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PCEHR Registration Service
Technical Service Specification v1.2

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Document information

Key information

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Product version history

Product version	Date	Release comments
1.0	May 2012	Initial release
1.1	November 2012	Updated to reflect policy changes enabling healthcare organisations to register consumers for a PCEHR. See release note for full details.
1.2	July 2015	Updated PCEHR Error Codes and registerPCEHR. Appendix A - XSD and WSDL are now externally referenced.

Table of contents

1 Introduction 5
1.1 Purpose 5
1.2 Intended audience 5
1.3 Context 5
1.4 Conformance points 6
1.5 Relationship to eHealth Interoperability Framework 7
1.6 Document map 7
2 Standards and technology platform 8
3 Computational viewpoint 9
3.1 Service interface realisation 9
3.1.1 SOAP signature 9
3.1.2 registerPCEHR 10
4 Information viewpoint 19
4.1 Information data type realisation 19
4.1.1 Common Header 19
4.2 Common response status 23
5 Engineering viewpoint 26
5.1 Discovery services 26
Appendix A XSD and WSDL 27
Acronyms 28
References 29

1 Introduction

1.1 Purpose

This document provides an implementable technical interface specification for the Registration Service. It provides a set of the functions required to register a PCEHR.

This technical service specification should be read in conjunction with the *PCEHR Registration Service Logical Service Specification* [REG-LSS].

1.2 Intended audience

This document is intended primarily for:

- Developers and implementers of software products that seek to interact with the personally controlled electronic health record (PCEHR) system (normative)
- Jurisdictional eHealth programs (informative)
- The Australian Health Informatics Standards development community (informative)

This is a technical document which makes use of the UML2.3 standard [UML2010]. It is assumed that the audience is familiar with:

- UML and service-oriented architecture concepts and patterns
- The PCEHR Concept of Operations, September 2011 release [PCEHR-CON-OPS]
- RM-ODP (Reference Model of Open Distributed Processing) reference model. [RM-ODP]
- ATS 5820-2010 *E-health Web Services Profile* [ATS 5820-2010]
- ATS 5821-2010 *E-health XML Secured Payload Profiles* [ATS 5821-2010].

1.3 Context

The *PCEHR Registration Logical Service Specification* [REG-LSS] presents a platform-independent specification of the PCEHR Registration Service. This technical service specification presents an implementable interface that is supported by the PCEHR system and can be used by systems integrating to the PCEHR system.

Figure 1 shows how the set of operations addressed within this specification fit into the broader set of PCEHR functionality.

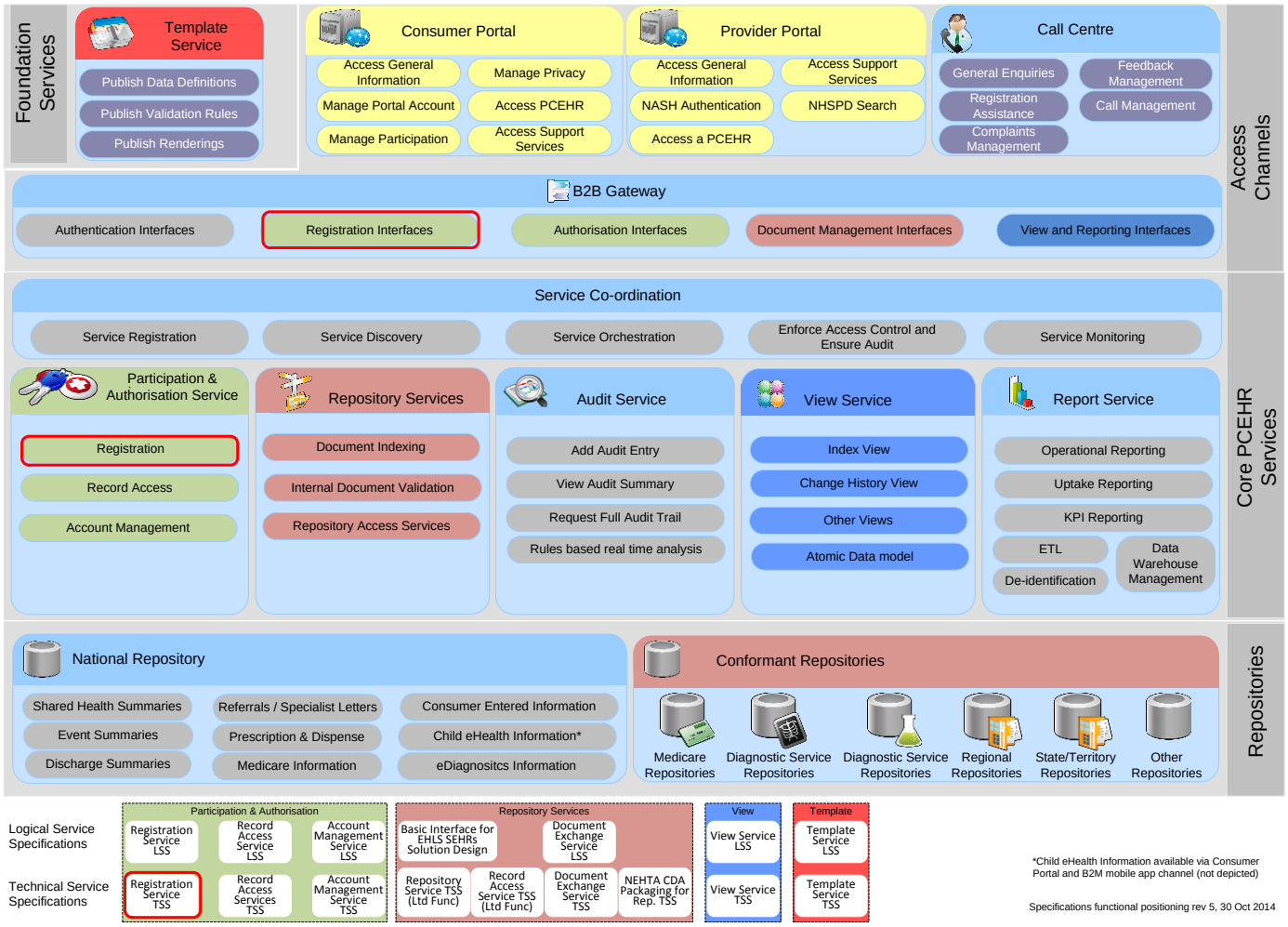

Figure 1 – PCEHR functions addressed

1.4 Conformance points

This specification contains conformance points that identify normative requirements that are to be met by identified members of the Registration Service interface user system roles (as described in the logical service specification) in order to comply with this specification when interacting with the Registration Service interface.

