PRIVACY AND SECURITY STANDARDS APPLICABLE TO ARRA REQUIREMENTS (August 20, 2009 Update)

| Source Refs/ Cross-Refs | Standard | Services Supported | Recommended Implementation Timeframe | | |
|----------------------------|---|-------------------------|--|------|------|
| | | | 2011 | 2013 | 2015 |
| HITSP TP20/SC108 | HL7 V3 RBAC, R1-2008, HL7 Version 3 Standard: Role Based Access Control (RBAC) Healthcare Permissions Catalog, Release 1, February 2008 [1] | Access control | | х | |
| HITSP | OASIS eXtensible Access Control Markup Language (XACML), ITU-T | Access control | | | х |
| TP20/SC108 | Recommendation X.1142, February 2005 | | | | |
| HITSP | OASIS Security Assertion Markup Language (SAML) v2.0 OASIS | Access control | | Х | |
| C19/TP20/ | Standard, ITU-T X.1141 [2] | | | | |
| SC108 | | | | | |
| HITSP | OASIS WS-Trust Version 1.3, March 2007 | Access control | | Х | |
| TP20/SC108 | | | | | |
| HITSP T15/T17/ | IHE ITI-TF Revision 4.0 or later, Audit Trail and Node Authentication | Audit | | Х | |
| SC109 | (ATNA) Integration Profile, Section 9.1 Authentication | | | | |
| IHE EUA | IETF RFC 4120. The Kerberos Network Authentication Service (V5). July 2005 | Authentication | Х | | |
| HITSP TP30 | IHE ITI-TF Revision 5.0 Volume 2 Supplement 2007 – 2008 Cross- | Authentication; Consent | | Х | |
| | Enterprise Document Sharing-B (XDS.b) | management | | | |
| | IHE ITI-TF Revision 5.0 or later, Enterprise User Authentication (EUA) profile | Authentication | х | | |
| HITSP C19 | | Authentication | | Х | |

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| HITSP C19; IHE Registry Query; IHE XDS.b | OASIS Simple Object Access Protocol (SOAP) Version 1.1 [4] | Authentication | х | | |
| HITSP CAP143 | HITSP/CAP143 Manage Consumer Preference and Consents | Consent management | | х | |
| HITSP TP30 | HL7 Version 3.0 Privacy Consent related specifications RCMR_RM010001 - Data Consent [1] | Consent management | | | х |
| HITSP TP30 | IHE ITI-TF Revision 5.0, Basic Patient Privacy Consents (BPPC) Profile [5] | Consent management | | х | |
| HITSP TP30 | IHE ITI-TF Revision 5.0 - Registry Stored Query Transaction for XDS Profile Supplement [ITI-18] | Consent management | | | |
| IHE Registry Query | OASIS/ebXML Registry Information Model v3.0 | Consent management | | х | |
| IHE Registry Query | OASIS/ebXML Registry Services (ebRS) Specifications v3.0 | Consent management | | х | |
| HITSP T16; IHE Consistent Time | IETF Network Time Protocol (Version 3) Specification, Implementation and Analysis, "Request for Comment" (RFC) #1305, March, 1992 | Consistent time | х | | |
| HITSP T16; IHE Consistent Time | IETF Simple Network Time Protocol (SNTP) Version 4, "Request for Comment" (RFC) #2030, October, 1996 | Consistent time | х | | |
| HITSP T16; IHE Consistent Time | IHE ITI-TF Revision 4.0 or later, Consistent Time (CT) Integration Profile [6] | Consistent time | х | | |
| HITSP CAP119 | Communicate Structured Document (using portable media or system-to-system (PHR) topology) | Consumer EHR | | х | |

