



NHS CFH National Spine Systems Engineering

6751 2008-A TES External Interface Requirements (LIM - DIM)

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Issue 2 Draft D	8/03/2007	Charlotte Gamsu	Changes following CFH review workshop

Issue 2	8/03/2007	Charlotte Gamsu	Document for issue
Issue 3 Draft A	12/03/2007	Charlotte Gamsu	Addressed comments from CFH: Section 3.1.2.1 line 3 wording changed from "... either as free text or as a coded reason" to "a mandatory coded reason (plus optional free text)" Class reason, description of reasonText - inserted word "Supplementary" at the beginning of the description. Section 4.2 replaced "as an oid" with "has an oid"
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1 Introduction

1.1 Purpose and Scope

This document describes the external interfaces of Spine TES Services Alerts to and from external Accredited Systems.

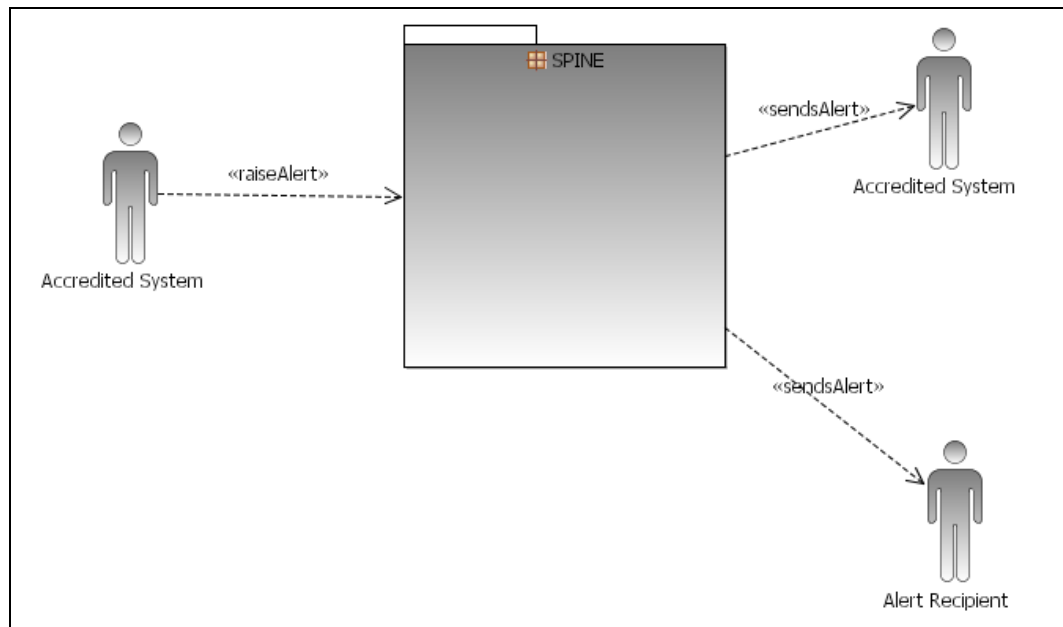
1.2 Background

The definition of a Spine service interface will be covered by:

- The Logical Interface Model (LIM)
 - abstraction at the analysis level that provides a set of views (models) that describes a service interface and the operation of the service (from the service provider's perspective). Multiple LIMs will be required to describe multiple service interfaces. LIMs will be produced during the Spine Elaboration Phase.
- The Design Interface Model (DIM)
 - a design level abstraction that provides a set of views that describes a service at a level of detail that has close to a 1-1 mapping with the interface technology (e.g. XML). DIMs can be traced to LIMs. DIMs are produced during the Spine Realisation Phase.

This version of the document describes both the Logical and the Design Interface Models.

2 TES Alert Service Context



2.1 Actors

Actors associated with this LIM are:

Name	Description
Accredited System	An instance of an Accredited Platform which has passed Accreditation, and is an identified accredited source or recipient of messages. (The Accredited System may be internal to or external from Spine)
Alert Recipient	An instance of person to whom alert notifications are to be directed.

3 System Services

This section describes the TES system services provided by Spine. Only the service which is being introduced in Release 2008-A will be described here. This service relates to an Accredited System sending alerts to Spine.

