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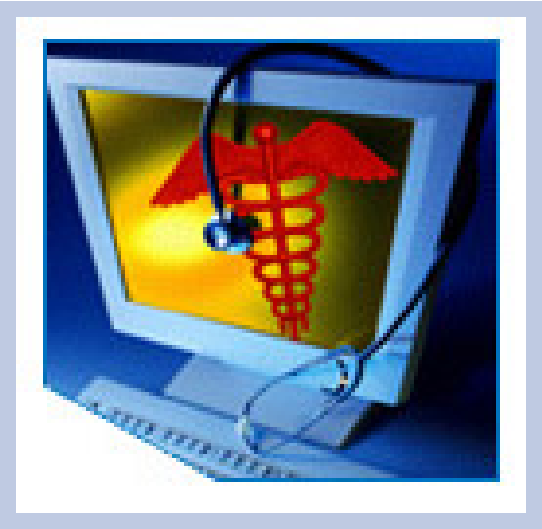
Version 2.2

HITSP Notification of Document Availability Transaction

HITSP/T29



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DOCUMENT CHANGE HISTORY

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2.1.1	Review Copy	Security, Privacy and Infrastructure Domain Technical Committee	August 20, 2008
2.2	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 Notification of Document Availability Transaction, 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 this 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 Definition.

1.1 OVERVIEW

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

This HITSP Notification of Document Availability Transaction references the structures and the work that is accomplished by implementing this Transaction. Source material was predominantly from the Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) Supplement, Notification of Document Availability (NAV) Integration Profile.

The IHE NAV Integration Profile introduces a mechanism allowing notifications to be sent point-to-point to systems within a Cross-Enterprise Document Sharing XDS Affinity Domain (See the IHE Cross-Enterprise Document Sharing (XDS) Integration Profile in the IHE IT Infrastructure Technical Framework), eliminating the need for manual steps or polling mechanisms for a Document Consumer to be aware that documents of interest have been registered with an XDS Document Registry Actor.

The capability for automation of critical workflows used in healthcare has been greatly advanced by the introduction of the IHE Cross-Enterprise Document Sharing Integration Profile. However, without point-to-point notification of document availability, these workflows still require manual interactions between parties using document sharing.

This basic mechanism is intended to facilitate the common part of a large range of workflows related to notifying a remote party (user or system) that one or more documents have been registered in an XDS Registry and may be retrieved if the notified party wishes.

1.2 TRANSACTION DOCUMENT MAP

Each HITSP specification describes 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 Notification of Document Availability Transaction specification does not depend on any other HITSP constructs, however, it 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.

1.3 COPYRIGHT PERMISSIONS

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

Reference Document	Document Description
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 DEFINITION

Transactions are a logical grouping of actions, including necessary content and context that must all succeed or fail as a group.

2.1 CONTEXT OVERVIEW

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

The HITSP Notification of Document Availability Transaction defines a mechanism for a provider to notify other providers or the patient about a change in a patient's health record. This Transaction defines the format, content, encoding and transmission of notification messages and acknowledgements between IHE NAV Actors and a known recipient (either a person or system) that participate in the same XDS Affinity Domain. The Transaction is based on the Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) Supplement - Notification of Document Availability (NAV).

2.1.1 TRANSACTION CONSTRAINTS

This section describes the constraints that limit the context in which the Transaction 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.

Table 2.1.1-1 Transaction Constraints

Constraint
The NAV operations assume that a suitable security and privacy environment has been established
See IHE ITI-TF NAV supplement for additional constraint information

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. 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, 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.

Table 2.1.2-1 Technical Actors

Actor	Description	Used in Component/ Standard	Transaction/Content	Optionality*
Notification Sender	This actor sends notifications of availability for documents in an XDS registry and receives acknowledgements of these notifications	Section 12.2 of IHE-ITI-TF NAV Supplement	Send Notification [ITI-25]	R
			Receive Acknowledgement [ITI-28]	O
Notification Receiver	This actor receives notifications of availability for documents in an XDS registry and may optionally send acknowledgments of them	Section 12.2 of IHE-ITI-TF NAV Supplement	Receive Notification [ITI-26]	R
			Send Acknowledgement [ITI-27]	O

***NOTE:** Optionality = "R" for Required, "R2" for Required if known, "O" for Optional, or "C" for Conditional.

2.1.3 ACTOR INTERACTIONS

The following sections document the content of the Transaction and the basic process flows that are supported by the Transaction. They describe the underlying events that fulfill the Transaction, the sequence and timing of the events and the specific actors involved. Process flow diagrams are provided to illustrate the process relationships.

