nehta

CDA Package

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1 Introduction

1.1 Background

Clinical information can comprise of a single CDA XML document and associated attachments.

For example:

- A pathology report comprising of a CDA XML document and images that are packaged attachments to that CDA XML document.
- A discharge summary comprising of a CDA XML document with a packaged attachment that is a pathology report, where the pathology report comprises of another CDA XML document and an image as its packaged attachment.
- A prescription comprising of a CDA XML document, a packaged attachment and a digital signature. The digital signature is a separate byte stream that signs the CDA XML document.
- A discharge summary comprising of a CDA XML document, a packaged attachment image, a packaged attachment prescription and a digital signature. The digital signature is a separate byte stream that signs the discharge summary CDA XML document. The prescription comprises of multiple byte streams.

1.2 Purpose

This specification defines three logical models for clinical data that consists of a single CDA XML document and related byte streams. This specification also defines a possible serialized representation for those logical models.

This specification is a *clinical package profile* of the "Clinical Packages 1.0" [PKG2011]. Readers need to be familiar with [PKG2011] to understand this specification.

Specifications that use the logical models defined in this specification can define additional profiles of them to suit their requirements.

1.3 Scope

This specification defines logical models that contain a mandatory CDA XML document, optional package attachments and optional repository metadata. Depending on the logical model, eSignatures may or may not be present.

It is out of scope for this specification to define:

- The contents of the CDA XML document (e.g. pathology report, discharge summary, referral or electronic prescription).
- Whether package attachments are present or not and their contents.
- The party that is identified in the eSignature.
- The certificate used to create the eSignature.
- Whether the repository metadata is present or not.

It is expected profiles of these logical models will address these topics.

It is also out of scope for this specification to define how *CDA packages* are created or how they are processed. In particular, this specification does not specify how a processor handles a non-conformant *CDA package*. It is expected that specifications which uses *CDA packages* will specify the appropriate behaviour for dealing with non-conformant *CDA packages*.

1.4 References

1.4.1 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[ATS5821—2010] Standards Australia, *ATS 5821—2010 E-Health XML Secured Payload Profiles*, 5 March 2010.

[CDA] HL7, Clinical Document Architecture.

[ITI-TF2a] IHE, IT Infrastructure Technical Framework, Volume 2a: Transactions Part A—Sections 3.1-3.28, Revision 8.0, 19 August 2011 http://www.ihe.net/Technical_Framework/upload/IHE_ITI_TF_Rev8-0_Vol2a_FT_2011-08-19.pdf

[ITI-TF3] IHE, IT Infrastructure Technical Framework, Volume 3: Cross-Transaction Specifications and Content Specifications, Revision 8.0, 19 August 2011 http://www.ihe.net/Technical_Framework/upload/IHE_ITI_TF_Rev8-0_Vol3_FT_2011-08-19.pdf

[PK2004] PKWare Inc, *.ZIP File Format Specification*, version 6.2.0, 26 April 2004. http://www.pkware.com/documents/APPNOTE/APPNOTE_6.2.0.txt

[PKG2011] NEHTA, *Clinical Packages 1.0*, 25 November 2011.

[RFC3986] IETF, *RFC 3986: Uniform Resource Identifier (URI): Generic Syntax*, T. Berners-Lee, R. Fielding, L. Masinter, January 2005.

[XDM2006] IHE, IHE IT Infrastructure Technical Framework Supplement 2006-2007: Cross-Enterprise Document Media Interchange (XDM), Trial implementation version, 15 August 2006.

[XDS2011] IHE, *IHE IT Infrastructure Technical Framework Supplement: XDS Metadata Update*, Trial Implementation, 19 August 2011 http://www.ihe.net/Technical_Framework/upload/IHE_ITI_Suppl_XDS_Metadata_Update_Rev1-2_TI_2011-08-19.pdf

[XSD2004a] W3C, *XML Schema Part 1: Structures*, Second Edition, W3C Recommendation, 28 October 2004.

[XSD2004b] W3C, *XML Schema Part 2: Datatypes*, Second Edition, W3C Recommendation, 28 October 2004.

[XML2008] W3C, Extensible Markup Language (XML) 1.0, Fifth Edition, W3C Recommendation, 26 November 2008.

1.4.2 Informative References

[RFC2119] IETF, RFC 2119: *Keywords for use in RFCs to Indicate Requirement Levels*, S. Bradner, March 1997, http://ietf.org/rfc/rfc2119.txt

1.5 Definitions, acronyms, abbreviations

1.5.1 Acronyms and abbreviations

CDA	Clinical Document Architecture
XML	Extensible Markup Language
URI	Uniform Resource Identifier

1.5.2 XML namespaces

cda	urn:hl7-ort:v3
ds	http://www.w3.org/2000/09/xmldsig#
rim	urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0
s	http://ns.electronichealth.net.au/cdaPackage/xsd/eSignature/2012
sp	http://ns.electronichealth.net.au/xsp/xsd/SignedPayload/2010

1.5.3 Terminology

The keywords **SHALL**, **SHALL NOT**, **SHOULD** and **SHOULD NOT** in this document are to be interpreted as described in IETF's RFC 2119 [RFC2119].

1.6 Overview

The three *CDA package* profiles are specified in section 2.

The CDA XML document is profiled in section 3.

The syntax for an "eSignature" is specified in section 4.

The syntax for "repository metadata" is specified in section 5.

The XDM-ZIP representation is specified in section 6.

XML Schemas are specified in Appendix A.

An example of "repository metadata" can be found in Appendix B.

2 Profiles

2.1 Overview

This section defines three profiles of *clinical packages*.

CDA package profiles are expected to explicitly profile one of the three profiles, depending on their eSignature requirements:

- Base CDA package when eSignatures are optional.
- Unsigned CDA package when eSignatures are forbidden.
- Signed CDA package when eSignatures are mandatory.

All three profiles are logical models. They profile the *logical clinical packages*.

The term "CDA package" refers to the *base CDA package* and any profiles of it (which includes the *unsigned CDA package* and *signed CDA package*).

2.2 Base CDA Package

2.2.1 Introduction

Informally, a *base CDA package* is a logical model that consists of *members* and *distinguishers* for the following:

- a single mandatory root CDA XML document;
- optional and repeatable *packaged attachments*;
- optional and repeatable eSignatures; and
- optional repository metadata.

This profile can be used when the eSignature is optional.

2.2.2 Profiling clinical packages

M 1 A *base CDA package* shall conform to a *logical clinical package* as defined by *Clinical Package* [PKG2011].

2.2.3 Root

2.2.3.1 Definition

A *root entry* is a *distinguisher* with the *distinguisher type* "http://ns.electronichealth.net.au/cdaPackage/root/1.0".

2.2.3.2 Conformance points

M 2 A *base CDA package* shall contain one and only one *root entry*.

M 3 The *root entry* shall be associated with a *part* whose *byte stream* conforms to the "CDA XML document" as defined in section 3.

2.2.4 Package attachments

2.2.4.1 Definition

A *base CDA package* handles two types of *packaged attachments* to the root CDA XML document:

- *atomic packaged attachments* which are a single *byte stream*; and
- *CDA package packaged attachments* which are a *base CDA package*.

The formal definition of *packaged attachments* can be found in Clause 3.3.

2.2.4.2 Conformance points

M 4 Each *atomic packaged attachment* in a *base CDA package* shall correspond to a distinct *part* in the *base CDA package*.

M 5 Each *base CDA package packaged attachment* in a *base CDA package* shall correspond to a distinct *referenced package* in the *base CDA package*.

2.2.4.3 Informative notes

Because conformance point [M 4] describes the *part* as "distinct," that means that *part* cannot be the same as the root CDA XML document part, any eSignature *part* or be a *part* that corresponds to another *atomic packaged attachment*.

Because conformance point [M 5] describes the *referenced package* as "distinct," that means that *referenced package* cannot be a *referenced package* that corresponds to another *CDA package packaged attachment*.

CDA package processors can identify the *packaged attachments* by parsing the CDA XML document and extracting *identifiers* from it.

2.2.5 eSignature

2.2.5.1 Definition

An *eSignature entry* is a *distinguisher* with the *distinguisher type* "http://ns.electronichealth.net.au/cdaPackage/eSignature/1.0".

2.2.5.2 Conformance points

M 6 A *base CDA package* shall contain zero or more *eSignature entries*.

