doc.CDA.URL1                               |             |
| BJMD.C32Doc.CDA.URLScheme                          |             |
| BJMD.C32Doc.CDA.UVPTS                              |             |
| BJMD.C32Doc.CDA.Unknown                            |             |
| BJMD.C32Doc.CDA.VideoMediaType                     |             |
| BJMD.C32Doc.CDA.WorkPlaceAddressUse                |             |
| BJMD.C32Doc.CDA.adxp.additionalLocator             |             |
| BJMD.C32Doc.CDA.adxp.buildingNumberSuffix          |             |
| BJMD.C32Doc.CDA.adxp.careOf                        |             |
| BJMD.C32Doc.CDA.adxp.censusTract                   |             |
| BJMD.C32Doc.CDA.adxp.city                          |             |
| BJMD.C32Doc.CDA.adxp.country                       |             |
| BJMD.C32Doc.CDA.adxp.county                        |             |
| BJMD.C32Doc.CDA.adxp.delimiter                     |             |
| BJMD.C32Doc.CDA.adxp.deliveryAddressLine           |             |
| BJMD.C32Doc.CDA.adxp.deliveryInstallationArea      |             |
| BJMD.C32Doc.CDA.adxp.deliveryInstallationQualifier |             |
| BJMD.C32Doc.CDA.adxp.deliveryInstallationType      |             |
| BJMD.C32Doc.CDA.adxp.deliveryMode                  |             |
| BJMD.C32Doc.CDA.adxp.deliveryModelIdentifier       |             |
| BJMD.C32Doc.CDA.adxp.direction                     |             |
| BJMD.C32Doc.CDA.adxp.houseNumber                   |             |
| BJMD.C32Doc.CDA.adxp.houseNumberNumeric            |             |
| BJMD.C32Doc.CDA.adxp.postBox                       |             |
| BJMD.C32Doc.CDA.adxp.postalCode                    |             |
| BJMD.C32Doc.CDA.adxp.precinct                      |             |
| BJMD.C32Doc.CDA.adxp.state                         |             |
| BJMD.C32Doc.CDA.adxp.streetAddressLine             |             |
| BJMD.C32Doc.CDA.adxp.streetName                    |             |
| BJMD.C32Doc.CDA.adxp.streetNameBase                |             |
| BJMD.C32Doc.CDA.adxp.streetNameType                |             |
| BJMD.C32Doc.CDA.adxp.unitID                        |             |
| BJMD.C32Doc.CDA.adxp.unitType                      |             |
| BJMD.C32Doc.CDA.bin1                               |             |
| BJMD.C32Doc.CDA.bl                                 |             |
| BJMD.C32Doc.CDA.bn                                 |             |
| BJMD.C32Doc.CDA.cs                                 |             |
| BJMD.C32Doc.CDA.en.delimiter                       |             |
| BJMD.C32Doc.CDA.en.family                          |             |
| BJMD.C32Doc.CDA.en.given                           |             |
| BJMD.C32Doc.CDA.en.prefix                          |             |

| Class Name                                        | Description |
|---------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.en.suffix                         |             |
| BJMD.C32Doc.CDA.hasSupport                        |             |
| BJMD.C32Doc.CDA.int                               |             |
| BJMD.C32Doc.CDA.listint                           |             |
| BJMD.C32Doc.CDA.oid                               |             |
| BJMD.C32Doc.CDA.probability                       |             |
| BJMD.C32Doc.CDA.real                              |             |
| BJMD.C32Doc.CDA.ruid                              |             |
| BJMD.C32Doc.CDA.setEntityNamePartQualifier        |             |
| BJMD.C32Doc.CDA.setEntityNameUse                  |             |
| BJMD.C32Doc.CDA.setPostalAddressUse               |             |
| BJMD.C32Doc.CDA.setTelecommunicationAddressUse    |             |
| BJMD.C32Doc.CDA.st                                |             |
| BJMD.C32Doc.CDA.thumbnail                         |             |
| BJMD.C32Doc.CDA.ts                                |             |
| BJMD.C32Doc.CDA.uid                               |             |
| BJMD.C32Doc.CDA.url                               |             |
| BJMD.C32Doc.CDA.uuid                              |             |
| BJMD.C32Doc.CDA.xActClassDocumentEntryAct         |             |
| BJMD.C32Doc.CDA.xActClassDocumentEntryOrganizer   |             |
| BJMD.C32Doc.CDA.xActMoodDefEvn                    |             |
| BJMD.C32Doc.CDA.xActMoodDefEvnRqoPrmsPrp          |             |
| BJMD.C32Doc.CDA.xActMoodDocumentObservation       |             |
| BJMD.C32Doc.CDA.xActMoodEvnOrdPrmsPrp             |             |
| BJMD.C32Doc.CDA.xActMoodIntentEvent               |             |
| BJMD.C32Doc.CDA.xActMoodOrdPrms                   |             |
| BJMD.C32Doc.CDA.xActMoodOrdPrmsEvn                |             |
| BJMD.C32Doc.CDA.xActMoodRqoPrpAptArq              |             |
| BJMD.C32Doc.CDA.xActRelationshipDocument          |             |
| BJMD.C32Doc.CDA.xActRelationshipEntry             |             |
| BJMD.C32Doc.CDA.xActRelationshipEntryRelationship |             |
| BJMD.C32Doc.CDA.xActRelationshipExternalReference |             |
| BJMD.C32Doc.CDA.xActRelationshipPatientTransport  |             |
| BJMD.C32Doc.CDA.xActRelationshipPertinentInfo     |             |
| BJMD.C32Doc.CDA.xDeterminerInstanceKind           |             |
| BJMD.C32Doc.CDA.xDocumentActMood                  |             |
| BJMD.C32Doc.CDA.xDocumentEncounterMood            |             |
| BJMD.C32Doc.CDA.xDocumentEntrySubject             |             |
| BJMD.C32Doc.CDA.xDocumentProcedureMood            |             |
| BJMD.C32Doc.CDA.xDocumentSubject                  |             |
| BJMD.C32Doc.CDA.xDocumentSubstanceMood            |             |
| BJMD.C32Doc.CDA.xEncounterParticipant             |             |
| BJMD.C32Doc.CDA.xEncounterPerformerParticipation  |             |
| BJMD.C32Doc.CDA.xEntityClassDocumentReceiving     |             |

| Class Name                                        | Description |
|---------------------------------------------------|-------------|
| BJMD.C32Doc.CDA.xEntityClassPersonOrOrgReceiving  |             |
| BJMD.C32Doc.CDA.xInformationRecipient             |             |
| BJMD.C32Doc.CDA.xInformationRecipientRole         |             |
| BJMD.C32Doc.CDA.xOrganizationNamePartType         |             |
| BJMD.C32Doc.CDA.xParticipationAuthorPerformer     |             |
| BJMD.C32Doc.CDA.xParticipationEntVrf              |             |
| BJMD.C32Doc.CDA.xParticipationPrfEntVrf           |             |
| BJMD.C32Doc.CDA.xParticipationVrfRespSprfWit      |             |
| BJMD.C32Doc.CDA.xPersonNamePartType               |             |
| BJMD.C32Doc.CDA.xRoleClassAccommodationRequestor  |             |
| BJMD.C32Doc.CDA.xRoleClassCoverage                |             |
| BJMD.C32Doc.CDA.xRoleClassCoverageInvoice         |             |
| BJMD.C32Doc.CDA.xRoleClassCredentialedEntity      |             |
| BJMD.C32Doc.CDA.xRoleClassPayeePolicyRelationship |             |
| BJMD.C32Doc.CDA.xServiceEventPerformer            |             |
| BJMD.C32Doc.SDTC.AD                               |             |
| BJMD.C32Doc.SDTC.ADXP                             |             |
| BJMD.C32Doc.SDTC.ANY                              |             |
| BJMD.C32Doc.SDTC.ANYNonNull                       |             |
| BJMD.C32Doc.SDTC.ActClass                         |             |
| BJMD.C32Doc.SDTC.ActClassComposition              |             |
| BJMD.C32Doc.SDTC.ActClassCondition                |             |
| BJMD.C32Doc.SDTC.ActClassContract                 |             |
| BJMD.C32Doc.SDTC.ActClassControlAct               |             |
| BJMD.C32Doc.SDTC.ActClassDocument                 |             |
| BJMD.C32Doc.SDTC.ActClassEntry                    |             |
| BJMD.C32Doc.SDTC.ActClassExtract                  |             |
| BJMD.C32Doc.SDTC.ActClassFinancialContract        |             |
| BJMD.C32Doc.SDTC.ActClassObservation              |             |
| BJMD.C32Doc.SDTC.ActClassObservationSeries        |             |
| BJMD.C32Doc.SDTC.ActClassOrganizer                |             |
| BJMD.C32Doc.SDTC.ActClassPublicHealthCase         |             |
| BJMD.C32Doc.SDTC.ActClassROI                      |             |
| BJMD.C32Doc.SDTC.ActClassRoot                     |             |
| BJMD.C32Doc.SDTC.ActClassSupply                   |             |
| BJMD.C32Doc.SDTC.ActClinicalDocument              |             |
| BJMD.C32Doc.SDTC.ActContainer                     |             |
| BJMD.C32Doc.SDTC.ActMood                          |             |
| BJMD.C32Doc.SDTC.ActMoodCompletionTrack           |             |
| BJMD.C32Doc.SDTC.ActMoodIntent                    |             |
| BJMD.C32Doc.SDTC.ActMoodPredicate                 |             |
| BJMD.C32Doc.SDTC.ActRelationshipAccounting        |             |
| BJMD.C32Doc.SDTC.ActRelationshipConditional       |             |
| BJMD.C32Doc.SDTC.ActRelationshipCostTracking      |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.ActRelationshipExcerpt<br>BJMD.C32Doc.SDTC.ActRelationshipFulfills<br>BJMD.C32Doc.SDTC.ActRelationshipHasComponent<br>BJMD.C32Doc.SDTC.ActRelationshipObjective<br>BJMD.C32Doc.SDTC.ActRelationshipOutcome<br>BJMD.C32Doc.SDTC.ActRelationshipPertains<br>BJMD.C32Doc.SDTC.ActRelationshipPosting<br>BJMD.C32Doc.SDTC.ActRelationshipReason<br>BJMD.C32Doc.SDTC.ActRelationshipReplacement<br>BJMD.C32Doc.SDTC.ActRelationshipSequel<br>BJMD.C32Doc.SDTC.ActRelationshipType<br>BJMD.C32Doc.SDTC.AdditionalLocator<br>BJMD.C32Doc.SDTC.AddressPartType<br>BJMD.C32Doc.SDTC.AddressUse<br>BJMD.C32Doc.SDTC.ApplicationMediaType<br>BJMD.C32Doc.SDTC.AskedButUnknown<br>BJMD.C32Doc.SDTC.AudioMediaType<br>BJMD.C32Doc.SDTC.BIN<br>BJMD.C32Doc.SDTC.BL1<br>BJMD.C32Doc.SDTC.BN1<br>BJMD.C32Doc.SDTC.BXITCD<br>BJMD.C32Doc.SDTC.BXITIVLPQ<br>BJMD.C32Doc.SDTC.BinaryDataEncoding<br>BJMD.C32Doc.SDTC.BuildingNumber<br>BJMD.C32Doc.SDTC.CD<br>BJMD.C32Doc.SDTC.CE<br>BJMD.C32Doc.SDTC.CR<br>BJMD.C32Doc.SDTC.CS1<br>BJMD.C32Doc.SDTC.CV<br>BJMD.C32Doc.SDTC.CalendarCycle<br>BJMD.C32Doc.SDTC.CalendarCycleOneLetter<br>BJMD.C32Doc.SDTC.CalendarCycleTwoLetter<br>BJMD.C32Doc.SDTC.Classes<br>BJMD.C32Doc.SDTC.CommunicationFunctionType<br>BJMD.C32Doc.SDTC.CompressionAlgorithm<br>BJMD.C32Doc.SDTC.ContextControl<br>BJMD.C32Doc.SDTC.ContextControlAdditive<br>BJMD.C32Doc.SDTC.ContextControlNonPropagating<br>BJMD.C32Doc.SDTC.ContextControlOverriding<br>BJMD.C32Doc.SDTC.ContextControlPropagating<br>BJMD.C32Doc.SDTC.Currency<br>BJMD.C32Doc.SDTC.DeliveryAddressLine<br>BJMD.C32Doc.SDTC.ED<br>BJMD.C32Doc.SDTC.EIVL.event |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Description |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.EIVLPPDTS<br>BJMD.C32Doc.SDTC.EIVLTS<br>BJMD.C32Doc.SDTC.EN<br>BJMD.C32Doc.SDTC.ENXP<br>BJMD.C32Doc.SDTC.EntityClass<br>BJMD.C32Doc.SDTC.EntityClassContainer<br>BJMD.C32Doc.SDTC.EntityClassDevice<br>BJMD.C32Doc.SDTC.EntityClassLivingSubject<br>BJMD.C32Doc.SDTC.EntityClassManufacturedMaterial<br>BJMD.C32Doc.SDTC.EntityClassMaterial<br>BJMD.C32Doc.SDTC.EntityClassNonPersonLivingSubject<br>BJMD.C32Doc.SDTC.EntityClassOrganization<br>BJMD.C32Doc.SDTC.EntityClassPlace<br>BJMD.C32Doc.SDTC.EntityClassRoot<br>BJMD.C32Doc.SDTC.EntityDeterminer<br>BJMD.C32Doc.SDTC.EntityDeterminerDetermined<br>BJMD.C32Doc.SDTC.EntityNamePartQualifier<br>BJMD.C32Doc.SDTC.EntityNamePartType<br>BJMD.C32Doc.SDTC.EntityNameSearchUse<br>BJMD.C32Doc.SDTC.EntityNameUse<br>BJMD.C32Doc.SDTC.GLISTPQ<br>BJMD.C32Doc.SDTC.GLISTTS<br>BJMD.C32Doc.SDTC.GregorianCalendarCycle<br>BJMD.C32Doc.SDTC.HXITCE<br>BJMD.C32Doc.SDTC.HXITPQ<br>BJMD.C32Doc.SDTC.HomeAddressUse<br>BJMD.C32Doc.SDTC.II<br>BJMD.C32Doc.SDTC.INT1<br>BJMD.C32Doc.SDTC.IVLINT<br>BJMD.C32Doc.SDTC.IVLMO<br>BJMD.C32Doc.SDTC.IVLPPDPQ<br>BJMD.C32Doc.SDTC.IVLPPDTS<br>BJMD.C32Doc.SDTC.IVLPQ<br>BJMD.C32Doc.SDTC.IVLRAL<br>BJMD.C32Doc.SDTC.IVLT<br>BJMD.C32Doc.SDTC.IVXBINT<br>BJMD.C32Doc.SDTC.IVXBMO<br>BJMD.C32Doc.SDTC.IVXBPPDPQ<br>BJMD.C32Doc.SDTC.IVXBPPDTS<br>BJMD.C32Doc.SDTC.IVXBPQ<br>BJMD.C32Doc.SDTC.IVXBREAL<br>BJMD.C32Doc.SDTC.IVXBTS<br>BJMD.C32Doc.SDTC.ImageMediaType<br>BJMD.C32Doc.SDTC.IntegrityCheckAlgorithm |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Description |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.LicensedEntityRole<br>BJMD.C32Doc.SDTC.MO<br>BJMD.C32Doc.SDTC.MediaType<br>BJMD.C32Doc.SDTC.ModelMediaType<br>BJMD.C32Doc.SDTC.MultipartMediaType<br>BJMD.C32Doc.SDTC.NamePseudonymUse<br>BJMD.C32Doc.SDTC.NameRepresentationUse<br>BJMD.C32Doc.SDTC.NoInformation<br>BJMD.C32Doc.SDTC.NullFlavor<br>BJMD.C32Doc.SDTC.ON<br>BJMD.C32Doc.SDTC.OrganizationNamePartQualifier<br>BJMD.C32Doc.SDTC.OrganizationNameUse<br>BJMD.C32Doc.SDTC.Other<br>BJMD.C32Doc.SDTC.PIVLPPDTS<br>BJMD.C32Doc.SDTC.PIVLTS<br>BJMD.C32Doc.SDTC.PDPQ<br>BJMD.C32Doc.SDTC.PDTS<br>BJMD.C32Doc.SDTC.PQ<br>BJMD.C32Doc.SDTC.PQR<br>BJMD.C32Doc.SDTC.ParticipationAncillary<br>BJMD.C32Doc.SDTC.ParticipationIndirectTarget<br>BJMD.C32Doc.SDTC.ParticipationInformationGenerator<br>BJMD.C32Doc.SDTC.ParticipationInformationRecipient<br>BJMD.C32Doc.SDTC.ParticipationPhysicalPerformer<br>BJMD.C32Doc.SDTC.ParticipationTargetDevice<br>BJMD.C32Doc.SDTC.ParticipationTargetDirect<br>BJMD.C32Doc.SDTC.ParticipationTargetLocation<br>BJMD.C32Doc.SDTC.ParticipationTargetSubject<br>BJMD.C32Doc.SDTC.ParticipationType<br>BJMD.C32Doc.SDTC.ParticipationVerifier<br>BJMD.C32Doc.SDTC.PersonNamePartAffixTypes<br>BJMD.C32Doc.SDTC.PersonNamePartChangeQualifier<br>BJMD.C32Doc.SDTC.PersonNamePartMiscQualifier<br>BJMD.C32Doc.SDTC.PersonNamePartQualifier<br>BJMD.C32Doc.SDTC.PersonNameUse<br>BJMD.C32Doc.SDTC.PostalAddressUse<br>BJMD.C32Doc.SDTC.ProbabilityDistributionType<br>BJMD.C32Doc.SDTC.QTY<br>BJMD.C32Doc.SDTC.REAL1<br>BJMD.C32Doc.SDTC.RTOMOPQ<br>BJMD.C32Doc.SDTC.RTOPQPQ<br>BJMD.C32Doc.SDTC.RTOQTYQTY<br>BJMD.C32Doc.SDTC.RelatedLinkType<br>BJMD.C32Doc.SDTC.RoleClass |             |

| Class Name                                        | Description |
|---------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.RoleClassAgent                   |             |
| BJMD.C32Doc.SDTC.RoleClassAssignedEntity          |             |
| BJMD.C32Doc.SDTC.RoleClassAssociative             |             |
| BJMD.C32Doc.SDTC.RoleClassContact                 |             |
| BJMD.C32Doc.SDTC.RoleClassDistributedMaterial     |             |
| BJMD.C32Doc.SDTC.RoleClassEmployee                |             |
| BJMD.C32Doc.SDTC.RoleClassInactiveIngredient      |             |
| BJMD.C32Doc.SDTC.RoleClassIngredientEntity        |             |
| BJMD.C32Doc.SDTC.RoleClassInvestigationSubject    |             |
| BJMD.C32Doc.SDTC.RoleClassIsSpeciesEntity         |             |
| BJMD.C32Doc.SDTC.RoleClassLocatedEntity           |             |
| BJMD.C32Doc.SDTC.RoleClassManufacturedProduct     |             |
| BJMD.C32Doc.SDTC.RoleClassMutualRelationship      |             |
| BJMD.C32Doc.SDTC.RoleClassOntological             |             |
| BJMD.C32Doc.SDTC.RoleClassPartitive               |             |
| BJMD.C32Doc.SDTC.RoleClassPassive                 |             |
| BJMD.C32Doc.SDTC.RoleClassRelationshipFormal      |             |
| BJMD.C32Doc.SDTC.RoleClassRoot                    |             |
| BJMD.C32Doc.SDTC.RoleClassServiceDeliveryLocation |             |
| BJMD.C32Doc.SDTC.RoleClassSpecimen                |             |
| BJMD.C32Doc.SDTC.RoleLinkType                     |             |
| BJMD.C32Doc.SDTC.SC                               |             |
| BJMD.C32Doc.SDTC.SLISTPQ                          |             |
| BJMD.C32Doc.SDTC.SLISTTS                          |             |
| BJMD.C32Doc.SDTC.ST1                              |             |
| BJMD.C32Doc.SDTC.SXCMCD                           |             |
| BJMD.C32Doc.SDTC.SXCMINT                          |             |
| BJMD.C32Doc.SDTC.SXCMMO                           |             |
| BJMD.C32Doc.SDTC.SXCMPPDPQ                        |             |
| BJMD.C32Doc.SDTC.SXCMPPDTS                        |             |
| BJMD.C32Doc.SDTC.SXCMPQ                           |             |
| BJMD.C32Doc.SDTC.SXCMREAL                         |             |
| BJMD.C32Doc.SDTC.SXCMTS                           |             |
| BJMD.C32Doc.SDTC.SXPRTS                           |             |
| BJMD.C32Doc.SDTC.SdtcAssignedEntity               |             |
| BJMD.C32Doc.SDTC.SdtcAssociatedEntity             |             |
| BJMD.C32Doc.SDTC.SdtcPatient                      |             |
| BJMD.C32Doc.SDTC.SdtcRelatedEntity                |             |
| BJMD.C32Doc.SDTC.SetOperator                      |             |
| BJMD.C32Doc.SDTC.State                            |             |
| BJMD.C32Doc.SDTC.StreetAddressLine                |             |
| BJMD.C32Doc.SDTC.StreetName                       |             |
| BJMD.C32Doc.SDTC.TEL                              |             |
| BJMD.C32Doc.SDTC.TN                               |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Description |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.TS1<br>BJMD.C32Doc.SDTC.TelecommunicationAddressUse<br>BJMD.C32Doc.SDTC.TemporallyPertains<br>BJMD.C32Doc.SDTC.TextMediaType<br>BJMD.C32Doc.SDTC.TimingEvent<br>BJMD.C32Doc.SDTC.URL1<br>BJMD.C32Doc.SDTC.URLScheme<br>BJMD.C32Doc.SDTC.UVPTS<br>BJMD.C32Doc.SDTC.Unknown<br>BJMD.C32Doc.SDTC.VideoMediaType<br>BJMD.C32Doc.SDTC.WorkPlaceAddressUse<br>BJMD.C32Doc.SDTC.adxp.additionalLocator<br>BJMD.C32Doc.SDTC.adxp.buildingNumberSuffix<br>BJMD.C32Doc.SDTC.adxp.careOf<br>BJMD.C32Doc.SDTC.adxp.censusTract<br>BJMD.C32Doc.SDTC.adxp.city<br>BJMD.C32Doc.SDTC.adxp.country<br>BJMD.C32Doc.SDTC.adxp.county<br>BJMD.C32Doc.SDTC.adxp.delimiter<br>BJMD.C32Doc.SDTC.adxp.deliveryAddressLine<br>BJMD.C32Doc.SDTC.adxp.deliveryInstallationArea<br>BJMD.C32Doc.SDTC.adxp.deliveryInstallationQualifier<br>BJMD.C32Doc.SDTC.adxp.deliveryInstallationType<br>BJMD.C32Doc.SDTC.adxp.deliveryMode<br>BJMD.C32Doc.SDTC.adxp.deliveryModelIdentifier<br>BJMD.C32Doc.SDTC.adxp.direction<br>BJMD.C32Doc.SDTC.adxp.houseNumber<br>BJMD.C32Doc.SDTC.adxp.houseNumberNumeric<br>BJMD.C32Doc.SDTC.adxp.postBox<br>BJMD.C32Doc.SDTC.adxp.postalCode<br>BJMD.C32Doc.SDTC.adxp.precinct<br>BJMD.C32Doc.SDTC.adxp.state<br>BJMD.C32Doc.SDTC.adxp.streetAddressLine<br>BJMD.C32Doc.SDTC.adxp.streetName<br>BJMD.C32Doc.SDTC.adxp.streetNameBase<br>BJMD.C32Doc.SDTC.adxp.streetNameType<br>BJMD.C32Doc.SDTC.adxp.unitID<br>BJMD.C32Doc.SDTC.adxp.unitType<br>BJMD.C32Doc.SDTC.bin1<br>BJMD.C32Doc.SDTC.bl<br>BJMD.C32Doc.SDTC.bn<br>BJMD.C32Doc.SDTC.cs<br>BJMD.C32Doc.SDTC.en.delimiter<br>BJMD.C32Doc.SDTC.en.family |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Description |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BJMD.C32Doc.SDTC.en.given<br>BJMD.C32Doc.SDTC.en.prefix<br>BJMD.C32Doc.SDTC.en.suffix<br>BJMD.C32Doc.SDTC.hasSupport<br>BJMD.C32Doc.SDTC.int<br>BJMD.C32Doc.SDTC.listint<br>BJMD.C32Doc.SDTC.oid<br>BJMD.C32Doc.SDTC.probability<br>BJMD.C32Doc.SDTC.real<br>BJMD.C32Doc.SDTC.ruid<br>BJMD.C32Doc.SDTC.setEntityNamePartQualifier<br>BJMD.C32Doc.SDTC.setEntityNameUse<br>BJMD.C32Doc.SDTC.setPostalAddressUse<br>BJMD.C32Doc.SDTC.setTelecommunicationAddressUse<br>BJMD.C32Doc.SDTC.st<br>BJMD.C32Doc.SDTC.thumbnail<br>BJMD.C32Doc.SDTC.ts<br>BJMD.C32Doc.SDTC.uid<br>BJMD.C32Doc.SDTC.url<br>BJMD.C32Doc.SDTC.uuid<br>BJMD.C32Doc.SDTC.xActClassDocumentEntryAct<br>BJMD.C32Doc.SDTC.xActClassDocumentEntryOrganizer<br>BJMD.C32Doc.SDTC.xActMoodDefEvn<br>BJMD.C32Doc.SDTC.xActMoodDefEvnRqoPrmsPrp<br>BJMD.C32Doc.SDTC.xActMoodDocumentObservation<br>BJMD.C32Doc.SDTC.xActMoodEvnOrdPrmsPrp<br>BJMD.C32Doc.SDTC.xActMoodIntentEvent<br>BJMD.C32Doc.SDTC.xActMoodOrdPrms<br>BJMD.C32Doc.SDTC.xActMoodOrdPrmsEvn<br>BJMD.C32Doc.SDTC.xActMoodRqoPrpAptArq<br>BJMD.C32Doc.SDTC.xActRelationshipDocument<br>BJMD.C32Doc.SDTC.xActRelationshipEntry<br>BJMD.C32Doc.SDTC.xActRelationshipEntryRelationship<br>BJMD.C32Doc.SDTC.xActRelationshipExternalReference<br>BJMD.C32Doc.SDTC.xActRelationshipPatientTransport<br>BJMD.C32Doc.SDTC.xActRelationshipPertinentInfo<br>BJMD.C32Doc.SDTC.xDeterminerInstanceKind<br>BJMD.C32Doc.SDTC.xDocumentActMood<br>BJMD.C32Doc.SDTC.xDocumentEncounterMood<br>BJMD.C32Doc.SDTC.xDocumentEntrySubject<br>BJMD.C32Doc.SDTC.xDocumentProcedureMood<br>BJMD.C32Doc.SDTC.xDocumentSubject<br>BJMD.C32Doc.SDTC.xDocumentSubstanceMood<br>BJMD.C32Doc.SDTC.xEncounterParticipant |             |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Description                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| BJMD.C32Doc.SDTC.xEncounterPerformerParticipation<br>BJMD.C32Doc.SDTC.xEntityClassDocumentReceiving<br>BJMD.C32Doc.SDTC.xEntityClassPersonOrOrgReceiving<br>BJMD.C32Doc.SDTC.xInformationRecipient<br>BJMD.C32Doc.SDTC.xInformationRecipientRole<br>BJMD.C32Doc.SDTC.xOrganizationNamePartType<br>BJMD.C32Doc.SDTC.xParticipationAuthorPerformer<br>BJMD.C32Doc.SDTC.xParticipationEntVrf<br>BJMD.C32Doc.SDTC.xParticipationPrfEntVrf<br>BJMD.C32Doc.SDTC.xParticipationVrfRespSprfWit<br>BJMD.C32Doc.SDTC.xPersonNamePartType<br>BJMD.C32Doc.SDTC.xRoleClassAccommodationRequestor<br>BJMD.C32Doc.SDTC.xRoleClassCoverage<br>BJMD.C32Doc.SDTC.xRoleClassCoverageInvoice<br>BJMD.C32Doc.SDTC.xRoleClassCredentialedEntity<br>BJMD.C32Doc.SDTC.xRoleClassPayeePolicyRelationship<br>BJMD.C32Doc.SDTC.xServiceEventPerformer                                                                                                                                                                                               |                                                                                        |
| BJMD.Install.PostInstallTask<br>BJMD.Install.PreInstallTask                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Classes that support installation of C Messaging software                              |
| BJMD.NIST.FileInboundAdapter<br>BJMD.NIST.FormatMethods<br>BJMD.NIST.Operation.ValidationWebServiceSOAP11porthttp<br>BJMD.NIST.Request.getAvailableValidationsRequest<br>BJMD.NIST.Request.validateDocumentRequest<br>BJMD.NIST.Response.getAvailableValidationsResponse<br>BJMD.NIST.Response.validateDocumentResponse<br>BJMD.NIST.ValidateC32BP<br>BJMD.NIST.ValidateC32BP.Context<br>BJMD.NIST.ValidateC32BP.ContextsysResponseHandlers<br>BJMD.NIST.ValidateC32BP.Thread1<br>BJMD.NIST.ValidateC32BP.Thread1sysChildThreads<br>BJMD.NIST.ValidateC32BP.Thread1sysPendingResponses<br>BJMD.NIST.ValidateC32BP.Thread1sysSyncResponses<br>BJMD.NIST.ValidateC32BPsysSynchronizedResponses<br>BJMD.NIST.ValidateC32BS<br>BJMD.NIST.ValidationWebServiceSOAP11porthttp<br>BJMD.NIST.ValidationWebServiceSOAP11porthttp.getAvailableValidations<br>BJMD.NIST.ValidationWebServiceSOAP11porthttp.validateDocument<br>BJMD.NIST.WSIndividualValidationResult<br>BJMD.NIST.WSSpecification<br>BJMD.NIST.WSValidationResults | Classes that support automated validation of C32 documents against the NIST validator. |

