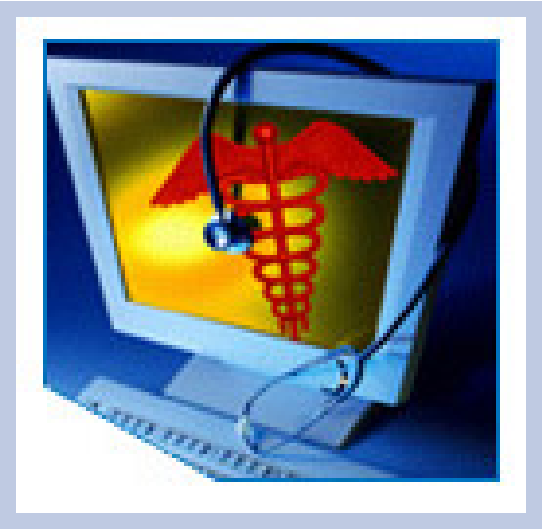
August 27, 2008
Version 2.4

HITSP Manage Sharing of Documents Transaction Package

HITSP/TP13



Submitted to:

Healthcare Information Technology Standards Panel

Submitted by:

Security, Privacy and Infrastructure Domain Technical Committee
(Formerly Security and Privacy Technical Committee)

DOCUMENT CHANGE HISTORY

Version Number	Description of Change	Name of Author	Date Published
1.0	Final Draft	Electronic Health Record Technical Committee	August 18, 2006
1.1	Ready for Public Comment	Biosurveillance Technical Committee Consumer Empowerment Technical Committee Electronic Health Record Technical Committee	September 12, 2006
1.2	Ready for Implementation Testing	Biosurveillance Technical Committee Consumer Empowerment Technical Committee Electronic Health Record Technical Committee	October 20, 2006
1.3	Review Copy	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee	April 27, 2007
2.0	Released for Implementation	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee	May 11, 2007
2.0.1	Review Copy	Security and Privacy Technical Committee	July 20, 2007
2.0.2	Review Copy	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	October 5, 2007
2.1	Released for Implementation	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	October 15, 2007
2.1.1	Review Copy	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	November 6, 2007
2.2	Released for Implementation	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	December 13, 2007
2.2.1	Review Copy	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	March 19, 2008
2.3	Released for Implementation	Population Health Technical Committee Consumer Empowerment Technical Committee Care Delivery Technical Committee Security and Privacy Technical Committee	March 27, 2008

Version Number	Description of Change	Name of Author	Date Published
2.3.1	Review Copy	Security, Privacy, and Infrastructure Domain Technical Committee	August 20, 2008
2.4	Released for Implementation	Security, Privacy, and Infrastructure Domain Technical Committee	August 27, 2008

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FIGURES AND TABLES

1.0 INTRODUCTION

As an introduction to the HITSP Manage Sharing of Documents Transaction Package, this section provides a high level overview of the information sharing scenario enabled by following this specification, provides a document map of the construct relationships for the HITSP specification, acknowledges the copyright protections that pertain and provides a list of key reference documents and background material. If you are already familiar with this information, proceed to Section 2.0 Transaction Package Definition.

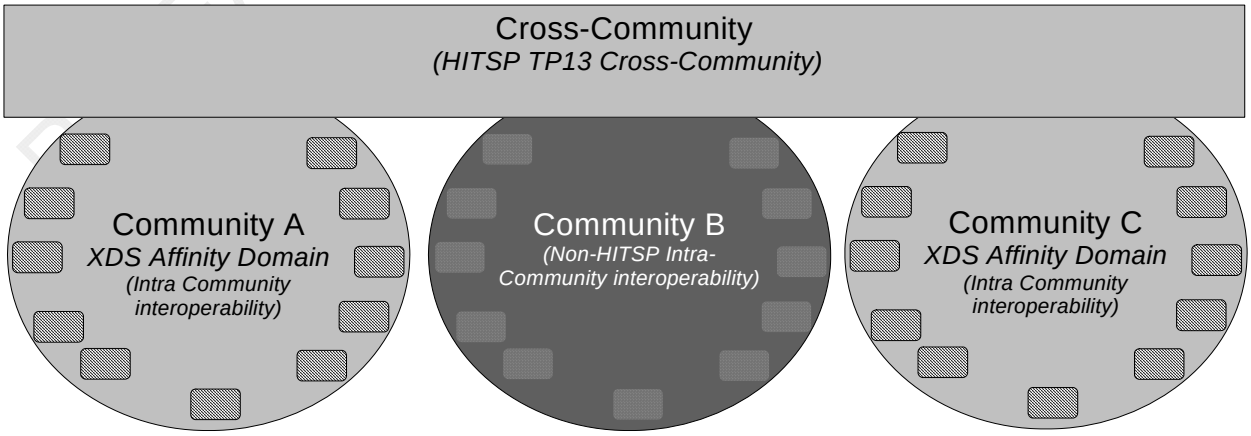
1.1 OVERVIEW

This section describes the contents of this specification and provides a high level definition of this Transaction Package and background information about the underlying Transactions and Components that the Transaction Package is based on.

This HITSP Transaction Package supports the sharing of patient records in the form of source attested objects called documents. A healthcare document is a composite of structured and coded health information, both narrative and tabular, that describes acts, observations and services for the purpose of exchange. No assumption is made by this construct in terms of the format and structure of the content of documents shared. Interoperability related to document content is addressed by HITSP in other constructs.

Documents may be shared within a community where a significant part of the document sharing for a consumer or patient may occur, as well as across communities. This construct addresses both the Intra-Community and the Cross-Community sharing of documents. In Cross-Community interoperability communities interconnecting their edge systems or enterprises in other ways than defined by this construct are also supported, as shown in Figure 1.1-1.

Figure 1.1-1 Intra and Cross-Community Document Sharing



NOTE:

IMPLEMENTATION OPTIONS

This HITSP construct supports the choice of one or more of the following implementation options:

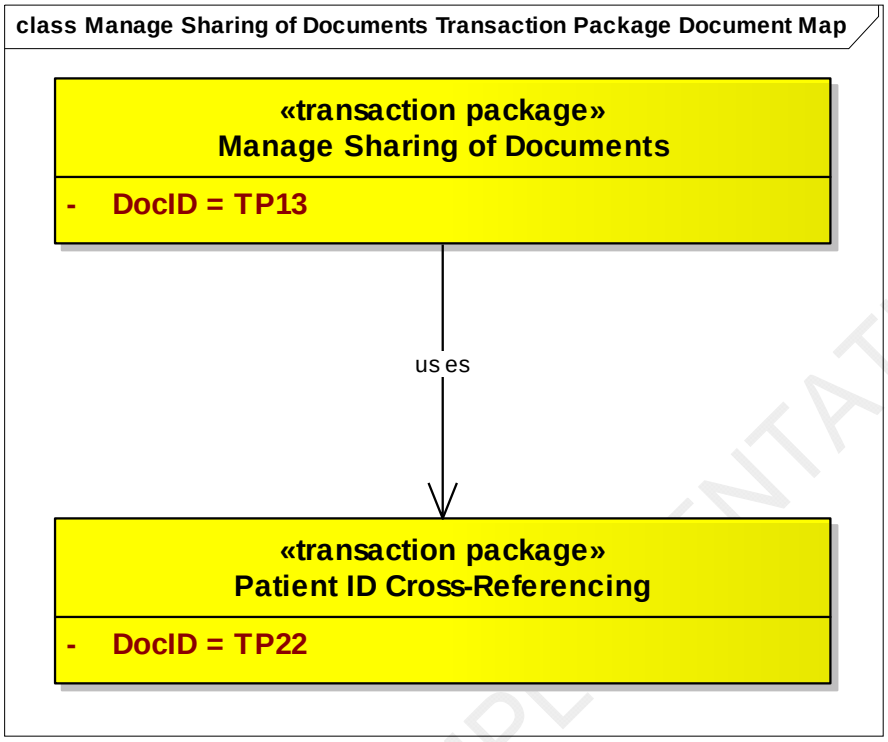
1. XDS.a Option: Management of Document Sharing within a community according to IHE XDS.a
    - (See Change History – Note 1)
2. XDS.b Option: Management of Document Sharing within a community according to IHE XDS.b
    - This is an evolution of XDS which is functionally equivalent to XDS.a but which supports the most recent Web Services standards. This enables the support of Entity Identity Assertion on all transactions, simplifies implementation and is consistent with Cross-Community Access (XCA) (See Change History – Note 2)
3. XCA Option: Management of Cross-Community Access according to IHE XCA
    - This addresses the requirement for federating two or more communities using IHE XDS.b internally or other non-HITSP legacy means of communication (See Change History – Note 2)

Each HITSP Interoperability Specification that requires the HITSP Manage Sharing of Documents Transaction Package specifies which option(s) are required. Support of both XDS.a and XDS.b as options within this version preserves full compatibility with previous versions of this specification, while allowing new implementations to take advantage of XDS.b. XDS.a and XDS.b are functionally identical and transition from one to the other. It is the intention of HITSP to select the XDS.b option for Intra-Community interoperability in new Interoperability Specifications and in major updates to current Interoperability Specifications; support of XDS.a will be phased out over time. Migration strategies are discussed in the IHE IT Infrastructure Technical Framework XDS.b Supplement (Section 10.7).