M 7 An *eSignature entry* shall have a value that is the *part identifier* of a *part* whose *byte stream* conforms to the "eSignature" syntax as defined in section 4.

2.2.5.3 Informative notes

A *base CDA package* allows zero or more *eSignature entries*.

This can be further constrained by additional profiles. For example, the *unsigned CDA package* (section 2.3) constrains this by forbidding *eSignature entries* (always zero); the *signed CDA package* (section 2.4) constrains this by requiring there always be at least one an *eSignature entry* (one or more).

2.2.6 Repository metadata

2.2.6.1 Definition

A *repository metadata entry* is a *distinguisher* with the *distinguisher type* "http://ns.electronichealth.net.au/cdaPackage/repositoryMetadata/1.0".

2.2.6.2 Conformance points

M 8 A *base CDA package* shall contain zero or one *repository metadata entry*.

M 9 A *repository metadata entry* shall have a value that is the *part identifier* of a *part* whose *byte stream* conforms to the "repository metadata" syntax as defined in section 5.

2.2.6.3 Informative notes

A *base CDA package* allows an optional *repository metadata entry*. It can be constrained by additional profiles that make it mandatory or forbidden.

2.3 Unsigned CDA package

2.3.1 Introduction

Informally, an *unsigned CDA package* is a logical model that consists of *members* and *distinguishers* for the following:

- a single mandatory root CDA XML document; and
- optional and repeatable *packaged attachments*.

This profile can be used when the eSignature is forbidden.

2.3.2 Profiling the base CDA package

M 10 A *logical unsigned CDA package* shall conform to the conformance points for a *base CDA package* (section 2.2).

2.3.3 eSignature restriction

M 11 A *logical unsigned CDA package* shall have zero *eSignature entries.*

2.4 Signed CDA package

2.4.1 Introduction

Informally, a *signed CDA package* is a logical model that consists of *members* and *distinguishers* for the following:

- a single mandatory root CDA XML document;
- optional and repeatable *packaged attachments*; and
- one or more *eSignatures*.

This profile can be used when an eSignature is mandatory.

2.4.2 Profiling the base CDA package

M 12 A *signed CDA package* shall conform to the conformance points for a *base CDA package* (section 2.2).

2.4.3 eSignature restriction

M 13 A *signed CDA package* shall have one or more *eSignature entries*.

3 CDA XML document

3.1 Introduction

This section defines the syntax of a "CDA XML document" that is used as the root.

3.2 CDA XML document

3.2.1 Conformance points

M 14 A "CDA XML document" shall be an XML document that is conforms to the CDA specification [CDA].

3.3 Attachments

3.3.1 Introduction

An instance of a CDA XML document can have attachments associated with it.

There are internal and external forms of attachments in CDA. In the internal form, the attachment is base64 encoded and included in the CDA XML document. In the external form, the attachment is referenced using elements of the ED datatype elements. The CDA specification does not stipulate where that reference refers to: it could be remote (e.g. on a Web server, in a well-known location or in local storage) or packaged with the CDA XML document.

Attachments can also be verified by providing a digest of it. The `ED datatype in CDA` has optional `integrityCheckAlgorithm` and `integrityCheck` attributes which can be used for this purpose.

3.3.2 Definitions

The *CDA package* profiles only handles *packaged attachments*.

A *packaged attachment* is defined as an attachment that:

- it is external to the CDA XML document;
- it is included in the same *CDA package* as the CDA XML document; and
- it is referenced appropriately (e.g. has a SHA-1 digest).

The *CDA package* supports two types of *packaged attachments*:

- *Atomic packaged attachments*: where the attachment is a single byte stream. For example, a JPEG image.
- *CDA package packaged attachments*: where the attachment itself is a *signed CDA package*. Note: it is not possible to have a package attachment that is an *unsigned CDA package*.

An "ED-element" is an XML element of the "ED" datatype from CDA. There are several elements in CDA that have this datatype. Particular profiles might define whether these elements can appear and how they are used.

3.3.3 Conformance points

The following conformance points define *packaged attachments* and how they are represented inside the CDA XML document:

M 15 If a "CDA XML document" contains a *packaged attachment*, it shall represent the *packaged attachment* using an *ED-element*.

M 16 That *ED-element* shall have an `integrityCheckAlgorithm` attribute whose value is "`SHA-1`".

M 17 That *ED-element* shall contain a single `cda:reference` element.

M 18 That `cda:reference` element shall have a `value` attribute containing a `URI-reference` as defined by *Uniform Resource Identifier (URI): Generic Syntax* [RFC3986].

M 19 A CDA XML document shall not contain any *ED-element* that satisfies [M 16], [M 17], [M 18] and has a `cda:reference` child element with a `value` attribute with that is equivalent to any *identifier* in the *package* that the CDA XML document is a member of, unless that *ED-element* represents a *packaged attachment*.

3.3.3.1 Atomic packaged attachment

M 20 If the *packaged attachment* is an *atomic packaged attachment*, that *ED-element* shall have an `integrityCheck` attribute whose value is the SHA-1 digest of the *byte stream*.

M 21 If the *packaged attachment* is an *atomic packaged attachment*, the *ED-element* shall have a `mediaType` attribute whose value is an agreed Internet media type of the byte stream (or the value "`application/octet-string`" if there is no agreed value).

3.3.3.2 CDA package packaged attachment

M 22 If the *packaged attachment* is a *CDA package packaged attachment*, that *E-element* shall have an integrityCheck attribute whose value is the SHA-1 digest of the *byte stream* of any one eSignature *part* inside the attachment *CDA package*.

M 23 If the *packaged attachment* is a *CDA package packaged attachment*, the *ED-element* shall have a `mediaType` attribute whose value is "`application/x.electronichealth.cda.package`".

Editorial note: It is expected that an Internet Media Type will be officially registered with IANA and that registered value will be used. The above media type is an unregistered media type.

3.3.4 Informative notes

It is outside the scope of this specification to define how a processor processes *ED-elements* in the CDA XML document that does not represent a *packaged attachment*. For example, it does not define how *ED-elements* that do not have a digest are processed. If used, the processing of those types of attachments will have to be defined by another specification. Similarly, this specification does not define whether the internal form attachments are permitted or not.

If it is permitted, the use of *ED-elements* in the CDA XML document that does not represent a *packaged attachment* needs to be specified by a profile of the *base CDA package*.

3.3.4.1 Example

The following is an example of a CDA XML document containing two *packaged attachments*. For these to be a *packaged attachments* in the same *CDA package* there has to be a *part* with the *part identifier* of "a19605b5-6c76-4608-9046-86c417f1e43c" and a *referenced package* with the *package identifier* of "cce9cf64-ee6c-4dfb-94d1-090122e9f71c".

This example uses the `cda:value` element, which is of the ED datatype. Note: there are other elements in CDA that are also of the ED datatype.

If these *parts* do not exist, then they are not a *packaged attachment* and how they are processed is outside the scope of this specification.

```
<?xml version="1.0" encoding="UTF-8"?>

<ClinicalDocument xmlns="urn:hl7-org:v3">
 …
 <value mediaType="image/jpeg"
  integrityCheckAlgorithm="SHA-1"
  integrityCheck="0NyFNJ74XRAJjvsihGPqGePn0gU=">
  <reference value="a19605b5-6c76-4608-9046-86c417f1e43c"/>
 </value>
 …
 <value mediaType="application/x.electronichealth.cda.package"
  integrityCheckAlgorithm="SHA-1"
  integrityCheck="iRvxDejGCiNiRbIHo39C4nQ8J58=">
  <reference value="cce9cf64-ee6c-4dfb-94d1-090122e9f71c"/>
 </value>
…
</ClinicalDocument>
```

4 eSignature

4.1 Introduction

This section defines the syntax of an "eSignature." It a profile of the "Signed Container" from [ATS 5821—2010] that has a specific payload.

The primary purpose of an "eSignature" is to represent an "electronic signature" that attests to the contents of the root CDA XML document (and indirectly its *packaged attachments*). It contains a digital signature, so in addition to the attestation it is also a mechanism to prevent forgery and to detect tampering of that assertion and the data being asserted.

The concept of an "electronic signature" and "approver" comes from the "Electronic Signature Requirements" [ESR2011]. This "eSignature" is one possible implementation of an "electronic signature."

