

HITSP Emergency Message Distribution Element Transaction

HITSP/T63



Healthcare Information Technology Standards Panel

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
	Template V2.4	Project Team	July 31, 2008
0.0.1	Review Copy	Security, Privacy and Infrastructure Domain Technical Committee	September 26, 2008
0.0.2	Review Copy	Security, Privacy and Infrastructure Domain Technical Committee	December 10, 2008
1.0	Released for Implementation	Security, Privacy and Infrastructure Domain Technical Committee	December 18, 2008
	Template V2.5	Project Team	June 30, 2009
1.0.1	Review Copy	Security, Privacy and Infrastructure Domain Technical Committee	June 30, 2009
1.1	Released for Implementation	Security, Privacy and Infrastructure Domain Technical Committee	July 8, 2009



TABLE OF CONTENTS

1.0	INTRODUCTION.....	5
1.1	Overview.....	5
1.2	Copyright Permissions.....	5
1.3	Reference Documents.....	5
1.4	Conformance	5
1.4.1	Conformance Criteria	5
1.4.2	Conformance Scoping, Subsetting and Options	6
2.0	TRANSACTION DEFINITION.....	7
2.1	Context Overview	7
2.1.1	Transaction Constraints.....	8
2.1.2	Interfaces.....	8
2.1.3	Interface Interactions.....	8
2.1.4	Pre-conditions.....	9
2.1.4.1	Process Triggers	9
2.1.5	Post-conditions	9
2.1.5.1	Required Output	9
2.1.6	Data Flows.....	9
2.2	List of HITSP Constructs	9
2.2.1	Construct Dependencies	10
2.2.2	Additional Constraints on Required Constructs.....	10
2.3	Standards	10
2.3.1	Regulatory Guidance.....	10
2.3.2	Selected Standards	10
2.3.3	Informative Reference Standards.....	10
3.0	APPENDIX.....	11
4.0	DOCUMENT UPDATES	12
4.1	December 10, 2008	12
4.2	December 18, 2008	12
4.3	June 30, 2009.....	12
4.4	July 8, 2009	12



FIGURES AND TABLES

Figure 2-1 Distribution Element Interface Interaction	9
Table 1-1 Reference Documents	5
Table 2-1 Transaction Constraints	8
Table 2-2 Interfaces	8
Table 2-3 Interface and Transaction/Content Constraints	8
Table 2-4 Pre-conditions	9
Table 2-5 Process Triggers	9
Table 2-6 Post-conditions	9
Table 2-7 Required Output	9
Table 2-8 List of HITSP Constructs	9
Table 2-9 Construct Dependencies	10
Table 2-10 Additional Constraints on Required Constructs	10
Table 2-11 Regulatory Guidance	10
Table 2-12 Selected Standards	10
Table 2-13 Informative Reference Standards	10



1.0 INTRODUCTION

1.1 OVERVIEW

The HITSP Emergency Message Distribution Element Transaction construct selects the Emergency Data Exchange Language (EDXL) Distribution Element (DE) V1.0 standard, and is a multicast notification message sent to an identified population (assume this is not to the general public, but to specifically identified populations, such as emergency departments).

1.2 COPYRIGHT PERMISSIONS

COPYRIGHT NOTICE

© 2009 ANSI. This material may be copied without permission from ANSI only if and to the extent that the text is not altered in any fashion and ANSI's copyright is clearly noted.

OASIS materials used in this document have been extracted from relevant copyrighted materials with permission of the Organization for the Advancement of Structured Information Standards (OASIS). Copies of this standard are available from OASIS at www.oasis-open.org.

1.3 REFERENCE DOCUMENTS

This section provides a list of key reference documents and background material.

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

Table 1-1 Reference Documents

Reference Document	Document Description
HITSP Acronyms List	Lists and defines the acronyms used in this document
HITSP Glossary	Provides definitions for relevant terms used by HITSP documents
TN900 - Security and Privacy Technical Note	TN900 is a reference document that provides the overall context for use of the HITSP Security and Privacy constructs

1.4 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.

1.4.1 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 implement all of the required interfaces 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 or Capability with which this construct is associated.



1.4.2 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 interface 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.



2.0 TRANSACTION DEFINITION

2.1 CONTEXT OVERVIEW

The intended recipients are populations such as "all emergency departments in XXX County".

This construct is based on the OASIS Emergency Data Exchange Language (EDXL) Distribution Element (DE) V1.0 standard.

The text for the OASIS Emergency Data Exchange Language (EDXL) Distribution Element (DE) V1.0 standard specification begins here:

The OASIS EDXL-DE standard is a standard message distribution framework for data sharing among emergency information systems using the XML-based Emergency Data Exchange Language (EDXL). This format may be used over any data transmission system, including but not limited to the SOAP HTTP binding.

