nehta

e-Discharge Summary

Technical Service Specification

Version 1.1 — 30 August 2010

Final

National E-Health Transition Authority

National E-Health Transition Authority Ltd
Level 25
56 Pitt Street
Sydney, NSW, 2000
Australia.
www.nehta.gov.au

Document information

Change history

Version	Date	Contributor	Comments
1.0	2010-04-27	Kevin Lin	Draft for review
1.1	2010-08-30	Hoylen Sue	Release

Document authorisation

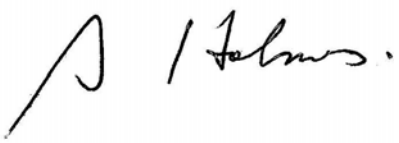
Name	Title	Signature
Paul Williams	Head of Solutions Development	
Sean Holmes	Program Manager, Continuity of Care	

Table of contents

This page is intentionally left blank.

Preface

Document purpose

The purpose of this document is to define the service interfaces and associated conformance points for the e-Discharge Summary package.

It consists of two main parts:

- the logical service specification; and
- a technical service specification that satisfies the logical service specification.

For historical reasons, the logical service specification is in the main part of this document and the technical service specification appears in an appendix. In future releases, these will be separated into two documents.

The Discharge Summary package describes the specifications and guidelines for consideration by implementers when developing interoperable Discharge Summary solutions within the Australian healthcare community.

Intended audience

This is a technical document. The reader is expected to understand XML, SOAP Web services and the Secure Message Delivery Specification defined by [ATS 5822—2010].

The intended audience for this document are:

- Solution architects:
  - To understand the service specifications to incorporate them into their designs.
- Developers:
  - To implement the design so that it conforms to the service specifications.
- Testers:
  - To evaluate whether an implementation conforms to the service specifications.

This document is to be read in conjunction with the *e-Discharge Summary: Solution Design* [DS-SD2010] and the other documents listed in the references section.

Document map

The following diagram represents the relationship between this document and others within the e-Discharge Summary package.

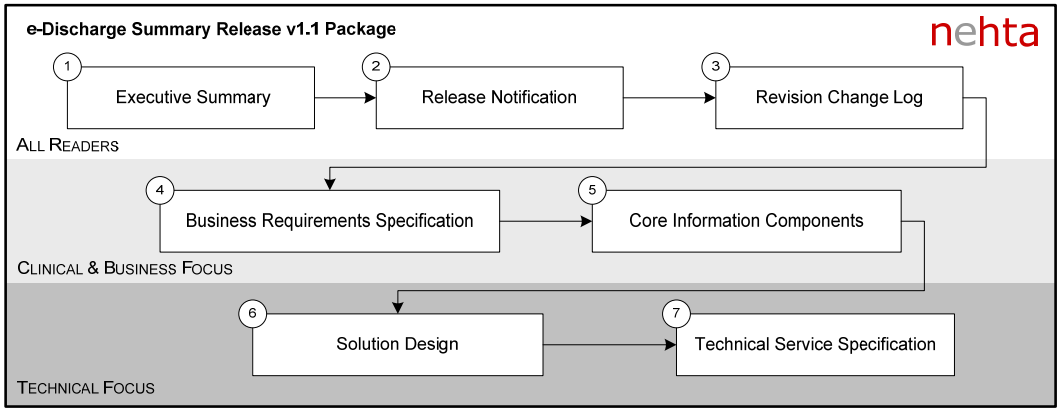


Figure 1 Document map for the e-Discharge Summary package

Definitions, acronyms and abbreviations

For lists of definitions, acronyms and abbreviations, see the Definitions section on page 4.

References and related documents

For a list of all referenced documents, see the References section on page 5.

Conformance

The keywords MUST, MUST NOT, SHOULD, SHOULD NOT, and MAY in this document are to be interpreted as described in the Internet Engineering Task Force's (IETF) Request for Comments (RFC) 2119 [RFC2119].

1 Logical service specification

1.1 Introduction

The logical service specification for the e-Discharge Summary package is documented in terms of the roles, artefacts, business services, interactions and states. Non-functional aspects, such as security are also documented.

The logical service specification is complemented by one or more technical service specifications that map the logical functions described here to invocations of operations on platform-specific interfaces. One such technical service specification is defined in Appendix A.

1.2 Artefacts

In the e-Discharge Summary community there is one artefact:

- DS-Document.