Conformance points include requirements on a party (Service Invoker) invoking the service and the party (Registration Service Provider) providing the service.

Any capability required to meet a conformance point **SHALL** be considered part of the requirements to be met under this specification.

Conformance points are identified within this document by the means of the following notation:

REGS-T 0	This is an example only. Conformance points **SHALL** be numbered and contain an identifier of 'REGS-T' which identifies them as being applicable to the Registration Service technical service specification.

The keywords **SHALL**, **SHALL NOT**, **SHOULD** and **SHOULD NOT** in this document are to be interpreted as described in IETF's Request for Comment (RFC) 2119 [RFC2119].

Note that the conformance point numbering is non-consecutive in some sections; however, numbers remain uniquely assigned to each conformance points.

1.5 Relationship to eHealth Interoperability Framework

This specification has been produced in accordance with the eHealth Interoperability Framework [EIF], which considers three layers of abstraction and five viewpoints. The viewpoints relevant to this logical service specification are each covered in a separate section.

1.6 Document map

Figure 2 shows how this document and other PCEHR artefacts are grouped according to the eHealth Interoperability Framework layers of abstraction and viewpoints.

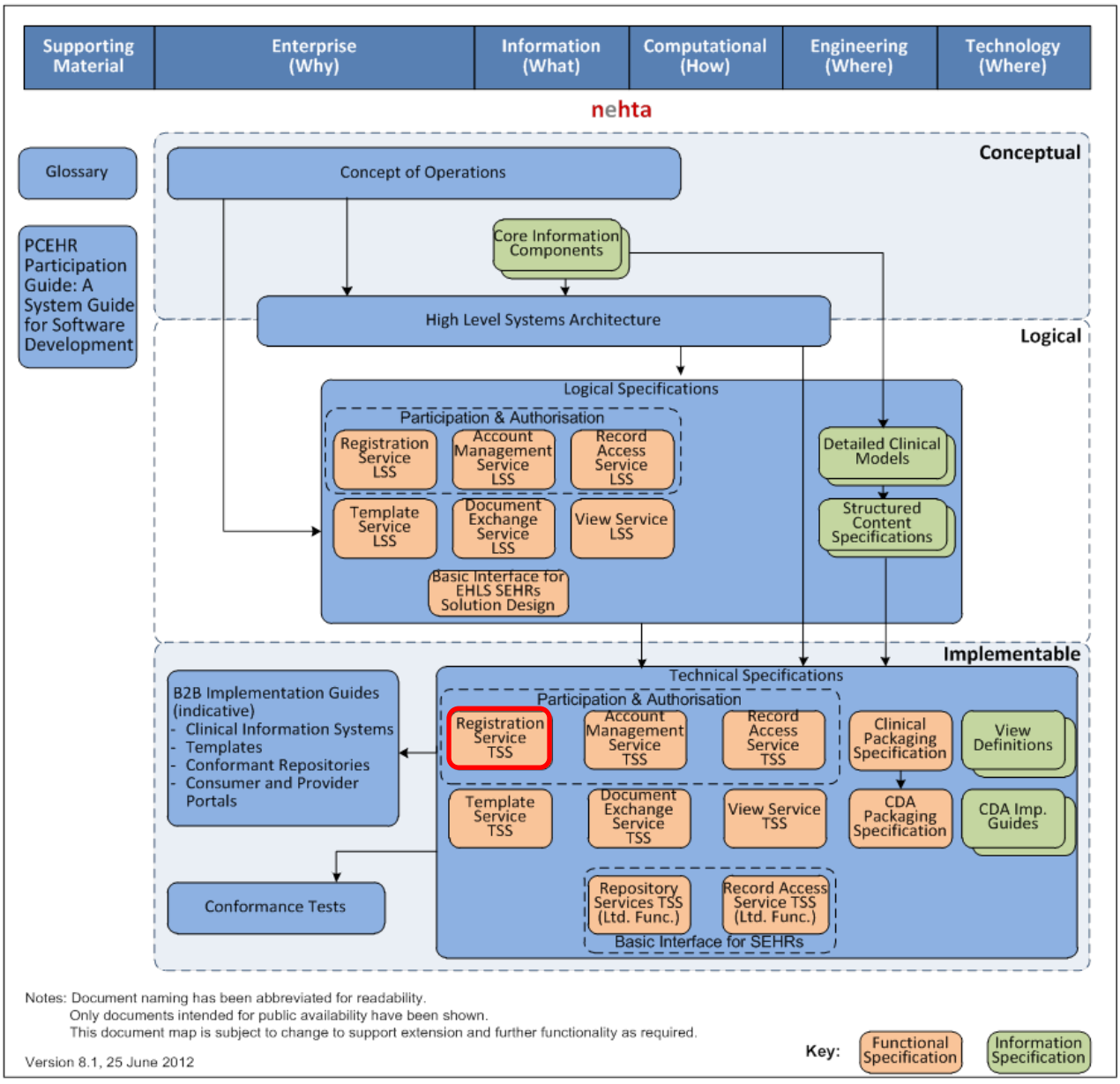

Figure 2 – Document map

2 Standards and technology platform

A standards and technology platform is a collection of standards and technologies that may be used collectively to realise an implementation of one or more service interfaces specified within a logical service specification.