4.2 Contents

4.2.1 XSP signed container

4.2.1.1 Conformance points

M 24 An "eSignature" shall be an XML document that conforms to a *Signed Container* as defined by [ATS 5821—2010] with the root element of that XML document being the `sp:signedPayload` element.

M 25 This Signed Payload shall contain one and only one `ds:Signature` element.

4.2.1.2 Informative notes

Although an XSP Signed Payload can contain one or more digital signatures, it is being used as a single electronic signature made by one party. Therefore, there will always be only one digital signature in it.

4.2.2 Payload

4.2.2.1 Conformance points

4.2.2.1.1 sp:signedPayloadData

M 26 The `sp:signedPayloadData` element in this *Signed Payload* shall contain exactly one `s:eSignature` element as defined by the XML Schema for an eSignature in Appendix A.1.

4.2.2.1.2 Manifest

M 27 In an eSignature, the `ds:Manifest` element shall contain a single ds:Reference element with its URI attribute set to the *part identifier* of the root CDA XML document *part* and using the SHA-1 digest algorithm on its unmodified *byte stream*.

M 28 This `ds:Manifest` element shall contain one and only one `ds:Reference` element with its URI attribute set to the *part identifier* of the signatory *part* and using the SHA-1 digest algorithm on its unmodified *byte stream*.

4.2.2.1.3 approver

M 29 In an eSignature, the `s:approver` element shall contain values that can identify a person that the eSignature creator claims was the "approver" of the eSignature.

4.2.2.1.4 signingTime

M 30 In an eSignature, the `s:signingTime` element shall contain a time of which the eSignature creator claims to have performed the signing process.

M 31 In an eSignature, the value in the `s:signingTime` element shall include an explicit timezone.

4.2.2.2 Informative notes

4.2.2.2.1 eSignature

The eSignature is an XML document whose root element is the Signed Payload Container from [ATS 5821—2010]. There is no conformance point specifying the encoding of the digital signature XML document, but it is suggested that only UTF-8 or UTF-16 be used.

The Signed Payload Container is designed to sign the XML element that is in the `sp:signedPayloadData` element.

4.2.2.2.2 Manifest

The `ds:Manifest` element is defined in the XML Digital Signatures specification for applications to use. In the digital signature part, it is used to reference the *root XML document* being signed. So even though the Signed Payload Container is not designed to sign external data the `ds:Manfest` element is used to reference external data, so that the end result is a digital signature over external data.

This specification constrains the `ds:Manifest` element to have exactly one `ds:Reference` (unless others are allowed by additional profiles), and that `ds:Reference` element to use the SHA-1 digest algorithm. That digest is calculated on the serialized representation of the root CDA XML document. That is, it is treated as a byte stream—XML canonicalization is not performed on it.

The order of the `ds:Reference` elements inside the `ds:Manifest` element is not significant.

4.2.2.2.3 Approver

The [ESR2011] defines the approver as a person that is responsible for approving the contents (i.e. cannot be a device or organisation).

The approver needs to be identified inside the clinical contents according to [ESR2011] which could imply that they are also identified inside the CDA XML document. The contents of the CDA XML document are outside the scope of this specification. Therefore, this specification makes no requirements for an approver to be identified inside the CDA XML document or whether that approver has to be the same as the signatory person. Other profiles that define the contents of the CDA XML document could make such requirements.

4.2.2.2.4 Other elements

The eSignature XML Schema allows for zero or more arbitrary elements to support extensions. For example, profiles could define additional elements to represent commitment types, signature policies and notarized timestamps.

Implementations are expected to ignore elements that it doesn't recognise.

4.2.2.2.5 Attachments

The *eSignature* does not directly sign attachments. The integrity of attachments, if any, is handled indirectly through the `integrityCheckAlgorithm` and `integrityCheck` attributes on CDA references (see Clause 3.3).

4.3 Example

```
<?xml version="1.0"?>

<sp:signedPayload
 xmlns:sp="http://ns.electronichealth.net.au/xsp/xsd/SignedPayload/2010"
 xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
 <sp:signatures>
  <ds:Signature>
   <!-- digital signature as profiled by the XSP Signed Container -->
   …
  </ds:Signature>
 </sp:signatures>

 <sp:signedPayloadData id="x">

  <s:eSignature
   xmlns:s="http://ns.electronichealth.net.au/cdaPackage/xsd/eSignature/2012">

   <ds:Manifest>
    <ds:Reference URI="cda-xml-document-part-identifier">
     <ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
     <ds:DigestValue>…</ds:DigestValue>
    </ds:Reference>
   </ds:Manifest>

   <s:approver>
    <s:personId>
     http://ns.electronichealth.net.au/id/hi/hpii/1.0/800361??????????
    </s:personId>
    <s:personName>
      <s:nameTitle>Dr</s:nameTitle>
      <s:givenName>John</s:givenName>
      <s:familyName>Smith</s:familyName>
    </s:personName>
   </s:approver>

   <s:signingTime>2012-12-31T23:59:59Z</s:signingTime>

  </s:eSignature>

 </sp:signedPayloadData>
</sp:signedPayload>
```

5 Repository metadata

5.1 Introduction

This section defines the syntax of "repository metadata." It is a profile of the XDS repository metadata [XDS2011].

A "repository metadata" is used for data that a repository could use to process the *CDA package*. Some of its metadata deliberately duplicates data found inside the CDA XML document, while some of it does not come from the CDA XML document.

This part is optional for a *CDA package*. It is expected that *CDA package profiles* for use with repositories would make this part mandatory, but remains optional when it is not used with repositories.

In this section, the term "attribute" refers to a metadata attribute, the terminology used in [ITI-TF3]. It does not refer to an XML attribute.

5.2 General

5.2.1 Conformance points

M 32 A "repository metadata" shall be an XML document that conforms to section 3.14.4.1.2.7 Document Definition Metadata of [ITI-TF2] and the XML Schema at http://docs.oasis-open.org/regrep/v3.0/schema/

M 33 A "repository metadata" shall contain exactly one Submission Set Metadata block (SSM block) that conforms to the conformance points in Clause 5.3.

M 34 A "repository metadata" shall contain exactly one Document Entry Metadata block for the root part (DEM-R block) that conforms to the conformance points in Clause 5.4.

M 35 A "repository metadata" shall contain exactly one Document Entry Metadata block for a packaged attachment (DEM-A block) for each *packaged attachment* that conforms to the conformance points in Clause 5.5.

M 36 A "repository metadata" shall not contain any other metadata block other than the ones defined by conformance points M 33, M 34 and M 35.

5.2.2 Informative notes

This XML document contains a sequence of `rim:Identifiable` elements, each corresponding to one of the following:

- The submission set as a whole. The contents of this `rim:Identifiable` element is specified in Clause 5.3. The metadata attributes in this block come from the `XDSSubmissionSet` in Section 4.1.8 "Submission Set Metadata" of [ITI-TF3].
- The CDA XML document part. The contents of this `rim:Identifiable` element is specified in Clause 5.4. The metadata attributes in this block come from the `XDSDocumentEntry` in Section 4.1.7 "Document Definition Metadata" of [ITI-TF3].
- The cryptographic signature part, the signatory part and each (if any) *packaged attachments*. If these `rim:Identifiable` elements are present, their values are specified in Clause 5.5. The metadata attributes in this block also come from the `XDSDocumentEntry` in Section 4.1.7 "Document Definition Metadata" of [ITI-TF3].