The primary purpose of the Distribution Element is to facilitate the routing of any properly formatted XML emergency message to recipients. The Distribution Element may be thought of as a "container." It provides the information to route "payload" message sets (such as Alerts or Resource Messages), by including key routing information such as distribution type, geography, incident, and sender/recipient IDs.

The text for the OASIS Emergency Data Exchange Language (EDXL) Distribution Element (DE) V1.0 standard specification ends here.

Note: The OASIS EDXL-DE standard allows for the communication of non-XML content such as PDFs, text files, or other identified Multipurpose Internet Mail Extension (MIME) types of content.

This construct is limited to the distribution of messages between distribution nodes in an alert network. The means for subscribing to the multicast and distribution to message recipients are not considered in scope for this construct. Any record of the message for audit purposes (e.g., timestamp, intended population group) is also out of scope and considered a function of the sending system.

This construct transports content such as HITSP/C82 Emergency Common Alerting Protocol (which is based on OASIS CAP) situation reports, and Emergency Medical Technician's (EMT's) run reports. However, any relationship between this construct and the ambulance run report (an attachment as defined by claims attachments Notice of Proposed Rule Making (NPRM) from the Centers for Medicare and Medicaid Services (CMS)) is out of scope. It is a routing element intended to route payloads of any kind, including other OASIS emergency message standards such as CAP, HAVE and Resource Messaging, but also any of the HITSP constructs, NIEM IEPDS, etc. It is designed to be provisioned by core services to route based on geography, incident type, agency type, or level of government. It can also be provisioned with access control and other security data.

The message will persist as long as the event is happening, and then the data would be deprecated. This construct does not require its interfaces to explicitly deprecate data that has been superseded and time stamped.

OASIS EDXL-DE is intended to be used over web services in a point to point conversation between Distribution Elements. The existing HITSP Security and Privacy protections can be applied.

According to guidance provided by the HITSP Security, Privacy, and Infrastructure Technical Committee, Interoperability Specifications should constrain their systems to implement HITSP/T17 Secured Communication Channel, HITSP/T15 Collect and Communicate Audit Trail, HITSP/T16 Consistent Time, HITSP/TP20 Access Control and HITSP/TP30 Manage Consent Directives to protect the security and privacy of individually identifiable health information (IIHI).



The systems that implements the Distribution Element (DE) may use multicast methods (e.g., pager, radio, email) to ultimately communicate with the end systems. This is considered system "black box" and not an interoperability issue for HITSP.

2.1.1 TRANSACTION CONSTRAINTS

The Interoperability Specification that uses this construct may impose restrictions on the DE data content. However, this construct does not impose any restrictions at this time.

Table 2-1 Transaction Constraints

Constraint
No applicable constraints

2.1.2 INTERFACES

Table 2-2 Interfaces

Interface	Description	Used in Component/ Standard	Transaction/Content	T/C Optionality ¹
Alert Message Receiver	This interface receives notifications and emergency data from the Message Transmitter	OASIS EDXL-DE	Receive Alert Message	R
Alert Message Transmitter	The holder of emergency data that is communicating that data to the message receiver	OASIS EDXL-DE	Send Alert Message (CAP, etc.)	R

The following table describes the implementation constraints placed on the interfaces, transactions, or content. The Constraint Codes listed below correspond to the codes placed in the Interface and Transaction/Content optionality column in Table 2-2 above.

Table 2-3 Interface and Transaction/Content Constraints

Constraint Code	Constraint Description
No applicable implementation constraints ²	

2.1.3 INTERFACE INTERACTIONS

For this construct, there is at least one Message Receiver to one or more Message Transmitters. For example, an amber alert notification is transmitted by the Message Transmitter, such as a Police radio channel. There must be at least one Message Receiver interface that receives this message. Some other examples are provided in the OASIS EDXL-DE specification.