3.1 IG Alerts

Information Governance (IG) Alerts are raised when an event occurs that is deemed to compromise the confidentiality of patient data. Such alerts shall be made available to authorised person(s), such as Privacy Officers, with a responsibility for governance of patient information.

3.1.1 Sequence Diagram of IG Alerts

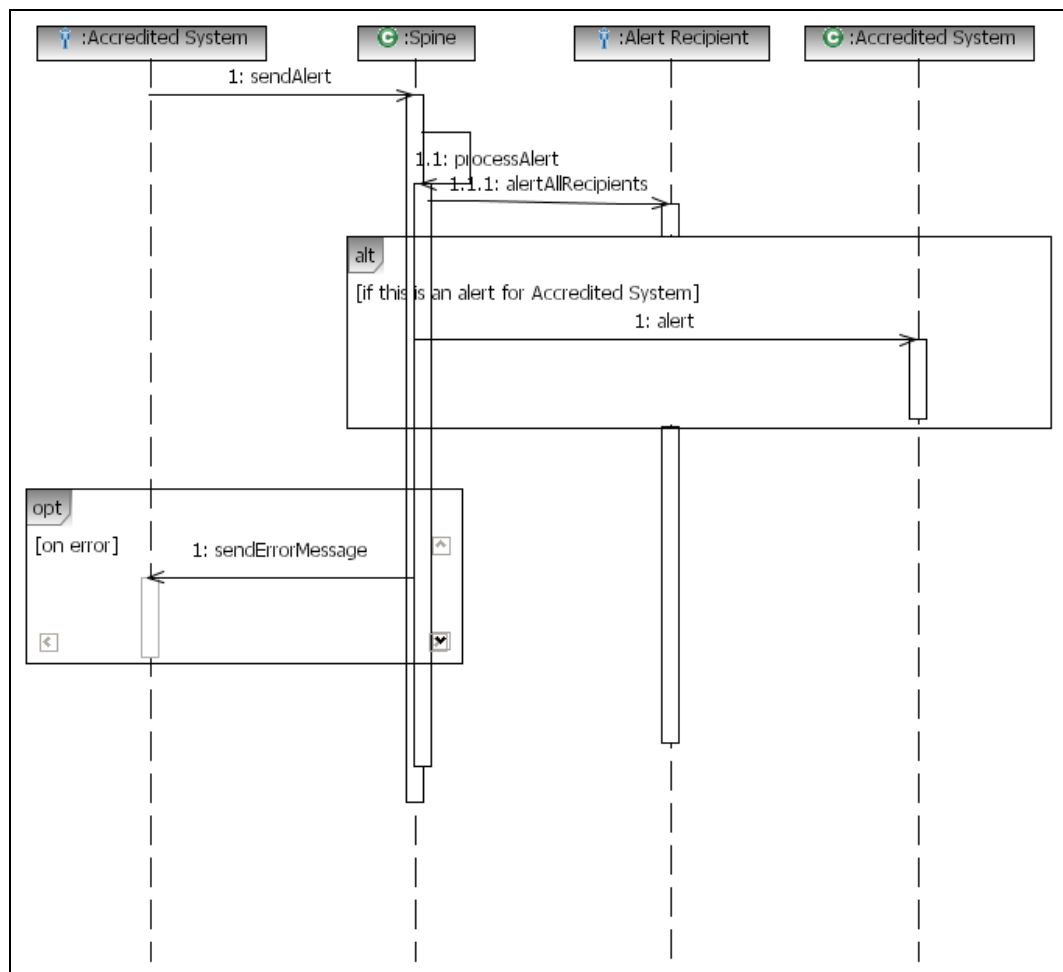
The sequence diagram below shows the three new services which are to be described in this LIM:

IG Alert from the Accredited System to Spine;

IG Alert from Spine to Accredited System(s); and,

Error Response from Spine to the Accredited System.