| Class Name                                            | Description                                                                                      |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| BJMD.Prod.AlertProcess                                | Classes supporting Ensemble Data Transformations (DTLs), alerts and generation of C32 documents. |
| BJMD.Prod.AlertProcess.Context                        |                                                                                                  |
| BJMD.Prod.AlertProcess.ContextsysResponseHandlers     |                                                                                                  |
| BJMD.Prod.AlertProcess.Thread1                        |                                                                                                  |
| BJMD.Prod.AlertProcess.Thread1sysChildThreads         |                                                                                                  |
| BJMD.Prod.AlertProcess.Thread1sysPendingResponses     |                                                                                                  |
| BJMD.Prod.AlertProcess.Thread1sysSyncResponses        |                                                                                                  |
| BJMD.Prod.AlertProcesssysSynchronizedResponses        |                                                                                                  |
| BJMD.Prod.Alerts                                      |                                                                                                  |
| BJMD.Prod.BuildC32Stream                              |                                                                                                  |
| BJMD.Prod.C32FileBO                                   |                                                                                                  |
| BJMD.Prod.CompiledRecordBS                            |                                                                                                  |
| BJMD.Prod.CompiledRecordInbound                       |                                                                                                  |
| BJMD.Prod.DTL.AllergyComponent                        |                                                                                                  |
| BJMD.Prod.DTL.AllergyEntry                            |                                                                                                  |
| BJMD.Prod.DTL.ClinicalDocument                        |                                                                                                  |
| BJMD.Prod.DTL.ConditionComponent                      |                                                                                                  |
| BJMD.Prod.DTL.ConditionEntry                          |                                                                                                  |
| BJMD.Prod.DTL.EncounterComponent                      |                                                                                                  |
| BJMD.Prod.DTL.EncounterEntry                          |                                                                                                  |
| BJMD.Prod.DTL.ExtractionCriteriaComponent             |                                                                                                  |
| BJMD.Prod.DTL.Functions                               |                                                                                                  |
| BJMD.Prod.DTL.HealthcareProviderDocumentationOf       |                                                                                                  |
| BJMD.Prod.DTL.HealthcareProviderPerformer             |                                                                                                  |
| BJMD.Prod.DTL.ImmunizationComponent                   |                                                                                                  |
| BJMD.Prod.DTL.ImmunizationEntry                       |                                                                                                  |
| BJMD.Prod.DTL.InsuranceProviderComponent              |                                                                                                  |
| BJMD.Prod.DTL.InsuranceProviderEntry                  |                                                                                                  |
| BJMD.Prod.DTL.MedFrequency                            |                                                                                                  |
| BJMD.Prod.DTL.MedicationComponent                     |                                                                                                  |
| BJMD.Prod.DTL.MedicationEntry                         |                                                                                                  |
| BJMD.Prod.DTL.ProcedureComponent                      |                                                                                                  |
| BJMD.Prod.DTL.ResultComponent                         |                                                                                                  |
| BJMD.Prod.DTL.ResultEntry                             |                                                                                                  |
| BJMD.Prod.DTL.VitalSignComponent                      |                                                                                                  |
| BJMD.Prod.DTL.VitalSignEntry                          |                                                                                                  |
| BJMD.Prod.ErrorRecordBS                               |                                                                                                  |
| BJMD.Prod.ErrorRecordInbound                          |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP                            |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.Context                    |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.ContextsysResponseHandlers |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.Thread1                    |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.Thread1sysChildThreads     |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.Thread1sysPendingResponses |                                                                                                  |
| BJMD.Prod.GenerateC32DocBP.Thread1sysSyncResponses    |                                                                                                  |
| BJMD.Prod.GenerateC32DocBPsysSynchronizedResponses    |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
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| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C32 Ensemble/Cache class development                                                             |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     |                                                                                                  |
| BJMD.Prod.GeneralC32EnsembleCache                     | C                                                                                                |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Description                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| BJMD.RespondingGatewayQueryService.ihe.Document<br>BJMD.RespondingGatewayQueryService.ihe.DocumentRequest<br>BJMD.RespondingGatewayQueryService.ihe.DocumentResponse<br>BJMD.RespondingGatewayQueryService.ihe.ProvideAndRegisterDocumentSetRequestType<br>BJMD.RespondingGatewayQueryService.ihe.RetrieveDocumentSetRequestType<br>BJMD.RespondingGatewayQueryService.ihe.RetrieveDocumentSetResponseType<br>BJMD.RespondingGatewayQueryService.lcm.AcceptObjectRequest<br>BJMD.RespondingGatewayQueryService.lcm.ApproveObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.DeprecateObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.RelocateObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.RemoveObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.SubmitObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.UndeprecateObjectsRequest<br>BJMD.RespondingGatewayQueryService.lcm.UpdateObjectsRequest<br>BJMD.RespondingGatewayQueryService.query.AdhocQueryQueryType<br>BJMD.RespondingGatewayQueryService.query.AssociationQueryType<br>BJMD.RespondingGatewayQueryService.query.AuditableEventQueryType<br>BJMD.RespondingGatewayQueryService.query.BooleanFilterType<br>BJMD.RespondingGatewayQueryService.query.BranchType<br>BJMD.RespondingGatewayQueryService.query.ClassificationNodeQueryType<br>BJMD.RespondingGatewayQueryService.query.ClassificationQueryType<br>BJMD.RespondingGatewayQueryService.query.ClassificationSchemeQueryType<br>BJMD.RespondingGatewayQueryService.query.CompoundFilterType<br>BJMD.RespondingGatewayQueryService.query.DateTimeFilterType<br>BJMD.RespondingGatewayQueryService.query.ExternalIdentifierQueryType<br>BJMD.RespondingGatewayQueryService.query.ExternalLinkQueryType<br><br>BJMD.RespondingGatewayQueryService.query.FederationQueryType<br>BJMD.RespondingGatewayQueryService.query.FilterQueryType<br>BJMD.RespondingGatewayQueryService.query.FilterType<br>BJMD.RespondingGatewayQueryService.query.FloatFilterType<br>BJMD.RespondingGatewayQueryService.query.IntegerFilterType<br>BJMD.RespondingGatewayQueryService.query.InternationalStringBranchType<br>BJMD.RespondingGatewayQueryService.query.NotificationQueryType<br>BJMD.RespondingGatewayQueryService.query.OrganizationQueryType<br>BJMD.RespondingGatewayQueryService.query.PersonQueryType<br>BJMD.RespondingGatewayQueryService.query.QueryExpressionBranchType<br>BJMD.RespondingGatewayQueryService.query.RegistryObjectQueryType<br>BJMD.RespondingGatewayQueryService.query.RegistryPackageQueryType<br>BJMD.RespondingGatewayQueryService.query.RegistryQueryType<br>BJMD.RespondingGatewayQueryService.query.ResponseOptionType<br>BJMD.RespondingGatewayQueryService.query.ServiceBindingQueryType<br>BJMD.RespondingGatewayQueryService.query.ServiceQueryType<br>BJMD.RespondingGatewayQueryService.query.SimpleFilterType | Classes that support sending and receiving C32 requests and documents over Web Services (WS). |
| BJMD.RespondingGatewayQueryService.query.SlotBranchType<br>BJMD.RespondingGatewayQueryService.query.SpecificationLinkQueryType<br>BJMD.RespondingGatewayQueryService.query.StringFilterType<br>BJMD.RespondingGatewayQueryService.query.SubscriptionQueryType<br>BJMD.RespondingGatewayQueryService.query.UserQueryType                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | C32 Ensemble/Cache class development                                                          |

| Class Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Description                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| BJMD.RespondingGatewayQueryService.query.ExtrinsicObjectQueryType<br>BJMD.Tasks.Purge<br>BJMD.Tasks.UpdateProductionState                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Classes that maintain and weekly purge the C32 production                                                           |
| BJMD.Xfer.Address<br>BJMD.Xfer.Allergy<br>BJMD.Xfer.AllergyReaction<br>BJMD.Xfer.C32Main<br>BJMD.Xfer.C32Populate<br>BJMD.Xfer.Condition<br>BJMD.Xfer.Encounter<br>BJMD.Xfer.EncounterFreeText<br>BJMD.Xfer.FieldTransformations<br>BJMD.Xfer.GeneratePatientList<br>BJMD.Xfer.HealthcareProvider<br>BJMD.Xfer.Immunization<br>BJMD.Xfer.InsuranceProvider<br>BJMD.Xfer.MedFrequency<br>BJMD.Xfer.MedFulfillment<br>BJMD.Xfer.Medication<br>BJMD.Xfer.Parameters<br>BJMD.Xfer.PerformanceData<br>BJMD.Xfer.PerformanceDataX<br>BJMD.Xfer.PersonAlias<br>BJMD.Xfer.PersonName<br>BJMD.Xfer.PopAllergy<br>BJMD.Xfer.PopCondition<br>BJMD.Xfer.PopEncounter<br>BJMD.Xfer.PopHealthcareProvider<br>BJMD.Xfer.PopImmunization<br>BJMD.Xfer.PopInformationSource<br>BJMD.Xfer.PopInsuranceProvider<br>BJMD.Xfer.PopMedication<br>BJMD.Xfer.PopPerson<br>BJMD.Xfer.PopProcedure<br>BJMD.Xfer.PopResult<br>BJMD.Xfer.PopSupport<br>BJMD.Xfer.PopVitalSign<br>BJMD.Xfer.Procedure<br>BJMD.Xfer.PushQueue<br>BJMD.Xfer.Queue<br>BJMD.Xfer.Result<br>BJMD.Xfer.SupportPerson<br>BJMD.Xfer.VitalSign | Classes that support extraction of RPMS data and storing it in intermediate compile structures (C Messaging queue). |

## 13.0 Assembly Checklist

Indian Health Service (IHS) Section 508

36 CFR Part §1194.21 Software Applications and Operating Systems Checklist

Software application and version: IHS C32 version 1.0

Manufacturer/Contractor/Developer: Vangent, Inc

Tester.

Date: May 2010

Fully Compliant (FC): All instances are Fully Compliant

Non-Compliant (NC): All instances are Non-Compliant

Partially Compliant (PC): Requires further explanation

Not Applicable (N/A): Standard is not applicable to this application

Compliance is defined as meeting the requirement set forth in the Section 508 Technical Standards 36 CFR Part 1194; go to the Guide to the 508 Electronic and Information Technologies Web page, <http://www.access-board.gov/sec508/guide/>.

Any item not rated as fully compliant needs an explanation as to why the standard was not met. Enter the ID number and an explanation in the space provided at the end of the checklist.

| ID | 36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question                                                                                                                                                                                                                    | FC | PC | NC | N/A |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----|
| 1  | <p>(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.</p> <p>Can you navigate and use all aspects of the application using only the keyboard?</p> | FC |    |    |     |

| ID | 36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FC                                                                                   | PC                                                                   | NC | N/A |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------|----|-----|
| 2  | <p><b>(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.</b></p> <p>Are all of the accessibility options that were previously set still available?</p> | FC                                                                                   |                                                                      |    |     |
| 3  | <p><b>(c) A well defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.</b></p> <p>Is the focus well defined?</p>                                                                                                                                                                                                                                                                                                                                   | FC                                                                                   |                                                                      |    |     |
|    | Is there no evident change in on-screen focus as you navigate through one or more components of an application?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                      |                                                                      |    |     |
| 4  | <p><b>(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.</b></p> <p>Can the screen reader distinguish and read all controls to the user, such as prompts for edit fields, text, radio buttons, checkboxes, menus, and toolbars?</p>                                                                                                                                                                                      |                                                                                      | PC at present- Testing is Pending with Assistive Technology Products |    |     |
| 5  | <p><b>(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.</b></p> <p>Do individual icons used to identify controls, status indicators, or other programmatic elements mean the same thing throughout the application?</p>                                                                                                                                                                                                                                                                         | FC – there is only one GUI screen in the application and it is internally consistent |                                                                      |    |     |

| ID | 36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question                                                                                                                                                                                                                                                                                                                                                                         | FC                                                         | PC | NC | N/A |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----|----|-----|
| 6  | <b>(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.</b><br>Is all text presented in the application readable by assistive technologies?                                                                                                                                                               | FC - Testing is Pending with Assistive Technology Products |    |    |     |
| 7  | <b>(g) Applications shall not override user selected contrast and color selections and other individual display attributes.</b><br>Does the software not override user-selected contrast and color selections and other individual display attributes or settings?                                                                                                                                                                                                           | FC – Compliance depends on tool compliance                 |    |    |     |
| 8  | <b>(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.</b><br>If animated objects exist, does the information conveyed by the animated object exist in another mode, i.e., captions?                                                                                                                                                                                             | FC                                                         |    |    |     |
| 9  | <b>(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</b><br>If color is the sole means used to prompt a response, indicate an action, distinguish a visual element, or convey information, is the information displayed in another mode? For example: If the color red indicates negative numbers, are those numbers also represented with a negative sign (-)? | FC                                                         |    |    |     |
| 10 | <b>(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</b><br>If users can adjust color and contrast settings, are a variety of color and contrast settings available to choose from?                                                                                                                                                                  |                                                            |    |    | N/A |

| ID | 36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question                                                                                                                                                                                                                    | FC           | PC | NC | N/A |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----|----|-----|
| 11 | <b>(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</b><br>If any flashing or blinking objects or text occurs in the application, are the frequencies less than 2 Hz and greater than 55Hz?                   | FC           |    |    |     |
| 12 | <b>(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.</b><br>Can you navigate and follow links and forms with the keyboard? | FC - Pending |    |    |     |
|    | Can the electronic forms be used with assistive technologies?                                                                                                                                                                                                                                                           |              |    |    |     |
|    | Can a screen reading program read all prompts, directions, explanations, or instructions on the form and understand the purpose of each field?                                                                                                                                                                          |              |    |    |     |
| 13 | <b>Documentation</b><br>Are all manuals and documentation provided in electronic format, as well as text files, including text descriptions of any charts, graphs, pictures, or graphics of any nature?                                                                                                                 | FC - Pending |    |    |     |

Enter the ID number and an explanation for any Partially Compliant (PC) or Non-Compliant (NC) results from above.

| ID | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Currently all functionality in the application is accessible via keyboard.                                                                                                                                                                                                                                                                                                                                                                                    |
| 4  | Testing with screen-reading assistive technology software is pending.                                                                                                                                                                                                                                                                                                                                                                                         |
| 6  | See comment on Item #4.                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 7  | The C32 application uses ZEN, an Intersystems technology, to display the C32 Audit Log. According to Intersystems documentation, "InterSystems believes that its products and services can be used by individuals regardless of differences in physical ability. We are committed to compliance with section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), as amended by Congress in 1998." Independent testing of ZEN's 508 compliance is pending. |
| 12 | Testing is pending. See Comment #4 and #6.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 13 | All documentation is being prepared using IHS form templates and documentation standards and guidelines.                                                                                                                                                                                                                                                                                                                                                      |

**Application results:**

Fully Compliant \_\_\_ Partially Compliant \_\_\_ Noncompliant \_\_\_ N/A \_\_\_

**Additional Comments:**

This initial review is based on application status prior to beta testing. Testing related to 508 compliance will continue and improvements will continue to be made prior to national release and potentially thereafter.

# Glossary

**API**

Application Programmer Interface

**BFMC**

Namespace for FM2C-generated classes.

**BJMD**

Namespace for C32 files, routines and classes.

**CCD**

Continuity of Care Document.

**CDA R2**

Clinical Document Architecture Release 2

**DTL**

Data Transformation Language

**FM2C**

Fileman-to-Class mapper. Prior to version 1.0, the acronym stood for Fileman-to-Cache mapper.

**GOTS**

Government off the Shelf. Refers to existing Government-owned and developed software applications.

**GUI**

Graphical User Interface

Healthcare Information Technology Standards Panel.

**HITSP**

Healthcare Information Technology Standards Panel.

**HRSA**

Health Resources and Services Administration. An agency within the Department of Health and Human Services.

**I/T/U**

Abbreviation referring to all IHS direct, tribal, and urban facilities. Using the abbreviation I/T/U generally refers to all components of the Indian healthcare system.

**IHS**

Indian Health Service

**ITSC**

Information Technology Support Center. Currently referred to as Office of Information Technology (OIT).

**KIDS**

Kernel Installation and Distribution System.

**NIST**

National Institute of Standards and Technology

**OIT**

Office of Information Technology. The organization within IHS that is responsible for developing and maintaining RPMS and related IT functions.

**PCC**

RPMS Patient Care Component Refers to functions within RPMS as a clinical data repository, storing visit-related data about a patient.

**PCC form**

The paper form used in most I/T/U clinics on which the provider(s) document all data from the patient's visit. Used by data entry staff to enter patient data into RPMS PCC.

**PCC+**

The RPMS PCC+ software produces automated, customizable PCC forms.

**PHR**

Personal Health record.

**RPMS**

Resource and Patient Management System. A series of integrated software components that includes clinical, administrative, and financial functions.

**SAC**

Standards and Convention

**SQA**

Software Quality Assurance. The office within OIT responsible for ensuring that the system conforms to RPMS Programming Standards and Conventions.

**SRD**

Software Requirements Document

**Taxonomy**

In RPMS, a grouping of functionally related data elements, such as ICD codes. For C32, taxonomies will be used to list procedures, test results and other data elements with non-standard data extraction criteria.

**TuneTable**

A Cache utility class which optimizes subsequent query performance by examining a persistent class' data and setting class selectivity and extent size.

**UI**

User Interface

**WS**

Web Services

**XML**

Extensible Markup Language

## Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

**Phone:** (505) 248-4371 or (888) 830-7280 (toll free)

**Fax:** (505) 248-4363

**Web:** <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

**Email:** [support@ihs.gov](mailto:support@ihs.gov)

## 14.0 Appendix A – C32/CCD Schemas

The following are the contents of the XSD files that define the C32/CCD structure.

### 14.1 C32\_CDA.xsd

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!-- edited with XMLSPY v2004 rel. 3 U (http://www.xmlspy.com) by Bob Dolin (HL7 CDA
TC) -->
<xs:schema targetNamespace="urn:hl7-org:v3"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="urn:hl7-org:v3"
xmlns:mif="urn:hl7-org:v3/mif" elementFormDefault="qualified">
  <xs:include schemaLocation="C32_POCD_MT000040.xsd"/>
  <xs:element name="ClinicalDocument" type="POCD_MT000040.ClinicalDocument"/>
</xs:schema>
```

### 14.2 C32\_POCD\_MT000040.xsd:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<xs:schema xmlns="urn:hl7-org:v3" targetNamespace="urn:hl7-org:v3"
  xmlns:mif="urn:hl7-org:v3/mif"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:sdct="urn:hl7-org:sdct"
  elementFormDefault="qualified"
  >

  <!--
*****
*****
*****
* XML schema for message type POCD_MT000040.
* Generated by XMLITS version 2.0
*
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* ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
```

```

*
*****
*****
-->
<xs:annotation>
  <xs:documentation>Generated using schema builder version 2.0. Stylesheets:
RoseTreeToMIFStaticModel.xsl version: 1.1
StaticMifToXsd.xsl version 2.0</xs:documentation>
</xs:annotation>

<xs:include schemaLocation="../../../processable/coreschemas/datatypes.xsd"/>
<xs:include schemaLocation="../../../processable/coreschemas/voc.xsd"/>
<xs:include schemaLocation="../../../processable/coreschemas/NarrativeBlock.xsd"/>
<xs:import namespace="urn:hl7-org:sdtc" schemaLocation="./SDTC_Extension.xsd" />

<xs:complexType name="POCD_MT000040.InfrastructureRoot.typeId">
  <xs:complexContent>
    <xs:restriction base="II">
      <xs:attribute name="root" type="uid" use="required"
fixed="2.16.840.1.113883.1.3"/>
      <xs:attribute name="extension" type="st" use="required"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Act">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="code" type="CD"/>
    <xs:element name="text" type="ED" minOccurs="0"/>
    <xs:element name="statusCode" type="CS" minOccurs="0"/>
    <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
    <xs:element name="priorityCode" type="CE" minOccurs="0"/>
    <xs:element name="languageCode" type="CS" minOccurs="0"/>
    <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
    <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="classCode" type="x_ActClassDocumentEntryAct"
use="required"/>
  <xs:attribute name="moodCode" type="x_DocumentActMood" use="required"/>

```

```

        <xs:attribute name="negationInd" type="bl" use="optional"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.AssignedAuthor">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" maxOccurs="unbounded"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
            <xs:choice>
                <xs:element name="assignedPerson" type="POCD_MT000040.Person"
minOccurs="0"/>
                <xs:element name="assignedAuthoringDevice"
type="POCD_MT000040.AuthoringDevice" minOccurs="0"/>
            </xs:choice>
            <xs:element name="representedOrganization"
type="POCD_MT000040.Organization" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="RoleClassAssignedEntity" use="optional"
fixed="ASSIGNED"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.AssignedCustodian">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="representedCustodianOrganization"
type="POCD_MT000040.CustodianOrganization"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="RoleClassAssignedEntity" use="optional"
fixed="ASSIGNED"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.AssignedEntity">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" maxOccurs="unbounded"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="assignedPerson" type="POCD_MT000040.Person"
minOccurs="0"/>
            <xs:element name="representedOrganization"
type="POCD_MT000040.Organization" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>

```

```

        <xs:attribute name="classCode" type="RoleClassAssignedEntity" use="optional"
fixed="ASSIGNED"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.AssociatedEntity">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="associatedPerson" type="POCD_MT000040.Person"
minOccurs="0"/>
            <xs:element name="scopingOrganization" type="POCD_MT000040.Organization"
minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="RoleClassAssociative" use="required"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.Authenticator">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="time" type="TS"/>
            <xs:element name="signatureCode" type="CS"/>
            <xs:element name="assignedEntity" type="sdte:SdteAssignedEntity"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="AUTHEN"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.Author">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="functionCode" type="CE" minOccurs="0"/>
            <xs:element name="time" type="TS"/>
            <xs:element name="assignedAuthor" type="POCD_MT000040.AssignedAuthor"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="AUT"/>
        <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.AuthoringDevice">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>

```

```

        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="manufacturerModelName" type="SC" minOccurs="0"/>
        <xs:element name="softwareName" type="SC" minOccurs="0"/>
        <xs:element name="asMaintainedEntity" type="POCD_MT000040.MaintainedEntity"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassDevice" use="optional"
fixed="DEV"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Authorization">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="consent" type="POCD_MT000040.Consent"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipType" use="optional"
fixed="AUTH"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Birthplace">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="place" type="POCD_MT000040.Place"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClass" use="optional"
fixed="BIRTHPL"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.ClinicalDocument">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II"/>
        <xs:element name="code" type="CE"/>
        <xs:element name="title" type="ST" minOccurs="0"/>
        <xs:element name="effectiveTime" type="TS"/>
        <xs:element name="confidentialityCode" type="CE"/>
        <xs:element name="languageCode" type="CS" minOccurs="0"/>
        <xs:element name="setId" type="II" minOccurs="0"/>
        <xs:element name="versionNumber" type="INT" minOccurs="0"/>
        <xs:element name="copyTime" type="TS" minOccurs="0"/>
    </xs:sequence>

```

```

        <xs:element name="recordTarget" type="POCD_MT000040.RecordTarget"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author"
maxOccurs="unbounded"/>
        <xs:element name="dataEnterer" type="POCD_MT000040.DataEnterer"
minOccurs="0"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="custodian" type="POCD_MT000040.Custodian"/>
        <xs:element name="informationRecipient"
type="POCD_MT000040.InformationRecipient" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="legalAuthenticator"
type="POCD_MT000040.LegalAuthenticator" minOccurs="0"/>
        <xs:element name="authenticator" type="POCD_MT000040.Authenticator"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant1"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="inFulfillmentOf" type="POCD_MT000040.InFulfillmentOf"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="documentationOf" type="POCD_MT000040.DocumentationOf"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="relatedDocument" type="POCD_MT000040.RelatedDocument"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="authorization" type="POCD_MT000040.Authorization"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="componentOf" type="POCD_MT000040.Component1"
minOccurs="0"/>
        <xs:element name="component" type="POCD_MT000040.Component2"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClinicalDocument" use="optional"
fixed="DOCCLIN"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Component1">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="encompassingEncounter"
type="POCD_MT000040.EncompassingEncounter"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipHasComponent" use="optional"
fixed="COMP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Component2">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:choice>
            <xs:element name="nonXMLBody" type="POCD_MT000040.NonXMLBody"/>
            <xs:element name="structuredBody" type="POCD_MT000040.StructuredBody"/>
        </xs:choice>
    </xs:sequence>
</xs:complexType>