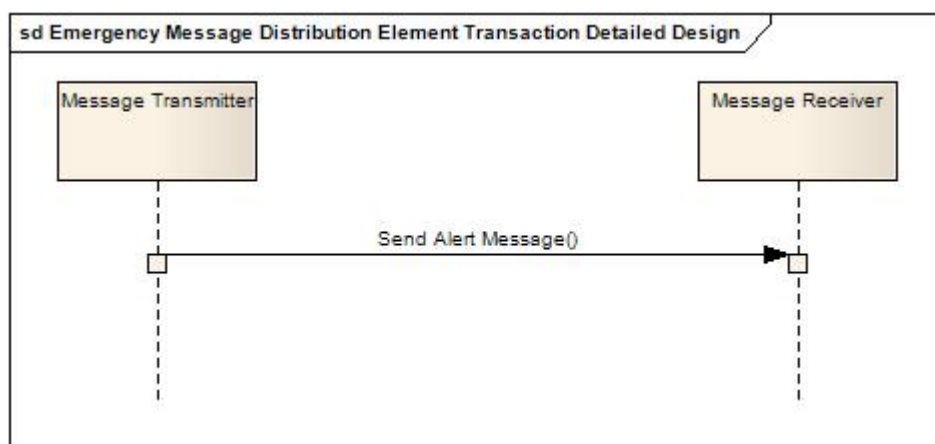
The interaction between the interfaces is as shown in Figure 2-1 below.

¹ Optionality = "R" for Required, "R2" for Required if Known, "O" for Optional, or "C" for Conditional

² There are no known restrictions on optionality Document Element standards; however, OASIS EDXL-DE is designed to be transported using web services, which may impose additional requirements on interfaces.



Figure 2-1 Distribution Element Interface Interaction



2.1.4 PRE-CONDITIONS

Table 2-4 Pre-conditions

Pre-condition
Recipient is tuned to transmission channel

2.1.4.1 PROCESS TRIGGERS

Table 2-5 Process Triggers

Process Trigger
Transmitter has a notification to send

2.1.5 POST-CONDITIONS

Table 2-6 Post-conditions

Post-condition
Recipients have been notified

2.1.5.1 REQUIRED OUTPUT

Table 2-7 Required Output

Required Output	Format/Usage
The OASIS EDXL-DE standard defines the required XML output	See OASIS EDXL-DE

2.1.6 DATA FLOWS

The details of the data element structure in the Document Object Model and Data Dictionary are fully defined in the OASIS EDXL-DE standard.

2.2 LIST OF HITSP CONSTRUCTS

Table 2-8 List of HITSP Constructs

Construct Name	Description	Transaction/Content
No applicable constructs		



2.2.1 CONSTRUCT DEPENDENCIES

Table 2-9 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

Table 2-10 Additional Constraints on Required Constructs

Data Element	Construct	Constraint	Constraint Type (Pre-condition, post-condition, general)	Purpose (Reason for this constraint)
No applicable constraints				

2.3 STANDARDS

2.3.1 REGULATORY GUIDANCE

Table 2-11 Regulatory Guidance

Regulation	Description
No applicable regulatory guidance	

2.3.2 SELECTED STANDARDS

Table 2-12 Selected Standards

Standard	Description
Organization for the Advancement of Structured Information Standards (OASIS) Emergency Data Exchange Language (EDXL) Distribution Element (DE) Version 1.0	This is a standard message distribution framework for data sharing among emergency information systems using the XML-based Emergency Data Exchange Language (EDXL). This format may be used over any data transmission system, including but not limited to the SOAP HTTP binding. It is a routing element intended to route payloads of any kind, including other OASIS emergency message standards such as CAP, HAVE and Resource Messaging, but also any of the HITSP constructs, NIEM IEPDS, etc. It is designed to be provisioned by core services to route based on geography, incident type, agency type, or level of government. It can also be provisioned with access control and other security data. For more information visit docs.oasis-open.org/emergency/edxl-de/v1.0/EDXL-DE_Spec_v1.0.pdf

2.3.3 INFORMATIVE REFERENCE STANDARDS

Table 2-13 Informative Reference Standards

Standard	Description
Assessing interoperability in emergency management standards Pack, D. Coleman, C., United States Navy, Charleston; This paper appears in: Southeastcon, 2008. IEEE Publication Date: 3-6 April 2008; On page(s): 334-339	Paper identifies the contributions that OASIS EDXL-DE standard will have on interoperability in Emergency Management, and provides a case study for evaluation purposes



3.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

No additional information at this time.



4.0 DOCUMENT UPDATES

4.1 DECEMBER 10, 2008

The changes in this construct address the following comments received during the Public Comment and Inspection Testing period (September 29 – October 24, 2008).

5069, 5070, 5547, 5581

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

Minor editorial changes were made to this construct.

4.2 DECEMBER 18, 2008

Upon approval by the HITSP Panel on December 18, 2008, this document is now Released for Implementation.

4.3 JUNE 30, 2009

Minor editorial changes were made to this document. Boilerplate text was removed for simplification. The term "actor" was replaced with "interface".

4.4 JULY 8, 2009

Upon approval by the HITSP Panel on July 8, 2009, this document is now Released for Implementation.