1.2 TRANSACTION PACKAGE DOCUMENT MAP

Each HITSP specification describes a suite of constructs that, taken as a whole, define how to integrate and constrain existing standards and specifications that will satisfy the requirements for the HITSP construct. There are four types of HITSP constructs called Interoperability Specifications (IS), Transaction Packages (TP), Transactions (T), and Components (C). Interoperability Specifications define the context(s) in which any other HITSP construct may be used. The current Manage Sharing of Documents Transaction Package specification is used with other constructs to meet the requirements of one or more ISs. Review Section 1.2 Interoperability Specification Document Map from the relevant IS to better understand the context, dependencies, and relationships between the constructs used to meet the IS requirements. The Document Map in Figure 1.2-1 depicts how this construct integrates and constrains HITSP constructs to support the information exchange, within the defined context of this document. Implementers should read the documents that describe the constructs depicted in the diagram for their details and specific uses.

Figure 1.2-1 Transaction Package Document Map



1.3 COPYRIGHT PERMISSIONS

COPYRIGHT NOTICE

IHE materials used in this document have been extracted from relevant copyrighted materials with permission of Integrating the Healthcare Enterprise (IHE) International. Copies of this standard may be retrieved from the IHE Web Site at www.ihe.net.

1.4 REFERENCE DOCUMENTS

This section provides a list of key reference documents and background material. If you are already familiar with this information, proceed to Section 2.

A list of key reference documents and background material is provided in the table below. These documents can be retrieved from the www.hitsp.org Web Site.

Table 1.4-1 Reference Documents

Reference Document	Document Description
HITSP Interoperability Specification Overview	Provides background information about the HITSP and its role in the overall U.S. efforts to realize large scale interoperability of health information. The document also provides a description of the HITSP process for healthcare standards harmonization and explains how to use the Interoperability Specifications and other related documents to inform your health IT product development or product refinement.
HITSP Conventions List	Describes the conventions that are used to convey the full descriptions and usage of standards in the HITSP specifications
HITSP Acronyms List	Lists and defines the acronyms used in this document
HITSP Glossary	Provides definitions for relevant terms used by HITSP documents
HITSP Harmonization Framework	Describes the current framework within which the Interoperability Specifications are built
TN900 - Security and Privacy Technical Note	Developed as a reference document to provide the overall context for use of the HITSP Security and Privacy constructs. It includes the following: • The scope, reference policy background, and Security and Privacy principles used in the development of the constructs • A detailed description and schematics of the conceptual relationship between the Security and Privacy constructs • A mapping of existing standards and constructs to be used in meeting the stated requirements of the AHIC Use Cases • A list of identified gaps and the recommended approaches to resolving those gaps • A roadmap for how the Security and Privacy constructs will evolve and eventually align with other HITSP Interoperability Specifications • A conceptual framework for Security and Privacy management, including reference information on privacy policies, risk assessment, and risk management • A glossary of terms used in all the Security and Privacy construct documents • A description of the application of the Security and Privacy constructs to the HITSP Interoperability Specifications for the three initial AHIC Use Cases – Biosurveillance, Electronic Health Records - Laboratory Results Reporting, and Consumer Empowerment HITSP will periodically update this Technical Note as required by the introduction of new contexts for use.

2.0 TRANSACTION PACKAGE DEFINITION

Transaction Packages define how two or more Transactions are used to support a stand-alone information exchange within a defined context between two or more systems.

2.1 CONTEXT OVERVIEW

This section provides a general description of the Transaction Package. It includes a detailed definition of the Transaction Package and the reason for its use. It also provides all the necessary background information that further describes the context in which the Transaction Package is needed and the independent Transactions and Components that the Transaction Package is based on.

To support this HITSP Manage Sharing of Documents Transaction Package, HITSP has selected the Integrating the Healthcare Enterprise (IHE) Cross-Enterprise Document Sharing (XDS) and the Cross Community Access (XCA) Integration Profiles, which facilitate the registration, distribution and access of patient electronic health records across healthcare enterprises and across communities of such enterprises. Cross-Enterprise Document Sharing is focused on providing a standards-based specification for managing the sharing of documents between healthcare enterprises, ranging from a private physician office, to a clinic, to an acute care inpatient facility and other healthcare IT systems. Cross Community Access is focused on creating a “network of networks” or communities by providing the means for a community to access consumer’s health records managed by other communities. Additional source material from the IHE IT Infrastructure (ITI) Technical Framework (TF) Cross-Enterprise Document Sharing (XDS) Integration Profile and associated supplements on Registry Stored Query, XDS.b and XCA are quoted in this document to further clarify the actions and interactions.

The IHE XDS and XCA Integration Profiles, which are reproduced in part in this specification, with specific written permission from IHE, provide sample scenarios depicting how specific technical actors should comply with the proposed standards for interoperability. Key concepts from the IHE XDS and XCA Integration Profiles are introduced in this document to help the reader understand the context of the Profile.

Overview of IHE XDS Integration Profile

This section provides an overview of the IHE XDS Integration Profile. Its intent is to provide the reader with an introductory context to the XDS Profile. XDS provides the ability to register, store and query/retrieve documents containing consumer or patient-centric healthcare information.

The previous XDS Integration Profile[1] is now referred to as XDS.a but remains technically without change. The current XDS Integration Profile referred to as XDS.b employs different versions of

[1] Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF), Volume 1, Revision 4.0, Section 10

ebXML Registry (versions 2.0 and 3.0) and specifications that have been superseded (like SOAP with Attachments or SwA). The IHE XDS.b Integration Profile accomplishes the following:

1. Updates XDS Web Services implementation to allow for use of SOAP 1.2 and optionally SOAP 1.1
2. Updates the XDS transactions to use ebXML Registry 3.0 metadata
3. Updates Provide and Register Document Set "on-line" mode transaction to use MTOM instead of the legacy SOAP with Attachments (SwA) mechanism
4. Defines a new transaction which provides a SOAP binding for the XDS Retrieve Document transaction that uses MTOM (new transaction now named "Retrieve Document Set")
5. Updates IHE XDS Registry Stored Query transaction to be consistent with other XDS.b transactions. The Registry Stored Query transaction is the same in XDS.a and XDS.b
6. Provides informative Web Services Description Language (WSDL) contracts for all required IHE XDS.b Transactions and WSDL fragments for options

XDS.b introduces the new Patient Identity Feed HL7v3 transaction in addition to the existing Patient Identity Feed [ITI-8] transaction based on HL7v2. For more detailed explanations, examples and the complete specification see the IHE XDS Integration Profile specification at www.ihe.net.

Text from the IHE XDS Integration Profile begins here:

> IHE Cross-Enterprise Document Sharing (XDS) is focused on providing a standards-based specification for managing the sharing of patient electronic health records or documents between any healthcare entity, ranging from a private physician office, to a clinic, to an acute care in-patient facility or other health information system.
>
> The IHE XDS Integration Profile assumes that these enterprises belong to one or more XDS Affinity Domains. An XDS Affinity Domain is a group of healthcare enterprises that have agreed to share health information together using a common set of policies and share a common infrastructure.
>
> Examples of XDS Affinity Domains include:
>
> - Community of Care supported by a Health Information Exchange in order to serve all patients in a given region
> - Nationwide EHR
> - Specialized or Disease-Oriented Care
> - Cardiology Specialists and an Acute Cardiology Center
> - Oncology Network
> - Diabetes Network
> - Federation of Enterprises

    - A regional federation made up of several local hospitals and healthcare providers
- Government Sponsored Facilities (e.g., VA or Military)
- Insurance Provider Supported Communities

Within an XDS Affinity Domain, certain common policies and business rules must be defined. They include how patients are identified, consent is obtained and access is controlled, as well as the format, content, structure, organization and representation of health information. This Integration Profile does not define specific policies and business rules; however, it has been designed to accommodate a wide range of such policies to facilitate the deployment of standards-based infrastructures for sharing patient health documents. This is managed through federated Document Repositories and a Document Registry to create a longitudinal record of information about a patient within a given XDS Affinity Domain. These are distinct entities with separate responsibilities:

- A Document Repository is responsible for storing documents in a transparent, secure, reliable and persistent manner and responding to document retrieval requests
- A Document Registry is responsible for storing information about documents of interest, for the care of a patient may be easily found, selected and retrieved irrespective of the repository where they are actually stored

The concept of a document in XDS is not limited to textual information, a XDS is document content neutral. Any type of health information without regard to content and representation is supported. This makes the IHE XDS Integration Profile equally able to handle documents containing simple text, formatted text (*e.g.,* HL7 CDA Release 1), images (*e.g.*, DICOM) or structured and vocabulary coded clinical information (*e.g.*, CDA Release 2, DICOM SR). In order to ensure the necessary interoperability between the Document Sources and the Document Consumers, the XDS Affinity Domain must adopt policies concerning document format, structure and content.