1.2.1 DS-Document

A DS-Document is a structured representation of the discharge summary.

1.3 Roles

In the e-Discharge Summary community, two roles have been identified:

- DS-Producer; and
- DS-Consumer.

1.3.1 DS-Producer

A DS-Producer has discharge summaries to send to the DS-Consumers.

This role is played by the hospital discharge system.

How the DS-Producer obtains the DS-Document is outside the scope of this specification.

1.3.2 DS-Consumer

A DS-Consumer receives the discharge summaries from DS-Producers.

This role is played by the community care organisation's system.

What the DS-Consumer does with the DS-Document after it has received it is outside the scope of this specification.

1.4 Business services

In the e-Discharge Summary community, there is a single service:

- DS-Receiving-Service.

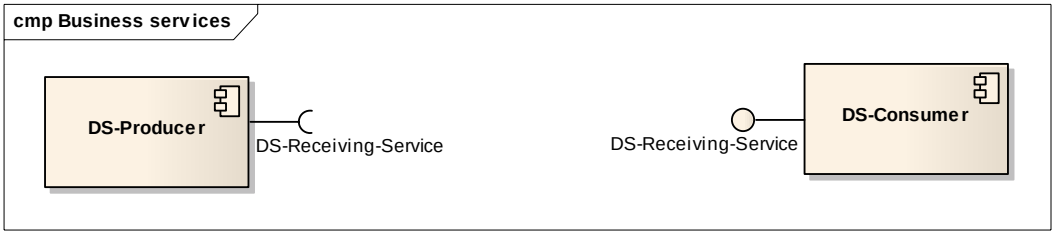


Figure 2 Business services

1.4.1 DS-Receiving-Service

This business service is provided by DS-Consumers who want to receive DS-Documents.

This business service is invoked by DS-Providers who have a DS-Document to deliver.

The *DS-Receiving-Service* provides a single function:

- DS-Deliver

1.4.1.1 DS-Deliver

This function is used to receive a DS-Document.

Input: DS-Document

Output: none

Quality of service: the invoker must be able to determine whether the operation succeeded or not.

1.5 Interactions

There is one interaction:

- DS-Delivery-Interaction

1.5.1 DS-Delivery-Interaction

This interaction is used to deliver a DS-Document from a DS-Producer to a DS-Consumer.