```

```

    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipHasComponent" use="optional"
fixed="COMP"/>
    <xs:attribute name="contextConductionInd" type="bl" use="optional"
fixed="true"/>
  </xs:complexType>
  <xs:complexType name="POCD_MT000040.Component3">
    <xs:sequence>
      <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
      <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="section" type="POCD_MT000040.Section"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipHasComponent" use="optional"
fixed="COMP"/>
    <xs:attribute name="contextConductionInd" type="bl" use="optional"
fixed="true"/>
  </xs:complexType>
  <xs:complexType name="POCD_MT000040.Component4">
    <xs:sequence>
      <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
      <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="sequenceNumber" type="INT" minOccurs="0"/>
      <xs:element name="seperatableInd" type="BL" minOccurs="0"/>
      <xs:choice>
        <xs:element name="act" type="POCD_MT000040.Act"/>
        <xs:element name="encounter" type="POCD_MT000040.Encounter"/>
        <xs:element name="observation" type="POCD_MT000040.Observation"/>
        <xs:element name="observationMedia"
type="POCD_MT000040.ObservationMedia"/>
        <xs:element name="organizer" type="POCD_MT000040.Organizer"/>
        <xs:element name="procedure" type="POCD_MT000040.Procedure"/>
        <xs:element name="regionOfInterest"
type="POCD_MT000040.RegionOfInterest"/>
        <xs:element name="substanceAdministration"
type="POCD_MT000040.SubstanceAdministration"/>
        <xs:element name="supply" type="POCD_MT000040.Supply"/>
      </xs:choice>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipHasComponent" use="optional"
fixed="COMP"/>
    <xs:attribute name="contextConductionInd" type="bl" use="optional"
fixed="true"/>
  </xs:complexType>
  <xs:complexType name="POCD_MT000040.Component5">
    <xs:sequence>
      <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>

```

```

        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
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    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipHasComponent" use="optional"
fixed="COMP"/>
    <xs:attribute name="contextConductionInd" type="bl" use="optional"
fixed="true"/>
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<xs:complexType name="POCD_MT000040.Consent">
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minOccurs="0"/>
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maxOccurs="unbounded"/>
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        <xs:element name="code" type="CE" minOccurs="0"/>
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    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="optional" fixed="CONS"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
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minOccurs="0"/>
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maxOccurs="unbounded"/>
        <xs:element name="manufacturedProduct"
type="POCD_MT000040.ManufacturedProduct"/>
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    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="CSM"/>
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<xs:complexType name="POCD_MT000040.Criterion">
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="value" type="ANY" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassObservation" use="optional"
default="OBS"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN.CRT"/>
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<xs:complexType name="POCD_MT000040.Custodian">
    <xs:sequence>

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maxOccurs="unbounded"/>
        <xs:element name="assignedCustodian"
type="POCD_MT000040.AssignedCustodian"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="CST"/>
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<xs:complexType name="POCD_MT000040.CustodianOrganization">
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minOccurs="0"/>
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maxOccurs="unbounded"/>
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        <xs:element name="name" type="ON" minOccurs="0"/>
        <xs:element name="telecom" type="TEL" minOccurs="0"/>
        <xs:element name="addr" type="AD" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassOrganization" use="optional"
fixed="ORG"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="time" type="TS" minOccurs="0"/>
        <xs:element name="assignedEntity" type="sdct:SdctAssignedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="ENT"/>
    <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Device">
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="manufacturerModelName" type="SC" minOccurs="0"/>
        <xs:element name="softwareName" type="SC" minOccurs="0"/>
    </xs:sequence>

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        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="EntityClassDevice" use="optional"
default="DEV"/>
        <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.DocumentationOf">
        <xs:sequence>
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maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="serviceEvent" type="POCD_MT000040.ServiceEvent"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="typeCode" type="ActRelationshipType" use="optional"
fixed="DOC"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.EncompassingEncounter">
        <xs:sequence>
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maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="effectiveTime" type="IVL_TS"/>
            <xs:element name="dischargeDispositionCode" type="CE" minOccurs="0"/>
            <xs:element name="responsibleParty" type="POCD_MT000040.ResponsibleParty"
minOccurs="0"/>
            <xs:element name="encounterParticipant"
type="POCD_MT000040.EncounterParticipant" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="location" type="POCD_MT000040.Location" minOccurs="0"/>
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        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="ActClass" use="optional" fixed="ENC"/>
        <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
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    <xs:complexType name="POCD_MT000040.Encounter">
        <xs:sequence>
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maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="code" type="CD" minOccurs="0"/>
            <xs:element name="text" type="ED" minOccurs="0"/>
            <xs:element name="statusCode" type="CS" minOccurs="0"/>
            <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
            <xs:element name="priorityCode" type="CE" minOccurs="0"/>
            <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
            <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>

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        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="required"/>
    <xs:attribute name="moodCode" type="x_DocumentEncounterMood" use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.EncounterParticipant">
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="time" type="IVL_TS" minOccurs="0"/>
        <xs:element name="assignedEntity" type="sdte:SdteAssignedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="x_EncounterParticipant" use="required"/>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="desc" type="ED" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassRoot" use="optional"
default="ENT"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:choice>
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            <xs:element name="encounter" type="POCD_MT000040.Encounter"/>
            <xs:element name="observation" type="POCD_MT000040.Observation"/>
        </xs:choice>
    </xs:sequence>
</xs:complexType>

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        <xs:element name="observationMedia"
type="POCD_MT000040.ObservationMedia"/>
        <xs:element name="organizer" type="POCD_MT000040.Organizer"/>
        <xs:element name="procedure" type="POCD_MT000040.Procedure"/>
        <xs:element name="regionOfInterest"
type="POCD_MT000040.RegionOfInterest"/>
        <xs:element name="substanceAdministration"
type="POCD_MT000040.SubstanceAdministration"/>
        <xs:element name="supply" type="POCD_MT000040.Supply"/>
    </xs:choice>
</xs:sequence>
<xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
<xs:attribute name="typeCode" type="x_ActRelationshipEntry" use="optional"
default="COMP"/>
<xs:attribute name="contextConductionInd" type="bl" use="optional"
fixed="true"/>
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<xs:complexType name="POCD_MT000040.EntryRelationship">
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maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
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        <xs:element name="seperatableInd" type="BL" minOccurs="0"/>
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            <xs:element name="encounter" type="POCD_MT000040.Encounter"/>
            <xs:element name="observation" type="POCD_MT000040.Observation"/>
            <xs:element name="observationMedia"
type="POCD_MT000040.ObservationMedia"/>
            <xs:element name="organizer" type="POCD_MT000040.Organizer"/>
            <xs:element name="procedure" type="POCD_MT000040.Procedure"/>
            <xs:element name="regionOfInterest"
type="POCD_MT000040.RegionOfInterest"/>
            <xs:element name="substanceAdministration"
type="POCD_MT000040.SubstanceAdministration"/>
            <xs:element name="supply" type="POCD_MT000040.Supply"/>
        </xs:choice>
    </xs:sequence>
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    <xs:attribute name="typeCode" type="x_ActRelationshipEntryRelationship"
use="required"/>
    <xs:attribute name="inversionInd" type="bl" use="optional"/>
    <xs:attribute name="contextConductionInd" type="bl" use="optional"
default="true"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
    </xs:sequence>

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    </xs:sequence>
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default="ACT"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
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  <xs:complexType name="POCD_MT000040.ExternalDocument">
    <xs:sequence>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
      <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
      <xs:element name="code" type="CD" minOccurs="0"/>
      <xs:element name="text" type="ED" minOccurs="0"/>
      <xs:element name="setId" type="II" minOccurs="0"/>
      <xs:element name="versionNumber" type="INT" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassDocument" use="optional"
default="DOC"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
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  <xs:complexType name="POCD_MT000040.ExternalObservation">
    <xs:sequence>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
      <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
      <xs:element name="code" type="CD" minOccurs="0"/>
      <xs:element name="text" type="ED" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassObservation" use="optional"
default="OBS"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
  </xs:complexType>
  <xs:complexType name="POCD_MT000040.ExternalProcedure">
    <xs:sequence>
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maxOccurs="unbounded"/>
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minOccurs="0"/>
      <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
      <xs:element name="code" type="CD" minOccurs="0"/>
      <xs:element name="text" type="ED" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="optional" fixed="PROC"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
  </xs:complexType>
  <xs:complexType name="POCD_MT000040.Guardian">
    <xs:sequence>

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        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
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minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:choice>
            <xs:element name="guardianPerson" type="POCD_MT000040.Person"/>
            <xs:element name="guardianOrganization"
type="POCD_MT000040.Organization"/>
        </xs:choice>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClass" use="optional" fixed="GUARD"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.HealthCareFacility">
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maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="location" type="POCD_MT000040.Place" minOccurs="0"/>
        <xs:element name="serviceProviderOrganization"
type="POCD_MT000040.Organization" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClassServiceDeliveryLocation"
use="optional" default="SDLOC"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Informant12">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
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            <xs:element name="relatedEntity" type="sdte:SdteRelatedEntity"/>
        </xs:choice>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="INF"/>
    <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.InformationRecipient">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>

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        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="intendedRecipient"
type="POCD_MT000040.IntendedRecipient"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="x_InformationRecipient" use="optional"
default="PRCP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.InFulfillmentOf">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="order" type="POCD_MT000040.Order"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipFulfills" use="optional"
fixed="FLFS"/>
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<xs:complexType name="POCD_MT000040.IntendedRecipient">
    <xs:sequence>
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maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="informationRecipient" type="POCD_MT000040.Person"
minOccurs="0"/>
        <xs:element name="receivedOrganization" type="POCD_MT000040.Organization"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="x_InformationRecipientRole" use="optional"
default="ASSIGNED"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.LabeledDrug">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="name" type="EN" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassManufacturedMaterial"
use="optional" fixed="MMAT"/>
    <xs:attribute name="determinerCode" type="EntityDeterminerDetermined"
use="optional" fixed="KIND"/>

```

```

</xs:complexType>
<xs:complexType name="POCD_MT000040.LanguageCommunication">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="languageCode" type="CS" minOccurs="0"/>
    <xs:element name="modeCode" type="CE" minOccurs="0"/>
    <xs:element name="proficiencyLevelCode" type="CE" minOccurs="0"/>
    <xs:element name="preferenceInd" type="BL" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.LegalAuthenticator">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="time" type="TS"/>
    <xs:element name="signatureCode" type="CS"/>
    <xs:element name="assignedEntity" type="sdte:SdteAssignedEntity"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="LA"/>
  <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Location">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="healthCareFacility"
type="POCD_MT000040.HealthCareFacility"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="typeCode" type="ParticipationTargetLocation" use="optional"
fixed="LOC"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.MaintainedEntity">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
    <xs:element name="maintainingPerson" type="POCD_MT000040.Person"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>

```

```

        <xs:attribute name="classCode" type="RoleClass" use="optional" fixed="MNT"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.ManufacturedProduct">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
            <xs:choice>
                <xs:element name="manufacturedLabeledDrug"
type="POCD_MT000040.LabeledDrug"/>
                <xs:element name="manufacturedMaterial" type="POCD_MT000040.Material"/>
            </xs:choice>
            <xs:element name="manufacturerOrganization"
type="POCD_MT000040.Organization" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="RoleClassManufacturedProduct"
use="optional" fixed="MANU"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.Material">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="name" type="EN" minOccurs="0"/>
            <xs:element name="lotNumberText" type="ST" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="EntityClassManufacturedMaterial"
use="optional" fixed="MMAT"/>
        <xs:attribute name="determinerCode" type="EntityDeterminerDetermined"
use="optional" fixed="KIND"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.NonXMLBody">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="text" type="ED"/>
            <xs:element name="confidentialityCode" type="CE" minOccurs="0"/>
            <xs:element name="languageCode" type="CS" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="ActClass" use="optional" fixed="DOCBODY"/>
        <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.Observation">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>

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        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD"/>
        <xs:element name="derivationExpr" type="ST" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="statusCode" type="CS" minOccurs="0"/>
        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="priorityCode" type="CE" minOccurs="0"/>
        <xs:element name="repeatNumber" type="IVL_INT" minOccurs="0"/>
        <xs:element name="languageCode" type="CS" minOccurs="0"/>
        <xs:element name="value" type="ANY" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="interpretationCode" type="CE" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="methodCode" type="CE" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="targetSiteCode" type="CD" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="referenceRange" type="POCD_MT000040.ReferenceRange"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassObservation" use="required"/>
    <xs:attribute name="moodCode" type="x_ActMoodDocumentObservation"
use="required"/>
    <xs:attribute name="negationInd" type="bl" use="optional"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.ObservationMedia">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="languageCode" type="CS" minOccurs="0"/>
        <xs:element name="value" type="ED"/>
        <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>

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        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassObservation" use="required"/>
    <xs:attribute name="moodCode" type="ActMood" use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.ObservationRange">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="value" type="ANY" minOccurs="0"/>
        <xs:element name="interpretationCode" type="CE" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassObservation" use="optional"
default="OBS"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN.CRT"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Order">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="priorityCode" type="CE" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassRoot" use="optional"
default="ACT"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="RQ0"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Organization">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>

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        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="name" type="ON" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="standardIndustryClassCode" type="CE" minOccurs="0"/>
        <xs:element name="asOrganizationPartOf"
type="POCD_MT000040.OrganizationPartOf" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassOrganization" use="optional"
fixed="ORG"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.OrganizationPartOf">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="statusCode" type="CS" minOccurs="0"/>
        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="wholeOrganization" type="POCD_MT000040.Organization"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClass" use="optional" fixed="PART"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Organizer">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="statusCode" type="CS"/>
        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>

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        <xs:element name="component" type="POCD_MT000040.Component4" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="x_ActClassDocumentEntryOrganizer"
use="required"/>
    <xs:attribute name="moodCode" type="ActMood" use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.ParentDocument">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="setId" type="II" minOccurs="0"/>
        <xs:element name="versionNumber" type="INT" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClinicalDocument" use="optional"
fixed="DOCCLIN"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Participant1">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="functionCode" type="CE" minOccurs="0"/>
        <xs:element name="time" type="IVL_TS" minOccurs="0"/>
        <xs:element name="associatedEntity" type="sdte:SdteAssociatedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="required"/>
    <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Participant2">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="time" type="IVL_TS" minOccurs="0"/>
        <xs:element name="awarenessCode" type="CE" minOccurs="0"/>
        <xs:element name="participantRole" type="POCD_MT000040.ParticipantRole"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="required"/>
    <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>

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<xs:complexType name="POCD_MT000040.ParticipantRole">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="code" type="CE" minOccurs="0"/>
    <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
    <xs:choice>
      <xs:element name="playingDevice" type="POCD_MT000040.Device"
minOccurs="0"/>
      <xs:element name="playingEntity" type="POCD_MT000040.PlayingEntity"
minOccurs="0"/>
    </xs:choice>
    <xs:element name="scopingEntity" type="POCD_MT000040.Entity"
minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="classCode" type="RoleClassRoot" use="optional"
default="ROL"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Patient">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="id" type="II" minOccurs="0"/>
    <xs:element name="name" type="PN" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="administrativeGenderCode" type="CE" minOccurs="0"/>
    <xs:element name="birthTime" type="TS" minOccurs="0"/>
    <xs:element name="maritalStatusCode" type="CE" minOccurs="0"/>
    <xs:element name="religiousAffiliationCode" type="CE" minOccurs="0"/>
    <xs:element name="raceCode" type="CE" minOccurs="0"/>
    <xs:element ref="sdct:raceCode" xmlns:sdct="urn:hl7-org:sdct" minOccurs="0"
maxOccurs="unbounded" />
    <xs:element name="ethnicGroupCode" type="CE" minOccurs="0"/>
    <xs:element name="guardian" type="POCD_MT000040.Guardian" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="birthplace" type="POCD_MT000040.Birthplace"
minOccurs="0"/>
    <xs:element name="languageCommunication"
type="POCD_MT000040.LanguageCommunication" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="classCode" type="EntityClass" use="optional" fixed="PSN"/>
  <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.PatientRole">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>

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        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" maxOccurs="unbounded"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="patient" type="POCD_MT000040.Patient" minOccurs="0"/>
        <xs:element name="providerOrganization" type="POCD_MT000040.Organization"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClass" use="optional" fixed="PAT"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Performer1">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="functionCode" type="CE" minOccurs="0"/>
        <xs:element name="time" type="IVL_TS" minOccurs="0"/>
        <xs:element name="assignedEntity" type="sdct:SdctAssignedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="x_ServiceEventPerformer" use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Performer2">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="time" type="IVL_TS" minOccurs="0"/>
        <xs:element name="modeCode" type="CE" minOccurs="0"/>
        <xs:element name="assignedEntity" type="sdct:SdctAssignedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationPhysicalPerformer"
use="optional" fixed="PRF"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Person">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="name" type="PN" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element ref="sdct:birthTime" minOccurs="0" />
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClass" use="optional" fixed="PSN"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Place">
    <xs:sequence>

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        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="name" type="EN" minOccurs="0"/>
        <xs:element name="addr" type="AD" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassPlace" use="optional"
fixed="PLC"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.PlayingEntity">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="quantity" type="PQ" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="name" type="PN" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element ref="sdct:birthTime" minOccurs="0" />
        <xs:element name="desc" type="ED" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="EntityClassRoot" use="optional"
default="ENT"/>
    <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Precondition">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="criterion" type="POCD_MT000040.Criterion"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ActRelationshipType" use="optional"
fixed="PRCN"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Procedure">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="statusCode" type="CS" minOccurs="0"/>
    </xs:sequence>

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        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="priorityCode" type="CE" minOccurs="0"/>
        <xs:element name="languageCode" type="CS" minOccurs="0"/>
        <xs:element name="methodCode" type="CE" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="approachSiteCode" type="CD" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="targetSiteCode" type="CD" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="required"/>
    <xs:attribute name="moodCode" type="x_DocumentProcedureMood" use="required"/>
    <xs:attribute name="negationInd" type="b1" use="optional"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Product">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="manufacturedProduct"
type="POCD_MT000040.ManufacturedProduct"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="PRD"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.RecordTarget">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="patientRole" type="POCD_MT000040.PatientRole"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="RCT"/>

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        <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="0P"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.Reference">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="seperatableInd" type="BL" minOccurs="0"/>
            <xs:choice>
                <xs:element name="externalAct" type="POCD_MT000040.ExternalAct"/>
                <xs:element name="externalObservation"
type="POCD_MT000040.ExternalObservation"/>
                <xs:element name="externalProcedure"
type="POCD_MT000040.ExternalProcedure"/>
                <xs:element name="externalDocument"
type="POCD_MT000040.ExternalDocument"/>
            </xs:choice>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="typeCode" type="x_ActRelationshipExternalReference"
use="required"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.ReferenceRange">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="observationRange" type="POCD_MT000040.ObservationRange"/>
        </xs:sequence>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="typeCode" type="ActRelationshipType" use="optional"
fixed="REFV"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.RegionOfInterest.value">
        <xs:complexContent>
            <xs:extension base="INT">
                <xs:attribute name="unsorted" type="xs:boolean" default="false"/>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.RegionOfInterest">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" maxOccurs="unbounded"/>
            <xs:element name="code" type="CS"/>
            <xs:element name="value" type="POCD_MT000040.RegionOfInterest.value"
maxOccurs="unbounded"/>
            <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>

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        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="required" fixed="ROIIOVL"/>
    <xs:attribute name="moodCode" type="ActMood" use="required" fixed="EVN"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.RelatedDocument">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="parentDocument" type="POCD_MT000040.ParentDocument"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="x_ActRelationshipDocument" use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.RelatedEntity">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="relatedPerson" type="POCD_MT000040.Person"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClassMutualRelationship"
use="required"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.RelatedSubject">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>

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        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="addr" type="AD" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="telecom" type="TEL" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="subject" type="POCD_MT000040.SubjectPerson"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="x_DocumentSubject" use="optional"
default="PRS"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.ResponsibleParty">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="assignedEntity" type="sdct:SdctAssignedEntity"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="RESP"/>
</xs:complexType>

    <xs:complexType name="POCD_MT000040.Section">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
            <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="id" type="II" minOccurs="0"/>
            <xs:element name="code" type="CE" minOccurs="0"/>
            <xs:element name="title" type="ST" minOccurs="0"/>
            <xs:element name="text" type="StrucDoc.Text" minOccurs="0"/>
            <xs:element name="confidentialityCode" type="CE" minOccurs="0"/>
            <xs:element name="languageCode" type="CS" minOccurs="0"/>
            <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
            <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="entry" type="POCD_MT000040.Entry" minOccurs="0"
maxOccurs="unbounded"/>
            <xs:element name="component" type="POCD_MT000040.Component5" minOccurs="0"
maxOccurs="unbounded"/>
        </xs:sequence>
        <xs:attribute name="ID" type="xs:ID"/>
        <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
        <xs:attribute name="classCode" type="ActClass" use="optional" fixed="DOCSECT"/>
        <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
    </xs:complexType>
    <xs:complexType name="POCD_MT000040.ServiceEvent">
        <xs:sequence>
            <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>

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        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CE" minOccurs="0"/>
        <xs:element name="effectiveTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="performer" type="POCD_MT000040.Performer1" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClassRoot" use="optional"
default="ACT"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Specimen">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="specimenRole" type="POCD_MT000040.SpecimenRole"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="typeCode" type="ParticipationType" use="optional"
fixed="SPC"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.SpecimenRole">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="specimenPlayingEntity" type="POCD_MT000040.PlayingEntity"
minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="RoleClassSpecimen" use="optional"
fixed="SPEC"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.StructuredBody">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="confidentialityCode" type="CE" minOccurs="0"/>
        <xs:element name="languageCode" type="CS" minOccurs="0"/>
        <xs:element name="component" type="POCD_MT000040.Component3"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="optional" fixed="DOCBODY"/>
    <xs:attribute name="moodCode" type="ActMood" use="optional" fixed="EVN"/>

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</xs:complexType>
<xs:complexType name="POCD_MT000040.Subject">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="awarenessCode" type="CE" minOccurs="0"/>
    <xs:element name="relatedSubject" type="POCD_MT000040.RelatedSubject"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="typeCode" type="ParticipationTargetSubject" use="optional"
fixed="SBJ"/>
  <xs:attribute name="contextControlCode" type="ContextControl" use="optional"
fixed="OP"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.SubjectPerson">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="name" type="PN" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="administrativeGenderCode" type="CE" minOccurs="0"/>
    <xs:element name="birthTime" type="TS" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
  <xs:attribute name="classCode" type="EntityClass" use="optional" fixed="PSN"/>
  <xs:attribute name="determinerCode" type="EntityDeterminer" use="optional"
fixed="INSTANCE"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.SubstanceAdministration">
  <xs:sequence>
    <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
    <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="code" type="CD" minOccurs="0"/>
    <xs:element name="text" type="ED" minOccurs="0"/>
    <xs:element name="statusCode" type="CS" minOccurs="0"/>
    <xs:element name="effectiveTime" type="SXXM_TS" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="priorityCode" type="CE" minOccurs="0"/>
    <xs:element name="repeatNumber" type="IVL_INT" minOccurs="0"/>
    <xs:element name="routeCode" type="CE" minOccurs="0"/>
    <xs:element name="approachSiteCode" type="CD" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="doseQuantity" type="IVL_PQ" minOccurs="0"/>
    <xs:element name="rateQuantity" type="IVL_PQ" minOccurs="0"/>
    <xs:element name="maxDoseQuantity" type="RTO_PQ_PQ" minOccurs="0"/>
    <xs:element name="administrationUnitCode" type="CE" minOccurs="0"/>
    <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
    <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
  </xs:sequence>

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        <xs:element name="consumable" type="POCD_MT000040.Consumable"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>
    <xs:attribute name="classCode" type="ActClass" use="required" fixed="SBADM"/>
    <xs:attribute name="moodCode" type="x_DocumentSubstanceMood" use="required"/>
    <xs:attribute name="negationInd" type="bl" use="optional"/>
</xs:complexType>
<xs:complexType name="POCD_MT000040.Supply">
    <xs:sequence>
        <xs:element name="realmCode" type="CS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="typeId" type="POCD_MT000040.InfrastructureRoot.typeId"
minOccurs="0"/>
        <xs:element name="templateId" type="II" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="id" type="II" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="code" type="CD" minOccurs="0"/>
        <xs:element name="text" type="ED" minOccurs="0"/>
        <xs:element name="statusCode" type="CS" minOccurs="0"/>
        <xs:element name="effectiveTime" type="SXCM_TS" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="priorityCode" type="CE" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="repeatNumber" type="IVL_INT" minOccurs="0"/>
        <xs:element name="independentInd" type="BL" minOccurs="0"/>
        <xs:element name="quantity" type="PQ" minOccurs="0"/>
        <xs:element name="expectedUseTime" type="IVL_TS" minOccurs="0"/>
        <xs:element name="subject" type="POCD_MT000040.Subject" minOccurs="0"/>
        <xs:element name="specimen" type="POCD_MT000040.Specimen" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="product" type="POCD_MT000040.Product" minOccurs="0"/>
        <xs:element name="performer" type="POCD_MT000040.Performer2" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="author" type="POCD_MT000040.Author" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="informant" type="POCD_MT000040.Informant12" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="participant" type="POCD_MT000040.Participant2"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="entryRelationship" type="POCD_MT000040.EntryRelationship"
minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="reference" type="POCD_MT000040.Reference" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="precondition" type="POCD_MT000040.Precondition"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional"/>

```

```

        <xs:attribute name="classCode" type="ActClassSupply" use="required"
fixed="SPLY"/>
        <xs:attribute name="moodCode" type="x_DocumentSubstanceMood" use="required"/>
    </xs:complexType>
</xs:schema>

```

## 14.3 datatypes.xsd:

```

<?xml version="1.0" encoding="UTF-8"?><!-- $Id: $ --><!--
  This schema is generated from a Generic Schema Definition (GSD)
  by gsd2xsl. Do not edit this file.
-->
<xs:schema xmlns:sch="http://www.ascc.net/xml/schematron"
xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xs:annotation>
    <xs:documentation>
      Copyright (c) 2001, 2002, 2003, 2004, 2005 Health Level Seven.
      All rights reserved.

      Redistribution and use in source and binary forms, with or
      without modification, are permitted provided that the following
      conditions are met:
      1. Redistributions of source code must retain the above
         copyright notice, this list of conditions and the following
         disclaimer.
      2. Redistributions in binary form must reproduce the above
         copyright notice, this list of conditions and the following
         disclaimer in the documentation and/or other materials
         provided with the distribution.
      3. All advertising materials mentioning features or use of this
         software must display the following acknowledgement:

      This product includes software developed by Health Level Seven.

      THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS
      ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT
      NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
      FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.  IN NO EVENT
      SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
      INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
      DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
      GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
      INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
      WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
      NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
      OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
      DAMAGE.

      Generated by $Id: gsd2xsd.xsl,v 1.4 2005/04/17 03:20:15 lmckenzi Exp $
    </xs:documentation>
  </xs:annotation>
  <xs:include schemaLocation="datatypes-base.xsd"/>
<!--
  Instantiated templates
-->
  <xs:complexType name="PIVL_TS">
    <xs:annotation>
      <xs:documentation>
        Note: because this type is defined as an extension of SXCM_T,

```

all of the attributes and elements accepted for T are also accepted by this definition. However, they are NOT allowed by the normative description of this type. Unfortunately, we cannot write a general purpose schematron constraints to provide that extra validation, thus applications must be aware that instance (fragments) that pass validation with this might might still not be legal.

```

</xs:documentation>
</xs:annotation>
<xs:complexContent>
  <xs:extension base="SXCM_TS">
    <xs:sequence>
      <xs:element name="phase" minOccurs="0" maxOccurs="1" type="IVL_TS">
        <xs:annotation>
          <xs:documentation>
            A prototype of the repeating interval specifying the
            duration of each occurrence and anchors the periodic
            interval sequence at a certain point in time.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="period" minOccurs="0" maxOccurs="1" type="PQ">
        <xs:annotation>
          <xs:documentation>
            A time duration specifying a reciprocal measure of
            the frequency at which the periodic interval repeats.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
    <xs:attribute name="alignment" type="CalendarCycle" use="optional">
      <xs:annotation>
        <xs:documentation>
          Specifies if and how the repetitions are aligned to
          the cycles of the underlying calendar (e.g., to
          distinguish every 30 days from "the 5th of every
          month".) A non-aligned periodic interval recurs
          independently from the calendar. An aligned periodic
          interval is synchronized with the calendar.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="institutionSpecified" type="bl" use="optional"
    default="false">
      <xs:annotation>
        <xs:documentation>
          Indicates whether the exact timing is up to the party
          executing the schedule (e.g., to distinguish "every 8
          hours" from "3 times a day".)
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="EIVL_TS">
  <xs:annotation>
    <xs:documentation>
      Note: because this type is defined as an extension of SXCM_T,
      all of the attributes and elements accepted for T are also
      accepted by this definition. However, they are NOT allowed