Text from the IHE XDS Integration Profile ends here.

Overview of the IHE XCA Integration profile

This section provides an overview of the IHE XCA Integration Profile. Its intent is to provide the reader with an introductory context to the XCA Profile.

Text from the IHE XCA Integration Profile begins here:

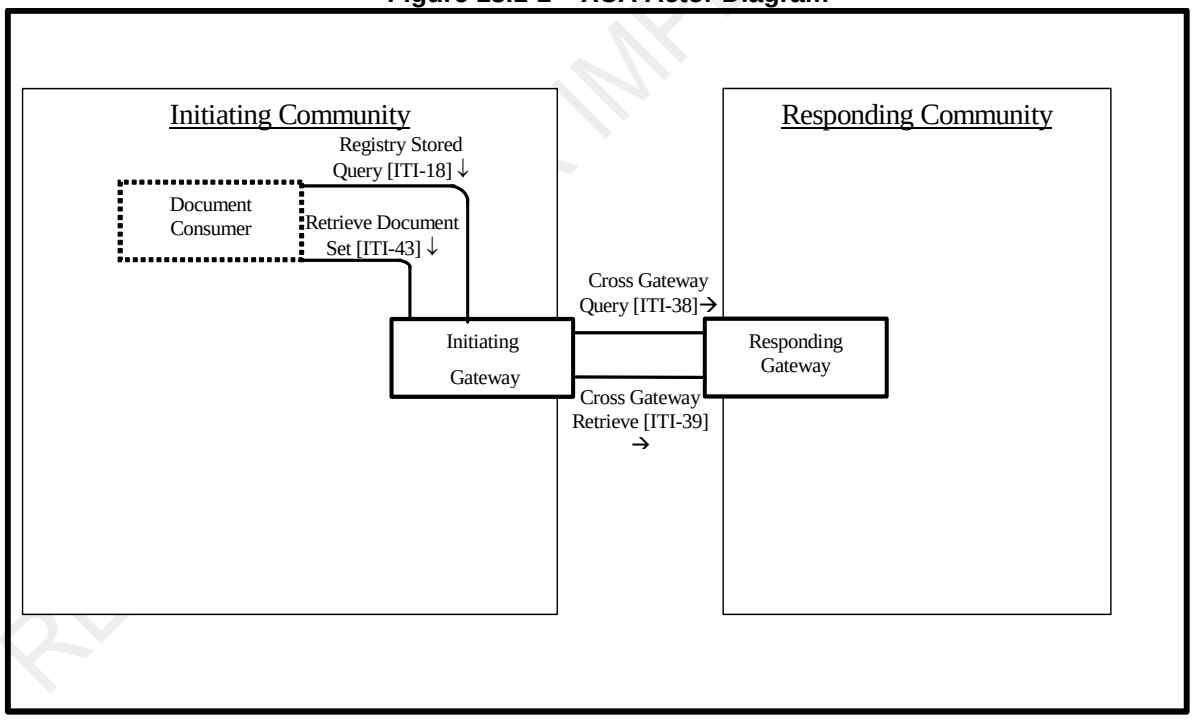
The Cross Community Access (XCA) profile supports the means to query and retrieve patient relevant medical data held by other communities. A community is defined as a coupling of facilities/enterprises that have agreed to work together using a common set of policies for the purpose of sharing clinical information via an established mechanism. Facilities/enterprises may host any type of healthcare application such as EHR, PHR, etc. A community is identifiable by a

globally unique ID called the homeCommunityId. Membership of a facility/enterprise in one community does not preclude it from being a member in another community. Such communities may be XDS Affinity Domains which define document sharing using the XDS Profile or any other communities, no matter what their internal sharing structure.

Assume within a given domain, such as the State of California, that we have several healthcare communities (or XDS Affinity Domains or RHIOs/HIEs). One in Los Angeles is based on IHE-XDS. One in Sacramento is based on another form of healthcare sharing infrastructure. One in San Francisco is also based on IHE XDS. A patient X, who travels frequently, has received healthcare in each of these communities. Patient X is admitted to a hospital in LA. The attending physician uses his hospital information system to query across multiple domains for healthcare information about this patient. Once found, references to patient data outside the local domain are cached locally for easy future reference.

Figure 18.1-1 shows the actors directly involved in the XCA Integration Profile and the relevant transactions between them.

Figure 18.1-1 – XCA Actor Diagram



The Document Consumer Actor is shown in Figure 18.1-1 to clarify the responsibility of the XDS Affinity Domain Option. Initiating Gateways, which support the XDS Affinity Domain Option,

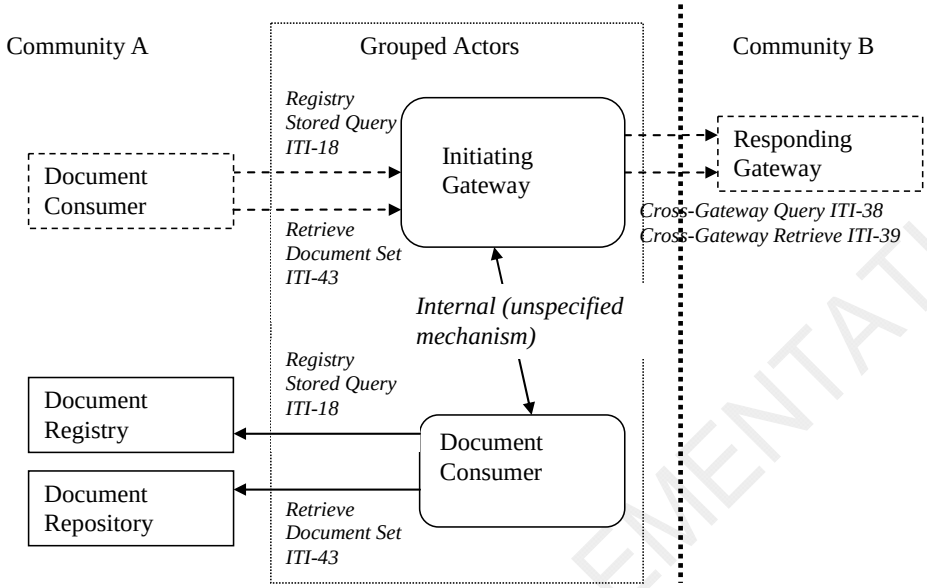
interact with Document Consumers within the XDS Affinity Domain served by the Initiating Gateway. Initiating Gateway actors, which support this option:

- Shall **receive** Registry Stored Query [ITI-18] transactions from a local Document Consumer actor and act on those requests on behalf of the Document Consumer. When receiving a Registry Stored Query from a local Document Consumer, shall require the homeCommunityId as an input parameter on relevant queries and shall specify the homeCommunityId attribute within its Registry Stored Query responses. See IHE XCA Section 18.3.2 for description of homeCommunityId
- Shall **receive** Retrieve Document Set [ITI-43] transactions from a local Document Consumer actor and act on those requests on behalf of the Document Consumer. When receiving a Retrieve Document Set from a local Document Consumer, shall require the homeCommunityId as an input parameter

When an Initiating Gateway does not support the XDS Affinity Domain option it is expected to be using non-IHE specified interactions to communicate remote community data to systems within its local community. These proprietary interactions are not further described within any IHE Profile. The use of XCA for the Integration of XDS and non-XDS communities is discussed further in the IHE ITI Technical Framework XCA Supplement, Appendix E Section E.6.

