

PRIVACY AND SECURITY STANDARDS APPLICABLE TO ARRA REQUIREMENTS (July 21, 2009)

Refs/ Cross-Refs	Short Title	Standard	Services Supported	Standards Readiness (see definitions below)			
				1	2	3	4
HITSP	HL7 V3 RBAC	HL7 V3 RBAC, R1-2008, HL7 Version 3 Standard: Role Based Access Control (RBAC) Healthcare Permissions Catalog, Release 1, February 2008 [1]	Access control		x		
HITSP	OASIS XACML	OASIS eXtensible Access Control Markup Language (XACML), ITU-T Recommendation X.1142, February 2005	Access control			x	
HITSP	OASIS SAML	OASIS Security Assertion Markup Language (SAML) v2.0 OASIS Standard; ITU-T X.1141 [2]	Access control	x			
HITSP	OASIS WS-Trust	OASIS WS-Trust Version 1.3, March 2007	Access control		x		
	ISO Common Criteria	ISO/IEC 15408, Common Criteria for Information Technology Security Evaluation [3]	Assurance certification		x		
HITSP	IHE ATNA	IHE ITI-TF Revision 4.0 or later, Audit Trail and Node Authentication (ATNA) Integration Profile, Section 9.1 Authentication	Audit		x		
HITSP	ASTM Authentication	ASTM Standard Guide for Electronic Authentication of Health Care Information: # E1762-95(2003)	Authentication	x			
<i>IHE EUA</i>	IETF Kerberos	IETF RFC 4120. The Kerberos Network Authentication Service (V5). July 2005	Authentication	x			
HITSP	IHE ITI-TF	IHE ITI-TF Rev. 3.0	Authentication		x		
HITSP	IHE XDS.b	IHE ITI-TF Revision 5.0 Volume 2 Supplement 2007 – 2008 Cross-Enterprise Document Sharing-B (XDS.b)	Authentication; Consent management		x		
	IHE EUA	IHE ITI-TF Revision 5.0 or later, Enterprise User Authentication (EUA) profile	Authentication	x			
HITSP	IHE XUA	IHE ITI-TF Volume 2 Supplement 2007 – 2008 Cross Enterprise User Assertion (XUA)	Authentication		x		
HITSP; <i>IHE Registry Query; IHE XDS.b</i>	OASIS SOAP	OASIS Simple Object Access Protocol (SOAP) Version 1.1;	Authentication	x			

HITSP	HL7 V3 Privacy Consent	HL7 Version 3.0 Privacy Consent related specifications RCMR_RM010001 - Data Consent [1]	Consent management				x
HITSP	IHE BPPC	IHE ITI-TF Revision 5.0, Basic Patient Privacy Consents (BPPC) Profile [4]	Consent management		x		
HITSP	IHE Registry Query	IHE ITI-TF Revision 5.0 - Registry Stored Query Transaction for XDS Profile Supplement [ITI-18]	Consent management		x		
<i>IHE Registry Query</i>	OASIS ebRIM	OASIS/ebXML Registry Information Model v3.0	Consent management		x		
<i>IHE Registry Query</i>	OASIS ebRS	OASIS/ebXML Registry Services (ebRS) Specifications v3.0	Consent management		x		
HITSP; <i>IHE Consistent Time</i>	IETF Network Time	IETF Network Time Protocol (Version 3) Specification, Implementation and Analysis, "Request for Comment" (RFC) #1305, March, 1992	Consistent time	x			
HITSP; <i>IHE Consistent Time</i>	IETF SNTP	IETF Simple Network Time Protocol (SNTP) Version 4, "Request for Comment" (RFC) #2030, October, 1996	Consistent time	x			
HITSP	IHE Consistent Time	IHE ITI-TF Revision 4.0 or later, Consistent Time (CT) Integration Profile [5]	Consistent time	x			
HIPAA	HIPAA Deidentification	45 CFR Parts 160 and 164. Standards for Privacy of Individually Identifiable Health Information; Final Rule. August 14, 2002. Section 164.514(a-b) Deidentification of protected health information. (Deidentification)	Deidentification	x			
HIPAA	HIPAA Pseudonymization	46 CFR Parts 160 and 164. Standards for Privacy of Individually Identifiable Health Information; Final Rule. August 14, 2002. Section 164.514(c) Reidentification (Pseudonymization)	Deidentification	x			
HITSP	ISO Pseudonymization	ISO/TS 25237:2008 Health Informatics -- Pseudonymisation, Unpublished Technical Specification (Pseudonymization) [6]	Deidentification			x	
HITSP	HL7 V3 Pedigree	HL7 Version 3.0 Clinical Genomics; Pedigree, Release 1 (Anonymization) [1]	Deidentification		x		
<i>IHE PWP</i>	IETF DNS	IETF: RFC-2181, -2219, -2782	Identity Management	x			
<i>IHE PWP</i>	IETF LDAP	IETF: RFC-2251, -2252, -2253	Identity Management	x			
HITSP	IHE PWP	IHE ITI-TF Revision 4.0 or later, Personnel White Pages (PWP)	Identity Management			x	
<i>IHE PWP</i>	IETF DNS Language Tags	RFC 1766 Tags for the Identification of Languages	Identity Management	x			
	IHE XCA	IHE ITI-TF Revision 5.0 or later, Cross Community Access (XCA) profile	Infrastructure		x		
HITSP	IHE XDS.b	IHE ITI-TF Revision 5.0 Volume 2 Supplement 2007 – 2008 Cross-Enterprise Document Sharing-B (XDS.b)	Infrastructure		x		

HITSP	ETSA XadES	ETSI Technical Specification TS 101 903: XML Advanced Electronic Signatures (XadES)	Non-repudiation			x	
HITSP	IHE DSG	IHE ITI-TF Supplement Volume 3 – Document Digital Signature (DSG) Content Profile	Non-repudiation			x	
<i>IHE XDM</i>	IETF S/MIME	IETF Cryptographic Message Syntax, RFC-2630, -3852	Non-repudiation; secure email	x			
<i>IHE DSG</i>	ISO PKI	ISO/TS-17090, Health Informatics, Public Key Infrastructure	Non-repudiation			x	
<i>IHE ATNA</i>	FIPS AES	FIPS 197, Advanced Encryption Standard, Nov 2001	Secure transmission	x			
<i>IHE ATNA</i>	IETF TLS	IETF Transport Layer Security (TLS) Protocol: RFC 2246, RFC 3546 [7]	Secure transmission	x			
HITSP	IHE XDM	IHE ITI-TF Revision 5.0 or later, Cross-Enterprise Document Media Interchange (XDM) Integration Profile [8]	Secure email		x		

NOTES:

[1] HL7 V3 constructs are gaining traction in the marketplace.

[2] SAML is widely used within enterprises, but lacks standardized set of attributes and vocabulary to enable use between enterprises (e.g., HIEs).

[3] The Common Criteria is not directly applicable to product certification, but could be used to develop one or more Protection Profiles specifying assurance levels

[4] Really just a special case of XDS, BPPC stores and retrieves to/from a document repository a document containing an individual's consents. It does not interpret

[5] Uses NTP and SNTP, both of which are quite mature.

[6] Discusses pseudonymization, but is not a technical specification.

[7] Require integrity protection -- i.e., no NULL_NULL

[8] Addresses sending of sensitive documents (ZIP files) over email secured using S/MIME (also used in IHE ATNA).

STANDARDS READINESS:

1 = mature; known/certain for 2011 (>20% implemented)

2 = ready for introduction; known/certain for 2013

3 = well developed; work in progress for 2013/2015

4 = in development; standards to be determined