```

```

        by the normative description of this type. Unfortunately,
        we cannot write a general purpose schematron constraints to
        provide that extra validation, thus applications must be
        aware that instance (fragments) that pass validation with
        this might still not be legal.
    </xs:documentation>
</xs:annotation>
<xs:complexContent>
  <xs:extension base="SXCM_TS">
    <xs:sequence>
      <xs:element name="event" type="EIVL.event" minOccurs="0"
maxOccurs="1">
        <xs:annotation>
          <xs:documentation>
            A code for a common (periodical) activity of daily
            living based on which the event related periodic
            interval is specified.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="offset" minOccurs="0" maxOccurs="1" type="IVL_PQ">
        <xs:annotation>
          <xs:documentation>
            An interval of elapsed time (duration, not absolute
            point in time) that marks the offsets for the
            beginning, width and end of the event-related periodic
            interval measured from the time each such event
            actually occurred.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVL_PQ">
  <xs:complexContent>
    <xs:extension base="SXCM_PQ">
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="low" minOccurs="1" maxOccurs="1" type="IVXB_PQ">
            <xs:annotation>
              <xs:documentation>
                The low limit of the interval.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:choice minOccurs="0">
            <xs:element name="width" minOccurs="0" maxOccurs="1" type="PQ">
              <xs:annotation>
                <xs:documentation>
                  The difference between high and low boundary. The
                  purpose of distinguishing a width property is to
                  handle all cases of incomplete information
                  symmetrically. In any interval representation only
                  two of the three properties high, low, and width need
                  to be stated and the third can be derived.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:choice>
        </xs:sequence>
      </xs:choice>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

type="IVXB_PQ">
    <xs:element name="high" minOccurs="0" maxOccurs="1"
      <xs:annotation>
        <xs:documentation>
          The high limit of the interval.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:choice>
</xs:sequence>
<xs:element name="high" minOccurs="1" maxOccurs="1" type="IVXB_PQ">
  <xs:annotation>
    <xs:documentation/>
  </xs:annotation>
</xs:element>
<xs:sequence>
  <xs:element name="width" minOccurs="1" maxOccurs="1" type="PQ">
    <xs:annotation>
      <xs:documentation>
        The difference between high and low boundary. The
        purpose of distinguishing a width property is to
        handle all cases of incomplete information
        symmetrically. In any interval representation only
        two of the three properties high, low, and width need
        to be stated and the third can be derived.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_PQ">
    <xs:annotation>
      <xs:documentation>
        The high limit of the interval.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="center" minOccurs="1" maxOccurs="1" type="PQ">
    <xs:annotation>
      <xs:documentation>
        The arithmetic mean of the interval (low plus high
        divided by 2). The purpose of distinguishing the center
        as a semantic property is for conversions of intervals
        from and to point values.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="width" minOccurs="0" maxOccurs="1" type="PQ">
    <xs:annotation>
      <xs:documentation>
        The difference between high and low boundary. The
        purpose of distinguishing a width property is to
        handle all cases of incomplete information
        symmetrically. In any interval representation only
        two of the three properties high, low, and width need
        to be stated and the third can be derived.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:sequence>

```

```

        </xs:choice>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="SXCM_PQ">
    <xs:complexContent>
      <xs:extension base="PQ">
        <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
          <xs:annotation>
            <xs:documentation>
              A code specifying whether the set component is included
              (union) or excluded (set-difference) from the set, or
              other set operations with the current set component and
              the set as constructed from the representation stream
              up to the current point.
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="IVXB_PQ">
    <xs:complexContent>
      <xs:extension base="PQ">
        <xs:attribute name="inclusive" type="bl" use="optional" default="true">
          <xs:annotation>
            <xs:documentation>
              Specifies whether the limit is included in the
              interval (interval is closed) or excluded from the
              interval (interval is open).
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="PPD_TS">
    <xs:annotation>
      <xs:appinfo>
        <diff>PPD_PQ</diff>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="TS">
        <xs:sequence>
          <xs:element name="standardDeviation" minOccurs="0" maxOccurs="1"
type="PQ">
            <xs:annotation>
              <xs:documentation>
                The primary measure of variance/uncertainty of the
                value (the square root of the sum of the squares of
                the differences between all data points and the mean).
                The standard deviation is used to normalize the data
                for computing the distribution function. Applications
                that cannot deal with probability distributions can
                still get an idea about the confidence level by looking
                at the standard deviation.
              </xs:documentation>
            </xs:annotation>
          </xs:element>

```

```

        </xs:sequence>
        <xs:attribute name="distributionType" type="ProbabilityDistributionType"
use="optional">
            <xs:annotation>
                <xs:documentation>
                    A code specifying the type of probability distribution.
                    Possible values are as shown in the attached table.
                    The NULL value (unknown) for the type code indicates
                    that the probability distribution type is unknown. In
                    that case, the standard deviation has the meaning of an
                    informal guess.
                </xs:documentation>
            </xs:annotation>
        </xs:attribute>
    </xs:extension>
</xs:complexType>
<xs:complexType name="PPD_PQ">
    <xs:annotation>
        <xs:appinfo>
            <diff>PPD_PQ</diff>
        </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="PQ">
            <xs:sequence>
                <xs:element name="standardDeviation" minOccurs="0" maxOccurs="1"
type="PQ">
                    <xs:annotation>
                        <xs:documentation>
                            The primary measure of variance/uncertainty of the
                            value (the square root of the sum of the squares of
                            the differences between all data points and the mean).
                            The standard deviation is used to normalize the data
                            for computing the distribution function. Applications
                            that cannot deal with probability distributions can
                            still get an idea about the confidence level by looking
                            at the standard deviation.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
            </xs:sequence>
            <xs:attribute name="distributionType" type="ProbabilityDistributionType"
use="optional">
                <xs:annotation>
                    <xs:documentation>
                        A code specifying the type of probability distribution.
                        Possible values are as shown in the attached table.
                        The NULL value (unknown) for the type code indicates
                        that the probability distribution type is unknown. In
                        that case, the standard deviation has the meaning of an
                        informal guess.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="PIVL_PPD_TS">
    <xs:annotation>
        <xs:documentation>

```

Note: because this type is defined as an extension of SXCM\_T, all of the attributes and elements accepted for T are also accepted by this definition. However, they are NOT allowed by the normative description of this type. Unfortunately, we cannot write a general purpose schematron constraints to provide that extra validation, thus applications must be aware that instance (fragments) that pass validation with this might might still not be legal.

```

</xs:documentation>
</xs:annotation>
<xs:complexContent>
  <xs:extension base="SXCM_PPD_TS">
    <xs:sequence>
      <xs:element name="phase" minOccurs="0" maxOccurs="1"
type="IVL_PPD_TS">
        <xs:annotation>
          <xs:documentation>
            A prototype of the repeating interval specifying the
            duration of each occurrence and anchors the periodic
            interval sequence at a certain point in time.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="period" minOccurs="0" maxOccurs="1" type="PPD_PQ">
        <xs:annotation>
          <xs:documentation>
            A time duration specifying a reciprocal measure of
            the frequency at which the periodic interval repeats.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
    <xs:attribute name="alignment" type="CalendarCycle" use="optional">
      <xs:annotation>
        <xs:documentation>
          Specifies if and how the repetitions are aligned to
          the cycles of the underlying calendar (e.g., to
          distinguish every 30 days from "the 5th of every
          month".) A non-aligned periodic interval recurs
          independently from the calendar. An aligned periodic
          interval is synchronized with the calendar.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="institutionSpecified" type="bl" use="optional"
default="false">
      <xs:annotation>
        <xs:documentation>
          Indicates whether the exact timing is up to the party
          executing the schedule (e.g., to distinguish "every 8
          hours" from "3 times a day".)
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SXCM_PPD_TS">
  <xs:complexContent>
    <xs:extension base="PPD_TS">

```

```

        <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
        <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
        </xs:documentation>
        </xs:annotation>
        </xs:attribute>
    </xs:extension>
</xs:complexType>
<xs:complexType name="IVL_PPD_TS">
    <xs:complexContent>
        <xs:extension base="SXCM_PPD_TS">
            <xs:choice minOccurs="0">
                <xs:sequence>
                    <xs:element name="low" minOccurs="1" maxOccurs="1"
type="IVXB_PPD_TS">
                        <xs:annotation>
                        <xs:documentation>
                            The low limit of the interval.
                        </xs:documentation>
                        </xs:annotation>
                    </xs:element>
                    <xs:choice minOccurs="0">
                        <xs:element name="width" minOccurs="0" maxOccurs="1"
type="PPD_PQ">
                            <xs:annotation>
                            <xs:documentation>
                                The difference between high and low boundary. The
                                purpose of distinguishing a width property is to
                                handle all cases of incomplete information
                                symmetrically. In any interval representation only
                                two of the three properties high, low, and width need
                                to be stated and the third can be derived.
                            </xs:documentation>
                            </xs:annotation>
                        </xs:element>
                        <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_PPD_TS">
                            <xs:annotation>
                            <xs:documentation>
                                The high limit of the interval.
                            </xs:documentation>
                            </xs:annotation>
                        </xs:element>
                    </xs:choice>
                </xs:sequence>
                <xs:element name="high" minOccurs="1" maxOccurs="1"
type="IVXB_PPD_TS">
                    <xs:annotation>
                    <xs:documentation/>
                    </xs:annotation>
                </xs:element>
                <xs:sequence>
                    <xs:element name="width" minOccurs="1" maxOccurs="1"
type="PPD_PQ">

```

```

        <xs:annotation>
          <xs:documentation>
            The difference between high and low boundary. The
            purpose of distinguishing a width property is to
            handle all cases of incomplete information
            symmetrically. In any interval representation only
            two of the three properties high, low, and width need
            to be stated and the third can be derived.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_PPD_TS">
        <xs:annotation>
          <xs:documentation>
            The high limit of the interval.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  <xs:sequence>
    <xs:element name="center" minOccurs="1" maxOccurs="1"
type="PPD_TS">
      <xs:annotation>
        <xs:documentation>
          The arithmetic mean of the interval (low plus high
          divided by 2). The purpose of distinguishing the center
          as a semantic property is for conversions of intervals
          from and to point values.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="width" minOccurs="0" maxOccurs="1"
type="PPD_PQ">
      <xs:annotation>
        <xs:documentation>
          The difference between high and low boundary. The
          purpose of distinguishing a width property is to
          handle all cases of incomplete information
          symmetrically. In any interval representation only
          two of the three properties high, low, and width need
          to be stated and the third can be derived.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:choice>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_PPD_TS">
  <xs:complexContent>
    <xs:extension base="PPD_TS">
      <xs:attribute name="inclusive" type="bl" use="optional" default="true">
        <xs:annotation>
          <xs:documentation>
            Specifies whether the limit is included in the
            interval (interval is closed) or excluded from the
            interval (interval is open).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="EIVL_PPD_TS">
    <xs:annotation>
      <xs:documentation>
        Note: because this type is defined as an extension of SXCM_T,
        all of the attributes and elements accepted for T are also
        accepted by this definition. However, they are NOT allowed
        by the normative description of this type. Unfortunately,
        we cannot write a general purpose schematron constraints to
        provide that extra validation, thus applications must be
        aware that instance (fragments) that pass validation with
        this might might still not be legal.
      </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="SXCM_PPD_TS">
        <xs:sequence>
          <xs:element name="event" type="EIVL.event" minOccurs="0"
maxOccurs="1">
            <xs:annotation>
              <xs:documentation>
                A code for a common (periodical) activity of daily
                living based on which the event related periodic
                interval is specified.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="offset" minOccurs="0" maxOccurs="1"
type="IVL_PPD_PQ">
            <xs:annotation>
              <xs:documentation>
                An interval of elapsed time (duration, not absolute
                point in time) that marks the offsets for the
                beginning, width and end of the event-related periodic
                interval measured from the time each such event
                actually occurred.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="IVL_PPD_PQ">
    <xs:complexContent>
      <xs:extension base="SXCM_PPD_PQ">
        <xs:choice minOccurs="0">
          <xs:sequence>
            <xs:element name="low" minOccurs="1" maxOccurs="1"
type="IVXB_PPD_PQ">
              <xs:annotation>
                <xs:documentation>
                  The low limit of the interval.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
          <xs:choice minOccurs="0">

```

```

type="PPD_PQ">
    <xs:element name="width" minOccurs="0" maxOccurs="1"
      <xs:annotation>
        <xs:documentation>
          The difference between high and low boundary. The
          purpose of distinguishing a width property is to
          handle all cases of incomplete information
          symmetrically. In any interval representation only
          two of the three properties high, low, and width need
          to be stated and the third can be derived.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
type="IVXB_PPD_PQ">
    <xs:element name="high" minOccurs="0" maxOccurs="1"
      <xs:annotation>
        <xs:documentation>
          The high limit of the interval.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:choice>
</xs:sequence>
  <xs:element name="high" minOccurs="1" maxOccurs="1"
type="IVXB_PPD_PQ">
  <xs:annotation>
    <xs:documentation/>
  </xs:annotation>
</xs:element>
<xs:sequence>
  <xs:element name="width" minOccurs="1" maxOccurs="1"
type="PPD_PQ">
  <xs:annotation>
    <xs:documentation>
      The difference between high and low boundary. The
      purpose of distinguishing a width property is to
      handle all cases of incomplete information
      symmetrically. In any interval representation only
      two of the three properties high, low, and width need
      to be stated and the third can be derived.
    </xs:documentation>
  </xs:annotation>
</xs:element>
  <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_PPD_PQ">
  <xs:annotation>
    <xs:documentation>
      The high limit of the interval.
    </xs:documentation>
  </xs:annotation>
</xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="center" minOccurs="1" maxOccurs="1"
type="PPD_PQ">
  <xs:annotation>
    <xs:documentation>
      The arithmetic mean of the interval (low plus high
      divided by 2). The purpose of distinguishing the center
      as a semantic property is for conversions of intervals
      from and to point values.

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```

        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="width" minOccurs="0" maxOccurs="1"
type="PPD_PQ">
      <xs:annotation>
        <xs:documentation>
          The difference between high and low boundary. The
          purpose of distinguishing a width property is to
          handle all cases of incomplete information
          symmetrically. In any interval representation only
          two of the three properties high, low, and width need
          to be stated and the third can be derived.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:choice>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SXXM_PPD_PQ">
  <xs:complexContent>
    <xs:extension base="PPD_PQ">
      <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
          <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_PPD_PQ">
  <xs:complexContent>
    <xs:extension base="PPD_PQ">
      <xs:attribute name="inclusive" type="bl" use="optional" default="true">
        <xs:annotation>
          <xs:documentation>
            Specifies whether the limit is included in the
            interval (interval is closed) or excluded from the
            interval (interval is open).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="SXPR_TS">
  <xs:complexContent>
    <xs:extension base="SXXM_TS">
      <xs:sequence>
        <xs:element name="comp" minOccurs="2" maxOccurs="unbounded"
type="SXXM_TS">
          <xs:annotation>

```

```

        <xs:documentation/>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SXCM_CD">
  <xs:complexContent>
    <xs:extension base="CD">
      <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
          <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="SXCM_MO">
  <xs:complexContent>
    <xs:extension base="MO">
      <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
          <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="SXCM_INT">
  <xs:complexContent>
    <xs:extension base="INT">
      <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
          <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

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<xs:complexType name="SXCM_REAL">
  <xs:complexContent>
    <xs:extension base="REAL">
      <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
        <xs:annotation>
          <xs:documentation>
            A code specifying whether the set component is included
            (union) or excluded (set-difference) from the set, or
            other set operations with the current set component and
            the set as constructed from the representation stream
            up to the current point.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="IVL_INT">
  <xs:complexContent>
    <xs:extension base="SXCM_INT">
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="low" minOccurs="1" maxOccurs="1"
type="IVXB_INT">
            <xs:annotation>
              <xs:documentation>
                The low limit of the interval.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:choice minOccurs="0">
            <xs:element name="width" minOccurs="0" maxOccurs="1"
type="INT">
              <xs:annotation>
                <xs:documentation>
                  The difference between high and low boundary. The
                  purpose of distinguishing a width property is to
                  handle all cases of incomplete information
                  symmetrically. In any interval representation only
                  two of the three properties high, low, and width need
                  to be stated and the third can be derived.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_INT">
              <xs:annotation>
                <xs:documentation>
                  The high limit of the interval.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:choice>
        </xs:sequence>
        <xs:element name="high" minOccurs="1" maxOccurs="1" type="IVXB_INT">
          <xs:annotation>
            <xs:documentation/>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        <xs:element name="width" minOccurs="1" maxOccurs="1" type="INT">
          <xs:annotation>
            <xs:documentation>
              The difference between high and low boundary. The
              purpose of distinguishing a width property is to
              handle all cases of incomplete information
              symmetrically. In any interval representation only
              two of the three properties high, low, and width need
              to be stated and the third can be derived.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_INT">
          <xs:annotation>
            <xs:documentation>
              The high limit of the interval.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="center" minOccurs="1" maxOccurs="1" type="INT">
        <xs:annotation>
          <xs:documentation>
            The arithmetic mean of the interval (low plus high
            divided by 2). The purpose of distinguishing the center
            as a semantic property is for conversions of intervals
            from and to point values.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="width" minOccurs="0" maxOccurs="1" type="INT">
        <xs:annotation>
          <xs:documentation>
            The difference between high and low boundary. The
            purpose of distinguishing a width property is to
            handle all cases of incomplete information
            symmetrically. In any interval representation only
            two of the three properties high, low, and width need
            to be stated and the third can be derived.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:choice>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_INT">
  <xs:complexContent>
    <xs:extension base="INT">
      <xs:attribute name="inclusive" type="bl" use="optional" default="true">
        <xs:annotation>
          <xs:documentation>
            Specifies whether the limit is included in the
            interval (interval is closed) or excluded from the
            interval (interval is open).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

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```

        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="IVL_REAL">
      <xs:complexContent>
        <xs:extension base="SXCM_REAL">
          <xs:choice minOccurs="0">
            <xs:sequence>
              <xs:element name="low" minOccurs="1" maxOccurs="1"
type="IVXB_REAL">
                <xs:annotation>
                  <xs:documentation>
                    The low limit of the interval.
                  </xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:choice minOccurs="0">
                <xs:element name="width" minOccurs="0" maxOccurs="1"
type="REAL">
                  <xs:annotation>
                    <xs:documentation>
                      The difference between high and low boundary. The
                      purpose of distinguishing a width property is to
                      handle all cases of incomplete information
                      symmetrically. In any interval representation only
                      two of the three properties high, low, and width need
                      to be stated and the third can be derived.
                    </xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_REAL">
                  <xs:annotation>
                    <xs:documentation>
                      The high limit of the interval.
                    </xs:documentation>
                  </xs:annotation>
                </xs:element>
              </xs:choice>
            </xs:sequence>
            <xs:element name="high" minOccurs="1" maxOccurs="1" type="IVXB_REAL">
              <xs:annotation>
                <xs:documentation/>
              </xs:annotation>
            </xs:element>
            <xs:sequence>
              <xs:element name="width" minOccurs="1" maxOccurs="1" type="REAL">
                <xs:annotation>
                  <xs:documentation>
                    The difference between high and low boundary. The
                    purpose of distinguishing a width property is to
                    handle all cases of incomplete information
                    symmetrically. In any interval representation only
                    two of the three properties high, low, and width need
                    to be stated and the third can be derived.
                  </xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_REAL">
                <xs:annotation>

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        <xs:documentation>
            The high limit of the interval.
        </xs:documentation>
    </xs:annotation>
</xs:element>
</xs:sequence>
<xs:sequence>
    <xs:element name="center" minOccurs="1" maxOccurs="1" type="REAL">
        <xs:annotation>
            <xs:documentation>
                The arithmetic mean of the interval (low plus high
                divided by 2). The purpose of distinguishing the center
                as a semantic property is for conversions of intervals
                from and to point values.
            </xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="width" minOccurs="0" maxOccurs="1" type="REAL">
        <xs:annotation>
            <xs:documentation>
                The difference between high and low boundary. The
                purpose of distinguishing a width property is to
                handle all cases of incomplete information
                symmetrically. In any interval representation only
                two of the three properties high, low, and width need
                to be stated and the third can be derived.
            </xs:documentation>
        </xs:annotation>
    </xs:element>
</xs:sequence>
</xs:choice>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_REAL">
    <xs:complexContent>
        <xs:extension base="REAL">
            <xs:attribute name="inclusive" type="bl" use="optional" default="true">
                <xs:annotation>
                    <xs:documentation>
                        Specifies whether the limit is included in the
                        interval (interval is closed) or excluded from the
                        interval (interval is open).
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="IVL_M0">
    <xs:complexContent>
        <xs:extension base="SXCM_M0">
            <xs:choice minOccurs="0">
                <xs:sequence>
                    <xs:element name="low" minOccurs="1" maxOccurs="1" type="IVXB_M0">
                        <xs:annotation>
                            <xs:documentation>
                                The low limit of the interval.
                            </xs:documentation>
                        </xs:annotation>
                    </xs:element>

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        <xs:choice minOccurs="0">
          <xs:element name="width" minOccurs="0" maxOccurs="1" type="M0">
            <xs:annotation>
              <xs:documentation>
                The difference between high and low boundary. The
                purpose of distinguishing a width property is to
                handle all cases of incomplete information
                symmetrically. In any interval representation only
                two of the three properties high, low, and width need
                to be stated and the third can be derived.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_M0">
            <xs:annotation>
              <xs:documentation>
                The high limit of the interval.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:choice>
      </xs:sequence>
      <xs:element name="high" minOccurs="1" maxOccurs="1" type="IVXB_M0">
        <xs:annotation>
          <xs:documentation/>
        </xs:annotation>
      </xs:element>
      <xs:sequence>
        <xs:element name="width" minOccurs="1" maxOccurs="1" type="M0">
          <xs:annotation>
            <xs:documentation>
              The difference between high and low boundary. The
              purpose of distinguishing a width property is to
              handle all cases of incomplete information
              symmetrically. In any interval representation only
              two of the three properties high, low, and width need
              to be stated and the third can be derived.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_M0">
          <xs:annotation>
            <xs:documentation>
              The high limit of the interval.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="center" minOccurs="1" maxOccurs="1" type="M0">
          <xs:annotation>
            <xs:documentation>
              The arithmetic mean of the interval (low plus high
              divided by 2). The purpose of distinguishing the center
              as a semantic property is for conversions of intervals
              from and to point values.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:element>

```

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        <xs:element name="width" minOccurs="0" maxOccurs="1" type="M0">
          <xs:annotation>
            <xs:documentation>
              The difference between high and low boundary. The
              purpose of distinguishing a width property is to
              handle all cases of incomplete information
              symmetrically. In any interval representation only
              two of the three properties high, low, and width need
              to be stated and the third can be derived.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:choice>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_M0">
  <xs:complexContent>
    <xs:extension base="M0">
      <xs:attribute name="inclusive" type="bl" use="optional" default="true">
        <xs:annotation>
          <xs:documentation>
            Specifies whether the limit is included in the
            interval (interval is closed) or excluded from the
            interval (interval is open).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="HXIT_PQ">
  <xs:complexContent>
    <xs:extension base="PQ">
      <xs:sequence>
        <xs:element name="validTime" minOccurs="0" maxOccurs="1"
type="IVL_TS">
          <xs:annotation>
            <xs:documentation>
              The time interval during which the given information
              was, is, or is expected to be valid. The interval can
              be open or closed, as well as infinite or undefined on
              either side.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="HXIT_CE">
  <xs:complexContent>
    <xs:extension base="CE">
      <xs:sequence>
        <xs:element name="validTime" minOccurs="0" maxOccurs="1"
type="IVL_TS">
          <xs:annotation>
            <xs:documentation>
              The time interval during which the given information
              was, is, or is expected to be valid. The interval can

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```

        be open or closed, as well as infinite or undefined on
        either side.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="BXIT_CD">
  <xs:complexContent>
    <xs:extension base="CD">
      <xs:attribute name="qty" type="int" use="optional" default="1">
        <xs:annotation>
          <xs:documentation>
            The quantity in which the bag item occurs in its containing
bag.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BXIT_IVL_PQ">
  <xs:complexContent>
    <xs:extension base="IVL_PQ">
      <xs:attribute name="qty" type="int" use="optional" default="1">
        <xs:annotation>
          <xs:documentation>
            The quantity in which the bag item occurs in its containing
bag.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="SLIST_PQ">
  <xs:complexContent>
    <xs:extension base="ANY">
      <xs:sequence>
        <xs:element name="origin" minOccurs="1" maxOccurs="1" type="PQ">
          <xs:annotation>
            <xs:documentation>
              The origin of the list item value scale, i.e., the
              physical quantity that a zero-digit in the sequence
              would represent.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="scale" minOccurs="1" maxOccurs="1" type="PQ">
          <xs:annotation>
            <xs:documentation>
              A ratio-scale quantity that is factored out of the
              digit sequence.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="digits" minOccurs="1" maxOccurs="1"
type="list_int">
          <xs:annotation>

```

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        <xs:documentation>
            A sequence of raw digits for the sample values. This is
            typically the raw output of an A/D converter.
        </xs:documentation>
    </xs:annotation>
</xs:element>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="list_int">
    <xs:list itemType="int"/>
</xs:simpleType>
<xs:complexType name="SLIST_TS">
    <xs:complexContent>
        <xs:extension base="ANY">
            <xs:sequence>
                <xs:element name="origin" minOccurs="1" maxOccurs="1" type="TS">
                    <xs:annotation>
                        <xs:documentation>
                            The origin of the list item value scale, i.e., the
                            physical quantity that a zero-digit in the sequence
                            would represent.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
                <xs:element name="scale" minOccurs="1" maxOccurs="1" type="PQ">
                    <xs:annotation>
                        <xs:documentation>
                            A ratio-scale quantity that is factored out of the
                            digit sequence.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
                <xs:element name="digits" minOccurs="1" maxOccurs="1"
type="list_int">
                    <xs:annotation>
                        <xs:documentation>
                            A sequence of raw digits for the sample values. This is
                            typically the raw output of an A/D converter.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GLIST_TS">
    <xs:complexContent>
        <xs:extension base="ANY">
            <xs:sequence>
                <xs:element name="head" minOccurs="1" maxOccurs="1" type="TS">
                    <xs:annotation>
                        <xs:documentation>
                            This is the start-value of the generated list.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
                <xs:element name="increment" minOccurs="1" maxOccurs="1" type="PQ">
                    <xs:annotation>
                        <xs:documentation>