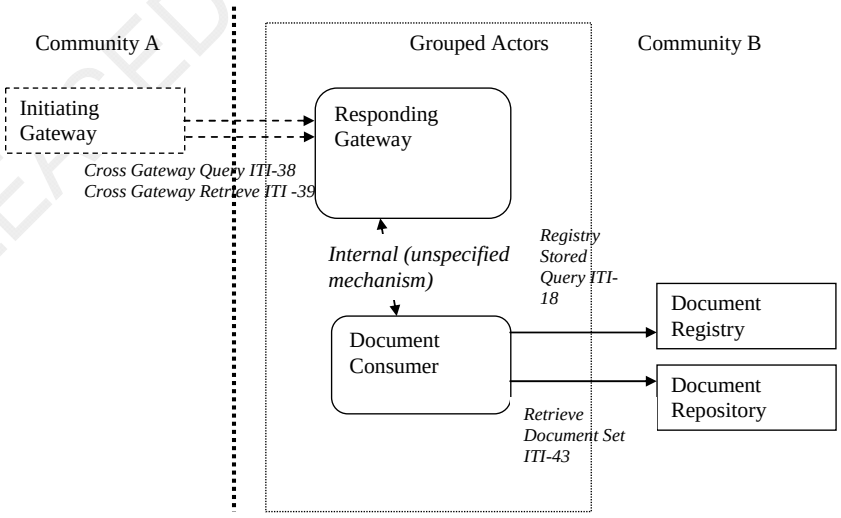
When an Initiating Gateway is supporting an XDS Affinity Domain, it can choose to query and retrieve from local actors in addition to remote communities. This is accomplished by grouping the Initiating Gateway Actor with a Document Consumer Actor. This grouping allows Document Consumers such as EHR/PHR/etc systems to query the Initiating Gateway to retrieve document information and content from both the local XDS Affinity Domain as well as remote communities. For details see IHE XCA Section 18.2.2.1. An Initiating Gateway Actor that is not grouped with a Document Consumer Actor is only able to return results from remote communities, so local EHR/PHR/etc systems (Document Consumer Actors) must direct separate query and document retrieve transactions internally and externally.

Figure 18.2-1 – Initiating Gateway grouped with Document Consumer



When a Responding Gateway is supporting an XDS Affinity Domain, it may resolve Cross Gateway Query and Cross Gateway Retrieve Transactions by grouping with a Document Consumer Actor and using the Registry Stored Query and Retrieve Document Set transactions. For details see IHE IT Infrastructure TF Section 18.2.2.2

Figure 18.2-2 – Responding Gateway grouped with Document Consumer



Text from the IHE XCA Integration Profile ends here.

2.1.1 TRANSACTION PACKAGE CONSTRAINTS

This section describes the constraints that limit the context in which the Transaction Package construct may be used. A constraint describes a rule that limits the use of the actors, actions or data within the given context or to which the interactions must conform to be used within the described context. It is a description of the limits and scope of the interactions and can describe actions or events that are not part of the initial definition for the context.

2.1.2 TECHNICAL ACTORS

This section describes the technical actors that need to be integrated in order to meet the interoperability requirements for this Transaction Package. A technical actor represents an entity internal to a software application, which is engaged in one or more specific Transactions to support a specific aspect of a real world information interchange (e.g., set of message exchanges). The table below lists the technical actors involved in the Transaction Package, a definition of their roles, an indication of their optionality, the specific Transactions and content with which they are involved and the optionality of the associated Transactions and/or content.

Options that may be selected for this Construct are listed below:

- For the XDS.a Option, in IHE-ITI-TF-1, Section 10.2, Table 10.2-1 (in the IHE XDS Integration Profile) along with the Actors to which they apply
- For the XDS.b Option, in the supplement IHE IT Infrastructure Technical Framework Supplement 2007-2008 Cross-Enterprise Document Sharing-b (XDS.b), Section 10.2, Table 10.2-1b XDS.b - Actors and Options
- For the XCA Option, In IHE-ITI-XCA Supplement, Section 18.2, Table 18.2-1 (in the IHE XCA Integration Profile) along with the Actors to which they apply

Table 2.1.2-1 Technical Actors for XDS.a Option

Actor Name	Description	Used in Component/Standard	Transaction/Content	Optionality *
Document Consumer	Queries a Document Registry Actor for documents meeting certain criteria and retrieves selected documents from one or more Document Repository actors	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), Volume 2	ITI-17: Retrieve Document	R
			ITI-18: Registry Stored Query	R
Document Source	Producer and publisher of documents. It is responsible for sending documents to a Document Repository Actor. It also supplies metadata to the Document Repository Actor for subsequent registration of the documents with the Document Registry Actor	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), Volume 2	ITI-15: Provide & Register Document Set	R

Actor Name	Description	Used in Component/Standard	Transaction/Content	Optionality*
Document Repository	Responsible for both the persistent storage of these documents as well as for their registration with the appropriate Document Registry. It assigns a Uniform Resource Identifier (URI) to documents for subsequent retrieval by a Document Consumer	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) Volume 2	ITI-15: Provide & Register Document Set	R
			ITI-17: Retrieve Document	R
			ITI-14: Register Document Set	R
Document Registry	Maintains metadata about each registered document in a document entry. This includes a link to the Document in the Repository where it is stored. The Document Registry responds to queries from Document Consumer actors about documents meeting specific criteria. It also enforces some healthcare specific technical policies at the time of document registration	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) Volume 2	ITI-14: Register Document Set	R
		Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), XDS Stored Query Supplement	ITI-18: Registry Stored Query	R

Table 2.1.2-2 List of Transactions for XDS.b Option

Actor Name	Description	Used in Component/Standard	Transaction/Content	Optionality*
Document Consumer	Queries a Document Registry Actor for documents meeting certain criteria and retrieves selected documents from one or more Document Repository actors	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), Volume 2	ITI-17: Retrieve Document	R
			ITI-18: Registry Stored Query	R
Document Source	Producer and publisher of documents. It is responsible for sending documents to a Document Repository Actor. It also supplies metadata to the Document Repository Actor for subsequent registration of the documents with the Document Registry Actor	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), XDS.b Supplement	ITI-41: Provide & Register Document Set-b	R
Document Repository	Responsible for both the persistent storage of these documents as well as for their registration with the appropriate Document Registry. In the registration to the Document Registry, it provides the location of documents for subsequent retrieval by a Document Consumer	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), XDS.b Supplement	ITI-41: Provide & Register Document Set-b	R
			ITI-42: Register Document Set-b	R
			ITI-43: Retrieve Document Set	R
Document Registry	Maintains metadata about each registered document in a document entry. This includes a link to the Document in the Repository where it is stored. The Document Registry responds to queries from Document Consumer actors about documents meeting specific criteria. It also enforces some healthcare specific technical policies at the time of document registration	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) XDS.b Supplement	ITI-42: Register Document Set-b	R
		Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), XDS Stored Query Supplement	ITI-18: Registry Stored Query	R

Actor Name	Description	Used in Component/Standard	Transaction/Content	Optionality*
Document Consumer	Queries a Document Registry Actor for documents meeting certain criteria and retrieves selected documents from one or more Document Repository actors	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) XDS.b Supplement	ITI-43: Retrieve Document Set	R
		Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), XDS Stored Query Supplement	ITI-18: Registry Stored Query	R

NOTE:

1. IHE Transaction descriptions are provided in the Appendix
2. *Optionality = "R" for Required, "R2" for Required if known, "O" for Optional, or "C" for Conditional. If applicable, conditional footnotes are further described below
3. The IHE ITI Technical Framework 4.0 includes a Query Registry Transaction (ITI-16), which has been made optional and replaced by the ITI-18 Registry Stored Query introduced by the XDS Stored Query Supplement

Table 2.1.2-3 Technical Actors for XCA Option

Actor Name	Description	Used in Component/Standard	Transaction/Content	Optionality*
Initiating Gateway	Supports all outgoing inter-community communications	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), Cross-Community Access (XCA) Supplement	ITI-38: Cross Gateway Query	R
			ITI-39: Cross Gateway Retrieve	R
			ITI-18; Registry Stored Query	O
			ITI-43: Retrieve Document Set	O
Responding Gateway	Supports all incoming inter-community communications	Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF), Cross-Community Access (XCA) Supplement	ITI-38: Cross Gateway Query	R
			ITI-39: Cross Gateway Retrieve	R

NOTE:

1. IHE Transaction descriptions are provided in the Appendix
2. *Optionality = "R" for Required, "R2" for Required if known, "O" for Optional, or "C" for Conditional. If applicable, conditional footnotes are further described below
3. The IHE ITI Technical framework 4.0 includes a Query Registry Transaction (ITI-16), which has been made optional and replaced by the ITI-18 Registry Stored Query introduced by the XDS Stored Query Supplement