A single service interface within a logical specification must be realised fully by a single technology platform. However, each service interface specified within a logical specification may be realised wholly on different standards and technology platforms.

The technology platform for this technical service specification is comprised of interaction through web service interfaces that conform to identified elements of *Australian Technical Specification 5820-2010 E-health Web Services Profile* [ATS 5820-2010].

This specification depends on the following infrastructure services:

- Healthcare Identifiers (HI) Service for identification of healthcare provider organisations (HPI-O), healthcare provider individuals (HPI-I), and the subject of care – an individual identified by an individual health identifier (IHI).
- The National Authentication Service for Health (NASH) compliant certificate for the provision of X.509 certificates used for signing and encryption.

Conformance points

The following conformance points define the application of the e–health web services profile [ATS 5820-2010] to service interactions:

REGS-T 1	All implementations **SHALL** conform to the web services base profile from ATS 5820-2010 for all web service invocations.
REGS-T 2	All implementations **SHALL** implement the TLS Security Profile from the Standards Australia ATS 5820-2010 for all web service invocations.

3 Computational viewpoint

The computational viewpoint addresses how the service interfaces and service operations defined in the logical service specification map to the operation and transport specifications provided by the standards and technology platform.

3.1 Service interface realisation

This section shows the service interfaces defined in the logical service specification and specifies how these are realised on the chosen technology platform.

Table 1 shows how the logical operations are realised in this technical service specification.

Table 1 - Mapping between logical and technical service operations

Logical service specification	Technical service specification
register	registerPCEHR
deactivate	Not applicable
reactivate	Not applicable
linkToPCEHR	Not applicable

3.1.1 SOAP signature

Conformance points

REGS-T 3	The Service Invoker and Service Provider **SHALL** include a transmission signature (section 4.1.1.3), containing a signed attestation of elements contained within the SOAP message, on all SOAP Request and Response messages, except where the response contains a SOAP fault.
REGS-T 4	The Service Invoker and Service Provider **SHALL** perform the signature using a certificate that asserts the same identity as that asserted in the TLS connection.
REGS-T 5	The Service Provider **SHOULD** respond to an invalid transmission signature as defined in ATS 5820-2010 by rejecting the entire message and respond with an error.

3.1.2 registerPCEHR

Figure 3 shows the process for registering a PCEHR for an individual or for a dependant.

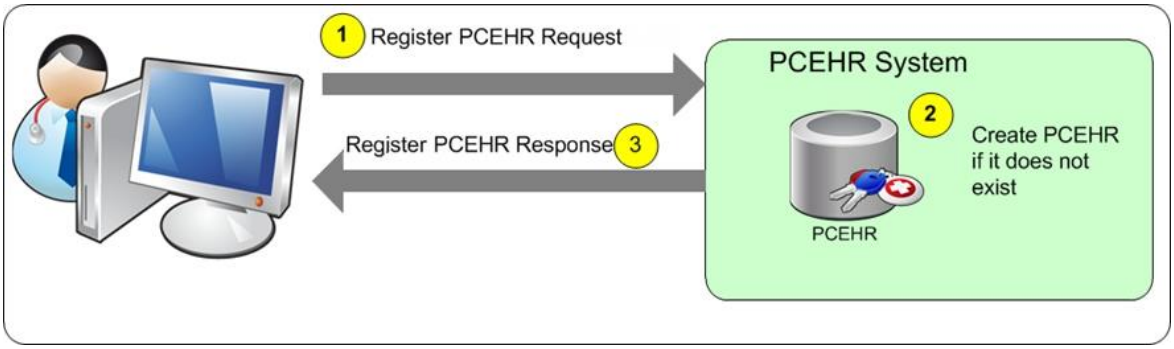

Figure 3 – registerPCEHR Conceptual interaction view

3.1.2.1 Actors and roles

Role 1: register Service Invoker

The *registerPCEHR Service Invoker* role represents the party responsible for invoking the *registerPCEHR* operation. This role will typically be realised by a clinical information system (CIS) or contracted service provider (CSP). This role will be referred to as the *Service Invoker*.

Role 2: register Service Provider

The *registerPCEHR Service Provider* role is the party responsible for fulfilling the *registerPCEHR* request. This role will be realised by the PCEHR system. This role will be referred to as the *Service Provider*.

3.1.2.2 Pre-conditions

Conformance points

REGS-T 6	A mutually authenticated encrypted connection **SHALL** be established between the Service Invoker (CIS and CSP) and Service Provider in conformance with the TLS Security Profile set out in ATS 5820-2010.
REGS-T 7	The Service Invoker (CIS and CSP) **SHALL** have the verified IHI of the individual that the record relates to.

3.1.2.3 Post-conditions

Conformance points

REGS-T 8	The *Service Provider* **SHALL** return a response indicating whether a record has been created.
REGS-T 9	In case of an error or validation failure, the *Service Provider* **SHALL** return a response with an appropriate error message. For a list of possible Response Codes please refer to section 4.2, Table 2.

3.1.2.4 Interaction

Figure 4 shows the interaction between an example *Service Invoker (CIS or CSP)* and *Service Provider*.

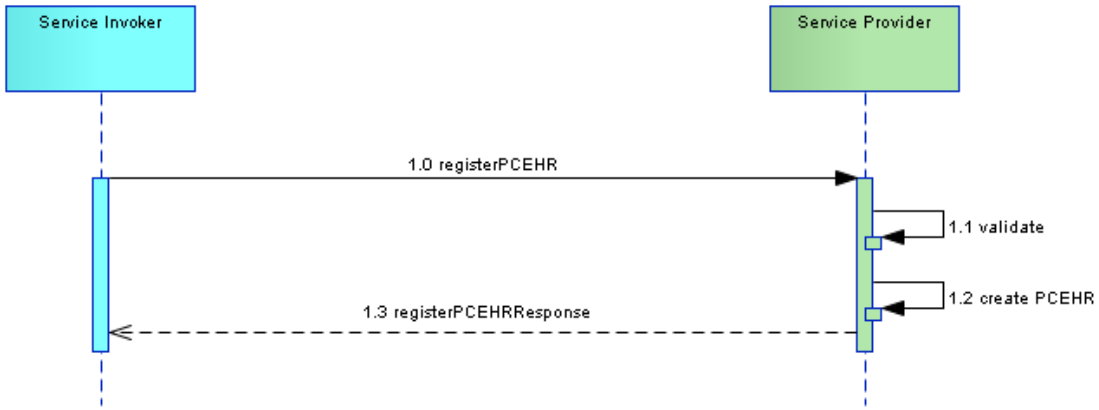

Figure 4 – registerPCEHR – Sequence diagram

Conformance points

REGS-T 10	This operation **SHALL** be realised as a synchronous query between the Service Invoker system (CIS and CSP) and the Service Provider.
REGS-T 11	The response **SHALL** be returned on the same software communication connection and within a timely manner considered appropriate for user interaction.