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|----------------------------|---|---------------------|--|------|------|
| | | | 2011 | 2013 | 2015 |
| HITSP CAP120 | Communicate Unstructured Document (using portable media or system-to-system (PHR) topology) | Consumer EHR | х | | |
| HIPAA | 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 | х | | |
| HIPAA | 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 | х | | |
| HITSP T24/C25/ | ISO/TS 25237:2008 Health Informatics Pseudonymisation, | Deidentification | | | х |
| C88 | Unpublished Technical Specification (Pseudonymization) [7] | | | | |
| HITSP C87 | HL7 Version 3.0 Clinical Genomics; Pedigree, Release 1 (Anonymization) [1] | Deidentification | | х | |
| IHE PWP | IETF: RFC-2181, -2219, -2782 (DNS services) | Identity Management | х | | |
| IHE PWP | IETF: RFC-2251, -2252, -2253 (LDAP) | Identity Management | х | | |
| HITSP T64 | IHE ITI-TF Revision 4.0 or later, Personnel White Pages (PWP) | Identity Management | | х | |
| HITSP C19 | OASIS Web Services Security:SOAP Message Security 1.1 (WS-Security 2004), 1 February 2006 [4] | Identity Management | х | | |
| IHE PWP | RFC 1766 Tags for the Identification of Languages | Identity Management | Х | | |
| HITSP TP30 | IHE ITI-TF Revision 5.0 or later, Cross Community Access (XCA) profile | Infrastructure | | х | |
| HITSP C26 | ETSI Technical Specification TS 101 903: XML Advanced Electronic Signatures (XadES) | Non-repudiation | | | х |
| HITSP C26 | ASTM Standard Guide for Electronic Authentication of Health Care Information: # E1762-95(2003) | Non-Repudiation | х | | |

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| HITSP C26 | HIE ITI-TF Supplement Volume 3 – Document Digital Signature (DSG) Content Profile | Non-repudiation | | | х |
| IHE XDM | IETF Cryptographic Message Syntax, RFC-2630, -3852 | Non-repudiation; secure email | х | | |
| IHE DSG | ISO/TS-17090, Health Informatics, Public Key Infrastructure | Non-repudiation | | | х |
| IHE ATNA | FIPS 197, Advanced Encryption Standard, Nov 2001 | Secure transmission | Х | | |
| IHE ATNA | FIPS PUB 180-2 with change notice to include SHA-224. 1 August 2002. SHA-2 family (excludes SHA-1). | Secure transmission | х | | |
| IHE ATNA | IETF Transport Layer Security (TLS) Protocol: RFC 2246, RFC 3546 [8] | Secure transmission | х | | |
| IHE BPPC | IHE ITI-TF Cross Enterprise Document Reliable Interchange (XDR) | Secure transmission | | х | |
| HITSP T33 | IHE ITI-TF Revision 5.0 or later, Cross-Enterprise Document Media Interchange (XDM) Integration Profile [9] | Secure email | | х | |

NOTES:

- [1] HL7 V3 constructs are gaining traction in the marketplace.
- [2] SAML is a well established standard set, with broad support from security vendors, but cannot be considered fully accepted. Also, with respect to healthcare use, SAML lacks a standardized set of attributes and vocabulary to enable its use between enterprises (e.g., HIEs).
- [3] XUA uses a subset of SAML for inter-enterprise exchanges -- therefore rated 2, consistent with inter-enterprise SAML.
- [4] SOAP is generally specified for web-services (WS) messaging in IHE profiles and HITSP constructs, so the SOAP standard and WS standards referenced by the HITSP constructs are included here. However, recent technology trends in web development are showing REpresentational State Transfer (REST) emerging as an alternative solution for eliminating some of the complexity associated with the WS-* standards. REST is not a new standard; rather it uses the "HTTP GET" command with a URI to retrieve the desired content. IHE ATNA (HITSP T17) accommodates both WS-* and REST. So rather than recommending one over the other, the Privacy and Security WG is recommending that both REST and SOAP be recognized as acceptable web-development design approaches.

| | | | Recommended | | |
|--------------|----------|--------------------|-----------------------------|------|------|
| Source Refs/ | | | Implementation Timeframe | | on |
| Cross-Refs | Standard | Services Supported | | | |
| | | | 2011 | 2013 | 2015 |

- [5] 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 those consents nor integrate them with access control.
- [6] Uses NTP and SNTP, both of which are quite mature.
- [7] Discusses pseudonymization, but is not a technical specification.
- [8] Requires integrity protection -- i.e., no NULL_NULL
- [9] Addresses sending of sensitive documents (ZIP files) over email secured using S/MIME (also used in IHE ATNA).