2.1.3 ACTOR INTERACTIONS

This section uses a Unified Modeling Language (UML) workflow diagram to depict the technical actors that fulfill the Transaction Package, the sequence and timing of the transactions. Process flow diagrams

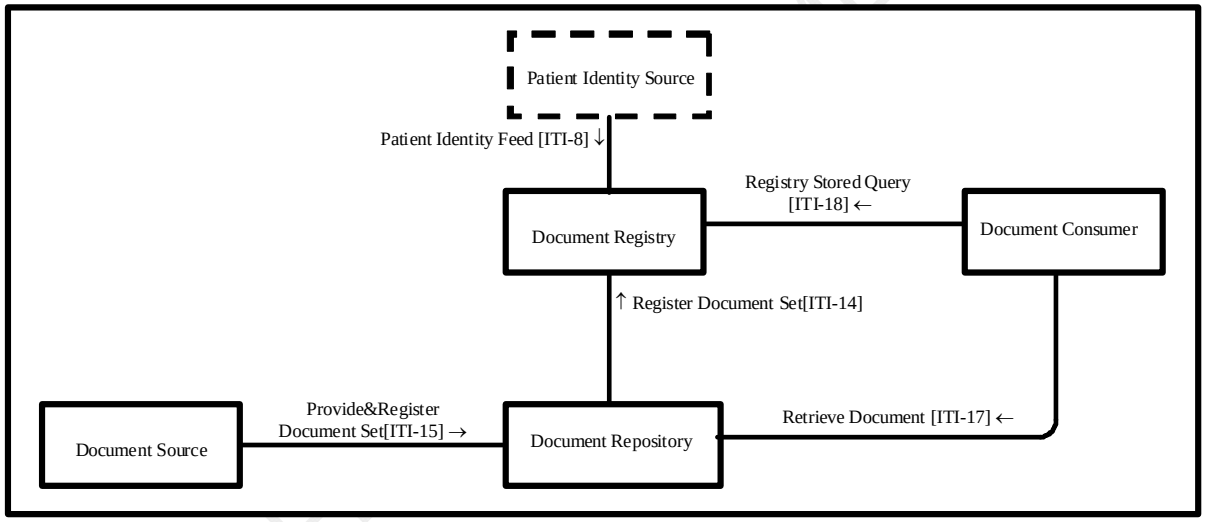
are also provided to illustrate the process relationships. A description of the UML diagram is also provided below the diagram.

Specifically, the following sections provide further detail about the interactions that are addressed by this Transaction Package.

2.1.3.1 Cross-Enterprise Document Sharing – XDS.a Option

The relationship between the technical actors and the transactions of this Transaction Package are shown in IHE-ITI-TF-1, Section 10.1 (in the IHE Technical Framework, XDS Integration Profile Chapter). The process flows supported by this Transaction Package are shown in IHE-ITI-TF-1 Section 10.4.1 (in the IHE XDS Integration Profile).

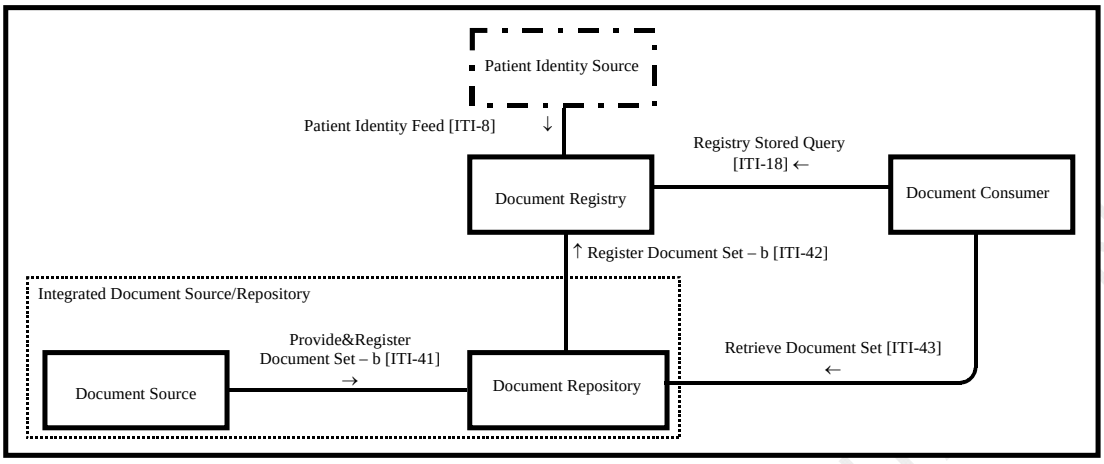
Figure 2.1.3.1-1 Cross-Enterprise Document Sharing – XDS.a Diagram



2.1.3.2 Cross-Enterprise Document Sharing – XDS.b

The relationship between the technical actors and the transactions of this Transaction Package are shown in IHE-ITI-TF-1, Section 10.1 (in the IHE Technical Framework, XDS Integration Profile Chapter). The process flows supported by this Transaction Package are shown in IHE-ITI-TF-1 Section 10.4.1 (in the IHE XDS Integration Profile).

Figure 2.1.3.2-1 Cross-Enterprise Document Sharing – XDS.b Diagram

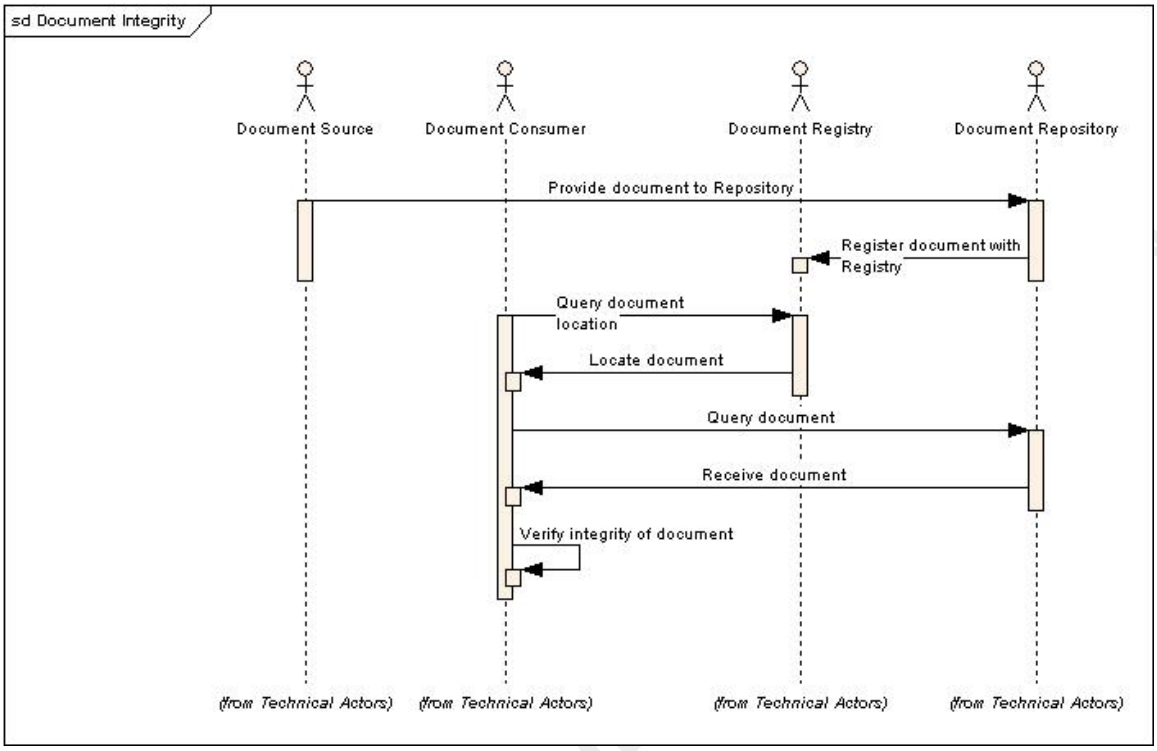


NOTE: Each XDS option addresses the same set of actors and transactions, but reference different transactions from the IHE Technical Framework for Retrieve Document set, Provide and Register Document Set, Register Document Set.

2.1.3.3 Document Integrity Option

The following diagram further illustrates where the optional verification of Document Integrity is performed within an XDS Affinity Domain. This option applies both on the XDS.a and the XDS.b options.