3.1.2.5 Inputs, outputs and faults

This section details the data that is submitted to the service as an input, the response returned and the details of any faults. The data types are realised as XSDs (see Appendix A).

See Appendix A for details of the WSDL definition for this operation and the XML Schema definitions for the underlying data types.

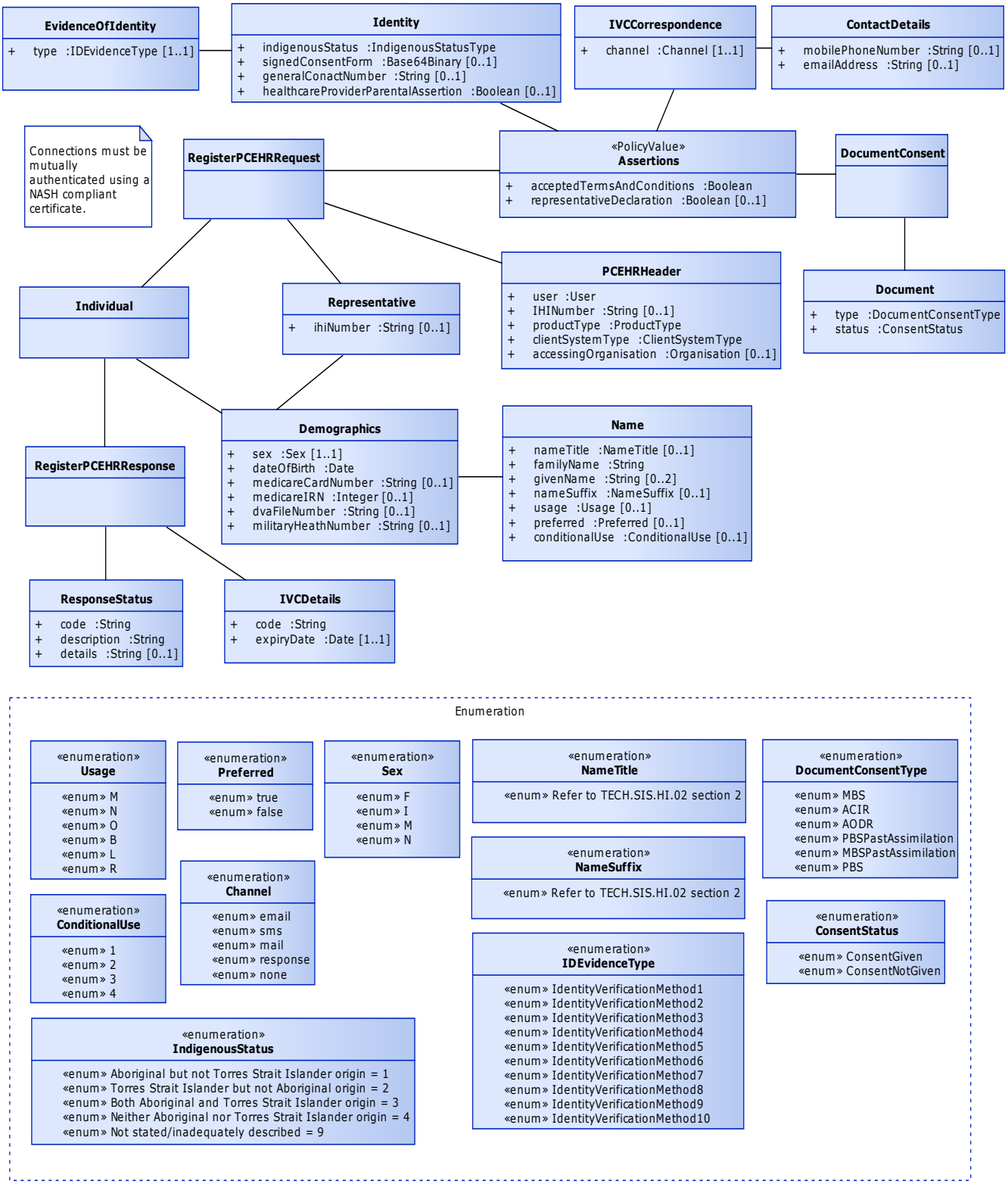

Figure 5 – registerPCEHR - Operation data view

Input messageString

Element Name	Type	Card-inality	Remarks
registerPCEHR	Grouping	1..1	
representative	Grouping	0..1	Representative ihiNumber or demographics
ihiNumber	String	0..1	The Representative's IHI number
demographics	Grouping	0..1	
name	Grouping	1..1	
nameTitle	String	0..1	Refer to TECH.SIS.HI.02 section 2
familyName	String	1..1	Representative surname
givenName	String	0..2	Representative given names
nameSuffix	String	0..1	Refer to TECH.SIS.HI.02 section 2
usage	String	0..1	Refer to TECH.SIS.HI.02 section 2
preferred	String	0..1	Flag if name is preferred name
conditionalUse	String	0..1	Refer to TECH.SIS.HI.02 section 2
/name	Grouping		
sex	String	1..1	Values("F", "I", "M", "N")
dateOfBirth	Date	1..1	
medicareCardNumber	String	0..1	Representative Medicare Card Number
medicareIRN	Integer	0..1	Representative Reference Number
dvaFileNumber	String	0..1	Representative DVA File Number
militaryHealthNumber	String	0..1	Representative Military Health Number
/demographics	Grouping		
/representative			
individual		0..1	Individual's ihiNumber provided in header) or demographics
demographics	Grouping	1..1	
name	Grouping	1..1	
nameTitle	String	0..1	Refer to TECH.SIS.HI.02 section 2
familyName	String	1..1	Individual surname
givenName	String	0..2	Individual given names
nameSuffix	String	0..1	Refer to TECH.SIS.HI.02 section 2
usage	String	0..1	Refer to TECH.SIS.HI.02 section 2