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3.1.1.1 Flow Description – Message from Accredited System to Spine

- An Accredited System sends an alert to Spine.
- Spine processes the alert, i.e.
 - it uses the information in the alert and in its Spine Directory Service (SDS) to identify recipients who must be informed of the alert.
 - Spine stores the alert
 - Spine sends an email notification to each recipient

3.1.1.2 Alternate Flow for Message to an Accredited System (or System)

If the alert is one of which an Accredited System (or Systems) must be made aware then:

- Spine creates an HL7 message and sends it to the Accredited System (or Systems)

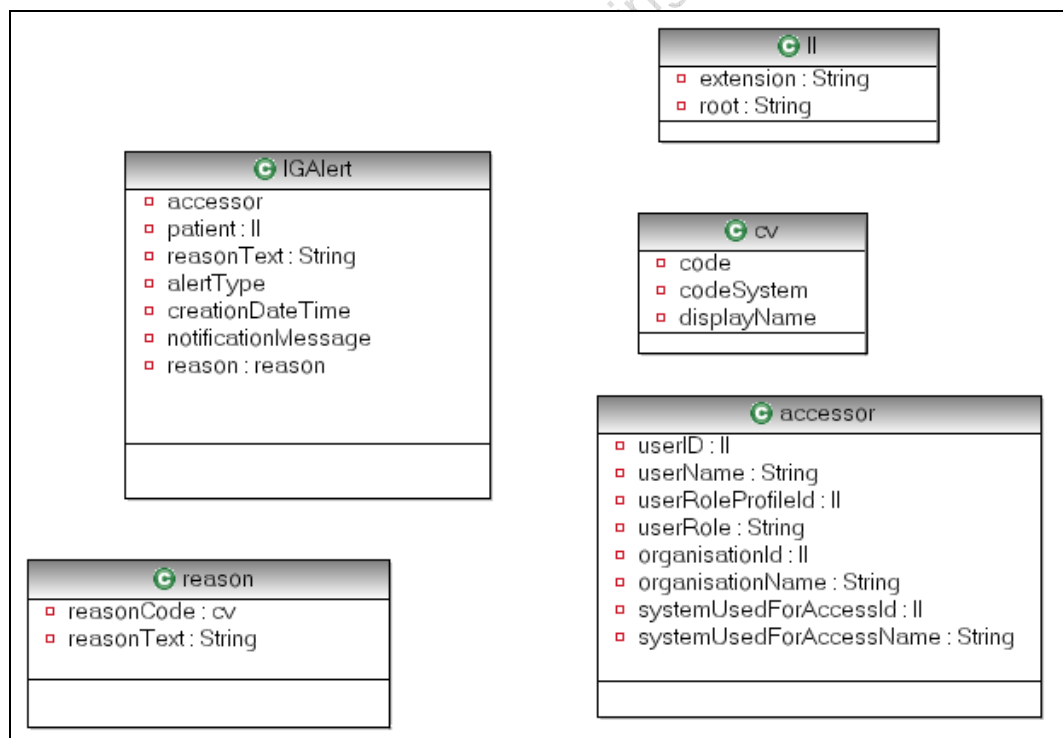
3.1.1.3 Error Flow

- If the alert process was not successful then:
- An error response is sent to the Accredited System which raised the alert.

3.1.2 IG Alert Data Mode Overview

An IG Alert is raised when a user accesses protected information about a patient. The Alert must capture accessor information, NHS number of patient whose information has been accessed, date and time of the access and a mandatory coded reason (plus optional free text). Coded reasons will be defined in the MiM and Spine shall not validate specific values or validate code reason relationship to alert type. Spine shall handle coded reasons generically.

3.1.2.1 Class Diagram



3.1.2.2 Class Details

Class: IGAAlert

Attribute	Type	Cardinality	Description
alertType	cv	1	Coded type of alert.
notificationMessage	string	0..1	Text populated by the Accredited System to provide a brief description of the alert to be provided in the notification to the Alert Recipient(s)
creationDateTime	Date/time	1	Date when the condition precipitating the alert occurred
Patient	II	1	The NHS number of the patient whose data was accessed. Root is an OID with value "2.16.840.1.113883.2.1.4.1" and extension contains the NHS Number
Reason	Reason	1	Reason entered by the user who triggered the alert, giving the reason the patient data was accessed.