```

```

        The difference between one value and its previous
        different value. For example, to generate the sequence
        (1; 4; 7; 10; 13; ...) the increment is 3; likewise to
        generate the sequence (1; 1; 4; 4; 7; 7; 10; 10; 13;
        13; ...) the increment is also 3.
    </xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
<xs:attribute name="period" type="int" use="optional">
    <xs:annotation>
        <xs:documentation>
            If non-NULL, specifies that the sequence alternates,
            i.e., after this many increments, the sequence item
            values roll over to start from the initial sequence
            item value. For example, the sequence (1; 2; 3; 1; 2;
            3; 1; 2; 3; ...) has period 3; also the sequence
            (1; 1; 2; 2; 3; 3; 1; 1; 2; 2; 3; 3; ...) has period
            3 too.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
<xs:attribute name="denominator" type="int" use="optional">
    <xs:annotation>
        <xs:documentation>
            The integer by which the index for the sequence is
            divided, effectively the number of times the sequence
            generates the same sequence item value before
            incrementing to the next sequence item value. For
            example, to generate the sequence (1; 1; 1; 2; 2; 2; 3; 3;
            3; ...) the denominator is 3.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="GLIST_PQ">
    <xs:complexContent>
        <xs:extension base="ANY">
            <xs:sequence>
                <xs:element name="head" minOccurs="1" maxOccurs="1" type="PQ">
                    <xs:annotation>
                        <xs:documentation>
                            This is the start-value of the generated list.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
                <xs:element name="increment" minOccurs="1" maxOccurs="1" type="PQ">
                    <xs:annotation>
                        <xs:documentation>
                            The difference between one value and its previous
                            different value. For example, to generate the sequence
                            (1; 4; 7; 10; 13; ...) the increment is 3; likewise to
                            generate the sequence (1; 1; 4; 4; 7; 7; 10; 10; 13;
                            13; ...) the increment is also 3.
                        </xs:documentation>
                    </xs:annotation>
                </xs:element>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:attribute name="period" type="int" use="optional">

```

```

        <xs:annotation>
          <xs:documentation>
            If non-NULL, specifies that the sequence alternates,
            i.e., after this many increments, the sequence item
            values roll over to start from the initial sequence
            item value. For example, the sequence (1; 2; 3; 1; 2;
            3; 1; 2; 3; ...) has period 3; also the sequence
            (1; 1; 2; 2; 3; 3; 1; 1; 2; 2; 3; 3; ...) has period
            3 too.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="denominator" type="int" use="optional">
        <xs:annotation>
          <xs:documentation>
            The integer by which the index for the sequence is
            divided, effectively the number of times the sequence
            generates the same sequence item value before
            incrementing to the next sequence item value. For
            example, to generate the sequence (1; 1; 1; 2; 2; 2; 3; 3;
            3; ...) the denominator is 3.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RTO_PQ_PQ">
  <xs:annotation>
    <xs:appinfo>
      <diff>RTO_PQ_PQ</diff>
    </xs:appinfo>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="QTY">
      <xs:sequence>
        <xs:element name="numerator" type="PQ">
          <xs:annotation>
            <xs:documentation>
              The quantity that is being divided in the ratio. The
              default is the integer number 1 (one).
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="denominator" type="PQ">
          <xs:annotation>
            <xs:documentation>
              The quantity that divides the numerator in the ratio.
              The default is the integer number 1 (one).
              The denominator must not be zero.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RTO_MO_PQ">
  <xs:annotation>
    <xs:appinfo>
      <diff>RTO_MO_PQ</diff>

```

```

    </xs:appinfo>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="QTY">
      <xs:sequence>
        <xs:element name="numerator" type="M0">
          <xs:annotation>
            <xs:documentation>
              The quantity that is being divided in the ratio. The
              default is the integer number 1 (one).
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="denominator" type="PQ">
          <xs:annotation>
            <xs:documentation>
              The quantity that devides the numerator in the ratio.
              The default is the integer number 1 (one).
              The denominator must not be zero.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="UVP_TS">
  <xs:complexContent>
    <xs:extension base="TS">
      <xs:attribute name="probability" type="probability" use="optional">
        <xs:annotation>
          <xs:documentation>
            The probability assigned to the value, a decimal number
            between 0 (very uncertain) and 1 (certain).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
</xs:schema>

```

```

datatypes-base.xsd:
<?xml version="1.0" encoding="UTF-8"?><!--
  This schema is generated from a Generic Schema Definition (GSD)
  by gsd2xsl. Do not edit this file.
-->
<xs:schema xmlns:sch="http://www.ascc.net/xml/schematron"
  xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xs:annotation>
    <xs:documentation>
      Copyright (c) 2001, 2002, 2003, 2004, 2005 Health Level Seven.
      All rights reserved.

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      without modification, are permitted provided that the following
      conditions are met:
      1. Redistributions of source code must retain the above
         copyright notice, this list of conditions and the following
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      ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT
      NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
      FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.  IN NO EVENT
      SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
      INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
      DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
      GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
      INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
      WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
      NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
      OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
      DAMAGE.

      Generated by $Id: gsd2xsd.xsl,v 1.4 2005/04/17 03:20:15 lmckenzi Exp $
    </xs:documentation>
  </xs:annotation>
  <xs:include schemaLocation="voc.xsd"/>
  <xs:annotation>
    <xs:documentation>
      Generated by $Id: v3dt-schema.xsl,v 1.5 2005/05/24 05:44:38 lmckenzi Exp
      $
    </xs:documentation>
  </xs:annotation>
  <xs:complexType name="ANY" abstract="true">
    <xs:annotation>
      <xs:documentation>
        Defines the basic properties of every data value. This
        is an abstract type, meaning that no value can be just
        a data value without belonging to any concrete type.
        Every concrete type is a specialization of this
        general abstract DataValue type.
      </xs:documentation>
    </xs:annotation>
  </xs:complexType>

```

```

    <xs:attribute name="nullFlavor" type="NullFlavor" use="optional">
      <xs:annotation>
        <xs:documentation>
          An exceptional value expressing missing information
          and possibly the reason why the information is missing.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:complexType>
  <xs:simpleType name="bl">
    <xs:annotation>
      <xs:documentation>
        The Boolean type stands for the values of two-valued logic.
        A Boolean value can be either true or
        false, or, as any other value may be NULL.
      </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:boolean">
      <xs:pattern value="true|false"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="BL">
    <xs:annotation>
      <xs:documentation>
        The Boolean type stands for the values of two-valued logic.
        A Boolean value can be either true or
        false, or, as any other value may be NULL.
      </xs:documentation>
      <xs:appinfo>
        <sch:pattern name="validate BL">
          <sch:rule abstract="true" id="rule-BL">
            <sch:report test="(@nullFlavor or @value) and not(@nullFlavor and
@value)"/>
          </sch:rule>
        </sch:pattern>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="ANY">
        <xs:attribute name="value" use="optional" type="bl"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="bn">
    <xs:annotation>
      <xs:documentation>
        The BooleanNonNull type is used where a Boolean cannot
        have a null value. A Boolean value can be either
        true or false.
      </xs:documentation>
    </xs:annotation>
    <xs:restriction base="bl"/>
  </xs:simpleType>
  <xs:complexType name="ANYNonNull">
    <xs:annotation>
      <xs:documentation>
        The BooleanNonNull type is used where a Boolean cannot
        have a null value. A Boolean value can be either
        true or false.
      </xs:documentation>
    </xs:annotation>
  </xs:complexType>

```

```

<xs:complexContent>
  <xs:restriction base="ANY">
    <xs:attribute name="nullFlavor" type="NullFlavor" use="prohibited"/>
  </xs:restriction>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="BN">
  <xs:annotation>
    <xs:documentation>
      The BooleanNonNull type is used where a Boolean cannot
      have a null value. A Boolean value can be either
      true or false.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ANYNonNull">
      <xs:attribute name="value" use="optional" type="bn"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BIN" abstract="true" mixed="true">
  <xs:annotation>
    <xs:documentation>
      Binary data is a raw block of bits. Binary data is a
      protected type that MUST not be used outside the data
      type specification.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ANY">
      <xs:attribute name="representation" use="optional"
type="BinaryDataEncoding" default="TXT">
        <xs:annotation>
          <xs:documentation>
            Specifies the representation of the binary data that
            is the content of the binary data value.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="bin">
  <xs:annotation>
    <xs:documentation>
      Binary data is a raw block of bits. Binary data is a
      protected type that MUST not be used outside the data
      type specification.
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:base64Binary"/>
</xs:simpleType>
<xs:simpleType name="BinaryDataEncoding">
  <xs:restriction base="xs:NMTOKEN">
    <xs:enumeration value="B64"/>
    <xs:enumeration value="TXT"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ED" mixed="true">
  <xs:annotation>
    <xs:documentation>

```

Data that is primarily intended for human interpretation or for further machine processing is outside the scope of HL7. This includes unformatted or formatted written language, multimedia data, or structured information as defined by a different standard (e.g., XML-signatures.) Instead of the data itself, an ED may contain only a reference (see TEL.) Note that the ST data type is a specialization of the ED data type when the ED media type is text/plain.

```

</xs:documentation>
</xs:annotation>
<xs:complexContent>
  <xs:extension base="BIN">
    <xs:sequence>
      <xs:element name="reference" type="TEL" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>
            A telecommunication address (TEL), such as a URL
            for HTTP or FTP, which will resolve to precisely
            the same binary data that could as well have been
            provided as inline data.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="thumbnail" minOccurs="0" maxOccurs="1"
type="thumbnail"/>
    </xs:sequence>
    <xs:attribute name="mediaType" type="cs" use="optional"
default="text/plain">
      <xs:annotation>
        <xs:documentation>
          Identifies the type of the encapsulated data and
          identifies a method to interpret or render the data.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="language" type="cs" use="optional">
      <xs:annotation>
        <xs:documentation>
          For character based information the language property
          specifies the human language of the text.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="compression" type="CompressionAlgorithm"
use="optional">
      <xs:annotation>
        <xs:documentation>
          Indicates whether the raw byte data is compressed,
          and what compression algorithm was used.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="integrityCheck" type="bin" use="optional">
      <xs:annotation>
        <xs:documentation>
          The integrity check is a short binary value representing
          a cryptographically strong checksum that is calculated
          over the binary data. The purpose of this property, when
          communicated with a reference is for anyone to validate

```

```

        later whether the reference still resolved to the same
        data that the reference resolved to when the encapsulated
        data value with reference was created.
    </xs:documentation>
</xs:annotation>
</xs:attribute>
<xs:attribute name="integrityCheckAlgorithm"
type="IntegrityCheckAlgorithm" use="optional" default="SHA-1">
    <xs:annotation>
        <xs:documentation>
            Specifies the algorithm used to compute the
            integrityCheck value.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="thumbnail" mixed="true">
    <xs:annotation>
        <xs:documentation>
            A thumbnail is an abbreviated rendition of the full
            data. A thumbnail requires significantly fewer
            resources than the full data, while still maintaining
            some distinctive similarity with the full data. A
            thumbnail is typically used with by-reference
            encapsulated data. It allows a user to select data
            more efficiently before actually downloading through
            the reference.
        </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:restriction base="ED">
            <xs:sequence>
                <xs:element name="reference" type="TEL" minOccurs="0" maxOccurs="1"/>
                <xs:element name="thumbnail" type="thumbnail" minOccurs="0"
maxOccurs="0"/>
            </xs:sequence>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="st">
    <xs:annotation>
        <xs:documentation>
            The character string data type stands for text data,
            primarily intended for machine processing (e.g.,
            sorting, querying, indexing, etc.) Used for names,
            symbols, and formal expressions.
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ST" mixed="true">
    <xs:annotation>
        <xs:documentation>
            The character string data type stands for text data,
            primarily intended for machine processing (e.g.,
            sorting, querying, indexing, etc.) Used for names,
            symbols, and formal expressions.

```

```

</xs:documentation>
<xs:appinfo>
  <sch:pattern name="validate ST">
    <sch:rule abstract="true" id="rule-ST">
      <sch:report test="(@nullFlavor or text()) and not(@nullFlavor and
text())">
        <p>Text content is only allowed in non-NULL values.</p>
      </sch:report>
    </sch:rule>
  </sch:pattern>
</xs:appinfo>
</xs:annotation>
<xs:complexContent>
  <xs:restriction base="ED">
    <xs:sequence>
      <xs:element name="reference" type="TEL" minOccurs="0" maxOccurs="0"/>
      <xs:element name="thumbnail" type="ED" minOccurs="0" maxOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="representation" type="BinaryDataEncoding"
fixed="TXT"/>
    <xs:attribute name="mediaType" type="cs" fixed="text/plain"/>
    <xs:attribute name="language" type="cs" use="optional"/>
    <xs:attribute name="compression" type="CompressionAlgorithm"
use="prohibited"/>
    <xs:attribute name="integrityCheck" type="bin" use="prohibited"/>
    <xs:attribute name="integrityCheckAlgorithm"
type="IntegrityCheckAlgorithm" use="prohibited"/>
  </xs:restriction>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="cs">
  <xs:annotation>
    <xs:documentation>
      Coded data in its simplest form, consists of a code.
      The code system and code system version is fixed by
      the context in which the CS value occurs. CS is used
      for coded attributes that have a single HL7-defined
      value set.
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:token">
    <xs:pattern value="^[^\s]+"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CD">
  <xs:annotation>
    <xs:documentation>
      A concept descriptor represents any kind of concept usually
      by giving a code defined in a code system. A concept
      descriptor can contain the original text or phrase that
      served as the basis of the coding and one or more
      translations into different coding systems. A concept
      descriptor can also contain qualifiers to describe, e.g.,
      the concept of a "left foot" as a postcoordinated term built
      from the primary code "FOOT" and the qualifier "LEFT".
      In exceptional cases, the concept descriptor need not
      contain a code but only the original text describing
      that concept.
    </xs:documentation>
  </xs:annotation>
</xs:complexType>

```

```

    <xs:extension base="ANY">
      <xs:sequence>
        <xs:element name="originalText" type="ED" minOccurs="0"
maxOccurs="1">
          <xs:annotation>
            <xs:documentation>
              The text or phrase used as the basis for the coding.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="qualifier" type="CR" minOccurs="0"
maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>
              Specifies additional codes that increase the
              specificity of the primary code.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="translation" type="CD" minOccurs="0"
maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>
              A set of other concept descriptors that translate
              this concept descriptor into other code systems.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="code" type="cs" use="optional">
        <xs:annotation>
          <xs:documentation>
            The plain code symbol defined by the code system.
            For example, "784.0" is the code symbol of the ICD-9
            code "784.0" for headache.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystem" type="uid" use="optional">
        <xs:annotation>
          <xs:documentation>
            Specifies the code system that defines the code.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystemName" type="st" use="optional">
        <xs:annotation>
          <xs:documentation>
            A common name of the coding system.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystemVersion" type="st" use="optional">
        <xs:annotation>
          <xs:documentation>
            If applicable, a version descriptor defined
            specifically for the given code system.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="displayName" type="st" use="optional">

```

```

        <xs:annotation>
          <xs:documentation>
            A name or title for the code, under which the sending
            system shows the code value to its users.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="CE">
  <xs:annotation>
    <xs:documentation>
      Coded data, consists of a coded value (CV)
      and, optionally, coded value(s) from other coding systems
      that identify the same concept. Used when alternative
      codes may exist.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:restriction base="CD">
      <xs:sequence>
        <xs:element name="originalText" type="ED" minOccurs="0"
maxOccurs="1">
          <xs:annotation>
            <xs:documentation>
              The text or phrase used as the basis for the coding.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="qualifier" type="CR" minOccurs="0" maxOccurs="0"/>
        <xs:element name="translation" type="CD" minOccurs="0"
maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>
              A set of other concept descriptors that translate
              this concept descriptor into other code systems.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="code" type="cs" use="optional">
        <xs:annotation>
          <xs:documentation>
            The plain code symbol defined by the code system.
            For example, "784.0" is the code symbol of the ICD-9
            code "784.0" for headache.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystem" type="uid" use="optional">
        <xs:annotation>
          <xs:documentation>
            Specifies the code system that defines the code.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystemName" type="st" use="optional">
        <xs:annotation>
          <xs:documentation>
            A common name of the coding system.

```

```

        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="codeSystemVersion" type="st" use="optional">
      <xs:annotation>
        <xs:documentation>
          If applicable, a version descriptor defined
            specifically for the given code system.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attribute name="displayName" type="st" use="optional">
      <xs:annotation>
        <xs:documentation>
          A name or title for the code, under which the sending
            system shows the code value to its users.
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:restriction>
</xs:complexType>
</xs:complexType>
<xs:complexType name="CV">
  <xs:annotation>
    <xs:documentation>
      Coded data, consists of a code, display name, code system,
        and original text. Used when a single code value must be sent.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:restriction base="CE">
      <xs:sequence>
        <xs:element name="originalText" type="ED" minOccurs="0"
maxOccurs="1">
          <xs:annotation>
            <xs:documentation>
              The text or phrase used as the basis for the coding.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="translation" type="CD" minOccurs="0"
maxOccurs="0"/>
      </xs:sequence>
      <xs:attribute name="code" type="cs" use="optional">
        <xs:annotation>
          <xs:documentation>
            The plain code symbol defined by the code system.
            For example, "784.0" is the code symbol of the ICD-9
              code "784.0" for headache.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystem" type="uid" use="optional">
        <xs:annotation>
          <xs:documentation>
            Specifies the code system that defines the code.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="codeSystemName" type="st" use="optional">
        <xs:annotation>

```

```

        <xs:documentation>
            A common name of the coding system.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
<xs:attribute name="codeSystemVersion" type="st" use="optional">
    <xs:annotation>
        <xs:documentation>
            If applicable, a version descriptor defined
            specifically for the given code system.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
<xs:attribute name="displayName" type="st" use="optional">
    <xs:annotation>
        <xs:documentation>
            A name or title for the code, under which the sending
            system shows the code value to its users.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
</xs:restriction>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="CS">
    <xs:annotation>
        <xs:documentation>
            Coded data, consists of a code, display name, code system,
            and original text. Used when a single code value must be sent.
        </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:restriction base="CV">
            <xs:attribute name="code" type="cs" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        The plain code symbol defined by the code system.
                        For example, "784.0" is the code symbol of the ICD-9
                        code "784.0" for headache.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
            <xs:attribute name="codeSystem" type="uid" use="prohibited"/>
            <xs:attribute name="codeSystemName" type="st" use="prohibited"/>
            <xs:attribute name="codeSystemVersion" type="st" use="prohibited"/>
            <xs:attribute name="displayName" type="st" use="prohibited"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="CO">
    <xs:annotation>
        <xs:documentation>
            Coded data, where the domain from which the codeset comes
            is ordered. The Coded Ordinal data type adds semantics
            related to ordering so that models that make use of such
            domains may introduce model elements that involve statements
            about the order of the terms in a domain.
        </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="CV"/>
    </xs:complexContent>
</xs:complexType>

```

```

    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="CR">
    <xs:annotation>
      <xs:documentation>
        A concept qualifier code with optionally named role.
        Both qualifier role and value codes must be defined by
        the coding system. For example, if SNOMED RT defines a
        concept "leg", a role relation "has-laterality", and
        another concept "left", the concept role relation allows
        to add the qualifier "has-laterality: left" to a primary
        code "leg" to construct the meaning "left leg".
      </xs:documentation>
      <xs:appinfo>
        <sch:pattern name="validate CR">
          <sch:rule abstract="true" id="rule-CR">
            <sch:report test="(value or @nullFlavor) and not(@nullFlavor and
node())">
              <p>
                A value component is required or else the
                code role is NULL.
              </p>
            </sch:report>
          </sch:rule>
        </sch:pattern>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="ANY">
        <xs:sequence>
          <xs:element name="name" type="CV" minOccurs="0" maxOccurs="1">
            <xs:annotation>
              <xs:documentation>
                Specifies the manner in which the concept role value
                contributes to the meaning of a code phrase. For
                example, if SNOMED RT defines a concept "leg", a role
                relation "has-laterality", and another concept "left",
                the concept role relation allows to add the qualifier
                "has-laterality: left" to a primary code "leg" to
                construct the meaning "left leg". In this example
                "has-laterality" is the CR.name.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="value" type="CD" minOccurs="0" maxOccurs="1">
            <xs:annotation>
              <xs:documentation>
                The concept that modifies the primary code of a code
                phrase through the role relation. For example, if
                SNOMED RT defines a concept "leg", a role relation
                "has-laterality", and another concept "left", the
                concept role relation allows adding the qualifier
                "has-laterality: left" to a primary code "leg" to
                construct the meaning "left leg". In this example
                "left" is the CR.value.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
        <xs:attribute name="inverted" type="bn" use="optional" default="false">
          <xs:annotation>