Element Name	Type	Card-inality	Remarks
preferred	String	0..1	Flag if name is preferred name
conditionalUse	String	0..1	Refer to TECH.SIS.HI.02 section 2
/name	Grouping		
sex	String	1..1	Values("F", "I", "M", "N")
dateOfBirth	Date	1..1	
medicareCardNumber	String	0..1	Individual Medicare Card Number
medicareIRN	Integer	0..1	Individual Reference Number
dvaFileNumber	String	0..1	Individual DVA File Number
militaryHealthNumber	String	0..1	Individual Military Health Number
/demographics			
/individual			
assertions		1..1	
identity	Grouping	1..1	
evidenceOfIdentity	Grouping	1..1	
type	String	1..1	**Values** / **Meaning**

Values	Meaning
IdentityVerificationMethod1	Attending third or more consultation and Medicare/DVA card
IdentityVerificationMethod2	Attending hospital with their clinical referral and Medicare/DVA card
IdentityVerificationMethod3	Attending emergency department with PHOTO ID with Medicare/DVA card
IdentityVerificationMethod4	Having prescriptions filled on three or more occasions in the past year and Medicare/DVA card
IdentityVerificationMethod5	Enrolled and attending Aboriginal Medical Service and Medicare/DVA card
IdentityVerificationMethod6	Attending third or more consultation and has a My eHealth Record
IdentityVerificationMethod7	Identity verified by referee consistent with My eHealth Record requirements

Element Name		Type	Card-inality	Remarks	
				IdentityVerificationMethod8	Resident of Aged Care facility and Medicare/DVA card
				IdentityVerificationMethod9	100pts of documentary evidence consistent with PCEHR Consumer Identity Framework
				IdentityVerificationMethod10	Other criteria approved by the System Operator
	/evidenceOfIdentity	Grouping			
	indigenousStatus	String	1..1	**Value**	**Meaning**
				1	Aboriginal but not Torres Strait Islander origin
				2	Torres Strait Islander but not Aboriginal origin
				3	Both Aboriginal and Torres Strait Islander origin
				4	Neither Aboriginal nor Torres Strait Islander origin
				9	Not stated/inadequately described
	signedConsentForm	Base64Binary	0..1	Scanned image of signed consent form (maximum size 200kb). Supported file formats: PDF, JPG, JPEG, GIF, TIF, TIFF, PNG.	
	generalConactNumber	String	0..1	The contact number must be: • Minimum 10 numeric digits; • Maximum 20 numeric digits; and • Can contain only numeric digits (0-9), spaces and/or the following special characters: '+' '–' '(' ')'; **OR** • Set to null Notes: For a "Create Record for Self" registration, the contact number will be stored against the individual's IHI. For a "Create Record for Someone Else (Child)" registration, the contact number will be stored against the Authorised Representative's IHI.	

Element Name	Type	Card-inality	Remarks
healthcareProviderParentalAssertion	Boolean	0..1	Healthcare Provider assertion flag if Authorised Representative has parental responsibilities.
/identity	Grouping		
documentConsent	Grouping	0..1	
document	Grouping	1..*	
type	String	1..1	Values ("MBS","ACIR","AODR","PBSPastAssimilation","MBSPastAssimilation","PBS")
status	String	1..1	Values("ConsentGiven","ConsentNotGiven")
/document	Grouping		
/documentConsent	Grouping		
ivcCorrespondence	Grouping	1..1	
channel	String	1..1	Values ("email","sms","response","mail","none")
contactDetails	Grouping	0..1	
mobilePhoneNumber	String	0..1	Validate with "^(\+?)(61)(4[0-9]{8})$\|^([0+])(4[0-9]{8})$". I.e. Starting with 04; Ten digits for mobile number part; Optionally preceeded with international dialling prefix and country code.
emailAddress	String	0..1	Validate with "[a-z0-9!#$%&'*+/=?^_`{\|}~-]+(?:\.[a-z0-9!#$%&'*+/=?^_`{|}~-]+)*@(?:[a-z0-9](?:[a-z0-9-]*[a-z0-9])?\.)+[a-z0-9](?:[a-z0-9-]*[a-z0-9])?" Validation according to RFC 2822.
/contactDetails	Grouping		
/ivcCorrespondence	Grouping		
acceptedTermsAndConditions	Boolean	1..1	Flag indicating if terms and conditions have been accepted
representativeDeclaration	Boolean	0..1	Parent declaration flag is mandatory if representative block is given
/assertions	Grouping		
/registerPCEHR	Grouping		

Conformance points

REGS-T 12	The Service Invoker (CIS and CSP) **SHALL** set the accessingOrganisation to the HPI-O of the organisation attempting to register the PCEHR.
REGS-T 13	The Service Invoker **SHALL** set the individual demographics if the IHI number is not passed in the PCEHRHeader.
REGS-T 14	The Service Invoker **SHALL** set the representative ihiNumber if the representative demographics are not passed in the request.
REGS-T 15	The Service Invoker **SHALL** set the representative demographics if the representative ihiNumber is not passed in the request.
REGS-T 16	The Service Invoker **SHALL** set the representative flag when registering for a child or dependant.