Class: accessor

Attribute	Type	Cardinality	Description
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Attribute	Type	Cardinality	Description
userId	II	1	This is the user's unique identifier. The root is "1.2.826.0.1285.0.2.0.65" (UUID) The extension is the value associated with this UUID
userName	String	1	The name of the user who triggered the alert.
userRoleProfileId	II	1	User Role Profile Id of person who accessed / tried to access the restricted patient data. The root is an OID with value "1.2.826.0.1285.0.2.0.67" (HL7 Person Role Profile ID). The extension is the value associated with this OID.
roleName	String	1	Name of User Role
organisationID	II	1	This is the user's organisation ID. The root is "1.2.826.0.1285.0.1.10" and the extension is the value associated with this OID.
organisationName	String	1	This is the name of the user's organisation.
systemUsedForAccess	II	1	Information about the system the user used when accessing / trying to access the restricted patient data. The root is an OID with value "1.2.826.0.1285.0.2.0.107" (Accredited System Id). The extension is the value associated with this OID.
systemUsedForAccessName	String	1	This is the name of the system the user used when accessing / trying to access the restricted patient

Attribute	Type	Cardinality	Description
			data.

Class reason

Attribute	Type	Cardinality	Description
reasonCode	cv	1	The coded reason entered by the user who triggered the alert, giving the reason the patient data was accessed.
reasonText	String	0..1	Supplementary free text entered by the user who triggered the alert, giving the reason the patient data was accessed.

Class: cv

Attribute	Type	Cardinality	Description
Code	string	1	The primary code value originally used to encode a statement.
codeSystem	string	1	An OID identifying the coding system from which the code is derived.
displayName	string	1	The text or rubric associated with the code.

Class: ll

Attribute	Type	Cardinality	Description
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Attribute	Type	Cardinality	Description
Root	string	1	UUID or OID
extension	string	0..1	"Real world" identifiers such as a GMCP number or a patient NHS Number should be sent in the extension attribute

3.1.3 Failure Response Data Model.

3.1.3.1 Overview

If the alert process was not successful then an Error Response will be sent from Spine to the Accredited System giving information about the error.

3.1.3.2 Classes of Error Message

Class: Error Message

Attribute	Type	Cardinality	Description
errorCode	String	1	Identifies the type of error.

4 Coded Values

4.1 **alertType**

This will contain a coded value representing **alertType** in the class **IG Alert**.

4.2 **reasonCode**

This coded value is to be defined in the MiM. For example, for Patient Seal Access Alerts these could include the following:

- Consent given by the patient
- Public interest
- Access required by statute
- Court order demands access.

Since the interface is 'generic' Spine will not validate the **reasonCode** and associated OID and display name with the relevant alert type. Spine will accept the attributes so long as they adhere to the structure of the defined message. In other words, as long as a **reasonCode** has an oid, code and display name, Spine shall not reject the message.

5 Enumerations

5.1 **errorCode**

This enumeration is used by class **errorMessage** in its attribute **errorCode**. The enumeration defines the valid entries for this attribute.

The vocabulary for **errorCode** will be defined in the MiM. Below is a first attempt at defining an enumeration of **errorCodes**. This list is subject to change.

errorCode	errorText	Caused by	Remediation
2001	Unknown Alert	An alertType other than one of those contained in the enumeration as per the supported MIM	Re-send message with the correct value for alertType as per the supported MIM
2002	Invalid input message.	Message is malformed, corrupt or invalid in some way.	Re-send message which is well-formed.
2003	Mandatory field missing.	A mandatory field in the payload is missing.	Re-send message with correct value for mandatory field.
2004	Field failed validation	A mandatory field in the payload failed validation.	Re-send message with correct value for mandatory field.

6 Glossary

Term	Definition
Alert Recipient	an authorised person within the organisation of the user with a responsibility for protecting patient confidentiality such as the Caldicott Guardian or Privacy Officer.
DIM	Design Interface Model.
EIS	External Interface Specification
IG Alert	Information Governance Alert, a type of Alert sent to Spine. IG Alerts signal access to 'Sealed' Information without explicit or implicit access permission.
LIM	Logical Interface Model
MIM	Message Implementation Manual
OID	A schema of identifiers
TES	TMS Event Service - Spine subsystem for handling notifications and alerts
TMS	Transaction Messaging Service
URP	User Role Profile
UUID	Universally Unique Id

End of document

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