Example structure of a “repository metadata”:

```
<?xml version="1.0"?>

<e:SubmitObjectsRequest
 xmlns="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
 xmlns:e="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0">

  <RegistryObjectList>

    <Identifiable xsi:type="ExtrinsicObjectType" id="1" ... >
      <!-- details of Root CDA document ... -->
    </Identifiable>

    <Identifiable xsi:type="ExtrinsicObjectType" id="2" ... >
      <!-- .. details of Signature document ... -->
    </Identifiable>

    <Identifiable xsi:type="ExtrinsicObjectType" id="3" ... >
      <!-- .. details of attached documents ... >
    </Identifiable>

    <Identifiable xsi:type="RegistryPackageType" id="4" ... >
      <!-- ... details of Submission Set ... >
    </Identifiable>

    <Identifiable xsi:type="ClassificationType" id="5"
       classifiedObject="4" ... Classification of Submission Set ... >

    <Identifiable xsi:type="AssociationType1"
                  sourceObject="4" targetObject="1" ...>
      < ... Association: Submission Set id = 4 hasMember document id = 1>
    </Identifiable>

    <Identifiable xsi:type="AssociationType1"
                  sourceObject="4" targetObject="2" ...>
       < ... Association: Submission Set id = 4 hasMember document id = 2>
    </Identifiable>

    <Identifiable xsi:type="AssociationType1"
                  sourceObject="4" targetObject="3" ...>
        < ... Association: Submission Set id = 4 HasMember document id = 3>
    </Identifiable>

    <Identifiable xsi:type="AssociationType1"
                  sourceObject="4" targetObject="1" ...>
           < ... Association: Document id = 2 signs document id = 1>
    </Identifiable>

  </RegistryObjectList>

</e:SubmitObjectsRequest>
```

5.3 Submission Set Metadata

5.3.1 Values from the CDA XML document: mandatory

5.3.1.1 Introduction

The following attributes are always mandatory and must have the same values as the indicated values from the CDA XML document.

Note: this implies that these values are mandatory for the CDA XML document.

5.3.1.2 Conformance points

5.3.1.2.1 patientId

M 37 An SSM block shall contain exactly one `patientId` attribute.

M 38 The `patientID` attribute in the SSM block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:recordTarget/cda:patientRole/
 cda:patient/ext:asEntityIdentifier/
 ext:id[@assigningAuthorityName='IHI']/@root
```

in the HL7v2 CX format.

5.3.1.2.2 sourceId

M 39 An SSM block shall contain exactly one `sourceId` attribute.

M 40 The `sourceId` attribute in the SSM block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:author/cda:assignedAuthor/
 cda:representedOrganization/ext:asEntityIdentifier/
 ext:id[@assigningAuthorityName='HPI-O']/@root
```

in the HL7v2 XON format.

5.3.2 Values from the CDA XML document: optional

5.3.2.1 Introduction

The following attributes are mandatory if their corresponding value is defined in the CDA XML document. They are prohibited if their corresponding value is not defined in the CDA XML document.

5.3.2.2 Conformance points

5.3.2.2.1 author:Institution

M 41 If the value (defined in M 43) exists in the CDA XML document, an SSM block shall contain exactly one `author:Institution` attribute.

M 42 If the value (defined in M 43) does not exist in the CDA XML document, an SSM block shall not contain any `author:Institution` attribute.

M 43 The `author:Institution` attribute in the SSM block shall have the same value as this element in the CDA XML document:

```
/cda:ClinicalDocument/cda:author/cda:assignedAuthor/
 cda:representedOrganization/ext:asEntityIdentifier/
 ext:id[@assigningAuthorityName='HPI-O']/@root
```

in the HL7v2 XON format.

5.3.2.2.2 author:authorPerson

M 44 If the value (defined in M 46) exists in the CDA XML document, an SSM block shall contain exactly one `author:authorPerson` attribute.

M 45 If the value (defined in M 46) does not exist in the CDA XML document, an SSM block shall not contain any `author:authorPerson` attribute.

M 46 The author:authorPerson attribute in the SSM block shall have the same value as this element in the CDA XML document:

```
/cda:ClinicalDocument/cda:author/cda:assignedAuthor/

cda:assignedPerson/ext:asEntityIdentifier/ext:id[@assigningA
uthorityName='HPI-I']/@root

+ demographics (family,given,title,prefix)

/cda:ClinicalDocument/cda:author/cda:assignedAuthor/
 cda:assignedPerson/cda:name
```

in the HL7v2 XCN format.

5.3.3 Values new to repository metadata: mandatory

5.3.3.1 Introduction

The following attributes are mandatory, but don't correspond to any values inside the CDA XML document.

5.3.3.2 Conformance points

5.3.3.2.1 contentTypeCode

M 47 An SSM block shall contain exactly one `contentTypeCode` attribute.

M 48 The `contentTypeCode` attribute in the SSM block shall contain one of the values from the table in Clause 5.6.1.

5.3.3.2.2 entryUUID

M 49 An SSM block shall contain exactly one `entryUUID` attribute.

M 50 The `entryUUID` attribute in the SSM block shall have a unique UUID value.

5.3.3.2.3 submissionTime

M 51 An SSM block shall contain exactly one `submissionTime` attribute.

M 52 The `submissionTime` attribute in the SSM block shall have contain same value as the `s:signingTime` element from the *eSignature* part.

5.3.3.2.4 uniqueID

M 53 An SSM block shall contain exactly one `uniqueID` attribute.

M 54 The `uniqueId` attribute in the SSM block shall have the same UUID value as the entryUUID.

5.4 Document Entry Metadata: root part

5.4.1 Values from the CDA XML document: mandatory

5.4.1.1 Conformance points

5.4.1.1.1 creationTime

M 55 A DEM-R block shall contain exactly one `creationTime` attribute.

M 56 The `creationTime` attribute in a DEM-R block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:effectiveTime
```

5.4.1.1.2 languageCode

M 57 A DEM-R block shall contain exactly one `languageCode` attribute.

M 58 The `languageCode` attribute in a DEM-R block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:languageCode/@code
```

5.4.1.1.3 patientId

M 59 A DEM-R block shall contain exactly one `patientId` attribute.

M 60 The `patientId` attribute in a DEM-R block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:recordTarget/cda:patientRole/
 cda:patient/ext:asEntityIdentifier/
 ext:id[@assigningAuthorityName='IHI']/@root
```

in the HL7v2 CX format.

5.4.1.1.4 sourcePatientId

M 61 A DEM-R block shall contain exactly one sourcePatientId attribute.

M 62 The sourcePatientId attribute in a DEM-R block shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:recordTarget/cda:patientRole/
 cda:id
```

in the HL7v2 CX format using both @root and @extension value.

5.4.1.1.5 uniqueId

M 63 A DEM-R block shall contain exactly one `uniqueId` attribute.

M 64 The `uniqueId` attribute shall have the same value as this element from the CDA XML document:

```
/cda:ClinicalDocument/cda:id/@root
```

5.4.2 Values from the CDA XML document: optional

The following attributes are mandatory if their corresponding value is defined in the CDA XML document. They are prohibited if their corresponding value is not defined in the CDA XML document.

5.4.2.1 Conformance points

5.4.2.1.1 author:Institution

M 65 If the value (defined in M 67) exists in the CDA XML document, a DEM-R block shall contain exactly one `author:Institution` attribute.

M 66 If the value (defined in M 67) does not exist in the CDA XML document, a DEM-R block shall not contain any `author:Institution` attribute.

M 67 The author:`Institution` attribute in the DEM-R block shall have the same value as this element in the CDA XML document:

```
/cda:ClinicalDocument/cda:author/cda:assignedAuthor/
 cda:representedOrganization/ext:asEntityIdentifier/
 ext:id[@assigningAuthorityName='HPI-O']/@root
```

in the HL7v2 XON format.

5.4.2.1.2 author:authorPerson

M 68 If the value (defined in M 70) exists in the CDA XML document, a DEM-R block shall contain exactly one `author:authorPerson` attribute.

M 69 If the value (defined in M 70) does not exist in the CDA XML document, a DEM-R block shall not contain any `author:authorPerson` attribute.

M 70 The author:`authorPerson` attribute in the DEM-R block shall have the same value as this element in the CDA XML document:

```
/cda:ClinicalDocument/cda:author/cda:assignedAuthor/

cda:assignedPerson/ext:asEntityIdentifier/ext:id[@assigningA
uthorityName='HPI-I']/@root

+ demographics (family,given,title,prefix)

/cda:ClinicalDocument/cda:author/cda:assignedAuthor/
 cda:assignedPerson/cda:name
```

in the HL7v2 XCN format.

5.4.3 Values that are new to the repository metadata

5.4.3.1 Introduction

The following attributes are mandatory, but don't correspond to any values inside the CDA XML document.

5.4.3.2 Conformance points

5.4.3.2.1 classCode

M 71 A DEM-R block shall contain exactly one `classCode` attribute.

M 72 The `classCode` attribute in the DEM-R block shall contain one of the values from the table in Clause 5.6.1.

5.4.3.2.2 confidentialityCode

M 73 A DEM-R block shall contain exactly one `confidentialityCode` attribute.

M 74 The `confidentialityCode` attribute in a DEM-R block shall contain one of the values from the table in Clause 5.6.2.