```

```

        <xs:documentation>
            Indicates if the sense of the role name is inverted.
            This can be used in cases where the underlying code
            system defines inversion but does not provide reciprocal
            pairs of role names. By default, inverted is false.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SC" mixed="true">
    <xs:annotation>
        <xs:documentation>
            A ST that optionally may have a code attached.
            The text must always be present if a code is present. The
            code is often a local code.
        </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="ST">
            <xs:attribute name="code" type="cs" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        The plain code symbol defined by the code system.
                        For example, "784.0" is the code symbol of the ICD-9
                        code "784.0" for headache.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
            <xs:attribute name="codeSystem" type="uid" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        Specifies the code system that defines the code.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
            <xs:attribute name="codeSystemName" type="st" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        A common name of the coding system.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
            <xs:attribute name="codeSystemVersion" type="st" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        If applicable, a version descriptor defined
                        specifically for the given code system.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
            <xs:attribute name="displayName" type="st" use="optional">
                <xs:annotation>
                    <xs:documentation>
                        A name or title for the code, under which the sending
                        system shows the code value to its users.
                    </xs:documentation>
                </xs:annotation>
            </xs:attribute>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

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    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="uid">
    <xs:annotation>
      <xs:documentation>
        A unique identifier string is a character string which
        identifies an object in a globally unique and timeless
        manner. The allowable formats and values and procedures
        of this data type are strictly controlled by HL7. At this
        time, user-assigned identifiers may be certain character
        representations of ISO Object Identifiers (OID) and DCE
        Universally Unique Identifiers (UUID). HL7 also reserves
        the right to assign other forms of UUIDs, such as mnemonic
        identifiers for code systems.
      </xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="oid uuid ruid"/>
  </xs:simpleType>
  <xs:simpleType name="oid">
    <xs:annotation>
      <xs:documentation>
        A globally unique string representing an ISO Object Identifier
        (OID) in a form that consists only of non-negative numbers with
        no leading zeros and dots (e.g., "2.16.840.1.113883.3.1").
        According to ISO, OIDs are paths in a tree structure, with the
        left-most number representing the root and the right-most number
        representing a leaf.
      </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
      <xs:pattern value="[0-2](\.(0|[1-9][0-9]*)*)*" />
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="uuid">
    <xs:annotation>
      <xs:documentation>
        A DCE Universal Unique Identifier is a globally unique
        string consisting of 5 groups of upper- or lower-case
        hexadecimal digits having 8, 4, 4, 4, and 12 places
        respectively. UUIDs are assigned using Ethernet MAC
        addresses, the point in time of creation and some random
        components. This mix is believed to generate sufficiently
        unique identifiers without any organizational policy for
        identifier assignment (in fact this piggy-backs on the
        organization of MAC address assignment.)
      </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
      <xs:pattern value="[0-9a-zA-Z]{8}-[0-9a-zA-Z]{4}-[0-9a-zA-Z]{4}-[0-9a-zA-Z]{4}-[0-9a-zA-Z]{12}" />
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ruid">
    <xs:annotation>
      <xs:documentation>
        HL7 reserved identifiers are strings consisting only of
        (US-ASCII) letters, digits and hyphens, where the first
        character must be a letter. HL7 may assign these reserved
        identifiers as mnemonic identifiers for major concepts of
        interest to HL7.
      </xs:documentation>
    </xs:annotation>
  </xs:simpleType>

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</xs:annotation>
<xs:restriction base="xs:string">
  <xs:pattern value="[A-Za-z][A-Za-z0-9\-\-]*/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="II">
  <xs:annotation>
    <xs:documentation>
      An identifier that uniquely identifies a thing or object.
      Examples are object identifier for HL7 RIM objects,
      medical record number, order id, service catalog item id,
      Vehicle Identification Number (VIN), etc. Instance
      identifiers are defined based on ISO object identifiers.
    </xs:documentation>
    <xs:appinfo>
      <sch:pattern name="validate II">
        <sch:rule abstract="true" id="rule-II">
          <sch:report test="(@root or @nullFlavor) and not(@root and
@nullFlavor)">
            A root component is required or else the II value is NULL.
          </sch:report>
        </sch:rule>
      </sch:pattern>
    </xs:appinfo>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ANY">
      <xs:attribute name="root" type="uid" use="optional">
        <xs:annotation>
          <xs:documentation>
            A unique identifier that guarantees the global uniqueness
            of the instance identifier. The root alone may be the
            entire instance identifier.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="extension" type="st" use="optional">
        <xs:annotation>
          <xs:documentation>
            A character string as a unique identifier within the
            scope of the identifier root.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="assigningAuthorityName" type="st" use="optional">
        <xs:annotation>
          <xs:documentation>
            A human readable name or mnemonic for the assigning
            authority. This name may be provided solely for the
            convenience of unaided humans interpreting an II value
            and can have no computational meaning. Note: no
            automated processing must depend on the assigning
            authority name to be present in any form.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="displayable" type="bl" use="optional">
        <xs:annotation>
          <xs:documentation>
            Specifies if the identifier is intended for human
            display and data entry (displayable = true) as

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        opposed to pure machine interoperation (displayable
        = false).
      </xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="url">
  <xs:annotation>
    <xs:documentation>
      A telecommunications address specified according to
      Internet standard RFC 1738
      [http://www.ietf.org/rfc/rfc1738.txt]. The
      URL specifies the protocol and the contact point defined
      by that protocol for the resource. Notable uses of the
      telecommunication address data type are for telephone and
      telefax numbers, e-mail addresses, Hypertext references,
      FTP references, etc.
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:anyURI"/>
</xs:simpleType>
<xs:complexType name="URL" abstract="true">
  <xs:annotation>
    <xs:documentation>
      A telecommunications address specified according to
      Internet standard RFC 1738
      [http://www.ietf.org/rfc/rfc1738.txt]. The
      URL specifies the protocol and the contact point defined
      by that protocol for the resource. Notable uses of the
      telecommunication address data type are for telephone and
      telefax numbers, e-mail addresses, Hypertext references,
      FTP references, etc.
    </xs:documentation>
  <xs:appinfo>
    <sch:pattern name="validate URL">
      <sch:rule abstract="true" id="rule-URL">
        <sch:report test="(@nullFlavor or @value) and not(@nullFlavor and
@value)"/>
      </sch:rule>
    </sch:pattern>
  </xs:appinfo>
</xs:annotation>
<xs:complexContent>
  <xs:extension base="ANY">
    <xs:attribute name="value" type="url" use="optional"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="ts">
  <xs:annotation>
    <xs:documentation>
      A quantity specifying a point on the axis of natural time.
      A point in time is most often represented as a calendar
      expression.
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:pattern value="[0-9]{1,8}|([0-9]{9,14}|[0-9]{14,14}\.[0-9]+)([+|-][0-
9]{1,4})?" />

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    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="TS">
    <xs:annotation>
      <xs:documentation>
        A quantity specifying a point on the axis of natural time.
        A point in time is most often represented as a calendar
        expression.
      </xs:documentation>
      <xs:appinfo>
        <diff>PQ</diff>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="QTY">
        <xs:attribute name="value" use="optional" type="ts"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="TEL">
    <xs:annotation>
      <xs:documentation>
        A telephone number (voice or fax), e-mail address, or
        other locator for a resource (information or service)
        mediated by telecommunication equipment. The address
        is specified as a Universal Resource Locator (URL)
        qualified by time specification and use codes that help
        in deciding which address to use for a given time and
        purpose.
      </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="URL">
        <xs:sequence>
          <xs:element name="useablePeriod" minOccurs="0" maxOccurs="unbounded"
type="SXCM_TS">
            <xs:annotation>
              <xs:documentation>
                Specifies the periods of time during which the
                telecommunication address can be used. For a
                telephone number, this can indicate the time of day
                in which the party can be reached on that telephone.
                For a web address, it may specify a time range in
                which the web content is promised to be available
                under the given address.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
        <xs:attribute name="use" use="optional"
type="set_TelecommunicationAddressUse">
          <xs:annotation>
            <xs:documentation>
              One or more codes advising a system or user which
              telecommunication address in a set of like addresses
              to select for a given telecommunication need.
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>

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</xs:complexType>
<xs:complexType name="ADXP" mixed="true">
  <xs:annotation>
    <xs:documentation>
      A character string that may have a type-tag signifying its
      role in the address. Typical parts that exist in about
      every address are street, house number, or post box,
      postal code, city, country but other roles may be defined
      regionally, nationally, or on an enterprise level (e.g. in
      military addresses). Addresses are usually broken up into
      lines, which are indicated by special line-breaking
      delimiter elements (e.g., DEL).
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ST">
      <xs:attribute name="partType" type="AddressPartType">
        <xs:annotation>
          <xs:documentation>
            Specifies whether an address part names the street,
            city, country, postal code, post box, etc. If the type
            is NULL the address part is unclassified and would
            simply appear on an address label as is.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.delimiter">
  <xs:complexContent>
    <xs:restriction base="ADXP">
      <xs:attribute name="partType" type="AddressPartType" fixed="DEL"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.country">
  <xs:complexContent>
    <xs:restriction base="ADXP">
      <xs:attribute name="partType" type="AddressPartType" fixed="CNT"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.state">
  <xs:complexContent>
    <xs:restriction base="ADXP">
      <xs:attribute name="partType" type="AddressPartType" fixed="STA"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.county">
  <xs:complexContent>
    <xs:restriction base="ADXP">
      <xs:attribute name="partType" type="AddressPartType" fixed="CPA"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.city">
  <xs:complexContent>
    <xs:restriction base="ADXP">
      <xs:attribute name="partType" type="AddressPartType" fixed="CTY"/>
    </xs:restriction>
  </xs:complexContent>

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        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.postalCode">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="ZIP"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.streetAddressLine">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="SAL"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.houseNumber">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="BNR"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.houseNumberNumeric">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="BNN"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.direction">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="DIR"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.streetName">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="STR"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.streetNameBase">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="STB"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType><!--
jaxb implementors note: the jaxb code generator (v1.0.?) will
fail to append "Type" to streetNameType so that there will be
duplicate definitions in the java source for streetNameType.
You will have to fix this manually.
-->
    <xs:complexType mixed="true" name="adxp.streetNameType">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="STTYP"/>

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        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.additionalLocator">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="ADL"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.unitID">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="UNID"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.unitType">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="UNIT"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.careOf">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="CAR"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.censusTract">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="CEN"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.deliveryAddressLine">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="DAL"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.deliveryInstallationType">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="DINST"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.deliveryInstallationArea">
      <xs:complexContent>
        <xs:restriction base="ADXP">
          <xs:attribute name="partType" type="AddressPartType" fixed="DINSTA"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType mixed="true" name="adxp.deliveryInstallationQualifier">
      <xs:complexContent>

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        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="DINSTQ"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.deliveryMode">
    <xs:complexContent>
        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="DMOD"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.deliveryModeIdentifier">
    <xs:complexContent>
        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="DMODID"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.buildingNumberSuffix">
    <xs:complexContent>
        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="BNS"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.postBox">
    <xs:complexContent>
        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="POB"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType mixed="true" name="adxp.precinct">
    <xs:complexContent>
        <xs:restriction base="ADXP">
            <xs:attribute name="partType" type="AddressPartType" fixed="PRE"/>
        </xs:restriction>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AD" mixed="true">
    <xs:annotation>
        <xs:documentation>
            Mailing and home or office addresses. A sequence of
            address parts, such as street or post office Box, city,
            postal code, country, etc.
        </xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="ANY">
            <xs:sequence>
                <xs:choice minOccurs="0" maxOccurs="unbounded">
                    <xs:element name="delimiter" type="adxp.delimiter"/>
                    <xs:element name="country" type="adxp.country"/>
                    <xs:element name="state" type="adxp.state"/>
                    <xs:element name="county" type="adxp.county"/>
                    <xs:element name="city" type="adxp.city"/>
                    <xs:element name="postalCode" type="adxp.postalCode"/>
                    <xs:element name="streetAddressLine"
type="adxp.streetAddressLine"/>
                    <xs:element name="houseNumber" type="adxp.houseNumber"/>

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        <xs:element name="houseNumberNumeric"
type="adxp.houseNumberNumeric"/>
        <xs:element name="direction" type="adxp.direction"/>
        <xs:element name="streetName" type="adxp.streetName"/>
        <xs:element name="streetNameBase" type="adxp.streetNameBase"/>
        <xs:element name="streetNameType" type="adxp.streetNameType"/>
        <xs:element name="additionalLocator"
type="adxp.additionalLocator"/>
        <xs:element name="unitID" type="adxp.unitID"/>
        <xs:element name="unitType" type="adxp.unitType"/>
        <xs:element name="careOf" type="adxp.careOf"/>
        <xs:element name="censusTract" type="adxp.censusTract"/>
        <xs:element name="deliveryAddressLine"
type="adxp.deliveryAddressLine"/>
        <xs:element name="deliveryInstallationType"
type="adxp.deliveryInstallationType"/>
        <xs:element name="deliveryInstallationArea"
type="adxp.deliveryInstallationArea"/>
        <xs:element name="deliveryInstallationQualifier"
type="adxp.deliveryInstallationQualifier"/>
        <xs:element name="deliveryMode" type="adxp.deliveryMode"/>
        <xs:element name="deliveryModeIdentifier"
type="adxp.deliveryModeIdentifier"/>
        <xs:element name="buildingNumberSuffix"
type="adxp.buildingNumberSuffix"/>
        <xs:element name="postBox" type="adxp.postBox"/>
        <xs:element name="precinct" type="adxp.precinct"/>
    </xs:choice>
    <xs:element name="useablePeriod" minOccurs="0" maxOccurs="unbounded"
type="SXCM_TS">
        <xs:annotation>
            <xs:documentation>
                A General Timing Specification (GTS) specifying the
                periods of time during which the address can be used.
                This is used to specify different addresses for
                different times of the year or to refer to historical
                addresses.
            </xs:documentation>
        </xs:annotation>
    </xs:element>
</xs:sequence>
<xs:attribute name="use" use="optional" type="set_PostalAddressUse">
    <xs:annotation>
        <xs:documentation>
            A set of codes advising a system or user which address
            in a set of like addresses to select for a given purpose.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>
<xs:attribute name="isNotOrdered" type="bl" use="optional">
    <xs:annotation>
        <xs:documentation>
            A boolean value specifying whether the order of the
            address parts is known or not. While the address parts
            are always a Sequence, the order in which they are
            presented may or may not be known. Where this matters, the
            isNotOrdered property can be used to convey this
            information.
        </xs:documentation>
    </xs:annotation>
</xs:attribute>

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        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="ENXP" mixed="true">
      <xs:annotation>
        <xs:documentation>
          A character string token representing a part of a name.
          May have a type code signifying the role of the part in
          the whole entity name, and a qualifier code for more detail
          about the name part type. Typical name parts for person
          names are given names, and family names, titles, etc.
        </xs:documentation>
      </xs:annotation>
      <xs:complexContent>
        <xs:extension base="ST">
          <xs:attribute name="partType" type="EntityNamePartType">
            <xs:annotation>
              <xs:documentation>
                Indicates whether the name part is a given name, family
                name, prefix, suffix, etc.
              </xs:documentation>
            </xs:annotation>
          </xs:attribute>
          <xs:attribute name="qualifier" use="optional"
type="set_EntityNamePartQualifier">
            <xs:annotation>
              <xs:documentation>
                The qualifier is a set of codes each of which specifies
                a certain subcategory of the name part in addition to
                the main name part type. For example, a given name may
                be flagged as a nickname, a family name may be a
                pseudonym or a name of public records.
              </xs:documentation>
            </xs:annotation>
          </xs:attribute>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="en.delimiter" mixed="true">
      <xs:complexContent>
        <xs:restriction base="ENXP">
          <xs:attribute name="partType" type="EntityNamePartType" fixed="DEL"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="en.family" mixed="true">
      <xs:complexContent>
        <xs:restriction base="ENXP">
          <xs:attribute name="partType" type="EntityNamePartType" fixed="FAM"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="en.given" mixed="true">
      <xs:complexContent>
        <xs:restriction base="ENXP">
          <xs:attribute name="partType" type="EntityNamePartType" fixed="GIV"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="en.prefix" mixed="true">
      <xs:complexContent>

```

```

    <xs:restriction base="ENXP">
      <xs:attribute name="partType" type="EntityNamePartType" fixed="PFX"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="en.suffix" mixed="true">
  <xs:complexContent>
    <xs:restriction base="ENXP">
      <xs:attribute name="partType" type="EntityNamePartType" fixed="SFX"/>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="EN" mixed="true">
  <xs:annotation>
    <xs:documentation>
      A name for a person, organization, place or thing. A
      sequence of name parts, such as given name or family
      name, prefix, suffix, etc. Examples for entity name
      values are "Jim Bob Walton, Jr.", "Health Level Seven,
      Inc.", "Lake Tahoe", etc. An entity name may be as simple
      as a character string or may consist of several entity name
      parts, such as, "Jim", "Bob", "Walton", and "Jr.", "Health
      Level Seven" and "Inc.", "Lake" and "Tahoe".
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ANY">
      <xs:sequence>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
          <xs:element name="delimiter" type="en.delimiter"/>
          <xs:element name="family" type="en.family"/>
          <xs:element name="given" type="en.given"/>
          <xs:element name="prefix" type="en.prefix"/>
          <xs:element name="suffix" type="en.suffix"/>
        </xs:choice>
        <xs:element name="validTime" minOccurs="0" maxOccurs="1"
type="IVL_TS">
          <xs:annotation>
            <xs:documentation>
              An interval of time specifying the time during which
              the name is or was used for the entity. This
              accomodates the fact that people change names for
              people, places and things.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="use" use="optional" type="set_EntityNameUse">
        <xs:annotation>
          <xs:documentation>
            A set of codes advising a system or user which name
            in a set of like names to select for a given purpose.
            A name without specific use code might be a default
            name useful for any purpose, but a name with a specific
            use code would be preferred for that respective purpose.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

<xs:complexType name="PN" mixed="true">
  <xs:annotation>
    <xs:documentation>
      A name for a person. A sequence of name parts, such as
      given name or family name, prefix, suffix, etc. PN differs
      from EN because the qualifier type cannot include LS
      (Legal Status).
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="EN"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ON" mixed="true">
  <xs:annotation>
    <xs:documentation>
      A name for an organization. A sequence of name parts.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:restriction base="EN">
      <xs:sequence>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
          <xs:element name="delimiter" type="en.delimiter"/>
          <xs:element name="prefix" type="en.prefix"/>
          <xs:element name="suffix" type="en.suffix"/>
        </xs:choice>
        <xs:element name="validTime" minOccurs="0" maxOccurs="1"
type="IVL_TS">
          <xs:annotation>
            <xs:documentation>
              An interval of time specifying the time during which
              the name is or was used for the entity. This
              accomodates the fact that people change names for
              people, places and things.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="use" use="optional" type="set_EntityNameUse">
        <xs:annotation>
          <xs:documentation>
            A set of codes advising a system or user which name
            in a set of like names to select for a given purpose.
            A name without specific use code might be a default
            name useful for any purpose, but a name with a specific
            use code would be preferred for that respective purpose.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="TN" mixed="true">
  <xs:annotation>
    <xs:documentation>
      A restriction of entity name that is effectively a simple string used
      for a simple name for things and places.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>

```

```

    <xs:restriction base="EN">
      <xs:sequence>
        <xs:element name="validTime" minOccurs="0" maxOccurs="1"
type="IVL_TS">
          <xs:annotation>
            <xs:documentation>
              An interval of time specifying the time during which
              the name is or was used for the entity. This
              accomodates the fact that people change names for
              people, places and things.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:restriction>
  </xs:complexType>
  <xs:complexType name="QTY" abstract="true">
    <xs:annotation>
      <xs:documentation>
        The quantity data type is an abstract generalization
        for all data types (1) whose value set has an order
        relation (less-or-equal) and (2) where difference is
        defined in all of the data type's totally ordered value
        subsets. The quantity type abstraction is needed in
        defining certain other types, such as the interval and
        the probability distribution.
      </xs:documentation>
    <xs:appinfo>
      <diff>QTY</diff>
    </xs:appinfo>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="ANY"/>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="int">
  <xs:annotation>
    <xs:documentation>
      Integer numbers (-1,0,1,2, 100, 3398129, etc.) are precise
      numbers that are results of counting and enumerating.
      Integer numbers are discrete, the set of integers is
      infinite but countable. No arbitrary limit is imposed on
      the range of integer numbers. Two NULL flavors are
      defined for the positive and negative infinity.
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:integer"/>
</xs:simpleType>
<xs:complexType name="INT">
  <xs:annotation>
    <xs:documentation>
      Integer numbers (-1,0,1,2, 100, 3398129, etc.) are precise
      numbers that are results of counting and enumerating.
      Integer numbers are discrete, the set of integers is
      infinite but countable. No arbitrary limit is imposed on
      the range of integer numbers. Two NULL flavors are
      defined for the positive and negative infinity.
    </xs:documentation>
  <xs:appinfo>
    <diff>INT</diff>
  </xs:appinfo>

```

```

        <sch:pattern name="validate INT">
          <sch:rule abstract="true" id="rule-INT">
            <sch:report test="(@value or @nullFlavor) and not(@value and
@nullFlavor)"/>
          </sch:rule>
        </sch:pattern>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="QTY">
        <xs:attribute name="value" use="optional" type="int"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="real">
    <xs:annotation>
      <xs:documentation>
        Fractional numbers. Typically used whenever quantities
        are measured, estimated, or computed from other real
        numbers. The typical representation is decimal, where
        the number of significant decimal digits is known as the
        precision. Real numbers are needed beyond integers
        whenever quantities of the real world are measured,
        estimated, or computed from other real numbers. The term
        "Real number" in this specification is used to mean
        that fractional values are covered without necessarily
        implying the full set of the mathematical real numbers.
      </xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="xs:decimal xs:double"/>
  </xs:simpleType>
  <xs:complexType name="REAL">
    <xs:annotation>
      <xs:documentation>
        Fractional numbers. Typically used whenever quantities
        are measured, estimated, or computed from other real
        numbers. The typical representation is decimal, where
        the number of significant decimal digits is known as the
        precision. Real numbers are needed beyond integers
        whenever quantities of the real world are measured,
        estimated, or computed from other real numbers. The term
        "Real number" in this specification is used to mean
        that fractional values are covered without necessarily
        implying the full set of the mathematical real numbers.
      </xs:documentation>
    </xs:annotation>
    <xs:appinfo>
      <diff>REAL</diff>
      <sch:pattern name="validate REAL">
        <sch:rule abstract="true" id="rule-REAL">
          <sch:report test="(@nullFlavor or @value) and not(@nullFlavor and
@value)"/>
        </sch:rule>
      </sch:pattern>
    </xs:appinfo>
  </xs:complexType>
  <xs:complexContent>
    <xs:extension base="QTY">
      <xs:attribute name="value" use="optional" type="real"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

<xs:complexType name="PQR">
  <xs:annotation>
    <xs:documentation>
      A representation of a physical quantity in a unit from
      any code system. Used to show alternative representation
      for a physical quantity.
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="CV">
      <xs:attribute name="value" type="real" use="optional">
        <xs:annotation>
          <xs:documentation>
            The magnitude of the measurement value in terms of
            the unit specified in the code.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="PQ">
  <xs:annotation>
    <xs:documentation>
      A dimensioned quantity expressing the result of a
      measurement act.
    </xs:documentation>
  <xs:appinfo>
    <diff>PQ</diff>
  </xs:appinfo>
</xs:annotation>
  <xs:complexContent>
    <xs:extension base="QTY">
      <xs:sequence>
        <xs:element name="translation" type="PQR" minOccurs="0"
maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>
              An alternative representation of the same physical
              quantity expressed in a different unit, of a different
              unit code system and possibly with a different value.
            </xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="value" type="real" use="optional">
        <xs:annotation>
          <xs:documentation>
            The magnitude of the quantity measured in terms of
            the unit.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
      <xs:attribute name="unit" type="cs" use="optional" default="1">
        <xs:annotation>
          <xs:documentation>
            The unit of measure specified in the Unified Code for
            Units of Measure (UCUM)
            [http://aurora.rg.iupui.edu/UCUM].
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="M0">
    <xs:annotation>
      <xs:documentation>
        A monetary amount is a quantity expressing the amount of
        money in some currency. Currencies are the units in which
        monetary amounts are denominated in different economic
        regions. While the monetary amount is a single kind of
        quantity (money) the exchange rates between the different
        units are variable. This is the principle difference
        between physical quantity and monetary amounts, and the
        reason why currency units are not physical units.
      </xs:documentation>
      <xs:appinfo>
        <diff>M0</diff>
        <sch:pattern name="validate M0">
          <sch:rule abstract="true" id="rule-M0">
            <sch:report test="not(@nullFlavor and (@value or @currency))"/>
          </sch:rule>
        </sch:pattern>
      </xs:appinfo>
    </xs:annotation>
    <xs:complexContent>
      <xs:extension base="QTY">
        <xs:attribute name="value" type="real" use="optional">
          <xs:annotation>
            <xs:documentation>
              The magnitude of the monetary amount in terms of the
              currency unit.
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
        <xs:attribute name="currency" type="cs" use="optional">
          <xs:annotation>
            <xs:documentation>
              The currency unit as defined in ISO 4217.
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="RTO">
    <xs:annotation>
      <xs:documentation>
        A quantity constructed as the quotient of a numerator
        quantity divided by a denominator quantity. Common
        factors in the numerator and denominator are not
        automatically cancelled out. RTO supports titers
        (e.g., "1:128") and other quantities produced by
        laboratories that truly represent ratios. Ratios are
        not simply "structured numerics", particularly blood
        pressure measurements (e.g. "120/60") are not ratios.
        In many cases REAL should be used instead
        of RTO.
      </xs:documentation>
    </xs:annotation>
  </xs:complexType>

```

```

        <xs:extension base="RTO_QTY_QTY"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:simpleType name="probability">
      <xs:annotation>
        <xs:documentation>
          The probability assigned to the value, a decimal number
          between 0 (very uncertain) and 1 (certain).
        </xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:double">
        <xs:minInclusive value="0.0"/>
        <xs:maxInclusive value="1.0"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="EIVL.event">
      <xs:annotation>
        <xs:documentation>
          A code for a common (periodical) activity of daily
          living based on which the event related periodic
          interval is specified.
        </xs:documentation>
      </xs:annotation>
      <xs:complexContent>
        <xs:restriction base="CE">
          <xs:attribute name="code" type="TimingEvent" use="optional"/>
          <xs:attribute name="codeSystem" type="uid"
fixed="2.16.840.1.113883.5.139"/>
          <xs:attribute name="codeSystemName" type="st" fixed="TimingEvent"/>
        </xs:restriction>
      </xs:complexContent>
    </xs:complexType>
  <!--
    Instantiated templates
  -->
  <xs:complexType name="SXCM_TS">
    <xs:complexContent>
      <xs:extension base="TS">
        <xs:attribute name="operator" type="SetOperator" use="optional"
default="I">
          <xs:annotation>
            <xs:documentation>
              A code specifying whether the set component is included
              (union) or excluded (set-difference) from the set, or
              other set operations with the current set component and
              the set as constructed from the representation stream
              up to the current point.
            </xs:documentation>
          </xs:annotation>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="set_TelecommunicationAddressUse">
    <xs:list itemType="TelecommunicationAddressUse"/>
  </xs:simpleType>
  <xs:simpleType name="set_PostalAddressUse">
    <xs:list itemType="PostalAddressUse"/>
  </xs:simpleType>
  <xs:simpleType name="set_EntityNamePartQualifier">
    <xs:list itemType="EntityNamePartQualifier"/>

```

```

</xs:simpleType>
<xs:complexType name="IVL_TS">
  <xs:complexContent>
    <xs:extension base="SXCM_TS">
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="low" minOccurs="1" maxOccurs="1" type="IVXB_TS">
            <xs:annotation>
              <xs:documentation>
                The low limit of the interval.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:choice minOccurs="0">
            <xs:element name="width" minOccurs="0" maxOccurs="1" type="PQ">
              <xs:annotation>
                <xs:documentation>
                  The difference between high and low boundary. The
                  purpose of distinguishing a width property is to
                  handle all cases of incomplete information
                  symmetrically. In any interval representation only
                  two of the three properties high, low, and width need
                  to be stated and the third can be derived.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_TS">
              <xs:annotation>
                <xs:documentation>
                  The high limit of the interval.
                </xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:choice>
        </xs:sequence>
        <xs:element name="high" minOccurs="1" maxOccurs="1" type="IVXB_TS">
          <xs:annotation>
            <xs:documentation/>
          </xs:annotation>
        </xs:element>
        <xs:sequence>
          <xs:element name="width" minOccurs="1" maxOccurs="1" type="PQ">
            <xs:annotation>
              <xs:documentation>
                The difference between high and low boundary. The
                purpose of distinguishing a width property is to
                handle all cases of incomplete information
                symmetrically. In any interval representation only
                two of the three properties high, low, and width need
                to be stated and the third can be derived.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="high" minOccurs="0" maxOccurs="1"
type="IVXB_TS">
            <xs:annotation>
              <xs:documentation>
                The high limit of the interval.
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:choice>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        </xs:element>
      </xs:sequence>
    </xs:sequence>
    <xs:element name="center" minOccurs="1" maxOccurs="1" type="TS">
      <xs:annotation>
        <xs:documentation>
          The arithmetic mean of the interval (low plus high
          divided by 2). The purpose of distinguishing the center
          as a semantic property is for conversions of intervals
          from and to point values.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="width" minOccurs="0" maxOccurs="1" type="PQ">
      <xs:annotation>
        <xs:documentation>
          The difference between high and low boundary. The
          purpose of distinguishing a width property is to
          handle all cases of incomplete information
          symmetrically. In any interval representation only
          two of the three properties high, low, and width need
          to be stated and the third can be derived.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:choice>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="IVXB_TS">
  <xs:complexContent>
    <xs:extension base="TS">
      <xs:attribute name="inclusive" type="bl" use="optional" default="true">
        <xs:annotation>
          <xs:documentation>
            Specifies whether the limit is included in the
            interval (interval is closed) or excluded from the
            interval (interval is open).
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="set_EntityNameUse">
  <xs:list itemType="EntityNameUse"/>
</xs:simpleType>
<xs:complexType name="RTO_QTY_QTY">
  <xs:annotation>
    <xs:appinfo>
      <diff>RTO_QTY_QTY</diff>
    </xs:appinfo>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="QTY">
      <xs:sequence>
        <xs:element name="numerator" type="QTY">
          <xs:annotation>
            <xs:documentation>
              The quantity that is being divided in the ratio. The

```

```

        default is the integer number 1 (one).
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="denominator" type="QTY">
    <xs:annotation>
      <xs:documentation>
        The quantity that devides the numerator in the ratio.
        The default is the integer number 1 (one).
        The denominator must not be zero.
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
</xs:schema>

```

## 14.4 voc.xsd:

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:mif="urn:hl7-
org:v3/mif">
  <xs:annotation>
    <xs:documentation> $Id: Vocabulary.xml,v 1.1 2005/08/25 11:33:46 mcraig Exp $
RoseTree XML to Schema: $Id: VocabXMLtoXSD.xsl,v 1.6 2005/05/24 00:14:18 lmckenzi
Exp $</xs:documentation>
  </xs:annotation>
  <xs:include schemaLocation="datatypes.xsd"/>
  <xs:simpleType name="Classes">
    <xs:restriction base="cs"/>
  </xs:simpleType>
  <xs:annotation>
    <xs:documentation>The following types are used internally in data
types</xs:documentation>
  </xs:annotation>
  <xs:simpleType name="AddressPartType">
    <xs:annotation>
      <xs:documentation>vocSet: D10642 (C-0-D10642-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="AdditionalLocator DeliveryAddressLine
StreetAddressLine">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="CAR"/>
          <xs:enumeration value="CEN"/>
          <xs:enumeration value="CNT"/>
          <xs:enumeration value="CPA"/>
          <xs:enumeration value="CTY"/>
          <xs:enumeration value="DEL"/>
          <xs:enumeration value="POB"/>
          <xs:enumeration value="PRE"/>
          <xs:enumeration value="STA"/>
          <xs:enumeration value="ZIP"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>

```