REGS-T 36	If ATSI status is acquired manually, the capture **SHOULD** be compliant with *National Best Practice Guidelines for Collecting Indigenous Status in Health Data Sets* "Part A: Asking the question" [AIHW].
REGS-T 37	If the Service Invoker supplies representative details, the representative block **SHALL** specify Medicare card and IRN and **SHALL NOT** specify DVA File Number or Military Health Number.

3.1.2.6 Output message

The registerPCEHR operation will return the PCEHR system common response fields.

Please refer to section 4.2 for details and response codes.

Element Name	Type	Card-inality	Remarks
registerPCEHRResponse	Grouping	1..1	
responseStatus	Grouping	1..1	
Common Response Status			See Common Response Status in Section 4.2. Refer to Table 8 ResponseStatus Responses for further details.
/responseStatus	Grouping		
individual		0..1	
ihiNumber	String	1..1	The Individual's IHI number
demographics	Grouping	1..1	
name	Grouping	1..1	
nameTitle	String	0..1	Refer to TECH.SIS.HI.02 section 2
familyName	String	1..1	Individual surname
givenName	String	0..2	Individual given names
nameSuffix	String	0..1	Refer to TECH.SIS.HI.02 section 2
usage	String	0..1	Refer to TECH.SIS.HI.02 section 2

Element Name	Type	Card-inality	Remarks
preferred	String	0..1	Flag if name is preferred name
conditionalUse	String	0..1	Refer to TECH.SIS.HI.02 section 2
/name	Grouping		
sex	String	1..1	Values("F", "I", "M", "N")
dateOfBirth	Date	1..1	
medicareCardNumber	String	0..1	Individual Medicare Card Number
medicareIRN	Integer	0..1	Individual Reference Number
dvaFileNumber	String	0..1	Individual DVA File Number
militaryHealthNumber	String	0..1	
/demographics			
/individual			
ivcDetails	Grouping	0..1	
code	String	1..1	Identity verification code
expiryDate	Date	1..1	The expiry date of the code
/ivcDetails	Grouping		
/registerPCEHRResponse	Grouping		

Service fault

The following conformance points apply to a provider of this service when creating a service fault.

Conformance points

REGS-T 17	The Service Provider **SHOULD** respond with a fault containing an se:standardError element in the circumstances defined for this fault by ATS 5820-2010.

4 Information viewpoint

The information viewpoint addresses common information models that are used in the service operations defined in the Computational Viewpoint.

Note: The error code tables may be extended as development of the PCEHR system progresses.

4.1 Information data type realisation

This section shows the logical service specification [REG-LSS] information data type realised in this technical specification.

4.1.1 Common Header

Common Header is realised into the SOAP Header on web service calls as:

- WS-Addressing Header
- PCEHRHeader
- Timestamp
- Signature

4.1.1.1 WS-Addressing header (Request)

Table 3 WS-Addressing header request

Element Name	Type	Cardinality	Remarks
WS Addressing		**1..1**	
MessageId	UUID	1..1	Unique id for the message. E.g. uuid:95b48e68-5dfc-4dbd-ab05-aaa855cec03f
To	anyURI	1..1	Value: e.g. http://www.w3.org/2005/08/addressing/anonymous
Action	anyURI	1..1	Identifier (full namespace) of the virtual service being invoked.
/WS Addressing			

Conformance points

REGS-T 18	The *Service Invoker* **SHALL** set these values in accordance with ATS 5820-2010 Section 6 - Metadata.

4.1.1.2 WS-Addressing header (Response)

Table 4 WS-Addressing header response

Element Name	Type	Cardinality	Remarks
WS Addressing		**1..1**	
MessageId	UUID	1..1	Unique id for the message. E.g. uuid:95b48e68-5dfc-4dbd-ab05-aaa855cec03f
RelatesTo	UUID	1..1	MessageId of the original service request.
/WS Addressing			

Conformance points

REGS-T 19	The *Service Provider* **SHALL** set these values in accordance with ATS 5820-2010 Section 6 - Metadata.

4.1.1.3 Timestamp

Table 5 Timestamp

Element Name	Type	Cardinality	Remarks
timestamp		**1..1**	
created	dateTime	1..1	Time at SOAP message creation. Inclusive of Date, Time and UTC Timezone. E.g. 2011-10-25T03:06:13Z
expires	dateTime	0..1	For future use.
/timestamp	**-**	**-**	**-**

4.1.1.4 Signature

Table 6 - Transmission signature in SOAP header

Element Name	Type	Cardinality	Remarks
signature		**1..1**	
signature	ds:signature	1..1	A signed attestation of key SOAP message elements using the ATS 5821 specification.
/signature	**-**	**-**	**-**

Conformance points

REGS-T 20	The elements signed by the Transmission Signature by all parties **SHALL** include the SOAP Body element.
REGS-T 21	The elements signed by the Transmission Signature by the Service Invoker **SHALL** also include the PCEHR Header element (as defined in section 4.1.1.5).
REGS-T 22	The elements signed by the Transmission Signature **SHOULD** include the Transmission Timestamp element (as defined in section 4.1.1.3).
REGS-T 23	The Service Invoker and Service Provider **SHALL** calculate the ds:DigestValue as specified in "Section 4. XML Signature Profile" of ATS 5821-2010 prior to the application of MTOM/XOP. The ds:SignedInfo element type **SHALL** be realised in conformance with "Section 4. XML Signature Profile" as specified in ATS 5821-2010.
REGS-T 24	The fragment identifier used within the ds:Reference element, specified in "Section 4. XML Signature Profile" of ATS 5821-2010, **SHALL** refer to the "id" attribute specified in Section 3.3 of W3C-XML-1.1 of the element referenced [W3C-XML].
REGS-T 25	The ds:signature element type **SHALL** be realised in conformance with "Section 4. XML Signature Profile" as specified in ATS 5821-2010.

4.1.1.5 PCEHRHeader

PCEHRHeader is used for all interactions with the PCEHR system.