5.4.3.2.3 entryUUID

M 75 A DEM-R block shall contain exactly one `entryUUID` attribute.

M 76 The entryUUID attribute in a DEM-R block shall contain a new unique UUID value.

5.4.3.2.4 healthcareFacilityTypeCode

M 77 A DEM-R block shall contain exactly one `healthcareFailityTypeCode` attribute.

M 78 The `healthcareFacilityTypeCode` attribute in a DEM-R block shall contain one of the values from the table in Clause 5.6.4.

5.4.3.2.5 mimeType

M 79 A DEM-R block shall contain exactly one `mimeType` attribute.

M 80 The mimeType attribute in a DEM-R block shall contain the value "application/xml".

5.4.3.2.6 practiceSettingCode

M 81 A DEM-R block shall contain exactly one `practiceSettingCode` attribute.

M 82 The practiceSettingCode attribute in a DEM-R block shall contain one of the values from the table in Clause 5.6.5.

5.4.3.2.7 typeCode

M 83 A DEM-R block shall contain exactly one `typeCode` attribute.

M 84 The typeCode attribute in a DEM-R block shall contain one of the values from the table in Clause 5.6.1.

5.4.3.2.8 URI

M 85 A DEM-R block shall contain exactly one `URI` attribute.

M 86 The URI attribute in a DEM-R block shall contain the ZIP item name of the CDA XML document (relative to the "repository metadata" ZIP item name) or the *part identifier* for the root CDA XML document *part* if there is no associated *ZIP item name*.

5.4.3.3 Informative notes

If representing the CDA package in the XDM-ZIP representation, this value will always be "CDA_ROOT.XML".

If representing the *CDA package* in the CP-ZIP representation, the ZIP item name for the CDA XML document can be the same as the value of the entryUUID. This would make the entryUUID, URI and relative ZIP item name have the same value.

5.5 Document Entry Metadata: non-root parts

5.5.1 Values that are new to the repository metadata

5.5.1.1 Conformance points

5.5.1.1.1 classCode

M 87 A DEM-A block shall contain exactly one `classCode` attribute.

M 88 The `classCode` attribute in a DEM-A block shall contain one of the values from the table in Clause 5.6.1.

5.5.1.1.2 confidentialityCode

M 89 A DEM-A block shall contain exactly one `confidentialityCode` attribute.

M 90 The `confidentialityCode` attribute in a DEM-A block shall contain one of the values from the table in Clause 5.6.2.

5.5.1.1.3 entryUUID

M 91 A DEM-A block shall contain exactly one `entryUUID` attribute.

M 92 The `entryUUID` attribute in a DEM-A block shall contain a new UUID value.

5.5.1.1.4 healthcareFacilityTypeCode

M 93 A DEM-A block shall contain exactly one `healthcareFacilityTypeCode` attribute.

M 94 The `healthcareFacilityTypeCode` attribute in a DEM-A block shall contain one of the values from the table in Clause 5.6.4.

5.5.1.1.5 mimeType

M 95 A DEM-A block shall contain exactly one `mimeType` attribute.

M 96 The `mimeType` attribute in a DEM-A block shall contain the same Internet media type code type for the *packaged attachment* as used inside the CDA XML document for it.

5.5.1.1.6 practiceSettingCode

M 97 A DEM-A block shall contain exactly one `practiceSettingCode` attribute.

M 98 The `practiceSettingCode` attribute in a DEM-A block shall contain one of the values from the table in Clause 5.6.5.

5.5.1.1.7 typeCode

M 99 A DEM-A block shall contain exactly one `typeCode` attribute.

M 100 The `typeCode` attribute in a DEM-A block shall contain one of the values from the table in 5.6.1.

5.5.1.1.8 uniqueId

M 101 A DEM-A block shall contain exactly one `uniqueId` attribute.

M 102 The `uniqueId` attribute in a DEM-A block shall contain the *identifier* for the *part* or *referenced package* corresponding *packaged attachment*.

5.5.1.1.9 URI

M 103 A DEM-A block shall contain exactly one `URI` attribute.

M 104 The `URI` attribute in a DEM-A block shall contain *ZIP item name* of the part (relative to the "repository metadata" ZIP item) or the same value as the `uniqueId` if there is no corresponding *ZIP item*.

5.5.1.2 Informative notes

If representing the *CDA package* in the CP-ZIP representation, the ZIP item name for the *part* can be the same as the value of the entryUUID. This would make the entryUUID, URI and the relative *ZIP item name* have the same value.

If the *identifier* for the *packaged attachment* appears to be a UUID, it can be reused as the value of the entryUUID.

5.6 Permitted values

5.6.1 Content type and class codes

Code Value Set Definition

The below table lists the code set used for specifying the particular kind of document (e.g., Prescription, Discharge Summary, Report).

Coding System	**Coding System OID**	**Concept Code**	**Concept Name (Coding System Name)**	**NEHTA Package**
LOINC	2.16.840.1.113883.6.1	60591-5	Patient Summary	Shared Health Summary
LOINC	2.16.840.1.113883.6.1	57133-1	Referral note	eReferral
LOINC	2.16.840.1.113883.6.1	51852-2	Letter	Specialist Letter
LOINC	2.16.840.1.113883.6.1	18842-5	Discharge Summarisation Note	Discharge Summary
LOINC	2.16.840.1.113883.6.1	34133-9	Summarisation of episode note	Event Summary
NCTIS	1.2.36.1.2001.1001.101	100.16100	e-Prescription	ePrescription
NCTIS	1.2.36.1.2001.1001.101	100.16112	Dispense Record	Dispense Record
NCTIS	1.2.36.1.2001.1001.101	100.16285	Prescription Request	Prescription Request

5.6.2 Document Confidentiality

Code Value Set Definition

The below tables list the code set specifying the level of confidentiality of the XDS Document. These codes are specific to an XDS Affinity Domain. The PCEHR currently has no concept of confidentiality code on the submission of document and therefore is not applicable at the time this document was written.

Coding System	SNOMED-CT
Coding System OID	2.16.840.1.113883.6.96

Concept Code	Concept Name (Coding System Name)
385432009	Not Applicable

5.6.3 Document Format

Value Set Definition

A Code set representing the set of globally unique identifiers for document formats. When used in conjunction with the typeCode, it should provide sufficient information to allow any potential XDS Document Consumer to understand how to process the document.

It is intended that this formatCode shall be used as the TemplateId that will be used in the PCEHR Template Service. At the time this document was written, these codes were undefined. As such this field will default to the below until such time as this Value Set is defined.

Coding System	SNOMED-CT
Coding System OID	2.16.840.1.113883.6.96

Concept Code	Concept Name (Coding System Name)
385432009	Not Applicable

5.6.4 Healthcare Facility Type

Value Set Definition

This code set represents the type of organizational setting of the clinical encounter during which the documented act occurred. This list of codes has been drawn from the HI Service and is dynamic.

Coding System	ANZSIC

Concept Code	**Concept Name (Coding System Name)**
8601	Aged Care Residential Services
8591	Ambulance Services
7294	Call Centre Operation
7511	Central Government Healthcare Administration
8710	Child Care Services
8534	Chiropractic and Osteopathic Services
7000	Computer System Design and Related Services
6961	Corporate Head Office Management Services
5921	Data Processing and Web Hosting Services
8531	Dental Services
5922	Electronic Information Storage Services
7561	General Health Administration
8511	General Practice
9111	Health and Fitness Centres and Gymnasia Operation
6321	Health Insurance
8102	Higher Education
8401	Hospitals (except Psychiatric Hospitals)
5910	Internet Service Providers and Web Search Portals
7531	Local Government Healthcare Administration
8402	Mental Health Hospitals

7291	Office Administrative Services
8532	Optometry and Optical Dispensing
8539	Other Allied Health Services
8599	Other Healthcare Services nec
6999	Other Professional, Scientific and Technical Services n.e.c.
8609	Other Residential Care Services
8790	Other Social Assistance Services
8520	Pathology and Diagnostic Imaging Services
8533	Physiotherapy Services
7562	Provision and administration of public health program
4271	Retail Pharmacy
6910	Scientific Research Services
8512	Specialist Medical Services
7521	State Government Healthcare Administration
4623	Transport

5.6.5 Practice Setting Code

(Clinical Specialty) Value Set Definition

The code set specifying the clinical specialty where the act that resulted in the document was performed (e.g., Family Practice, Laboratory, Radiology). This list of codes has been drawn from the HI Service and is dynamic.