```

<xs:simpleType name="AdditionalLocator">
  <xs:annotation>
    <xs:documentation>specDomain: V10651 (C-0-D10642-V10651-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="ADL"/>
    <xs:enumeration value="UNID"/>
    <xs:enumeration value="UNIT"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DeliveryAddressLine">
  <xs:annotation>
    <xs:documentation>specDomain: V17887 (C-0-D10642-V17887-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="DAL"/>
    <xs:enumeration value="DINST"/>
    <xs:enumeration value="DINSTA"/>
    <xs:enumeration value="DINSTQ"/>
    <xs:enumeration value="DMOD"/>
    <xs:enumeration value="DMODID"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="StreetAddressLine">
  <xs:annotation>
    <xs:documentation>specDomain: V14822 (C-0-D10642-V14822-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="BuildingNumber StreetName">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="SAL"/>
        <xs:enumeration value="DIR"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="BuildingNumber">
  <xs:annotation>
    <xs:documentation>specDomain: V10649 (C-0-D10642-V14822-V10649-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="BNR"/>
    <xs:enumeration value="BNN"/>
    <xs:enumeration value="BNS"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="StreetName">
  <xs:annotation>
    <xs:documentation>specDomain: V10648 (C-0-D10642-V14822-V10648-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="STR"/>
    <xs:enumeration value="STB"/>
    <xs:enumeration value="STTYP"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:simpleType name="CalendarCycle">
  <xs:annotation>
    <xs:documentation>vocSet: D10684 (C-0-D10684-cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="CalendarCycleOneLetter CalendarCycleTwoLetter"/>
</xs:simpleType>
<xs:simpleType name="CalendarCycleOneLetter">
  <xs:annotation>
    <xs:documentation>abstDomain: V10701 (C-0-D10684-V10701-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="D"/>
    <xs:enumeration value="H"/>
    <xs:enumeration value="J"/>
    <xs:enumeration value="M"/>
    <xs:enumeration value="N"/>
    <xs:enumeration value="S"/>
    <xs:enumeration value="W"/>
    <xs:enumeration value="Y"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CalendarCycleTwoLetter">
  <xs:annotation>
    <xs:documentation>abstDomain: V10685 (C-0-D10684-V10685-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="GregorianCalendarCycle">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="CD"/>
        <xs:enumeration value="CH"/>
        <xs:enumeration value="CM"/>
        <xs:enumeration value="CN"/>
        <xs:enumeration value="CS"/>
        <xs:enumeration value="CW"/>
        <xs:enumeration value="CY"/>
        <xs:enumeration value="DM"/>
        <xs:enumeration value="DW"/>
        <xs:enumeration value="DY"/>
        <xs:enumeration value="HD"/>
        <xs:enumeration value="MY"/>
        <xs:enumeration value="NH"/>
        <xs:enumeration value="SN"/>
        <xs:enumeration value="WY"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="GregorianCalendarCycle">
  <xs:annotation>
    <xs:documentation>abstDomain: V10758 (C-0-D10684-V10685-V10758-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs"/>
</xs:simpleType>
<xs:simpleType name="CompressionAlgorithm">
  <xs:annotation>
    <xs:documentation>vocSet: D10620 (C-0-D10620-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">

```

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        <xs:enumeration value="DF"/>
        <xs:enumeration value="GZ"/>
        <xs:enumeration value="Z"/>
        <xs:enumeration value="ZL"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Currency">
    <xs:annotation>
        <xs:documentation>vocSet: D17388 (C-0-D17388-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="ARS"/>
        <xs:enumeration value="AUD"/>
        <xs:enumeration value="BRL"/>
        <xs:enumeration value="CAD"/>
        <xs:enumeration value="CHF"/>
        <xs:enumeration value="CLF"/>
        <xs:enumeration value="CNY"/>
        <xs:enumeration value="DEM"/>
        <xs:enumeration value="ESP"/>
        <xs:enumeration value="EUR"/>
        <xs:enumeration value="FIM"/>
        <xs:enumeration value="FRF"/>
        <xs:enumeration value="GBP"/>
        <xs:enumeration value="ILS"/>
        <xs:enumeration value="INR"/>
        <xs:enumeration value="JPY"/>
        <xs:enumeration value="KRW"/>
        <xs:enumeration value="MXN"/>
        <xs:enumeration value="NLG"/>
        <xs:enumeration value="NZD"/>
        <xs:enumeration value="PHP"/>
        <xs:enumeration value="RUR"/>
        <xs:enumeration value="THB"/>
        <xs:enumeration value="TRL"/>
        <xs:enumeration value="TWD"/>
        <xs:enumeration value="USD"/>
        <xs:enumeration value="ZAR"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="EntityNamePartQualifier">
    <xs:annotation>
        <xs:documentation>vocSet: D15888 (C-0-D15888-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="OrganizationNamePartQualifier
PersonNamePartQualifier"/>
</xs:simpleType>
<xs:simpleType name="OrganizationNamePartQualifier">
    <xs:annotation>
        <xs:documentation>abstDomain: V15889 (C-0-D15888-V15889-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="LS"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PersonNamePartQualifier">
    <xs:annotation>
        <xs:documentation>abstDomain: V10659 (C-0-D15888-V10659-
cpt)</xs:documentation>
    </xs:annotation>

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    <xs:union memberTypes="PersonNamePartAffixTypes PersonNamePartChangeQualifier
PersonNamePartMiscQualifier">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="IN"/>
          <xs:enumeration value="TITLE"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="PersonNamePartAffixTypes">
    <xs:annotation>
      <xs:documentation>abstDomain: V10666 (C-0-D15888-V10659-V10666-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AC"/>
      <xs:enumeration value="NB"/>
      <xs:enumeration value="PR"/>
      <xs:enumeration value="VV"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="PersonNamePartChangeQualifier">
    <xs:annotation>
      <xs:documentation>abstDomain: V10660 (C-0-D15888-V10659-V10660-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AD"/>
      <xs:enumeration value="BR"/>
      <xs:enumeration value="SP"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="PersonNamePartMiscQualifier">
    <xs:annotation>
      <xs:documentation>abstDomain: V10671 (C-0-D15888-V10659-V10671-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="CL"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="EntityNamePartType">
    <xs:annotation>
      <xs:documentation>vocSet: D15880 (C-0-D15880-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="x_OrganizationNamePartType x_PersonNamePartType">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="DEL"/>
          <xs:enumeration value="FAM"/>
          <xs:enumeration value="GIV"/>
          <xs:enumeration value="PFX"/>
          <xs:enumeration value="SFX"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="x_OrganizationNamePartType">
    <xs:annotation>

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    <xs:documentation>abstDomain: V15881 (C-0-D15880-V15881-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="DEL"/>
      <xs:enumeration value="PFX"/>
      <xs:enumeration value="SFX"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="x_PersonNamePartType">
    <xs:annotation>
      <xs:documentation>abstDomain: V10653 (C-0-D15880-V10653-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="DEL"/>
      <xs:enumeration value="FAM"/>
      <xs:enumeration value="GIV"/>
      <xs:enumeration value="PFX"/>
      <xs:enumeration value="SFX"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="EntityNameUse">
    <xs:annotation>
      <xs:documentation>vocSet: D15913 (C-0-D15913-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="EntityNameSearchUse NameRepresentationUse
OrganizationNameUse PersonNameUse">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="C"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="OrganizationNameUse">
    <xs:annotation>
      <xs:documentation>abstDomain: V15914 (C-0-D15913-V15914-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="EntityNameSearchUse NameRepresentationUse">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="C"/>
          <xs:enumeration value="L"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="PersonNameUse">
    <xs:annotation>
      <xs:documentation>abstDomain: V200 (C-0-D15913-V200-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="EntityNameSearchUse NamePseudonymUse
NameRepresentationUse">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="A"/>
          <xs:enumeration value="ASGN"/>
          <xs:enumeration value="C"/>
          <xs:enumeration value="I"/>

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        <xs:enumeration value="L"/>
        <xs:enumeration value="R"/>
    </xs:restriction>
</xs:simpleType>
</xs:union>
</xs:simpleType>
<xs:simpleType name="EntityNameSearchUse">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="SRCH"/>
        <xs:enumeration value="PHON"/>
        <xs:enumeration value="SNDX"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="NamePseudonymUse">
    <xs:annotation>
        <xs:documentation>specDomain: V19591 (C-0-D15913-V200-V19591-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="P"/>
        <xs:enumeration value="A"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="IntegrityCheckAlgorithm">
    <xs:annotation>
        <xs:documentation>vocSet: D17385 (C-0-D17385-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="SHA-1"/>
        <xs:enumeration value="SHA-256"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MediaType">
    <xs:annotation>
        <xs:documentation>vocSet: D14824 (C-0-D14824-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="ApplicationMediaType AudioMediaType ImageMediaType
ModelMediaType MultipartMediaType TextMediaType VideoMediaType"/>
</xs:simpleType>
<xs:simpleType name="ApplicationMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14832 (C-0-D14824-V14832-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="application/dicom"/>
        <xs:enumeration value="application/msword"/>
        <xs:enumeration value="application/pdf"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AudioMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14835 (C-0-D14824-V14835-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="audio/basic"/>

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        <xs:enumeration value="audio/k32adpcm"/>
        <xs:enumeration value="audio/mpeg"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ImageMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14839 (C-0-D14824-V14839-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="image/g3fax"/>
        <xs:enumeration value="image/gif"/>
        <xs:enumeration value="image/jpeg"/>
        <xs:enumeration value="image/png"/>
        <xs:enumeration value="image/tiff"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ModelMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14848 (C-0-D14824-V14848-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="model/vrml"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MultipartMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14850 (C-0-D14824-V14850-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="multipart/x-hl7-cda-level1"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TextMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14825 (C-0-D14824-V14825-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="text/html"/>
        <xs:enumeration value="text/plain"/>
        <xs:enumeration value="text/rtf"/>
        <xs:enumeration value="text/sgml"/>
        <xs:enumeration value="text/x-hl7-ft"/>
        <xs:enumeration value="text/xml"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="VideoMediaType">
    <xs:annotation>
        <xs:documentation>abstDomain: V14845 (C-0-D14824-V14845-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="video/mpeg"/>
        <xs:enumeration value="video/x-avi"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PostalAddressUse">
    <xs:annotation>

```

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    <xs:documentation>vocSet: D10637 (C-0-D10637-cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="AddressUse NameRepresentationUse">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="PHYS"/>
        <xs:enumeration value="PST"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="NameRepresentationUse">
  <xs:annotation>
    <xs:documentation>abstDomain: V17860 (C-0-D10637-V17860-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="ABC"/>
    <xs:enumeration value="IDE"/>
    <xs:enumeration value="SYL"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ProbabilityDistributionType">
  <xs:annotation>
    <xs:documentation>vocSet: D10747 (C-0-D10747-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="B"/>
    <xs:enumeration value="E"/>
    <xs:enumeration value="F"/>
    <xs:enumeration value="G"/>
    <xs:enumeration value="LN"/>
    <xs:enumeration value="N"/>
    <xs:enumeration value="T"/>
    <xs:enumeration value="U"/>
    <xs:enumeration value="X2"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SetOperator">
  <xs:annotation>
    <xs:documentation>vocSet: D17416 (C-0-D17416-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="A"/>
    <xs:enumeration value="E"/>
    <xs:enumeration value="H"/>
    <xs:enumeration value="I"/>
    <xs:enumeration value="P"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TelecommunicationAddressUse">
  <xs:annotation>
    <xs:documentation>vocSet: D201 (C-0-D201-cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="AddressUse">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="AS"/>
        <xs:enumeration value="EC"/>
        <xs:enumeration value="MC"/>
        <xs:enumeration value="PG"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>

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        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="AddressUse">
    <xs:annotation>
      <xs:documentation>abstDomain: V190 (C-0-D201-V190-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="HomeAddressUse WorkPlaceAddressUse">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="BAD"/>
          <xs:enumeration value="TMP"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="HomeAddressUse">
    <xs:annotation>
      <xs:documentation>specDomain: V10628 (C-0-D201-V190-V10628-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="H"/>
      <xs:enumeration value="HP"/>
      <xs:enumeration value="HV"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="WorkPlaceAddressUse">
    <xs:annotation>
      <xs:documentation>specDomain: V19613 (C-0-D201-V190-V19613-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="WP"/>
      <xs:enumeration value="DIR"/>
      <xs:enumeration value="PUB"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="TimingEvent">
    <xs:annotation>
      <xs:documentation>vocSet: D10706 (C-0-D10706-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AC"/>
      <xs:enumeration value="ACD"/>
      <xs:enumeration value="ACM"/>
      <xs:enumeration value="ACV"/>
      <xs:enumeration value="HS"/>
      <xs:enumeration value="IC"/>
      <xs:enumeration value="ICD"/>
      <xs:enumeration value="ICM"/>
      <xs:enumeration value="ICV"/>
      <xs:enumeration value="PC"/>
      <xs:enumeration value="PCD"/>
      <xs:enumeration value="PCM"/>
      <xs:enumeration value="PCV"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="URLScheme">
    <xs:annotation>

```

```

    <xs:documentation>vocSet: D14866 (C-0-D14866-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="fax"/>
    <xs:enumeration value="file"/>
    <xs:enumeration value="ftp"/>
    <xs:enumeration value="http"/>
    <xs:enumeration value="mailto"/>
    <xs:enumeration value="mlp"/>
    <xs:enumeration value="modem"/>
    <xs:enumeration value="nfs"/>
    <xs:enumeration value="tel"/>
    <xs:enumeration value="telnet"/>
  </xs:restriction>
</xs:simpleType>
<xs:annotation>
  <xs:documentation>The following types are used for structural RIM
attributes</xs:documentation>
</xs:annotation>
<xs:simpleType name="ActClass">
  <xs:annotation>
    <xs:documentation>vocSet: D11527 (C-0-D11527-cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="ActClassRoot"/>
</xs:simpleType>
<xs:simpleType name="ActClassRoot">
  <xs:annotation>
    <xs:documentation>specDomain: V13856 (C-0-D11527-V13856-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="ActClassContract ActClassControlAct ActClassObservation
ActClassSupply ActContainer x_ActClassDocumentEntryAct
x_ActClassDocumentEntryOrganizer">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="ACT"/>
        <xs:enumeration value="ACCM"/>
        <xs:enumeration value="ACCT"/>
        <xs:enumeration value="ACSN"/>
        <xs:enumeration value="ADJUD"/>
        <xs:enumeration value="CONS"/>
        <xs:enumeration value="CONTREG"/>
        <xs:enumeration value="CTTEVENT"/>
        <xs:enumeration value="DISPACT"/>
        <xs:enumeration value="ENC"/>
        <xs:enumeration value="INC"/>
        <xs:enumeration value="INFRM"/>
        <xs:enumeration value="INVE"/>
        <xs:enumeration value="LIST"/>
        <xs:enumeration value="MPROT"/>
        <xs:enumeration value="PCPR"/>
        <xs:enumeration value="PROC"/>
        <xs:enumeration value="REG"/>
        <xs:enumeration value="REV"/>
        <xs:enumeration value="SBADM"/>
        <xs:enumeration value="SPCTRT"/>
        <xs:enumeration value="SUBST"/>
        <xs:enumeration value="TRNS"/>
        <xs:enumeration value="VERIF"/>
        <xs:enumeration value="XACT"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>

```

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        </xs:simpleType>
      </xs:union>
    </xs:simpleType>
    <xs:simpleType name="ActClassContract">
      <xs:annotation>
        <xs:documentation>specDomain: V14002 (C-0-D11527-V13856-V14002-
cpt)</xs:documentation>
      </xs:annotation>
      <xs:union memberTypes="ActClassFinancialContract">
        <xs:simpleType>
          <xs:restriction base="cs">
            <xs:enumeration value="CNTRCT"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:union>
    </xs:simpleType>
    <xs:simpleType name="ActClassFinancialContract">
      <xs:annotation>
        <xs:documentation>specDomain: V14003 (C-0-D11527-V13856-V14002-V14003-
cpt)</xs:documentation>
      </xs:annotation>
      <xs:restriction base="cs">
        <xs:enumeration value="FCNTRCT"/>
        <xs:enumeration value="COV"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ActClassControlAct">
      <xs:annotation>
        <xs:documentation>specDomain: V11534 (C-0-D11527-V13856-V11534-
cpt)</xs:documentation>
      </xs:annotation>
      <xs:restriction base="cs">
        <xs:enumeration value="CACT"/>
        <xs:enumeration value="ACTN"/>
        <xs:enumeration value="INFO"/>
        <xs:enumeration value="STC"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ActClassObservation">
      <xs:annotation>
        <xs:documentation>specDomain: V11529 (C-0-D11527-V13856-V11529-
cpt)</xs:documentation>
      </xs:annotation>
      <xs:union memberTypes="ActClassCondition ActClassObservationSeries
ActClassROI">
        <xs:simpleType>
          <xs:restriction base="cs">
            <xs:enumeration value="OBS"/>
            <xs:enumeration value="ALRT"/>
            <xs:enumeration value="CLNTRL"/>
            <xs:enumeration value="CNOD"/>
            <xs:enumeration value="DGIMG"/>
            <xs:enumeration value="INVTG"/>
            <xs:enumeration value="SPCOBS"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:union>
    </xs:simpleType>
    <xs:simpleType name="ActClassCondition">
      <xs:annotation>

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```

        <xs:documentation>specDomain: V19580 (C-0-D11527-V13856-V11529-V19580-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="ActClassPublicHealthCase">
          <xs:simpleType>
            <xs:restriction base="cs">
              <xs:enumeration value="COND"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:union>
      </xs:simpleType>
      <xs:simpleType name="ActClassPublicHealthCase">
        <xs:annotation>
          <xs:documentation>specDomain: V11530 (C-0-D11527-V13856-V11529-V19580-
V11530-cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
          <xs:enumeration value="CASE"/>
          <xs:enumeration value="OUTB"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:simpleType name="ActClassObservationSeries">
        <xs:annotation>
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cpt)</xs:documentation>
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cpt)</xs:documentation>
        </xs:annotation>
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ActClassOrganizer">
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V18938-cpt)</xs:documentation>
    </xs:annotation>
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V18938-V13948-cpt)</xs:documentation>
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x_ActMoodIntentEvent x_ActMoodOrdPrms x_ActMoodOrdPrmsEvn x_ActMoodRqoPrpAptArg
x_DocumentActMood x_DocumentEncounterMood x_DocumentProcedureMood
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ActRelationshipOutcome ActRelationshipPertains ActRelationshipSequel
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x_ActRelationshipPertinentInfo"/>
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cpt)</xs:documentation>
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ActRelationshipReplacement">
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    </xs:annotation>
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        <xs:enumeration value="CAUS"/>
        <xs:enumeration value="MFST"/>
        <xs:enumeration value="REFR"/>
        <xs:enumeration value="SUBJ"/>
    </xs:restriction>
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    </xs:annotation>
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        <xs:enumeration value="RCV"/>
        <xs:enumeration value="RSP"/>
        <xs:enumeration value="SND"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:annotation>
        <xs:documentation>vocSet: D16478 (C-0-D16478-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="ContextControlAdditive ContextControlNonPropagating
ContextControlOverriding ContextControlPropagating"/>
</xs:simpleType>
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```

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    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AN"/>
      <xs:enumeration value="AP"/>
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  </xs:simpleType>
  <xs:simpleType name="ContextControlNonPropagating">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AN"/>
      <xs:enumeration value="ON"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ContextControlOverriding">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="ON"/>
      <xs:enumeration value="OP"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ContextControlPropagating">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AP"/>
      <xs:enumeration value="OP"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="EntityClass">
    <xs:annotation>
      <xs:documentation>vocSet: D10882 (C-0-D10882-cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="EntityClassRoot x_EntityClassDocumentReceiving
x_EntityClassPersonOrOrgReceiving"/>
  </xs:simpleType>
  <xs:simpleType name="EntityClassRoot">
    <xs:annotation>
      <xs:documentation>specDomain: V13922 (C-0-D10882-V13922-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="EntityClassLivingSubject EntityClassMaterial
EntityClassOrganization EntityClassPlace">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="ENT"/>
          <xs:enumeration value="HCE"/>
          <xs:enumeration value="RGRP"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>

```

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  <xs:annotation>
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cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="EntityClassNonPersonLivingSubject">
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        <xs:enumeration value="LIV"/>
        <xs:enumeration value="PSN"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="EntityClassNonPersonLivingSubject">
  <xs:annotation>
    <xs:documentation>specDomain: V11621 (C-0-D10882-V13922-V10884-V11621-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="NLIV"/>
    <xs:enumeration value="ANM"/>
    <xs:enumeration value="MIC"/>
    <xs:enumeration value="PLNT"/>
  </xs:restriction>
</xs:simpleType>
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cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="EntityClassManufacturedMaterial">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="MAT"/>
        <xs:enumeration value="CHEM"/>
        <xs:enumeration value="FOOD"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="EntityClassManufacturedMaterial">
  <xs:annotation>
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cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="EntityClassContainer EntityClassDevice">
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V11622-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">

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        <xs:enumeration value="CONT"/>
        <xs:enumeration value="HOLD"/>
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V11623-cpt)</xs:documentation>
    </xs:annotation>
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        <xs:enumeration value="DEV"/>
        <xs:enumeration value="CER"/>
        <xs:enumeration value="MODDV"/>
    </xs:restriction>
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cpt)</xs:documentation>
    </xs:annotation>
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        <xs:enumeration value="CITY"/>
        <xs:enumeration value="COUNTRY"/>
        <xs:enumeration value="COUNTY"/>
        <xs:enumeration value="PROVINCE"/>
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cpt)</xs:documentation>
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    <xs:union memberTypes="EntityClassOrganization">
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        </xs:simpleType>
    </xs:union>
</xs:simpleType>
<xs:simpleType name="x_EntityClassPersonOrOrgReceiving">
    <xs:annotation>
        <xs:documentation>abstDomain: V19463 (C-0-D10882-V19463-
cpt)</xs:documentation>
    </xs:annotation>
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    </xs:union>
</xs:simpleType>
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cpt)</xs:documentation>
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    <xs:union memberTypes="State">

```

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cpt)</xs:documentation>
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        <xs:enumeration value="NAT"/>
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      <xs:union memberTypes="EntityDeterminerDetermined x_DeterminerInstanceKind">
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cpt)</xs:documentation>
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        <xs:enumeration value="QUANTIFIED_KIND"/>
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    <xs:simpleType name="x_DeterminerInstanceKind">
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cpt)</xs:documentation>
      </xs:annotation>
      <xs:restriction base="cs">
        <xs:enumeration value="KIND"/>
        <xs:enumeration value="INSTANCE"/>
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cpt)</xs:documentation>
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        <xs:enumeration value="NA"/>
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  </xs:union>
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cpt)</xs:documentation>
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    <xs:enumeration value="NINF"/>
    <xs:enumeration value="PINF"/>
  </xs:restriction>
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cpt)</xs:documentation>
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        <xs:enumeration value="NASK"/>
        <xs:enumeration value="TRC"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
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  <xs:annotation>
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cpt)</xs:documentation>
  </xs:annotation>
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    <xs:enumeration value="ASKU"/>
    <xs:enumeration value="NAV"/>
  </xs:restriction>
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    <xs:documentation>vocSet: D10901 (C-0-D10901-cpt)</xs:documentation>
  </xs:annotation>

```

```

    <xs:union memberTypes="ParticipationAncillary ParticipationIndirectTarget
ParticipationInformationGenerator ParticipationInformationRecipient
ParticipationPhysicalPerformer ParticipationTargetDirect ParticipationTargetLocation
ParticipationVerifier x_EncounterParticipant x_EncounterPerformerParticipation
x_InformationRecipient x_ParticipationAuthorPerformer x_ParticipationEntVrf
x_ParticipationPrfEntVrf x_ParticipationVrfRespSprfWit x_ServiceEventPerformer">
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        <xs:restriction base="cs">
          <xs:enumeration value="CST"/>
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        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="ParticipationAncillary">
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="ADM"/>
      <xs:enumeration value="ATND"/>
      <xs:enumeration value="CALLBCK"/>
      <xs:enumeration value="CON"/>
      <xs:enumeration value="DIS"/>
      <xs:enumeration value="ESC"/>
      <xs:enumeration value="REF"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ParticipationIndirectTarget">
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cpt)</xs:documentation>
    </xs:annotation>
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      <xs:enumeration value="IND"/>
      <xs:enumeration value="BEN"/>
      <xs:enumeration value="COV"/>
      <xs:enumeration value="HLD"/>
      <xs:enumeration value="RCT"/>
      <xs:enumeration value="RCV"/>
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  </xs:simpleType>
  <xs:simpleType name="ParticipationInformationGenerator">
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="AUT"/>
      <xs:enumeration value="ENT"/>
      <xs:enumeration value="INF"/>
      <xs:enumeration value="WIT"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ParticipationInformationRecipient">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">

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        <xs:enumeration value="IRCP"/>
        <xs:enumeration value="NOT"/>
        <xs:enumeration value="PRCP"/>
        <xs:enumeration value="REFB"/>
        <xs:enumeration value="REFT"/>
        <xs:enumeration value="TRC"/>
    </xs:restriction>
</xs:simpleType>
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cpt)</xs:documentation>
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    <xs:restriction base="cs">
        <xs:enumeration value="PRF"/>
        <xs:enumeration value="DIST"/>
        <xs:enumeration value="PPRF"/>
        <xs:enumeration value="SPRF"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
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        <xs:simpleType>
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                <xs:enumeration value="DIR"/>
                <xs:enumeration value="BBY"/>
                <xs:enumeration value="CSM"/>
                <xs:enumeration value="DON"/>
                <xs:enumeration value="PRD"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
<xs:simpleType name="ParticipationTargetDevice">
    <xs:annotation>
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cpt)</xs:documentation>
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        <xs:enumeration value="DEV"/>
        <xs:enumeration value="NRD"/>
        <xs:enumeration value="RDV"/>
    </xs:restriction>
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cpt)</xs:documentation>
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        <xs:enumeration value="SBJ"/>
        <xs:enumeration value="SPC"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ParticipationTargetLocation">
    <xs:annotation>

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cpt)</xs:documentation>
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        <xs:enumeration value="DST"/>
        <xs:enumeration value="ELOC"/>
        <xs:enumeration value="ORG"/>
        <xs:enumeration value="RML"/>
        <xs:enumeration value="VIA"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ParticipationVerifier">
      <xs:annotation>
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cpt)</xs:documentation>
      </xs:annotation>
      <xs:restriction base="cs">
        <xs:enumeration value="VRF"/>
        <xs:enumeration value="AUTHEN"/>
        <xs:enumeration value="LA"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_EncounterParticipant">
      <xs:annotation>
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cpt)</xs:documentation>
      </xs:annotation>
      <xs:restriction base="cs">
        <xs:enumeration value="ADM"/>
        <xs:enumeration value="ATND"/>
        <xs:enumeration value="CON"/>
        <xs:enumeration value="DIS"/>
        <xs:enumeration value="REF"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_EncounterPerformerParticipation">
      <xs:annotation>
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cpt)</xs:documentation>
      </xs:annotation>
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        <xs:enumeration value="PRF"/>
        <xs:enumeration value="CON"/>
        <xs:enumeration value="SPRF"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_InformationRecipient">
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cpt)</xs:documentation>
      </xs:annotation>
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        <xs:enumeration value="PRCP"/>
        <xs:enumeration value="TRC"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_ParticipationAuthorPerformer">
      <xs:annotation>
        <xs:documentation>abstDomain: V19080 (C-0-D10901-V19080-
cpt)</xs:documentation>

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    </xs:annotation>
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  </xs:simpleType>
  <xs:simpleType name="x_ParticipationEntVrf">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="VRF"/>
      <xs:enumeration value="ENT"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="x_ParticipationPrfEntVrf">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="PRF"/>
      <xs:enumeration value="VRF"/>
      <xs:enumeration value="ENT"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="x_ParticipationVrfRespSprfWit">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="VRF"/>
      <xs:enumeration value="RESP"/>
      <xs:enumeration value="SPRF"/>
      <xs:enumeration value="WIT"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="x_ServiceEventPerformer">
    <xs:annotation>
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cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
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      <xs:enumeration value="SPRF"/>
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  </xs:simpleType>
  <xs:simpleType name="RoleClass">
    <xs:annotation>
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    </xs:annotation>
    <xs:union memberTypes="RoleClassRoot"/>
  </xs:simpleType>
  <xs:simpleType name="RoleClassRoot">
    <xs:annotation>
      <xs:documentation>specDomain: V13940 (C-0-D11555-V13940-
cpt)</xs:documentation>
    </xs:annotation>

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        <xs:union memberTypes="RoleClassAssociative RoleClassOntological
RoleClassPartitive x_DocumentEntrySubject x_DocumentSubject
x_InformationRecipientRole x_RoleClassAccommodationRequestor x_RoleClassCoverage
x_RoleClassCoverageInvoice x_RoleClassCredentialedEntity
x_RoleClassPayeePolicyRelationship">
            <xs:simpleType>
                <xs:restriction base="cs">
                    <xs:enumeration value="ROL"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:union>
    </xs:simpleType>
    <xs:simpleType name="RoleClassAssociative">
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cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="RoleClassMutualRelationship RoleClassPassive">
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                <xs:restriction base="cs"/>
            </xs:simpleType>
        </xs:union>
    </xs:simpleType>
    <xs:simpleType name="RoleClassMutualRelationship">
        <xs:annotation>
            <xs:documentation>abstDomain: V19316 (C-0-D11555-V13940-V19313-V19316-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="RoleClassRelationshipFormal">
            <xs:simpleType>
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V10416-cpt)</xs:documentation>
        </xs:annotation>
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RoleClassInvestigationSubject">
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                    <xs:enumeration value="COVPTY"/>
                    <xs:enumeration value="CRINV"/>
                    <xs:enumeration value="CRSPNSR"/>
                    <xs:enumeration value="GUAR"/>
                    <xs:enumeration value="PAT"/>
                    <xs:enumeration value="PAYEE"/>
                    <xs:enumeration value="PAYOR"/>
                    <xs:enumeration value="POLHOLD"/>
                    <xs:enumeration value="QUAL"/>
                    <xs:enumeration value="SPNSR"/>
                    <xs:enumeration value="STD"/>
                    <xs:enumeration value="UNDWRT"/>
                </xs:restriction>
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    </xs:simpleType>

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        </xs:union>
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V10416-V14006-cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="RoleClassAssignedEntity">
            <xs:simpleType>
                <xs:restriction base="cs">
                    <xs:enumeration value="AGNT"/>
                    <xs:enumeration value="GUARD"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:union>
    </xs:simpleType>
    <xs:simpleType name="RoleClassAssignedEntity">
        <xs:annotation>
            <xs:documentation>specDomain: V11595 (C-0-D11555-V13940-V19313-V19316-
V10416-V14006-V11595-cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="RoleClassContact">
            <xs:simpleType>
                <xs:restriction base="cs">
                    <xs:enumeration value="ASSIGNED"/>
                    <xs:enumeration value="COMPAR"/>
                    <xs:enumeration value="SGNOFF"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:union>
    </xs:simpleType>
    <xs:simpleType name="RoleClassContact">
        <xs:annotation>
            <xs:documentation>specDomain: V12205 (C-0-D11555-V13940-V19313-V19316-
V10416-V14006-V11595-V12205-cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="CON"/>
            <xs:enumeration value="ECON"/>
            <xs:enumeration value="NOK"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="RoleClassEmployee">
        <xs:annotation>
            <xs:documentation>specDomain: V11569 (C-0-D11555-V13940-V19313-V19316-
V10416-V11569-cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="EMP"/>
            <xs:enumeration value="MIL"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="RoleClassInvestigationSubject">
        <xs:annotation>
            <xs:documentation>specDomain: V19587 (C-0-D11555-V13940-V19313-V19316-
V10416-V19587-cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="INVSBJ"/>
            <xs:enumeration value="CASESBJ"/>
            <xs:enumeration value="RESBJ"/>
        </xs:restriction>
    </xs:simpleType>