Figure 2.1.3.3-1 Optional Document Integrity Sequence Diagram



The diagram above outlines several interactions that are integral to the establishment of Document Integrity. The storage and querying of documents, as occurs in the Provide Document to Repository transaction is the trigger by which the Document Integrity activity is invoked. Once a document is provided to the Document Repository by the Document Source, the document is also registered in a Registry, so that it can be located.

Once a document is stored into a Document Repository, it can be located through a registry query and then retrieved by the Document Consumer.

The “Verify Integrity of Document” interaction is an optional activity that occurs in order to ensure that Document Integrity is validated. This represents the validation of the SHA-1 hash attribute by the Document Consumer.

2.1.3.4 XCA – Cross Community Access

The relationship between the technical actors and the transactions of this Transaction Package are shown in IHE-ITI-XCA Supplement. The process flows supported by this Transaction Package are shown in IHE-ITI-XCA Supplement Section 18.1 (in the IHE XCA Integration Profile). This is described in the Overview Section 2.1 of this document.

2.1.3.5 Gaps

The following gaps have been identified for this Transaction Package.

2.1.3.5.1 Terminology

"Document Registration Terminology" is a gap. This Component will include the set of vocabularies used in the XDS Document Registry to populate the metadata associated with each document. There is no "ready terminology" to reference, but we will leverage subsets of existing terminology structures such as those used by LOINC Document dimensions.

2.1.3.5.2 Cross-Affinity Domain Document Sharing

The HITSP Manage Sharing of Documents Transaction Package is based on the IHE-XDS and the IHE XCA Integration Profiles referenced by HITSP from the IHE IT Infrastructure Technical Framework. This section discusses the pre-conditions associated with document sharing environments across multiple independent domains.

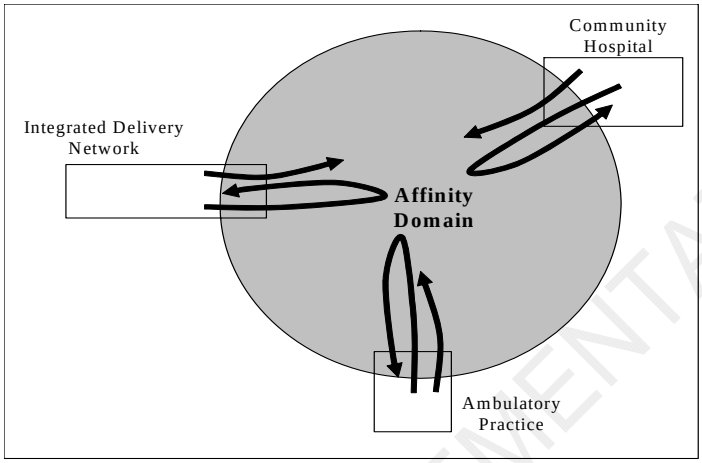
The Integrating the Healthcare Enterprise has defined an Integration Profile called Cross-Enterprise Document Sharing (XDS), which defines document sharing among a number of entities or organizations forming an XDS Affinity Domain using the IHE XDS terminology. This construct also includes the means for Communities (XDS based or not) to access remote Communities (XDS based or not), leveraging the IHE Cross-Community Access (XCA) Integration Profile.

For Cross-Community Access, a number of additional interoperability requirements need to be addressed beyond XCA. Some of these are addressed by existing HITSP Constructs, while others remain to be addressed:

1. Cross-Community patient identification linkage. In two common environments, this is addressed by the use of the existing HITSP/TP22 Patient Identity Cross-Referencing Transaction Package and HITSP/T23 Patient Demographics Query. This is discussed in detail in the IHE XCA supplement. Some specific issues may need further work for which HITSP should leverage lessons learned by the NHIN contractors, Connecting for Health, Federal Agencies, IHE and other implementation experiences
2. Community Discovery: In this domain there are numerous strategies, some patient-centric such as use of a Patient Community Locator, consumer carried smart tokens conveying community addresses, etc. This may be handled by manual configurations which may be the most practical especially when the Cross-Community consent sharing remains a complex issue
3. Cross-Community policy matching: This area requires much work and analysis. In the short to mid-term this may be handled by manual configuration among peer communities that have performed a matching of their document sharing policies

HITSP will contribute to and review the white paper being developed by IHE in 2008 along with other input such as lessons learned by the NHIN contractors, Connecting for Health, Federal Agencies, IHE and other implementation experiences.

Figure 2.1.3.5.2-1 XDS Affinity Domain



Within an XDS Affinity Domain, for the purpose of information exchange among the member organizations, certain common policies and business rules must be defined. Neither HITSP, nor IHE define these policies or what is the appropriate implementation of XDS Affinity Domains for the NHIN, RHIOs/HIEs, Sub-network Organizations or large enterprises such as Federal Agencies. HITSP does not rule on the number of organizations that partake. These choices are considered to be implementation, configuration or architecture decisions, not within the purview of HITSP.

Conclusion

The HITSP Manage Sharing of Documents Transaction Package addresses a number of environments while others are beyond its current scope:

1. *Single Organization – Stand-alone XDS Affinity Domain*: An organization/enterprise implements IHE-XDS internally and chooses to be a single XDS Affinity Domain, where its internal systems are Document Sources and Document Consumers. There is a Document Registry and one or more Document Repositories in the XDS Affinity Domain.
2. *Multi-Organization – Stand-alone Affinity Domain*: A number of independent organizations choose to share documents by joining in an XDS Affinity Domain. Each organization chooses to be a Document Source and /or Document Consumer. Each organization may also choose to be its own Document Repository or to use one or more shared Document Repository. There is a Document Registry in the XDS Affinity Domain (possibly hosted by one of the member organizations).
3. *Multi-Affinity Domains – Hierarchical Federation*: A number of XDS Affinity Domains, each independently managed, choose to establish a federation. With a federation level PIX Manager

(e.g. an RLS as defined by Connecting for Health) and the use of Cross-Community Access (XCA) as defined by this construct, Cross-Affinity Domain access is possible.

4. *Multi-Affinity Domains – Lateral Cross-Community*: A number of XDS Affinity Domains, each independently managed, wish to establish peer-to-peer communication without establishing a federation. With the use of Cross-Community Access (XCA) as defined by this construct, Cross-Affinity Domain access is possible.

Approach 3 and 4 require further work in the area of community discovery, privacy and Cross-Community policy matching. The HITSP will leverage lessons learned by the NHIN contractors, Connecting for Health, Federal Agencies, IHE and other implementation activities as they become available.

2.1.4 PRE-CONDITIONS

This section describes the necessary conditions that must be in place prior to the start of the workings of the Transaction Package. The pre-conditions are used to convey any conditions that must be true at the outset of a Transaction Package. They describe the context that must be established before the Transaction Package is executed. They are not, however, the triggers that initiate the Transaction Package. Where one or more pre-conditions are not met, the behavior of the Transaction Package should be considered uncertain.

Table 2.1.4-1 lists the pre-conditions when implementing the XDS.a and XDS.b Options for this Transaction Package.

Table 2.1.4-1 Pre-conditions for XDS.a and XDS.b Options

Pre-condition
The security framework under which this Transaction Package operates is in accordance with the Interoperability Specification that references this construct. Therefore, all applicable HITSP Security and Privacy constructs are implemented as required
The Patient Identity Feed Transaction conveys the patient identifier. It conveys the patient identifier and corroborating demographic data, captured when a patient's identity is established, modified or merged or in cases where the key corroborating demographic data has been modified. Its purpose in the IHE XDS Integration Profile is to populate the registry with patient identifiers registered for the domain
Organizations that share documents are part of the same XDS Affinity Domain. If they belong to different XDS Affinity Domains, these are hierarchically federated (e.g. sub-networks within one RHIO/HIE) or integrated by means not specified by HITSP (See Section 2.1.3.5.2 Cross-Affinity Domain Document Sharing)

Table 2.1.4-2 lists the pre-conditions when implementing the XCA Option for this Transaction Package.

Table 2.1.4-2 Pre-conditions for XCA Option

Pre-condition
It is expected that the security framework under which this Transaction Package operates is in accordance with the Interoperability Specification that references this construct. Therefore all applicable HITSP Security and Privacy constructs are implemented as required
The communities providing access to each other need to have agreed to a patient identification cross-referencing process. This may be supported dynamically by using other HITSP Constructs such HITSP/TP22 Patient ID Cross-Referencing or HITSP/T23 Patient Demographics Query or other means agreed between pairs of communicating communities. Further development in this area may be expected in the future
The communities providing access to each other need to have established a trust relationship, especially in terms of matching their respective security and privacy policies. This is likely to be achieved by peer-to-peer agreement without electronic transactions. Existing HITSP security constructs are likely to be relevant. For privacy and consent directive management, additional HITSP constructs may be developed in the future. IHE has developed a white paper (see www.ihe.net) and continues work in this area along with NHIN projects and several Health Information Exchange projects

2.1.4.1 Process Triggers

This section describes the triggers, including actors and/or processes, which are necessary to start the Transaction Package. They can invoke an automatic or manual process or result that in turn starts off the Transaction Package. A trigger is not the same as a pre-condition that describes a context that must be in place at the start of the event.