Coding System	ANZSIC

Concept Code	**Concept Name (Coding System Name)**
8539-1	Acupuncture service
8790-1	Adoption service
8790-2	Adult day care centre operation
8591-1	Aerial ambulance service
8790-3	Aged care assistance service
8790-4	Alcoholics anonymous operation
8512-1	Allergy specialist service
8591-2	Ambulance service
8512-2	Anaesthetist service
5921-1	Application hosting
5921-2	Application service provision
8539-2	Aromatherapy service
5921-3	Audio and visual media streaming service
8539-3	Audiology service
5921-4	Automated data processing service
8710-1	Before and/or after school care service
7291-1	Billing and record-keeping service
8599-1	Blood bank operation
7291-2	Business administrative service
8601-5	Charitable hostels for the aged
8710-2	Child care service
8710-3	Childminding service

8401-1	Children's Hospital
8710-4	Children's nursery operation (except preschool education)
8710-6	Children's play programs
8534-1	Chiropractic
7291-3	Clerical service
8539-4	Clinical psychology service
8102-1	Colleges of education operation
8511-5	Community Health Care
8599-4	Community Health Facility
8599-8	Community health facility ‰ÿ mental
8599-9	Community health facility ‰ÿ other
8599-7	Community health facility ‰ÿ substance abuse
4271-2	Community Pharmacy
5922-1	Computer data storage and retrieval service (except library service)
7000-1	Computer hardware consulting service
5921-5	Computer input preparation service
7000-2	Computer programming service
7000-3	Computer software consulting service
5921-6	Computer time leasing or renting
5921-7	Computer time sharing service
8531-1	Conservative dental service
8532-1	Contact lens dispensing
6961-1	Corporate head office management
5921-8	Data capture imaging service
5921-9	Data entry service (electronic)
5921-10	Data processing computer service
8401-2	Day Hospital nec
8401-18	Defence Force Hospital
8531-2	Dental hospital (out-patient)
8539-5	Dental hygiene service
6321-1	Dental insurance provision
8531-3	Dental practice service
8531-4	Dental practitioner service
8531-5	Dental surgery service
8512-3	Dermatology Service
8520-1	Diagnostic imaging service
8539-6	Dietician service
8790-5	Disabilities assistance service
5921-11	Disk and diskette conversion and recertification service
7511-1	Divisions of General Practice
8401-3	Ear, nose and throat hospital
8512-4	Ear, nose and throat specialist service
5921-12	Electronic data processing service
5922-2	Electronic information storage and retrieval service (except library service)
8512-19	Emergency Department Services
8531-6	Endodontic service
8539-18	Extended Allied Health services
8401-4	Eye Hospital

8532-2	Eye testing (optometrist)
8710-5	Family day care service
8511-1	Flying doctor service
6321-2	Funeral benefit provision
7561-1	General Health Administration
8401-5	General Hospital
8511-2	General medical practitioner service
8511-3	General practice medical clinic service
8601-2	Government nursing home for the aged
8609-3	Government nursing home for young disabled
8512-5	Gynaecology services
8512-6	Hair transplant service (by registered medical practitioner)
9111-1	Health and Fitness Centres and Gymnasia Operation
8599-2	Health assessment service
6321-3	Health insurance provision
8599-3	Healthcare service nec
8539-7	Hearing aid dispensing
8539-8	Herbalist service
8539-9	Homoeopathic service
8401-6	Hospital (except psychiatric or veterinary hospitals
8539-10	Hydropathic service
8401-7	Infectious diseases hospital (including human quarantine stations)
5910-1	Internet access provision
5910-2	Internet access service, on-line
7000-4	Internet and web design consulting service
5910-3	Internet search portal operation
5910-4	Internet search web site operation
5910-5	Internet service provision (ISP)
6999-1	Interpretation service
7531-1	Local Government Healthcare Administration
8601-6	Local government hostel for the aged
8790-6	Marriage guidance service
8401-8	Maternity Hospital
8520-2	Medical laboratory service
6910-1	Medical research service
5921-13	Microfiche or microfilm recording and imaging service
8539-11	Midwifery service
8539-12	Naturopathic service
8512-7	Neurology service
8539-13	Nursing service
8512-8	Obstetrics service
8401-9	Obstretic Hospital
8539-14	Occupational therapy service
7291-4	Office administrative service n.e.c.
8790-7	Operation of soup kitchen (including mobile)
8512-9	Ophthalmology service
8532-3	Optical dispensing
5921-14	Optical scanning service
8532-4	Optician service

8531-7	Oral pathology service
8531-8	Oral surgery service
8531-9	Orthodontic service
8512-10	Orthopaedic service
8532-5	Orthoptic service
8534-2	Osteopathic Services
8609-4	Other charitable hostel
8401-19	Other Commonwealth Hospital
8609-6	Other Local government hostel
8609-5	Other State government hostel
8512-11	Paediatric service
8520-3	Pathology laboratory service
7291-5	Payroll processing
8531-10	Pedodontics service
8531-11	Periodontic service
4271-1	Pharmacy, retail, operation
8533-1	Physiotherapy Services
8539-15	Podiatry service
5910-6	Portal web search operation
8102-2	Postgraduate school, university operation
8599-6	Private (non-profit) Community Health Centre
8401-16	Private acute care Hospital
8609-8	Private alcohol and drug treatment centre
8601-3	Private charitable nursing home for the aged
8609-1	Private charitable nursing home for young disabled
8401-13	Private day centre/hospital.
8401-14	Private freestanding day surgery centre.
8402-2	Private Mental Health Hospital
8601-1	Private profit nursing home for the aged
8609-2	Private profit nursing home for young disabled
6999-2	Professional, scientific and technical services n.e.c.
8531-12	Prosthodontics service
7562-1	Provision and administration of public health program
8512-12	Psychiatry service
8401-15	Public acute care Hospital
8609-7	Public alcohol and drug treatment centre
8599-5	Public Community Health Centre
8401-11	Public day centre/hospital
8401-12	Public freestanding day surgery centre.
8402-1	Public Mental Health Hospital
7291-6	Reception service
8102-3	Research school, university operation
8512-13	Rheumatology service
8511-4	Rural general medical practice service
6910-2	Social science research service
7000-5	Software development (customised) service (except publishing)
7000-6	Software installation service
8102-4	Specialist institute or college
8512-14	Specialist medical clinic service

8512-15	Specialist medical practitioner service nec
8512-16	Specialist surgical service
8532-6	Spectacles dispensing
8539-16	Speech pathology service
7521-1	State Government Healthcare Administration
8601-4	State government hostel for the aged
8401-20	Subacute Hospitals
7000-7	Systems analysis service
8102-5	Teachers' college operation
7294-1	Telephone answering service
7294-2	Telephone call centre operation
8539-17	Therapeutic massage service
8512-17	Thoracic specialist service
6999-3	Translation service
4623-1	Transport
8102-6	Undergraduate school, university operation
8102-7	University operation
8512-18	Urology service
8401-17	Veterans Affairs Hospital
7294-3	Voice mailbox service
5921-15	Web hosting
5910-7	Web search portal operation
8790-8	Welfare counselling service
8401-10	Women's Hospital
8520-4	X-ray clinic service
8790-9	Youth welfare service

6 XDM-ZIP representation

6.1 Introduction

This section defines the XDM-ZIP representation for a CDA package. Therefore, it can be used to represent base CDA packages, unsigned CDA packages, signed CDA packages and profiles of them.

This syntax is a ZIP archive format based on the Cross-Enterprise Document Media Interchange (XDM) format [XDM2006].

The XDM specification defines conventions for the transport of XDS submission sets over three types of media: CD-R, USB memory devices and ZIP over email. This XDM-ZIP syntax is based on that ZIP format, but without tying it to the use of email as the transport media.

6.2 Conformance points

M 105 An XDM-ZIP CDA package shall be a logical CDA package (section 2.2) represented according to the ZIP file specified by XDM [XDM2006] but with the following conformance points taking precedence:

M 106 There shall be exactly one submission set.

M 107 It is not mandatory that name of the directory that contains the submission set be set to "IHE_XDM".

M 108 The root shall have the fixed filename "CDA_ROOT.XML".

M 109 The eSignature shall have the fixed filename "CDA_SIGN.XML".