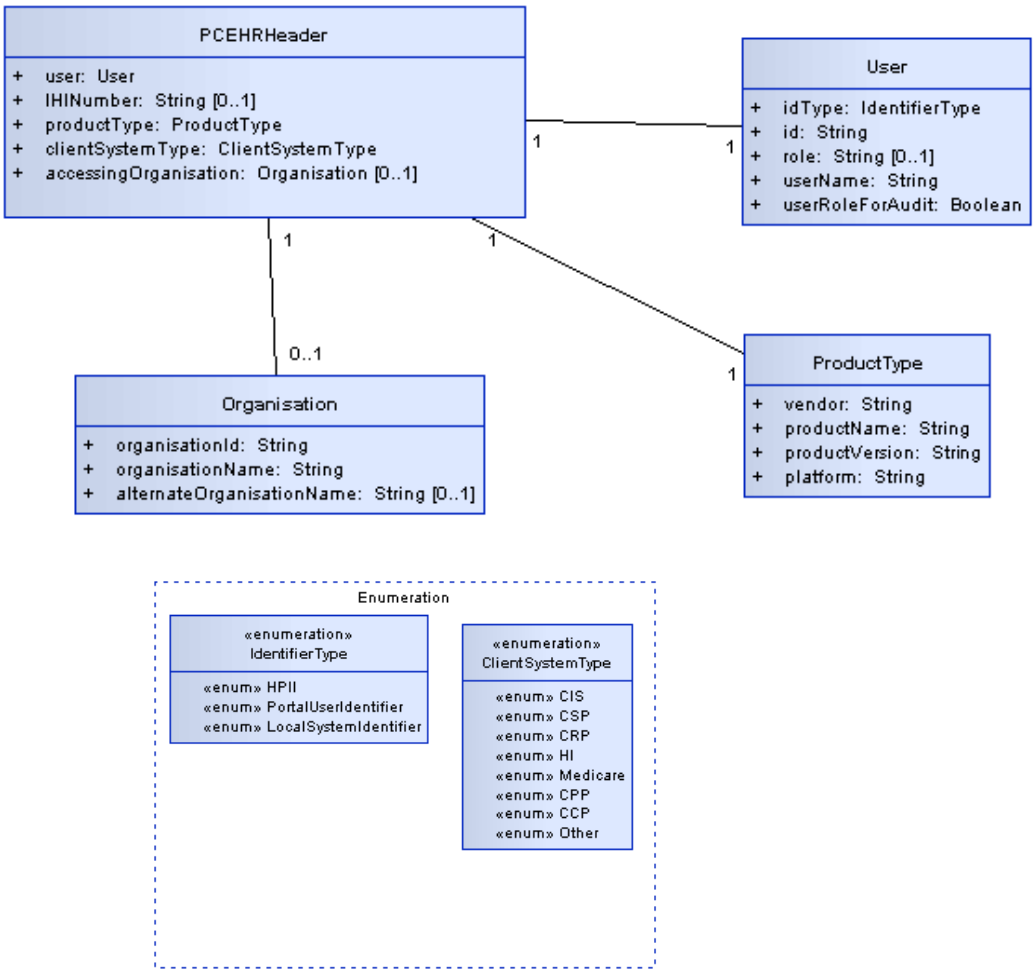

Figure 6 – PCEHRHeader

Table 7 PCEHRHeader

Element Name	Type	Cardinality	Remarks
PCEHRHeader		**1..1**	
User		**1..1**	
IDType	IdentifierType	1..1	Values ("HPII", "PortalUserIdentifier", "LocalSystemIdentifier")
ID	String	1..1	Portal User Identifier, 16-digit HPI-I number or other user ID
role	String	0..1	Optional user role
userName	String	1..1	User's name
useRoleForAudit	Boolean	1..1	If true, PCEHR will use sourceSystemUserRole as the user name for audit, else PCEHR will use sourceSystemUserName as the user name for audit
/User			
ihiNumber	String	0..1	PCEHR individual's 16-digit IHI number
productType		**1..1**	
vendor	String	1..1	Client system's vendor name
productName	String	1..1	Client system's product name
productVersion	String	1..1	Client system's product version
platform	String	1..1	Client system's platform
/productType			
clientSystemType	String	1..1	Values ("CCP","CPP", "CIS", "CSP", "CRP", "HI", "Medicare", "Other")
accessingOrganisation		**0..1**	
organisationID	String	1..1	The 16-digit healthcare organisation identifier (HPI-O)
organisationName	String	1..1	Healthcare organisation name
alternateOrganisationName	String	0..1	Alternate healthcare organisation name
/accessingOrganisation			
/PCEHRHeader			

Conformance points

REGS-T 26	The Service Invoker (CIS, CSP and Provider Portal) **SHALL** set the accessingOrganisation to the accessing organisation attempting to query the PCEHR.
REGS-T 27	The Service Invoker **SHALL** set the User.ID to either: • Preferably, if known, the 16-digit HPI-I of the provider attempting to access the PCEHR; or • Alternatively a local identifier of the provider attempting to access the PCEHR.
REGS-T 28	The Service Invoker **SHALL** set the User.IDType to the relevant value to identify the type of User.ID.
REGS-T 29	The Service Invoker (CIS, CSP) **SHALL** set the productType.vendor to the vendor name of the client system.
REGS-T 30	The Service Invoker (CIS, CSP) **SHALL** set the productType.productName to the product name of the client system.
REGS-T 31	The Service Invoker (CIS, CSP) **SHALL** set the productType.productVersion to the product version of the client system.
REGS-T 32	The Service Invoker (CIS, CSP) **SHALL** set the productType.platform to the client system vendor.
REGS-T 33	The Service Invoker (CIS) **SHALL** set the clientSystemType to CIS.
REGS-T 34	The Service Invoker (CSP) **SHALL** set the clientSystemType to CSP.

4.2 Common response status

All PCEHR system operations will return common response fields.