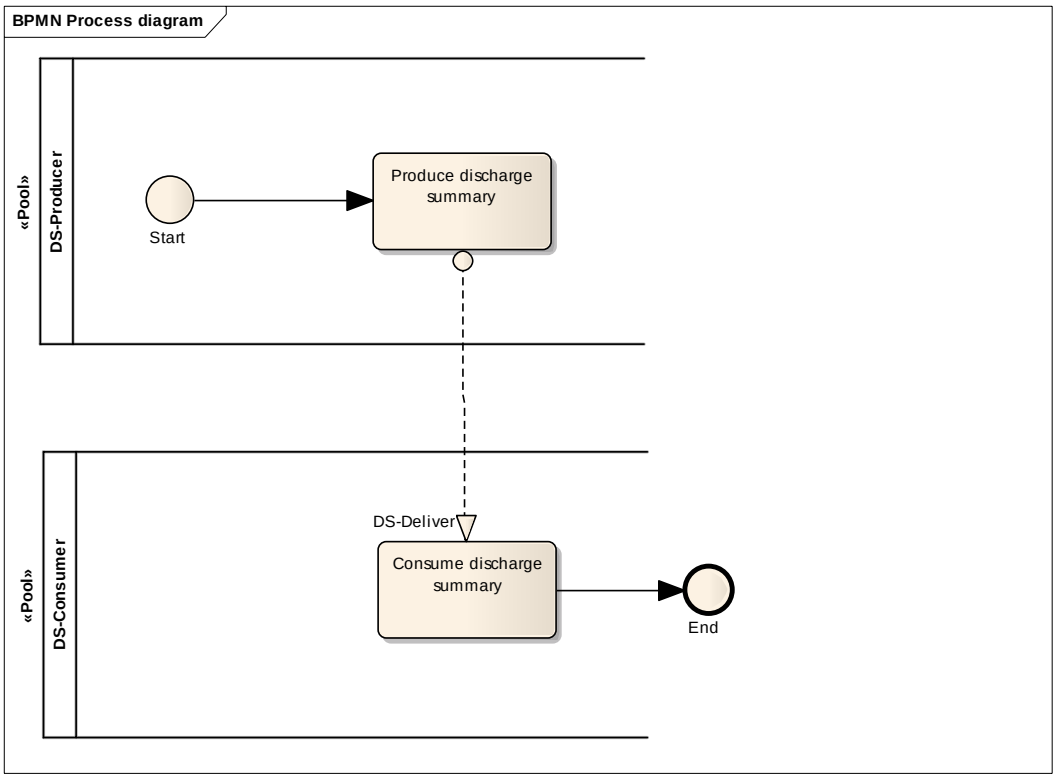


Figure 3 DS-Delivery-Interaction

1.6 Security

For the DS-Deliver function:

- The confidentiality of the DS-Document must be preserved between the DS-Producer and DS-Consumer.
- The integrity of the DS-Document must be preserved between the DS-Producer and DS-Consumer.
- The DS-Producer must be authenticated by the consumer.

Definitions

This section explains the terminology used in this document.

Shortened terms

This table lists abbreviations and acronyms in alphabetical order.

Term	Description
CDA	Clinical Document Architecture
HL7	Health Level 7
IETF	Internet Engineering Task Force
RFC	Request for Comments
SMD	Secure Message Delivery
XML	Extensible Markup Language

References

The following referenced documents are indispensable for the application of this document. Only the version cited applies.

Package documents

The documents listed below are part of the suite delivered in the e-Discharge Summary Package.

Discharge Summary Package Documents			
[REF]	Document Name	Publisher	Link
[DS-ES2010]	e-Discharge Summary Release 1.1 – Executive Summary v1.0	NEHTA 2010	http://www.nehta.gov.au/e-communications-in-practice/edischarge-summaries Open menu: e-Discharge Summary Package 1.1
[DS-RN2010]	e-Discharge Summary Release 1.1 – Release Notification v1.0		
[DS-BRS2010]	e-Discharge Summary Release 1.1 – Business Requirements Specification v1.0		
[DS-SD2010]	e-Discharge Summary: Solution Design v1.1		
[DS-CIC2010]	e-Discharge Summary Release 1.1 – Core Information Components v1.0		
[DS-TSS2010]	e-Discharge Summary: Technical Service Specification v1.1		

References

The documents listed below are non-package documents that have been cited in this document.

Reference Documents			
[REF]	Document Name	Publisher	Link
[RFC2119]	RFC 2119: Keywords for use in RFCs to Indicate Requirement Levels	IETF 1997	http://ietf.org/rfc/rfc2119.txt
[ATS 5822—2010]	Australian Technical Specification - E-Health Secure Message Delivery	Standards Australia 2010	http://www.e-health.standards.org.au/Home/Publications.aspx

Related reading

The documents listed below may provide further information about the issues discussed in this document.

Related Documents			
[REF]	Document Name	Publisher	Link
[IF2007]	Interoperability Framework v2.0	NEHTA 2007	http://www.nehta.gov.au/ Search “interoperability 2.0”.
[ATS 5820—2010]	Australian Technical Specification - E-Health Web Services Profiles	Standards Australia 2010	http://www.e-health.standards.org.au/Home/Publications.aspx
[ATS 5821—2010]	Australian Technical Specification – E-Health XML Secured Payload Profiles	Standards Australia 2010	http://www.e-health.standards.org.au/Home/Publications.aspx
[TR 5823—2010]	Technical Report – Endpoint Location Service	Standards Australia 2010	http://www.e-health.standards.org.au/Home/Publications.aspx

Technical service specification

Appendix A: Technical service specification

A.1 Overview

This appendix contains a technical service specification for the e-Discharge Summary package.

This technical service specification is specified as a profile of Secure Message Delivery [ATS 5822—2010].

This appendix defines the following endpoints:

- DS CDA Sender
- DS CDA Receiver

A.2 Reference values

A.2.1 Payloads

The following payloads are used by the endpoint definitions:

- [PAYLOAD-DS-CDA] as defined in *e-Discharge Summary: Core CDA Implementation Guide* Release 2.1.
- [PAYLOAD-EMPTY]: is an empty XML element. The element has a local name of 'null' from the http://ns.electronichealth.net.au/null/xsd/Null/1.0 namespace, and contains no attributes and no content model.