M 110 The "METADATA.XML" file shall correspond to the repository metadata if that part is present, otherwise there is no METADATA.XML file.

M 111 The "INDEX.HTM" file shall be optional in an XDM-ZIP representation.

M 112 The "README.TXT" file shall be optional in an XDM-ZIP representation.

6.3 Informative notes

The XDM-ZIP syntax uses *ZIP item name* conventions to implicitly represent the package metadata information that is in the logical CDA package.

The XDM-ZIP syntax is designed to only represent exactly one CDA package. The general XDM format supports multiple submission sets.

Fixed filenames are defined for the root and the eSignature because XDM does not define a mechanism to identify the purpose of the different files in it. The general XDM format does not specify any particular name for these files.

The INDEX.HTM and README.TXT files are made optional because they are not relevant for applications using the XDM-ZIP format. The general XDM format makes these files are mandatory.

6.3.1 Example

A minimal XDM-ZIP containing a CDA XML document with no packaged attachments will contain these ZIP items:

- IHE_XDM/SUBSET01/CDA_ROOT.XML
- IHE_XDM/SUBSET01/CDA_SIGN.XML

If there is a repository metadata part, there will be an additional ZIP item:

- IHE_XDM/SUBSET01/METADATA.XML

In the above, both the “IHE_XDM” and “SUBSET01” substrings are examples—these values are not required to be used. An XDM-ZIP instance may use different substrings for either or both of these component substrings but they must be the same for the same component in all ZIP item names in the XDM-ZIP instance.

Appendix A: Schemas

A.1 Signatory metadata

The following XML Schema is for the signatory metadata part.

```
<?xml version="1.0"?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 xmlns:tns=
  "http://ns.electronichealth.net.au/cdaPackage/xsd/eSignature/2012"
 targetNamespace=
  "http://ns.electronichealth.net.au/cdaPackage/xsd/eSignature/2012"
 xmlns:ds="http://www.w3.org/2000/09/xmldsig#"
 elementFormDefault="qualified">

  <xsd:import namespace="http://www.w3.org/2000/09/xmldsig#"
   schemaLocation="http://www.w3.org/TR/xmldsig-core/xmldsig-core-schema.xsd"/>

   <xsd:element name="eSignature" type="tns:eSignatureType"/>

   <xsd:complexType name="eSignatureType">
      <xsd:sequence>
         <xsd:element ref="ds:Manifest"
          minOccurs="1" maxOccurs="1"/>
         <xsd:element name="approver" type="tns:ApproverType"
          minOccurs="1" maxOccurs="1"/>
         <xsd:element name="signingTime" type="xsd:dateTime"
          minOccurs="1" maxOccurs="1"/>
         <xsd:any processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
   </xsd:complexType>

   <xsd:complexType name="ApproverType">
      <xsd:sequence>
         <xsd:element name="personId" type="xsd:anyURI"
          minOccurs="1" maxOccurs="1"/>
         <xsd:element name="personName" type="tns:PersonNameType"
          minOccurs="1" maxOccurs="1"/>
      </xsd:sequence>
   </xsd:complexType>

   <xsd:complexType name="PersonNameType">
      <xsd:sequence>
         <xsd:element name="nameTitle" type="xsd:string"
          minOccurs="0" maxOccurs="unbounded"/>
         <xsd:element name="givenName" type="xsd:string"
          minOccurs="0" maxOccurs="unbounded"/>
         <xsd:element name="familyName" type="xsd:string"
          minOccurs="1" maxOccurs="1"/>
         <xsd:element name="nameSuffix" type="xsd:string"
          minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
   </xsd:complexType>

</xsd:schema>
```

The `s:personId` element is designed to contain a machine readable identifier for the signatory. It is recommended that a HPI-I represented as qualified identifier be used when the signatory has a HPI-I number.

The `s:personName` element is designed to contain a human readable identifier for the signatory. The elements in the `PersonNameType` are based on a subset of the *NEHTA Participation: Data Specification version 3.2*, 20 July 2011.