Table 2.1.4.1-1 lists the triggers for the XDS.a and XDS.b Options for this Transaction Package.

Table 2.1.4.1-1 Process Triggers for XDS.a and XDS.b Options

Process Trigger
The Document Consumer Actor queries a Document Registry Actor for documents meeting certain criteria and retrieves selected documents from one or more Document Repository actors
The Document Source Actor is producer and publisher of documents. It is responsible for sending the documents to a Document Repository Actor. It supplies metadata to the Document Repository Actor for subsequent registration of the documents with the Document Registry Actor
The Document Registry Actor maintains metadata about each registered document in a document entry. This includes a link to the Document in the Repository where it is stored. The Document Registry responds to queries from Document Consumer Actors about documents meeting specific criteria. It also enforces some healthcare specific technical policies at the time of document registration
The Document Repository is responsible for both the persistent storage of these documents and for their registration with the appropriate Document Registry. It specifies the location of documents for subsequent retrieval by a Document Consumer
The Patient Identity Source Actor is a provider of a unique identifier for each patient and maintains a collection of identity traits. The Patient Identity Source facilitates the validation of patient identifiers by the Registry Actor in its interactions with other actors

Table 2.1.4.1-2 lists the triggers for the XCA Option for this Transaction Package.

Table 2.1.4.1-2 Process Triggers for XCA Option

Process Trigger
The Initiating Gateway Actor supporting a Community queries one or more Responding Gateway Actor(s) each serving one or more communities for documents meeting certain criteria, and retrieves selected documents from the respective Responding Gateway Actors
The Responding Gateway Actor supporting one or more communities receives queries and documents or retrieve requests from remote Initiating Gateways and responds to these requests

2.1.5 POST-CONDITIONS

This section provides an overview of the conditions or results that must occur at the end of the Transaction Package in order for the Transaction Package to be deemed successfully completed. This includes any required outputs from the Transaction Package or specific actor states.

Table 2.1.5-1 lists the post-conditions for the XDS.a and XDS.b Options for this Transaction Package, as well as the post-conditions if the Document Integrity constraint is applied.

Table 2.1.5-1 Post-conditions for XDS.a and XDS.b Options

Post-condition
The patient was successfully identified unambiguously
Sources and consumers of document(s) were effectively identified
The document was successfully retrieved by the requesting system (e.g., local or remote EHR system, authorized public health agencies)
The authorized public health agencies have gained access to the document
If the optional Document Integrity constraint is applied, then the following post-conditions are also required
Failed validation of the SHA-1 hash, the document shall be considered invalid by the supporting application
With successful validation of the SHA-1 hash, the document shall be considered valid by the supporting application

Table 2.1.5-2 lists the post-conditions for the XCA Option for this Transaction Package.

Table 2.1.5-2 Post-conditions for XCA Option

Post-condition
The patient was successfully identified unambiguously
Initiating and responding gateways were effectively identified
The documents were successfully retrieved by the requesting community (e.g., an XDS Affinity Domain, an integrated delivery network, a health information exchange which does not support the intra-community interoperability from this Transaction Package)

2.1.5.1 Required Outputs

This section identifies the required outputs that must be produced at the end of the Transaction Package in order for the Transaction Package to be deemed successfully completed. This includes the format and usage of the required output.

There were no identified outputs from the processes supported for the XDS.a and XDS.b options in this Transaction Package other than the integration of the documents into the clinician's EHR system and Biosurveillance database. If the optional Document Integrity constraint applied, then the following outputs are identified:

Table 2.1.5.1-1 Required Outputs

Required Output	Format/Usage
Require application to record an audit event to indicate a failed validation of the SHA-1 hash for Document Integrity	

2.1.6 DATA FLOWS

This section describes the basic data flows that are supported by this Transaction Package. It also describes the format of the data, the data sources and the relevant actors involved in the successful flow of data for the Transaction Package. Any prevailing pre- and post-conditions are identified, as well as the purpose of each data post-condition associated with each Transaction Package. Any data that need to be made available to particular actors are highlighted, as well as the conditions and processes that will use the data to achieve the stated post-conditions.

See IHE Infrastructure IT Technical Framework specifications for clinical examples.

2.2 LIST OF CONSTRUCTS

The following list of constructs and their definitions are used by the Transaction Package specification.

Table 2.2-1 List of Constructs

Construct Name		Description	Content
No applicable constructs			

2.2.1 CONSTRUCT DEPENDENCIES

The following Table shows a list of constructs with their existing dependencies. Dependencies usually exist when there are some additional pre-requisites for a specific Transaction Package specification.

Table 2.2.1-1 Construct Dependencies

Transaction Name	Depends On (Name of Transaction that it depends on)	Dependency Type (Pre-condition, Post-condition, general)	Purpose (Reason for this dependency)
Register Document Set on Document Registry Actor (XDS.a Option)	HITSP/TP22-Patient Identity Cross-Referencing Transaction Package	Pre-condition	Confirm patient exists before registering one or more documents in a submission set
Register Document Set-b on Document Registry Actor (XDS.b Option)	HITSP/TP22-Patient Identity Cross-Referencing Transaction Package	Pre-condition	Confirm patient exists before registering one or more documents in a submission set

2.2.2 ADDITIONAL CONSTRAINTS ON REQUIRED CONSTRUCTS

This section describes the constraints that further limit the constructs that are used by this Transaction Package.

Table 2.2.2-1 Additional Constraints on Required Constructs

Data Element	Construct	Constraint	Constraint Type (Pre-condition, Post-condition, General)	Purpose (Reason for this constraint)
No applicable additional constraints				

2.3 STANDARDS

It is important to understand that the standards selected here are within the context of the specific Use Case requirements and do not necessarily reflect selection in other contexts. The standards used by this Transaction Package specification fall into the following categories:

- Regulatory guidance is a legal or other authoritative declaration that HITSP must abide by in standards selection (see Section 2.3.1)
- Selected standards are necessary for interoperability. These are standards that are used to meet information exchange requirements of associated constructs. For example, they are used to realize direct information exchange, to provide the transport mechanism, to specify the content, or to address security (see Section 2.3.2)
- Informative reference standards provide additional background information or guidance, and are not required for interoperability. These standards are not required to implement the Transaction Package specification (see Section 2.3.3)

2.3.1 REGULATORY GUIDANCE

The following table provides a list of legal or other authoritative guidelines that HITSP must abide by, or has agreed to use as guidance in the selection of standards. Note that only the referenced sections of the regulations are relevant to this Transaction Package specification.

Table 2.3.1-1 Regulatory Guidance

Standard	Description
No applicable regulatory guidance	

2.3.2 SELECTED STANDARDS

The following table provides a list of standards that are used to meet information exchange requirements of the Transaction Package specification, and a detailed description of each standard.

Table 2.3.2-1 Selected Standards

Standard	Description
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0, Section 10 Cross-Enterprise Document Sharing (XDS.a)	The IHE IT Infrastructure Technical Framework defines specific implementations of established standards to achieve integration goals that promote appropriate sharing of health information to support optimal patient care. Section 10, Cross-Enterprise Document Sharing facilitates the registration, distribution and access across health enterprises of patient electronic health records. IHE Integration Profiles offer a common language that healthcare professionals and vendors may use in communicating requirements for the integration of products. The current version of the ITI-TF, rev. 4.0 for Final Text, specifies the IHE transactions defined and implemented as of August 22, 2007. The latest version of the IHE Technical Framework is available at www.ihe.net.
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0 - Registry Stored Query Transaction for XDS Profile Supplement [ITI-18]	The IHE IT Infrastructure Technical Framework defines specific implementations of established standards to achieve integration goals that promote appropriate sharing of health information to support optimal patient care. IHE Integration Profiles offer a common language that healthcare professionals and vendors may use in communicating requirements for the integration of products. The Registry Stored Query Transaction Trial Implementation Supplement specifies an IHE transaction that provides optimization and implementation simplification. This supplement is available at www.ihe.net.
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0 XCA Supplement	The IHE IT Infrastructure Technical Framework defines specific implementations of established standards to achieve integration goals that promote appropriate sharing of health information to support optimal patient care. IHE Integration Profiles offer a common language that healthcare professionals and vendors may use in communicating requirements for the integration of products. The trial implementation version of the XCA Supplement to the ITI-TF, rev. 4.0 Final Text, specifies the IHE transactions that support access between communities in a manner compatible with the XDS Integration profile. This supplement is available at www.ihe.net.
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Volume 2 Supplement 2007 – 2008 Cross-Enterprise Document Sharing-B (XDS.b)	The Cross-Enterprise Document Sharing-B Profile (XDS.b) supplement provides a new implementation choice for the Cross-Enterprise Document Sharing (XDS) Integration Profile based on use of the Web Services and ebXML Reg/Rep standards that is consistent with current developments and best practices in the industry. For more information visit www.ihe.net.