```

```

    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="RoleClassPassive">
    <xs:annotation>
      <xs:documentation>abstDomain: V19105 (C-0-D11555-V13940-V19313-V19105-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:union memberTypes="RoleClassDistributedMaterial
RoleClassManufacturedProduct RoleClassServiceDeliveryLocation">
      <xs:simpleType>
        <xs:restriction base="cs">
          <xs:enumeration value="ACCESS"/>
          <xs:enumeration value="BIRTHPL"/>
          <xs:enumeration value="EXPR"/>
          <xs:enumeration value="HLD"/>
          <xs:enumeration value="HLTHCHRT"/>
          <xs:enumeration value="IDENT"/>
          <xs:enumeration value="MNT"/>
          <xs:enumeration value="OWN"/>
          <xs:enumeration value="RGPR"/>
          <xs:enumeration value="TERR"/>
          <xs:enumeration value="WRTE"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:union>
  </xs:simpleType>
  <xs:simpleType name="RoleClassDistributedMaterial">
    <xs:annotation>
      <xs:documentation>specDomain: V10418 (C-0-D11555-V13940-V19313-V19105-
V10418-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="DST"/>
      <xs:enumeration value="RET"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="RoleClassManufacturedProduct">
    <xs:annotation>
      <xs:documentation>specDomain: V11580 (C-0-D11555-V13940-V19313-V19105-
V11580-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="MANU"/>
      <xs:enumeration value="THER"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="RoleClassServiceDeliveryLocation">
    <xs:annotation>
      <xs:documentation>specDomain: V16927 (C-0-D11555-V13940-V19313-V19105-
V16927-cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
      <xs:enumeration value="SDLOC"/>
      <xs:enumeration value="DSDLOC"/>
      <xs:enumeration value="ISDLOC"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="RoleClassOntological">
    <xs:annotation>
      <xs:documentation>abstDomain: V10428 (C-0-D11555-V13940-V10428-
cpt)</xs:documentation>

```

```

</xs:annotation>
<xs:union memberTypes="RoleClassIsSpeciesEntity">
  <xs:simpleType>
    <xs:restriction base="cs">
      <xs:enumeration value="INST"/>
      <xs:enumeration value="SUBS"/>
      <xs:enumeration value="SUBY"/>
    </xs:restriction>
  </xs:simpleType>
</xs:union>
</xs:simpleType>
<xs:simpleType name="RoleClassIsSpeciesEntity">
  <xs:annotation>
    <xs:documentation>specDomain: V10441 (C-0-D11555-V13940-V10428-V10441-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="GEN"/>
    <xs:enumeration value="GRIC"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="RoleClassPartitive">
  <xs:annotation>
    <xs:documentation>abstDomain: V10429 (C-0-D11555-V13940-V10429-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="RoleClassIngredientEntity RoleClassLocatedEntity
RoleClassSpecimen">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="CONT"/>
        <xs:enumeration value="MBR"/>
        <xs:enumeration value="PART"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="RoleClassIngredientEntity">
  <xs:annotation>
    <xs:documentation>specDomain: V10430 (C-0-D11555-V13940-V10429-V10430-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="RoleClassInactiveIngredient">
    <xs:simpleType>
      <xs:restriction base="cs">
        <xs:enumeration value="INGR"/>
        <xs:enumeration value="ACTI"/>
        <xs:enumeration value="ACTM"/>
        <xs:enumeration value="ADTV"/>
        <xs:enumeration value="BASE"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
<xs:simpleType name="RoleClassInactiveIngredient">
  <xs:annotation>
    <xs:documentation>specDomain: V19089 (C-0-D11555-V13940-V10429-V10430-
V19089-cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="IACT"/>

```

```

        <xs:enumeration value="COLR"/>
        <xs:enumeration value="FLVR"/>
        <xs:enumeration value="PRSV"/>
        <xs:enumeration value="STBL"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="RoleClassLocatedEntity">
    <xs:annotation>
        <xs:documentation>specDomain: V16815 (C-0-D11555-V13940-V10429-V16815-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="LOCE"/>
        <xs:enumeration value="STOR"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="RoleClassSpecimen">
    <xs:annotation>
        <xs:documentation>specDomain: V11591 (C-0-D11555-V13940-V10429-V11591-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="SPEC"/>
        <xs:enumeration value="ALQT"/>
        <xs:enumeration value="ISLT"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="x_DocumentEntrySubject">
    <xs:annotation>
        <xs:documentation>abstDomain: V19367 (C-0-D11555-V13940-V19367-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="SPEC"/>
        <xs:enumeration value="PAT"/>
        <xs:enumeration value="PRS"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="x_DocumentSubject">
    <xs:annotation>
        <xs:documentation>abstDomain: V19368 (C-0-D11555-V13940-V19368-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="PAT"/>
        <xs:enumeration value="PRS"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="x_InformationRecipientRole">
    <xs:annotation>
        <xs:documentation>abstDomain: V16772 (C-0-D11555-V13940-V16772-
cpt)</xs:documentation>
    </xs:annotation>
    <xs:restriction base="cs">
        <xs:enumeration value="ASSIGNED"/>
        <xs:enumeration value="HLTHCHRT"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="x_RoleClassAccommodationRequestor">
    <xs:annotation>

```

```

        <xs:documentation>abstDomain: V19382 (C-0-D11555-V13940-V19382-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="AGNT"/>
            <xs:enumeration value="PAT"/>
            <xs:enumeration value="PROV"/>
            <xs:enumeration value="PRS"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_RoleClassCoverage">
        <xs:annotation>
            <xs:documentation>abstDomain: V14008 (C-0-D11555-V13940-V14008-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="COVPTY"/>
            <xs:enumeration value="POLHOLD"/>
            <xs:enumeration value="SPNSR"/>
            <xs:enumeration value="UNDWRT"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_RoleClassCoverageInvoice">
        <xs:annotation>
            <xs:documentation>abstDomain: V14013 (C-0-D11555-V13940-V14013-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="PAYEE"/>
            <xs:enumeration value="PAYOR"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_RoleClassCredentialedEntity">
        <xs:annotation>
            <xs:documentation>abstDomain: V16930 (C-0-D11555-V13940-V16930-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:union memberTypes="LicensedEntityRole">
            <xs:simpleType>
                <xs:restriction base="cs">
                    <xs:enumeration value="ASSIGNED"/>
                    <xs:enumeration value="QUAL"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:union>
    </xs:simpleType>
    <xs:simpleType name="LicensedEntityRole">
        <xs:annotation>
            <xs:documentation>specDomain: V16773 (C-0-D11555-V13940-V16930-V16773-
cpt)</xs:documentation>
        </xs:annotation>
        <xs:restriction base="cs">
            <xs:enumeration value="LIC"/>
            <xs:enumeration value="NOT"/>
            <xs:enumeration value="PROV"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="x_RoleClassPayeePolicyRelationship">
        <xs:annotation>
            <xs:documentation>abstDomain: V19395 (C-0-D11555-V13940-V19395-
cpt)</xs:documentation>

```

```

</xs:annotation>
<xs:restriction base="cs">
  <xs:enumeration value="COVPTY"/>
  <xs:enumeration value="GUAR"/>
  <xs:enumeration value="POLHOLD"/>
  <xs:enumeration value="PROV"/>
  <xs:enumeration value="PRS"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="RoleLinkType">
  <xs:annotation>
    <xs:documentation>vocSet: D11603 (C-0-D11603-cpt)</xs:documentation>
  </xs:annotation>
  <xs:union memberTypes="RelatedLinkType"/>
</xs:simpleType>
<xs:simpleType name="RelatedLinkType">
  <xs:annotation>
    <xs:documentation>specDomain: V19615 (C-0-D11603-V19615-
cpt)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="cs">
    <xs:enumeration value="REL"/>
    <xs:enumeration value="BACKUP"/>
    <xs:enumeration value="DIRAUTH"/>
    <xs:enumeration value="INDAUTH"/>
    <xs:enumeration value="PART"/>
    <xs:enumeration value="REPL"/>
  </xs:restriction>
</xs:simpleType>
</xs:schema>

```

## 14.5 NarrativeBlock.xsd:

```

<?xml version="1.0" encoding="ASCII"?>
<!-- $Id: NarrativeBlock.xsd,v 1.4 2005/04/17 03:13:19 lmckenzi Exp $ -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="urn:hl7-org:v3"
targetNamespace="urn:hl7-org:v3" elementFormDefault="qualified">
  <xs:complexType name="StrucDoc.Text" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="content" type="StrucDoc.Content"/>
      <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
      <xs:element name="sub" type="StrucDoc.Sub"/>
      <xs:element name="sup" type="StrucDoc.Sup"/>
      <xs:element name="br" type="StrucDoc.Br"/>
      <xs:element name="footnote" type="StrucDoc.Footnote"/>
      <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
      <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
      <xs:element name="paragraph" type="StrucDoc.Paragraph"/>
      <xs:element name="list" type="StrucDoc.List"/>
      <xs:element name="table" type="StrucDoc.Table"/>
    </xs:choice>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="mediaType" type="xs:string" fixed="text/x-hl7-text+xml"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.Title" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="content" type="StrucDoc.TitleContent"/>
    </xs:choice>
  </xs:complexType>

```

```

    <xs:element name="sub" type="StrucDoc.Sub"/>
    <xs:element name="sup" type="StrucDoc.Sup"/>
    <xs:element name="br" type="StrucDoc.Br"/>
    <xs:element name="footnote" type="StrucDoc.TitleFootnote"/>
    <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
  </xs:choice>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="mediaType" type="xs:string" fixed="text/x-hl7-title+xml"/>
</xs:complexType><!-- DELETE THIS, we don't need to define a global element for
text
  <xs:element name="text" type="text"/>
-->
  <xs:complexType name="StrucDoc.Br"/>
  <xs:complexType name="StrucDoc.Caption" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
      <xs:element name="sub" type="StrucDoc.Sub"/>
      <xs:element name="sup" type="StrucDoc.Sup"/>
      <xs:element name="footnote" type="StrucDoc.Footnote"/>
      <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
    </xs:choice>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.Col">
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="span" type="xs:string" default="1"/>
    <xs:attribute name="width" type="xs:string"/>
    <xs:attribute name="align">
      <xs:simpleType>
        <xs:restriction base="xs:NMTOKEN">
          <xs:enumeration value="left"/>
          <xs:enumeration value="center"/>
          <xs:enumeration value="right"/>
          <xs:enumeration value="justify"/>
          <xs:enumeration value="char"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="char" type="xs:string"/>
    <xs:attribute name="charoff" type="xs:string"/>
    <xs:attribute name="valign">
      <xs:simpleType>
        <xs:restriction base="xs:NMTOKEN">
          <xs:enumeration value="top"/>
          <xs:enumeration value="middle"/>
          <xs:enumeration value="bottom"/>
          <xs:enumeration value="baseline"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
  <xs:complexType name="StrucDoc.Colgroup">
    <xs:sequence minOccurs="0" maxOccurs="unbounded">
      <xs:element name="col" type="StrucDoc.Col"/>
    </xs:sequence>

```

```

<xs:attribute name="ID" type="xs:ID"/>
<xs:attribute name="language" type="xs:NMTOKEN"/>
<xs:attribute name="styleCode" type="xs:NMTOKENS"/>
<xs:attribute name="span" type="xs:string" default="1"/>
<xs:attribute name="width" type="xs:string"/>
<xs:attribute name="align">
  <xs:simpleType>
    <xs:restriction base="xs:NMTOKEN">
      <xs:enumeration value="left"/>
      <xs:enumeration value="center"/>
      <xs:enumeration value="right"/>
      <xs:enumeration value="justify"/>
      <xs:enumeration value="char"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="char" type="xs:string"/>
<xs:attribute name="charoff" type="xs:string"/>
<xs:attribute name="valign">
  <xs:simpleType>
    <xs:restriction base="xs:NMTOKEN">
      <xs:enumeration value="top"/>
      <xs:enumeration value="middle"/>
      <xs:enumeration value="bottom"/>
      <xs:enumeration value="baseline"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Content" mixed="true">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="content" type="StrucDoc.Content"/>
    <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
    <xs:element name="sub" type="StrucDoc.Sub"/>
    <xs:element name="sup" type="StrucDoc.Sup"/>
    <xs:element name="br" type="StrucDoc.Br"/>
    <xs:element name="footnote" type="StrucDoc.Footnote"/>
    <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
    <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
  </xs:choice>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="revised">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="insert"/>
        <xs:enumeration value="delete"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.TitleContent" mixed="true">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="content" type="StrucDoc.TitleContent"/>
    <xs:element name="sub" type="StrucDoc.Sub"/>
    <xs:element name="sup" type="StrucDoc.Sup"/>
    <xs:element name="br" type="StrucDoc.Br"/>
    <xs:element name="footnote" type="StrucDoc.TitleFootnote"/>
    <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
  </xs:choice>

```

```

    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.Footnote" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="content" type="StrucDoc.Content"/>
      <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
      <xs:element name="sub" type="StrucDoc.Sub"/>
      <xs:element name="sup" type="StrucDoc.Sup"/>
      <xs:element name="br" type="StrucDoc.Br"/>
      <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
      <xs:element name="paragraph" type="StrucDoc.Paragraph"/>
      <xs:element name="list" type="StrucDoc.List"/>
      <xs:element name="table" type="StrucDoc.Table"/>
    </xs:choice>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.TitleFootnote" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="content" type="StrucDoc.TitleContent"/>
      <xs:element name="sub" type="StrucDoc.Sub"/>
      <xs:element name="sup" type="StrucDoc.Sup"/>
      <xs:element name="br" type="StrucDoc.Br"/>
    </xs:choice>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.FootnoteRef">
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="IDREF" type="xs:IDREF" use="required"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.Item" mixed="true">
    <xs:sequence>
      <xs:element name="caption" type="StrucDoc.Caption" minOccurs="0"/>
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element name="content" type="StrucDoc.Content"/>
        <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
        <xs:element name="sub" type="StrucDoc.Sub"/>
        <xs:element name="sup" type="StrucDoc.Sup"/>
        <xs:element name="br" type="StrucDoc.Br"/>
        <xs:element name="footnote" type="StrucDoc.Footnote"/>
        <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
        <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
        <xs:element name="paragraph" type="StrucDoc.Paragraph"/>
        <xs:element name="list" type="StrucDoc.List"/>
        <xs:element name="table" type="StrucDoc.Table"/>
      </xs:choice>
    </xs:sequence>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  </xs:complexType>
  <xs:complexType name="StrucDoc.LinkHtml" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="footnote" type="StrucDoc.Footnote"/>

```

```

    <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
  </xs:choice>
  <xs:attribute name="name" type="xs:string"/>
  <xs:attribute name="href" type="xs:string"/>
  <xs:attribute name="rel" type="xs:string"/>
  <xs:attribute name="rev" type="xs:string"/>
  <xs:attribute name="title" type="xs:string"/>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
</xs:complexType>
<xs:complexType name="StrucDoc.List">
  <xs:sequence>
    <xs:element name="caption" type="StrucDoc.Caption" minOccurs="0"/>
    <xs:element name="item" type="StrucDoc.Item" maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="listType" default="unordered">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="ordered"/>
        <xs:enumeration value="unordered"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Paragraph" mixed="true">
  <xs:sequence>
    <xs:element name="caption" type="StrucDoc.Caption" minOccurs="0"/>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="content" type="StrucDoc.Content"/>
      <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
      <xs:element name="sub" type="StrucDoc.Sub"/>
      <xs:element name="sup" type="StrucDoc.Sup"/>
      <xs:element name="br" type="StrucDoc.Br"/>
      <xs:element name="footnote" type="StrucDoc.Footnote"/>
      <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
      <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
    </xs:choice>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
</xs:complexType>
<xs:complexType name="StrucDoc.RenderMultiMedia">
  <xs:sequence>
    <xs:element name="caption" type="StrucDoc.Caption" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="referencedObject" type="xs:IDREFS" use="required"/>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
</xs:complexType>
<xs:complexType name="StrucDoc.Sub" mixed="true"/>
<xs:complexType name="StrucDoc.Sup" mixed="true"/>
<xs:complexType name="StrucDoc.Table">
  <xs:sequence>
    <xs:element name="caption" type="StrucDoc.Caption" minOccurs="0"/>
    <xs:choice>

```

```

        <xs:element name="col" type="StrucDoc.Col" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="colgroup" type="StrucDoc.Colgroup" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:choice>
    <xs:element name="thead" type="StrucDoc.Thead" minOccurs="0"/>
    <xs:element name="tfoot" type="StrucDoc.Tfoot" minOccurs="0"/>
    <xs:element name="tbody" type="StrucDoc.Tbody" maxOccurs="unbounded"/>
</xs:sequence>
<xs:attribute name="ID" type="xs:ID"/>
<xs:attribute name="language" type="xs:NMTOKEN"/>
<xs:attribute name="styleCode" type="xs:NMTOKENS"/>
<xs:attribute name="summary" type="xs:string"/>
<xs:attribute name="width" type="xs:string"/>
<xs:attribute name="border" type="xs:string"/>
<xs:attribute name="frame">
    <xs:simpleType>
        <xs:restriction base="xs:NMTOKEN">
            <xs:enumeration value="void"/>
            <xs:enumeration value="above"/>
            <xs:enumeration value="below"/>
            <xs:enumeration value="hsides"/>
            <xs:enumeration value="lhs"/>
            <xs:enumeration value="rhs"/>
            <xs:enumeration value="vsides"/>
            <xs:enumeration value="box"/>
            <xs:enumeration value="border"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute name="rules">
    <xs:simpleType>
        <xs:restriction base="xs:NMTOKEN">
            <xs:enumeration value="none"/>
            <xs:enumeration value="groups"/>
            <xs:enumeration value="rows"/>
            <xs:enumeration value="cols"/>
            <xs:enumeration value="all"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute name="cellspacing" type="xs:string"/>
<xs:attribute name="cellpadding" type="xs:string"/>
</xs:complexType>
<xs:complexType name="StrucDoc.Tbody">
    <xs:sequence maxOccurs="unbounded">
        <xs:element name="tr" type="StrucDoc.Tr"/>
    </xs:sequence>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="align">
        <xs:simpleType>
            <xs:restriction base="xs:NMTOKEN">
                <xs:enumeration value="left"/>
                <xs:enumeration value="center"/>
                <xs:enumeration value="right"/>
                <xs:enumeration value="justify"/>
                <xs:enumeration value="char"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>

```

```

</xs:attribute>
<xs:attribute name="char" type="xs:string"/>
<xs:attribute name="charoff" type="xs:string"/>
<xs:attribute name="valign">
  <xs:simpleType>
    <xs:restriction base="xs:NMTOKEN">
      <xs:enumeration value="top"/>
      <xs:enumeration value="middle"/>
      <xs:enumeration value="bottom"/>
      <xs:enumeration value="baseline"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Td" mixed="true">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="content" type="StrucDoc.Content"/>
    <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
    <xs:element name="sub" type="StrucDoc.Sub"/>
    <xs:element name="sup" type="StrucDoc.Sup"/>
    <xs:element name="br" type="StrucDoc.Br"/>
    <xs:element name="footnote" type="StrucDoc.Footnote"/>
    <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
    <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
    <xs:element name="paragraph" type="StrucDoc.Paragraph"/>
    <xs:element name="list" type="StrucDoc.List"/>
  </xs:choice>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="abbr" type="xs:string"/>
  <xs:attribute name="axis" type="xs:string"/>
  <xs:attribute name="headers" type="xs:IDREFS"/>
  <xs:attribute name="scope">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="row"/>
        <xs:enumeration value="col"/>
        <xs:enumeration value="rowgroup"/>
        <xs:enumeration value="colgroup"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="rowspan" type="xs:string" default="1"/>
  <xs:attribute name="colspan" type="xs:string" default="1"/>
  <xs:attribute name="align">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="left"/>
        <xs:enumeration value="center"/>
        <xs:enumeration value="right"/>
        <xs:enumeration value="justify"/>
        <xs:enumeration value="char"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="char" type="xs:string"/>
  <xs:attribute name="charoff" type="xs:string"/>
  <xs:attribute name="valign">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">

```

```

        <xs:enumeration value="top"/>
        <xs:enumeration value="middle"/>
        <xs:enumeration value="bottom"/>
        <xs:enumeration value="baseline"/>
    </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Tfoot">
    <xs:sequence maxOccurs="unbounded">
        <xs:element name="tr" type="StrucDoc.Tr"/>
    </xs:sequence>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="align">
        <xs:simpleType>
            <xs:restriction base="xs:NMTOKEN">
                <xs:enumeration value="left"/>
                <xs:enumeration value="center"/>
                <xs:enumeration value="right"/>
                <xs:enumeration value="justify"/>
                <xs:enumeration value="char"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="char" type="xs:string"/>
    <xs:attribute name="charoff" type="xs:string"/>
    <xs:attribute name="valign">
        <xs:simpleType>
            <xs:restriction base="xs:NMTOKEN">
                <xs:enumeration value="top"/>
                <xs:enumeration value="middle"/>
                <xs:enumeration value="bottom"/>
                <xs:enumeration value="baseline"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Th" mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element name="content" type="StrucDoc.Content"/>
        <xs:element name="linkHtml" type="StrucDoc.LinkHtml"/>
        <xs:element name="sub" type="StrucDoc.Sub"/>
        <xs:element name="sup" type="StrucDoc.Sup"/>
        <xs:element name="br" type="StrucDoc.Br"/>
        <xs:element name="footnote" type="StrucDoc.Footnote"/>
        <xs:element name="footnoteRef" type="StrucDoc.FootnoteRef"/>
        <xs:element name="renderMultiMedia" type="StrucDoc.RenderMultiMedia"/>
    </xs:choice>
    <xs:attribute name="ID" type="xs:ID"/>
    <xs:attribute name="language" type="xs:NMTOKEN"/>
    <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
    <xs:attribute name="abbr" type="xs:string"/>
    <xs:attribute name="axis" type="xs:string"/>
    <xs:attribute name="headers" type="xs:IDREFS"/>
    <xs:attribute name="scope">
        <xs:simpleType>
            <xs:restriction base="xs:NMTOKEN">
                <xs:enumeration value="row"/>
                <xs:enumeration value="col"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>

```

```

        <xs:enumeration value="rowgroup"/>
        <xs:enumeration value="colgroup"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="rowspan" type="xs:string" default="1"/>
  <xs:attribute name="colspan" type="xs:string" default="1"/>
  <xs:attribute name="align">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="left"/>
        <xs:enumeration value="center"/>
        <xs:enumeration value="right"/>
        <xs:enumeration value="justify"/>
        <xs:enumeration value="char"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="char" type="xs:string"/>
  <xs:attribute name="charoff" type="xs:string"/>
  <xs:attribute name="valign">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="top"/>
        <xs:enumeration value="middle"/>
        <xs:enumeration value="bottom"/>
        <xs:enumeration value="baseline"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="StrucDoc.Thead">
  <xs:sequence maxOccurs="unbounded">
    <xs:element name="tr" type="StrucDoc.Tr"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="align">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="left"/>
        <xs:enumeration value="center"/>
        <xs:enumeration value="right"/>
        <xs:enumeration value="justify"/>
        <xs:enumeration value="char"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="char" type="xs:string"/>
  <xs:attribute name="charoff" type="xs:string"/>
  <xs:attribute name="valign">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="top"/>
        <xs:enumeration value="middle"/>
        <xs:enumeration value="bottom"/>
        <xs:enumeration value="baseline"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>

```

```

</xs:complexType>
<xs:complexType name="StrucDoc.Tr">
  <xs:choice maxOccurs="unbounded">
    <xs:element name="th" type="StrucDoc.Th"/>
    <xs:element name="td" type="StrucDoc.Td"/>
  </xs:choice>
  <xs:attribute name="ID" type="xs:ID"/>
  <xs:attribute name="language" type="xs:NMTOKEN"/>
  <xs:attribute name="styleCode" type="xs:NMTOKENS"/>
  <xs:attribute name="align">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="left"/>
        <xs:enumeration value="center"/>
        <xs:enumeration value="right"/>
        <xs:enumeration value="justify"/>
        <xs:enumeration value="char"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="char" type="xs:string"/>
  <xs:attribute name="charoff" type="xs:string"/>
  <xs:attribute name="valign">
    <xs:simpleType>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="top"/>
        <xs:enumeration value="middle"/>
        <xs:enumeration value="bottom"/>
        <xs:enumeration value="baseline"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
</xs:schema>

```

## 14.6 SDTC\_Extension.xsd:

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="urn:hl7-org:sdtc"
  xmlns:sdtc="urn:hl7-org:sdtc" targetNamespace="urn:hl7-org:sdtc"
  xmlns:cda="urn:hl7-org:v3" elementFormDefault="qualified">
  <xs:import namespace="urn:hl7-org:v3" schemaLocation="C32_POCD_MT000040.xsd"/>

  <xs:include schemaLocation="../../processable/coreschemas/datatypes.xsd"/>

  <xs:complexType name="SdtcAssignedEntity">
    <xs:complexContent>
      <xs:extension base="cda:POCD_MT000040.AssignedEntity">
        <xs:sequence>
          <xs:element name="patient" type="SdtcPatient" minOccurs="0"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="SdtcRelatedEntity">
    <xs:complexContent>
      <xs:extension base="cda:POCD_MT000040.RelatedEntity">
        <xs:sequence>

```

```
        <xs:element name="patient" type="SdtcPatient" minOccurs="0"/>
      </xs:sequence>

    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="SdtcAssociatedEntity">
  <xs:complexContent>
    <xs:extension base="cda:POCD_MT000040.AssociatedEntity">
      <xs:sequence>
        <xs:element name="patient" type="SdtcPatient" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

<xs:complexType name="SdtcPatient">
  <xs:sequence>
    <xs:element name="id" type="cda:II" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>

<xs:element name="raceCode" type="cda:CE" />
<xs:element name="birthTime" type="cda:TS" />
</xs:schema>
```