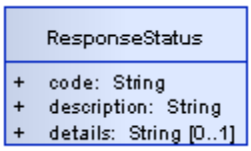

Figure 7 – ResponseStatus

Table 8 ResponseStatus Responses

Element Name	Type	Cardinality	Remarks
ResponseStatus		**1..1**	
code	String	1..1	Status code for the result of the transaction
description	String	1..1	Brief status description
details	String	0..1	Additional detail of the response
/ ResponseStatus			

Conformance points

REGS-T 35	The Service Provider **SHALL** set the appropriate code from Table 9 for any business failure.

Response codes

Table 9 Response codes

Code	Description
PCEHR_SUCCESS	SUCCESS
PCEHR_ERROR_0524	Attachment exceeds maximum supported size
PCEHR_ERROR_0525	Request message must be XOP/MTOM
PCEHR_ERROR_0526	Attachment MIME type is not supported
PCEHR_ERROR_9001	Evidence of identity has not been verified by provider
PCEHR_ERROR_9003	The latest terms and conditions have not been accepted
PCEHR_ERROR_9004	IVC Correspondence Channel has not been specified
PCEHR_ERROR_9005	Invalid IVC Correspondence Channel
PCEHR_ERROR_9007	Representative Declaration is required for assisted registration
PCEHR_ERROR_9008	Individual PCEHR already exists
PCEHR_ERROR_9009	Child PCEHR already exists
PCEHR_ERROR_9010	Individual cannot be less than 14 years of age
PCEHR_ERROR_9011	There is no relationship known to Medicare between the adult and child
PCEHR_ERROR_9012	Child cannot be older than 18 years of age
PCEHR_ERROR_9013	There must be a 14-year age gap between parent and child
PCEHR_ERROR_9016	Representative IHI number or demographics have not been specified
PCEHR_ERROR_9017	Individual IHI number or demographics have not been specified
PCEHR_ERROR_9018	Indigenous status has not been specified
PCEHR_ERROR_9019	IVC mail correspondence is currently not supported
PCEHR_ERROR_9020	Mobile phone number is required for IVC SMS correspondence
PCEHR_ERROR_9021	Email address is required for IVC email correspondence
PCEHR_ERROR_5006	No unique active IHI found
PCEHR_ERROR_0101	Invalid family name
PCEHR_ERROR_0102	Invalid given name
PCEHR_ERROR_0103	The birth year must not be less than 1800
PCEHR_ERROR_0104	The date of birth must not be in the future
PCEHR_ERROR_0105	Invalid mobile phone number
PCEHR_ERROR_0106	Invalid email address
PCEHR_ERROR_0107	Invalid Medicare card number
PCEHR_ERROR_0108	Invalid Medicare IRN

Code	Description
PCEHR_ERROR_0109	Invalid DVA file number
PCEHR_ERROR_0134	Invalid sex
PCEHR_ERROR_0135	Invalid date of birth
PCEHR_ERROR_0140	Parental assertion flag not required

5 Engineering viewpoint

The engineering viewpoint includes definitions of mechanisms and functions to support distributed interactions between computational objects as a series of templates (i.e. patterns) for computational interactions. These, in turn, are parameterised to support a range of different policies defined in the enterprise, information or computational specifications.

Examples of such functions are:

- repository (e.g. storage and information organisation function)
- security (e.g. access control, authentication, security audit, integrity and confidentiality functions)
- network services (e.g. naming services, time services and directory)
- type repository functions.

The engineering viewpoint is relevant for those who are providing infrastructure services and functions, such as system architects, network architects, security architects and middleware specialists.

5.1 Discovery services

The location of the register operations will be shared between parties before interaction. Dynamic discovery mechanisms will not be provided.

Appendix A XSD and WSDL

A.1 Data types

Table 10 below provides the name and description of the XML schema relevant for this specification. The schemas (XSD files) are packaged with the PCEHR B2B Client Library - Schema WSDL v2.0.0 [PCEHR-B2B-LIB], available from http://www.nehta.gov.au/implementation-resources/ehealth-reference-platform/EP-1940-2014/NEHTA-1932-2014.

Table 10 XML Schemas

XML Schema	Schema description
PCEHR_RegisterPCEHR.xsd	Defines the XSD for data associated with the B2B_RegisterPCEHR.wsdl interface.
wsp-StandardError-2010.xsd	Defines the XSD for the standard error data types.
PCEHR_CommonTypes.xsd	Defines the XSD for common data types that are used by all WSDL interfaces.
PCEHR_CommonTypes_Supplementary.xsd	Defines the XSD for supplementary to the common data types that are used by all WSDL interfaces.

A.2 registerPCEHR interface

A.2.1 Interface definition

The WSDL specification that defines the registerPCEHR SOAP interface is the B2B_RegisterPCEHRInterface.wsdl. This WSDL is packaged with the PCEHR B2B Client Library - Schema WSDL v2.0.0 [PCEHR-B2B-LIB], available from http://www.nehta.gov.au/implementation-resources/ehealth-reference-platform/EP-1940-2014/NEHTA-1932-2014.

A.2.2 TLS binding

This WSDL defines the binding of the registerPCEHR based on the TLS Security Profile defined in ATS 5820—2010.

It is packaged with the PCEHR B2B Client Library - Schema WSDL v2.0.0 [PCEHR-B2B-LIB], available from http://www.nehta.gov.au/implementation-resources/ehealth-reference-platform/EP-1940-2014/NEHTA-1932-2014.

Acronyms

The core set of terms used within the PCEHR are specified within the *PCEHR System – Glossary* [PCEHR-GLS].

Acronym	Description
CIS	clinical information system
CSP	contracted service provider
HPI-I	Healthcare Provider Identifier - Individual
HPI-O	Healthcare Provider Identifier - Organisation
IHI	Individual Healthcare Identifier
IRN	Individual Reference Number
IVC	Identity Verification Code
LSS	logical service specification
PCEHR	personally controlled electronic health record
TLS	Transport Layer Security
TSS	technical service specification
UML	Unified Modeling Language
WSDL	Web Service Definition Language
WSP	Web Service Profile – Commonly used to refer to the ATS-5820 Web Service Profile.
XSD	XML Schema Definition

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