Appendix B: Examples

B.1 Repository metadata

```
<?xml version="1.0"?>

<e:SubmitObjectsRequest
 xmlns="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
 xmlns:e="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

  <RegistryObjectList>

    <!--================================-->

    <Identifiable xsi:type="ExtrinsicObjectType"
     id="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
     objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"
     mimeType="application/xml"
     >
      <Slot name="creationTime">
        <ValueList><Value>20051224103022</Value></ValueList>
      </Slot>
      <Slot name="languageCode">
        <ValueList><Value>en-au</Value></ValueList>
      </Slot>
      <Slot name="sourcePatientId">
        <ValueList>
          <Value>
          123456^^^&amp;1.2.36.1.2001.1003.0.8003629876543214&amp;ISO</Value>
        </ValueList>
      </Slot>
      <Slot name="URI">
        <ValueList><Value>CDA_ROOT.XML</Value></ValueList>
      </Slot>

      <Classification id="ID_001"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:93606bcf-9494-43ec-9b4e-a7748d1a838d"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="">
        <Slot name="authorInstitution">
          <ValueList>
            <Value>
            GP Org^^^^^^^^^1.2.36.1.2001.1003.0.8003629876543214</Value>
          </ValueList>
        </Slot>
        <Slot name="authorPerson">
          <ValueList>

<Value>8003619876543214^Smith^John^^suffix^prefix^^^^&amp;1.2.36.1.2001.1003.0&a
mp;ISO</Value>
          </ValueList>
        </Slot>
      </Classification>
      <Classification id="ID_002"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
```

```
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <Classification id="ID_003"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
      <Classification id="ID_004"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
      <Classification id="ID_005"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="8511">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General Practice" />
        </Name>
      </Classification>
      <Classification id="ID_006"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:cccf5598-8b07-4b77-a05e-ae952c785ead"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="8511-2">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General medical practitioner service" />
        </Name>
      </Classification>
      <Classification id="ID_007"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f0306f51-975f-434e-a61c-c59651d33983"
      classifiedObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
```

```
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <ExternalIdentifier id="ID_008"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      identificationScheme="urn:uuid:58a6f841-87b3-4a3e-92fd-a8ffeff98427"
      value="8003609876543214^^^&amp;1.2.36.1.2001.1003.0&amp;ISO">
        <Name>
          <LocalizedString value="XDSDocumentEntry.patientId" />
        </Name>
      </ExternalIdentifier>
      <ExternalIdentifier id="ID_009"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
      identificationScheme="urn:uuid:2e82c1f6-a085-4c72-9da3-8640a32e42ab"
      value="2a4e2153-ff54-4dfd-a960-38ac4daa5435">
        <Name>
          <LocalizedString value="XDSDocumentEntry.uniqueId" />
        </Name>
      </ExternalIdentifier>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="ExtrinsicObjectType"
    id="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
    objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"
    mimeType="application/xml"
    >
      <Slot name="creationTime">
        <ValueList>
          <Value>20051224</Value>
        </ValueList>
      </Slot>
      <Slot name="languageCode">
        <ValueList>
          <Value>en-au</Value>
        </ValueList>
      </Slot>
      <Slot name="sourcePatientId">
        <ValueList>
          <Value>
          123456^^^&amp;1.2.36.1.2001.1003.0.8003629876543214&amp;ISO</Value>
        </ValueList>
      </Slot>
      <Slot name="URI">
        <ValueList>
          <Value>
          CDA_SIGN.XML</Value>
        </ValueList>
      </Slot>
      <Classification id="ID_010"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:93606bcf-9494-43ec-9b4e-a7748d1a838d"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="">
        <Slot name="authorInstitution">
          <ValueList>
            <Value>
           GP Org^^^^^^^^^1.2.36.1.2001.1003.0.8003629876543214</Value>
          </ValueList>
        </Slot>
        <Slot name="authorPerson">
```

```
          <ValueList>

<Value>8003619876543214^Smith^John^^suffix^prefix^^^^&amp;1.2.36.1.2001.1003.0&a
mp;ISO</Value>
          </ValueList>
        </Slot>
      </Classification>
      <Classification id="ID_011"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <Classification id="ID_012"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
      <Classification id="ID_013"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
      <Classification id="ID_014"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="8511">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General Practice" />
        </Name>
      </Classification>
      <Classification id="ID_015"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:cccf5598-8b07-4b77-a05e-ae952c785ead"
```

```
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="8511-2">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General medical practitioner service" />
        </Name>
      </Classification>
      <Classification id="ID_016"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f0306f51-975f-434e-a61c-c59651d33983"
      classifiedObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <ExternalIdentifier id="ID_017"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      identificationScheme="urn:uuid:58a6f841-87b3-4a3e-92fd-a8ffeff98427"
      value="8003609876543214^^^&amp;1.2.36.1.2001.1003.0&amp;ISO">
        <Name>
          <LocalizedString value="XDSDocumentEntry.patientId" />
        </Name>
      </ExternalIdentifier>
      <ExternalIdentifier id="ID_018"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
      identificationScheme="urn:uuid:2e82c1f6-a085-4c72-9da3-8640a32e42ab"
      value="9fa74017-c7f2-45c1-808c-3aa09482fc6b">
        <Name>
          <LocalizedString value="XDSDocumentEntry.uniqueId" />
        </Name>
      </ExternalIdentifier>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="ExtrinsicObjectType"
    id="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
    objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"
    mimeType="image/jpeg"
    >
      <Slot name="creationTime">
        <ValueList>
          <Value>20051224</Value>
        </ValueList>
      </Slot>
      <Slot name="languageCode">
        <ValueList>
          <Value>en-au</Value>
        </ValueList>
      </Slot>
      <Slot name="sourcePatientId">
        <ValueList>
          <Value>
          123456^^^&amp;1.2.36.1.2001.1003.0.8003629876543214&amp;ISO</Value>
        </ValueList>
      </Slot>
```

```
      <Slot name="URI">
        <ValueList>
          <Value>
          1BFED334BA134B2335FE4A134BDFF234.JPG</Value>
        </ValueList>
      </Slot>
      <Classification id="ID_019"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:93606bcf-9494-43ec-9b4e-a7748d1a838d"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="">
        <Slot name="authorInstitution">
          <ValueList>
            <Value>
            GP Org^^^^^^^^^1.2.36.1.2001.1003.0.8003629876543214</Value>
          </ValueList>
        </Slot>
        <Slot name="authorPerson">
          <ValueList>

<Value>8003619876543214^Smith^John^^suffix^prefix^^^^&amp;1.2.36.1.2001.1003.0&a
mp;ISO</Value>
          </ValueList>
        </Slot>
      </Classification>
      <Classification id="ID_020"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <Classification id="ID_021"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
      <Classification id="ID_022"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="385432009">
        <Slot name="codingScheme">
          <ValueList>
            <Value>SNOMED-CT</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Not applicable" />
        </Name>
      </Classification>
```

```
      <Classification id="ID_023"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="8511">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General Practice" />
        </Name>
      </Classification>
      <Classification id="ID_024"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:cccf5598-8b07-4b77-a05e-ae952c785ead"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="8511-2">
        <Slot name="codingScheme">
          <ValueList>
            <Value>ANZSIC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="General medical practitioner service" />
        </Name>
      </Classification>
      <Classification id="ID_025"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:f0306f51-975f-434e-a61c-c59651d33983"
      classifiedObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <ExternalIdentifier id="ID_026"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      identificationScheme="urn:uuid:58a6f841-87b3-4a3e-92fd-a8ffeff98427"
      value="8003609876543214^^^&amp;1.2.36.1.2001.1003.0&amp;ISO">
        <Name>
          <LocalizedString value="XDSDocumentEntry.patientId" />
        </Name>
      </ExternalIdentifier>
      <ExternalIdentifier id="ID_027"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
      identificationScheme="urn:uuid:2e82c1f6-a085-4c72-9da3-8640a32e42ab"
      value="5edd8890-12b1-4992-962e-a7e01383fd39">
        <Name>
          <LocalizedString value="XDSDocumentEntry.uniqueId" />
        </Name>
      </ExternalIdentifier>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="RegistryPackageType"
    id="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
```

```
    objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:RegistryPackage"
    >
      <Slot name="submissionTime">
        <ValueList>
          <Value>20041225235050</Value>
        </ValueList>
      </Slot>
      <Classification id="ID_028"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:a7058bb9-b4e4-4307-ba5b-e3f0ab85e12d"
      classifiedObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
      nodeRepresentation="">
        <Slot name="authorInstitution">
          <ValueList>
            <Value>
            GP Org^^^^^^^^^1.2.36.1.2001.1003.0.8003629876543214</Value>
          </ValueList>
        </Slot>
        <Slot name="authorPerson">
          <ValueList>

<Value>8003619876543214^Smith^John^^suffix^prefix^^^^&amp;1.2.36.1.2001.1003.0&a
mp;ISO</Value>
          </ValueList>
        </Slot>
      </Classification>
      <Classification id="ID_029"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
      classificationScheme="urn:uuid:aa543740-bdda-424e-8c96-df4873be8500"
      classifiedObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
      nodeRepresentation="60591-5">
        <Slot name="codingScheme">
          <ValueList>
            <Value>LOINC</Value>
          </ValueList>
        </Slot>
        <Name>
          <LocalizedString value="Patient Summary" />
        </Name>
      </Classification>
      <ExternalIdentifier id="ID_030"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
      identificationScheme="urn:uuid:96fdda7c-d067-4183-912e-bf5ee74998a8"
      value="46c020da-8633-4b53-b1b1-a07ea3ff0963">
        <Name>
          <LocalizedString value="XDSSubmissionSet.uniqueId" />
        </Name>
      </ExternalIdentifier>
      <ExternalIdentifier id="ID_031"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
      identificationScheme="urn:uuid:554ac39e-e3fe-47fe-b233-965d2a147832"
      value="1.2.36.1.2001.1003.0.8003629876543214">
        <Name>
          <LocalizedString value="XDSSubmissionSet.sourceId" />
        </Name>
      </ExternalIdentifier>
      <ExternalIdentifier id="ID_032"
      objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:ExternalIdentifier"
      registryObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
      identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446"
      value="8003609876543214^^^&amp;1.2.36.1.2001.1003.0&amp;ISO">
        <Name>
          <LocalizedString value="XDSSubmissionSet.patientId" />
```

```
        </Name>
      </ExternalIdentifier>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="ClassificationType" id="ID_033"
    objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Classification"
    classificationScheme="urn:uuid:a54d6aa5-d40d-43f9-88c5-b4633d873bdd"
    classifiedObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
    nodeRepresentation=""
     />

    <!--================================-->

    <Identifiable xsi:type="AssociationType1" id="ID_034"
    objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Association"
    associationType="urn:oasis:names:tc:ebxml-regrep:AssociationType:HasMember"
    sourceObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
    targetObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
    >
      <Slot name="SubmissionSetStatus">
        <ValueList>
          <Value>Original</Value>
        </ValueList>
      </Slot>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="AssociationType1" id="ID_035"
    objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Association"
    associationType="urn:oasis:names:tc:ebxml-regrep:AssociationType:HasMember"
    sourceObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
    targetObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
    >
      <Slot name="SubmissionSetStatus">
        <ValueList>
          <Value>Original</Value>
        </ValueList>
      </Slot>
    </Identifiable>

    <!--================================-->

    <Identifiable xsi:type="AssociationType1" id="ID_036"
    objectType="urn:oasis:names:tc:ebxml-
regrep:ObjectType:RegistryObject:Association"
    associationType="urn:oasis:names:tc:ebxml-regrep:AssociationType:HasMember"
    sourceObject="urn:uuid:3a9cd71d-e213-4644-b323-c9c9112e4195"
    targetObject="urn:uuid:45d1cacb-66a4-423c-9e39-16c17689fb2f"
    >
      <Slot name="SubmissionSetStatus">
        <ValueList>
          <Value>Original</Value>
        </ValueList>
      </Slot>
    </Identifiable>

    <!--================================-->

    <Identifiable
     xsi:type="AssociationType1" id="ID_037"
     objectType=
      "urn:oasis:names:tc:ebxml-regrep:ObjectType:RegistryObject:Association"
     associationType="urn:ihe:iti:2007:AssociationType:signs"
     sourceObject="urn:uuid:9feed3fe-41b3-4af3-bdfb-74f85d234b11"
     targetObject="urn:uuid:6a9a91f7-0385-4ce2-9bc9-dab615717c66"
```

```
      />

  </RegistryObjectList>
</e:SubmitObjectsRequest>
```