NOTE: The specific references to the underlying Web Services standards (e.g. SOAP, WSDL, MTOM, etc.) upon which the above listed profiles and standards rely upon, may be found in those documents.

2.3.3 INFORMATIVE REFERENCE STANDARDS

The following table lists standards that provide additional background information or guidance; however, they are not required for the implementation of the Transaction Package specification.

Table 2.3.3-1 Informative Reference Standards

Standard Name	Description/Usage
No applicable informative standard references	

3.0 TECHNICAL IMPLEMENTATION

3.1 CONFORMANCE

This section describes the conformance criteria, which are objective statements of requirements that can be used to determine if a specific behavior, function, interface or code set has been implemented correctly.

3.1.1 CONFORMANCE CRITERIA

In order to claim conformance to this construct specification, an implementation must satisfy all the requirements and mandatory statements listed in this specification, the associated HITSP Interoperability Specification, its associated construct specifications, as well as conformance criteria from the selected base and composite standards. A conformant system must also be constrained as specified in Table 2.1.1-1 and implement all of the required actors from Table 2.1.2-1, within the scope, subset or implementation option that is selected from the associated Interoperability Specification.

Claims of conformance may only be made for the overall HITSP Interoperability Specification with which this construct is associated.

3.1.2 CONFORMANCE SCOPING, SUBSETTING AND OPTIONS

A HITSP Interoperability Specification must be implemented in its entirety for an implementation to claim conformance to the specification. HITSP may define the permissibility for actor scoping, subsetting or implementation options by which the specification may be implemented in a limited manner. Such scoping, subsetting and options may extend to associated constructs, such as this construct. This construct must implement all requirements within the selected scope, subset or options as defined in the associated Interoperability Specification to claim conformance. This construct defines the following options that may be selected by the referencing HITSP Interoperability Specification.

3.1.2.1 Intra-Community Sharing of Documents (XDS.a Option)

Within the XDS.a option, a number of options may be selected depending on the technical actor implemented as defined by Table 3.1.2.1-1.

Table 3.1.2.1-1 XDS.a – Options by Actors

Actor	Options	Vol & Section
Document Source	Multiple Document Submission	ITI TF-1:10.2.1
	Document Life Cycle Management	ITI TF-1:10.2.2
	Folder Management	ITI TF-1:10.2.3
Document Repository	No options defined	
Document Registry	No options defined	

Actor	Options	Vol & Section
Document Source Actor Integrated with a Document Repository Actor	Multiple Document Submission	ITI TF-1:10.2.1
	Document Life Cycle Management	ITI TF-1:10.2.2
	Folder Management	ITI TF-1:10.2.3
Document Consumer	Verify Integrity of Document	Section 2.1.3.3

3.1.2.2 Intra-Community Sharing of Documents (XDS.b Option)

Within the XDS.b option, a number of options may be selected depending on the technical actor implemented as defined by Table 3.1.2.2-1.

Table 3.1.2.2-1 XDS.b – Options by Actors

Actor	Options	Vol & Section
Document Source	Multiple Document Submission	ITI TF-1:10.2.1
	Document Life Cycle Management	ITI TF-1:10.2.2
	Folder Management	ITI TF-1:10.2.3
Document Repository	No options defined	
Document Registry	No options defined	
Document Source Actor Integrated with a Document Repository Actor	Multiple Document Submission	ITI TF-1:10.2.1
	Document Life Cycle Management	ITI TF-1:10.2.2
	Folder Management	ITI TF-1:10.2.3
Document Consumer	Verify Integrity of Document	Section 2.1.3.3

3.1.2.3 Cross-Community Sharing of Documents (XCA Option)

Within the XCA option, a number of options may be selected depending on the technical actor implemented as defined by Table 3.1.2.3-1.

Table 3.1.2.3-1 XCA – Options by Actors

Actor	Options	Vol & Section
Initiating Gateway	XDS Affinity Domain Option	ITI TF-1:18.2.1
Responding Gateway	No options defined	- -

4.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

4.1 IHE TRANSACTIONS

The following Table lists the IHE XDS transactions and their descriptions:

Table 4.1-1 IHE Transaction Descriptions

Transaction Name	Description
ITI-14: Register Document Set	Register Document Set transaction passes a Submission Request for documents from a repository to a registry
ITI-15: Provide & Register Document Set	Provide and Register Document Set is used to provide a set of documents to a repository and to request that the repository store these documents and then register them with a registry
ITI-17: Retrieve Document	Retrieve Document is used by a Document Consumer to retrieve a document from a repository
ITI-18: Registry Stored Query	Registry Stored Query is used by a Document Consumer to query a registry for information about documents indexed in the registry (see Note)
ITI-18: Registry Stored Query	Registry Stored Query is used by a Document Consumer to query a registry for information about documents indexed in the registry (see Note)
ITI-38: Cross Gateway Query	Cross-Community Query is used by a community to query another community in order to identify what healthcare information satisfying specific criteria may be available in the target community
ITI-39: Cross Gateway Retrieve	Cross Gateway Retrieve requests the retrieval of a specific set of healthcare information (a document or documents) from a remote location
ITI-41: Provide & Register Document Set-b	Provide and Register Document Set is used to provide a set of documents to a repository and to request that the repository store these documents and then register them with a registry
ITI-42: Register Document Set-b	Register Document Set transaction passes a Submission Request for documents from a repository to a registry
ITI-43: Retrieve Document Set	Retrieve Document Set is used by a Document Consumer to retrieve one or more documents from a repository

5.0 CHANGE HISTORY

The following sections provide the history of changes made to this document.

5.1 NOVEMBER 6, 2007

The changes in this cycle introduce the optional use of XDS.b and the optional use of XCA. These changes reflect the response of IHE to address identified gaps in the previous versions. Minor updates to text throughout this document have been made where appropriate to indicate where optionality can be exercised and what additional constraints apply when optionality is invoked.

5.1.1 VERSION COMPATIBILITY:

NOTE 1: This is identical to the interoperability supported by HITSP/TP13 Version 2.0
NOTE 2: Gap identified in XDS as defined by HITSP/TP13 Version 2.0, June 2006

5.2 DECEMBER 5, 2007

The changes in this cycle address the following comments:

2557

The full text of the comments along with the Technical Committee's disposition can be reviewed on the HITSP Public Web Site.

5.3 DECEMBER 13, 2007

Upon approval by the HITSP Panel on December 13, 2007, this document is now Released for Implementation.

5.4 MARCH 19, 2008

This document has been updated with the HITSP Security and Privacy requirements and has been updated to reflect the new template.

The following changes have been made to the construct:

- Updated references to IHE Technical Framework supplements for XDS.b and ITI-18
- Removed constraints as these are now inherent in the referenced IHE Framework transactions

5.5 MARCH 27, 2008

Upon approval by the HITSP Panel on March 27, 2008, this document is now Released for Implementation.

The following changes have been made to the construct:

- Modified the following standard names/descriptions in Table 2.3-1 List of Standards to provide more clarity and specificity for the optionality described in HITSP/TP13:
    - Removed high level reference to IHE ITI-TF Revision 4
    - Added specific reference to Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0, Section 10 Cross-Enterprise Document Sharing (XDS.a)
    - Modified Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Volume 2 Supplement 2007 – 2008 Cross-Enterprise Document Sharing-B (XDS.b) description by moving extraneous content into the narrative of HITSP/TP13
    - Modified Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0 - Registry Stored Query Transaction for XDS Profile Supplement standard name by adding [ITI-18] for additional clarity

5.6 AUGUST 20, 2008

This document has been modified to reflect the updated HITSP approach to categorizing standards as Regulatory Guidance, Selected Standards, and Informative References.

Corrections were made to technical actor descriptions and transactions.

5.7 AUGUST 27, 2008

Upon approval by the HITSP Panel on August 27, 2008, this document is now Released for Implementation.