The details of the technical actor interactions are provided in the IHE ITI-TF NAV supplement.

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. The pre-conditions are used to convey any conditions that must be true at the onset of a Transaction. They describe the context that must be established before the Transaction is executed. They are not however the triggers that initiate the Transaction. Where one or more pre-conditions are not met, the behavior of the Transaction should be considered uncertain.

Table 2.1.4-1 Pre-conditions

Pre-condition
It is expected that the security framework under which this Transaction operates is in accordance with the Interoperability Specification that references this construct. Therefore all applicable HITSP Security and Privacy constructs are implemented as required
See IHE ITI-TF NAV supplement for additional pre-conditions

Note: The IHE ITI-TF NAV Integration Profile does not address how the recipients of the message are to be selected. This is an administrative function outside of the scope of the Integration Profile. What makes a receiver unique is that they have a unique e-mail address. Whether this is a person or a node is immaterial.

2.1.4.1 Process Triggers

This section describes the process triggers, including actors and/or processes, which are necessary to start the Transaction. They can invoke an automatic or manual process or result that in turn starts off the

Transaction. A process trigger is not the same as a pre-condition that describes a context that needs to be in place at the start of the event.

Table 2.1.4.1-1 Process Triggers

Process Trigger
See IHE ITI-TF NAV supplement for additional information

2.1.5 POST-CONDITIONS

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

Table 2.1.5-1 Post-conditions

Post-condition
See IHE ITI-TF NAV supplement for additional information

2.1.5.1 Required Outputs

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

Table 2.1.5.1-1 Required Outputs

Required Output	Format/Usage
See post-conditions	N/A

2.1.6 DATA FLOWS

This section describes the basic data flows that are supported by this Transaction. 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. Any prevailing pre and post conditions are identified, as well as the purpose of each data post-condition associated with each Transaction. 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.

All data flows are defined in the referenced IHE ITI-TF NAV supplement.

2.2 LIST OF CONSTRUCTS

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

Table 2.2-1 List of Constructs

Construct Name	Technical Actors	Description	Event/Action Code	Content
No applicable constructs				

2.2.1 CONSTRUCT DEPENDENCIES

The following table shows a list of Components with their existing dependencies. Dependencies usually exist when there are some additional pre-requisites for a specific construct:

Table 2.2.1-1 Construct Dependencies

Construct	Depends On (Name of Component that it depends on)	Dependency Type (Pre-condition, post-condition, general)	Purpose (Reason for this dependency)
No applicable dependencies			

2.2.2 ADDITIONAL CONSTRAINTS ON REQUIRED CONSTRUCTS

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

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 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 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 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 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 this Transaction specification, and a detailed description of each standard.

Table 2.3.2-1 Selected Standards

Composite Standard	Description
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (TF) Supplement - ITI-25 Notification of Document Availability (NAV) Jun 28, 2005	The capability for automation of critical workflows used in healthcare has been greatly advanced by the introduction of the Cross-Enterprise Document Sharing Integration Profile. However, without point-to-point notification of document availability, these workflows still require manual interactions between parties using document sharing The Notification of Document Availability Integration Profile (NAV) introduces a mechanism allowing notifications to be sent point-to-point to systems and users within an affinity domain, eliminating the need for manual steps or polling mechanisms. This basic mechanism is only intended to facilitate the common part of a large range of workflows related to notifying a remote party (user or system) that one or more documents have been registered in an XDS Registry and may be retrieved if the notified party wishes. For further information, visit www.ihe.net

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 this Transaction specification.

Table 2.3.3-1 Informative Reference Standards

Standard Name	Description/Usage
Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0	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 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

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.

4.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

No additional information at this time.

5.0 CHANGE HISTORY

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

5.1 MAY 11, 2007

Upon approval by the HITSP Panel on May 11, 2007, this document has been moved to Version 2.0. This document is now Released for Implementation.

5.2 MARCH 19, 2008

This document has been updated to include the HITSP Security and Privacy constructs and has been updated to reflect the new template.

5.3 MARCH 27, 2008

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

5.4 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.

Added a description for IHE NAV standard
The following standard was designated as Informative Reference:

- Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF) Revision 4.0

5.5 AUGUST 27, 2008

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