A.2.2 Service categories

The following service category is used by the endpoint definitions:

- [SC-DS-CDA] http://ns.electronichealth.net.au/eds/sc/dischargesummary/cda/1.1

A.3 Endpoints

A.3.1 DS CDA Sender

A.3.1.1 Payload behaviour

CP.1 The *DS CDA Sender* shall create and deliver a [PAYLOAD-DS-CDA] payload to a *DS CDA Receiver*.

A.3.1.2 Implementation

CP.2 The *DS CDA Sender* shall implement the *Sender* endpoint as specified by [ATS 5822—2010].

A.3.1.3 Send: CDA Discharge

A.3.1.3.1 Deferred mode

CP.3 The *DS CDA Sender* shall be capable of sending messages containing a [PAYLOAD-DS-CDA] payload by invoking a Sealed Message Delivery interface as specified by [ATS 5822—2010] of a DS CDA Receiver. Such invocations shall use the service category [SC-DS-CDA].

A.3.1.3.2 Immediate mode

CP.4 If the *DS CDA Sender* is capable of sending messages containing a [PAYLOAD-DS-CDA] payload by invoking a *Sealed Immediate Message Delivery* interface as specified by [ATS 5822—2010], then it shall be capable of receiving a [PAYLOAD-EMPTY] payload in the immediate response. Such invocations shall use the service category [SC-DS-CDA].

A.3.2 DS CDA Receiver

A.3.2.1 Payload Behaviour

CP.5 The *DS CDA Receiver* shall be capable of receiving and processing a message containing a [PAYLOAD-DS-CDA] payload.

CP.6 The *DS CDA Receiver* shall be capable of accepting and processing a [PAYLOAD-DS-CDA] payload of size up to 10MB.

A.3.2.2 Implementation

CP.7 The *DS CDA Receiver* shall implement the *Receiver* endpoint as specified by [ATS 5822—2010].

A.3.2.3 Receive: CDA discharge

A.3.2.3.1 Deferred mode

CP.8 The *DS CDA Receiver* shall be capable of receiving messages containing a [PAYLOAD-DS-CDA] payload either through implementation of a *Sealed Message Delivery* interface as specified by [ATS 5822—2010] or through retrieval of [PAYLOAD-DS-CDA] messages from a *Receiver Intermediary* endpoint as specified by [ATS 5822—2010].

CP.9 The *DS CDA Receiver* shall use the service category [SC-DS-CDA] when publishing a *Sealed Message Delivery* interface for receiving [PAYLOAD-DS-CDA] messages in a service directory as specified by [ATS 5822—2010].

A.3.2.3.2 Immediate mode

CP.10 If the *DS CDA Receiver* is capable of receiving messages containing a [PAYLOAD-DS-CDA] payload on a *Sealed Immediate Message Delivery* interface as specified by [ATS 5822—2010], then it shall return a [PAYLOAD-EMPTY] payload back as the immediate response.

CP.11 The *DS CDA Receiver* shall use the service category [SC-DS-CDA] when publishing a *Sealed Immediate Message Delivery* interface for receiving [PAYLOAD-DS-CDA] messages in a service directory as specified by [ATS 5822—2010].

Appendix B: Mapping to the logical service specification

This appendix describes how the technical service specification (discussed in the previous appendix) maps to the logical service specification (discussed in Chapter 1).

B.1 Roles

The producer role corresponds to the DS CDA Sender endpoint.

The consumer role corresponds to the DS CDA Receiver endpoint.

B.2 Artefacts

The DS-Document corresponds to the CDA Discharge Summary document.

B.3 Business services

The Discharge Summary Receiving Service corresponds to any of the Secure Message Delivery modes of operation for delivery of a sealed message from the sender to the receiver. This includes both deferred mode and immediate mode operations. It also includes the optional use of intermediaries.

B.4 Interactions

The Discharge-Summary-Delivery interaction can be provided by any of the Secure Message Delivery secured payload delivery interactions.

See [ATS 5022—2010] for a full list of these interactions.

B.5 Security

Confidentiality of the DS-Document from DS-Producer to DS-Consumer is provided by the secured payload feature in SMD.

Integrity of the DS-Document from DS-Producer to DS-Consumer is provided by the secured payload feature in SMD.

Authentication of the DS-Producer is provided by the secure payload feature in SMD.