Board Report: IHE ITI Domain

Sponsors:

Health Information Management Systems Society (HIMSS)

Leadership:

* Secretariat: Bell, Sarah [Sarah.Bell@himss.org](mailto:Sarah.Bell@himss.org)
* Board Representative: ITI Co-chairs for 2022
* Plan Cmte Co-chair: John Moehrke, ByLight Consulting
* Plan Cmte Co-chair: Steve Nichols, GE Healthcare
* Tech Cmte Co-chair: Luke Duncan, PATH
* Tech Cmte Co-chair: Oliver Egger, ahdis ag

Membership Rosters:

Planning and Technical Committee: <https://docs.google.com/spreadsheets/d/1lQ4dahBiJxRiLO7NBskS5pcJqfkdewfysgiHwq_Q7ew>

ITI Technical Google Group: 575 Members

ITI Planning Google Group: 234 Members

MHD Implementers Google Group: 263 members

IHE XDS Implementors Google Group: (unknown)

Activity:

* Domain Scope: The IT Infrastructure Domain defines interoperable infrastructure for the secure sharing  of healthcare information independent of clinical domain. Interoperable infrastructure is necessary to  support common IT functions for a variety of use cases but is rarely visible to the end user. Components  supporting interoperable infrastructure may be embedded in applications but are often deployed as a  shared resource within an organization or a regional or national health information exchange.
* Current Cycle Timeline/Milestones: [ITI Project Planning](https://github.com/IHE/IT-Infrastructure/projects/2)
* Background: IHE ITI was established by HIMSS & RSNA in 2002 in order to address use cases that cross multiple clinical domains and rely on a common IT Infrastructure.

Most Significant Profiles:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Title** | **# passing @Cthon** | | **# product @Registry** | | **Description** | **External Significance** |
| **2022** | **2021** | **2022** | **2021** |
| Consistent Time (CT) | 48 | 41 | 78 | \* | Time synchronization | * Endorsed by the European Commission * Dependency for several other profiles |
| Audit Trail and Node Authentication (ATNA) | 32 | 29 | 67 | 138 | Establishes security measures which, together with the Security Policy and Procedures, provide patient information confidentiality, data integrity and user accountability | * Endorsed by the European Commission * Support / Alignment with * MDR 17.4, 23.4 * NEMA Manufacturer Disclosure Statement for Medical Device Security MDS2 * DoD App Security STIGs |
| Cross-Enterprise Clinical Documents Share (XDS.b) | 20 | 23 | 43 | 51 | Provides a standards-based specification for managing the sharing of documents. | * Endorsed by the European Commission * Active Implementors Group * 2,360 results Google Scholar search terms “IHE XDS” (Enterprise and regional document sharing) |
| Mobile access to Health Documents (MHD) | 10 | 16 | 9 | \* | * FHIR-based document sharing * Projection testing |
| Cross-Enterprise Document Reliable Interchange (XDR) | 8 | 7 | 15 | \* | Lightweight point-to-point XDS |
| Cross-Enterprise Document Sharing of Scanned Documents (XDS-SD) | 8 | 6 | 12 | \* | * Endorsed by the European Commission * XDS for non-specific formats |
| Remove Metadata and Documents (RMD) | 7 | 10 | 2 | \* | Supports XDS by enabling document removal from an Repository, and metadata removal from a Registry. | Part of the XDS family |
| Cross Community Access (XCA) | 11 | 9 | 12 | 7 | Provides query and retrieve patient relevant medical data held by other communities. | * Endorsed by the European Commission * Serves as the basis for several HIEs |
| Patient Administration Management (PAM) | 12 | 10 | 8 | \* | Share patient demographic data within and between acute care and ambulatory settings | * Endorsed by the European Commission * Supports other profiles in enterprise and regional architectures by maintaining and reconciling the identity of a patient who may be identified in different ways by disparate systems |
| Patient Demographics Query (PDQ) | 8 | 12 | 23 | 9 | An application query to a central patient information server to retrieve a patient’s demographic and visit information |
| Patient Demographic Query HL7 V3 (PDQ V3) | 10 | 12 | 13 | 8 |
| Patient Demographics Query for Mobile (PDQm) | 7 | 13 | 0 | 3 |
| Patient Identifier Cross-referencing for MPI (PIX) | 11 | 11 | 31 | 14 | Supports the cross-referencing of patient identifiers from multiple Patient Identifier Domains |
| Patient Identifier Cross-Reference HL7 V3 (PIX V3) | 12 | 13 | 17 | 9 |
| Patient Identifier Cross-reference for Mobile (PIXm) | 6 | 12 | 0 | 3 |
| Cross Community Patient Discovery (XCPD) | 8 | 9 | 9 | \* |
| Cross Enterprise User Assertion (XUA) | 9 | 10 | 13 | \* | Provides means to communicate claims about the identity of an authenticated principal | * Endorsed by the European Commission * Supports other profiles in authentication |
| Basic Patient Privacy Consents (BPPC) | 6 | 3 | 13 | \* | Supports the development and implementation pf privacy policies | Supports patient opt-in and opt-out for health document sharing |
| Advanced Patient Privacy Consents (APPC) | 5 | 5 | 5 | \* |
| Sharing Value Sets (SVS) | 5 | 6 | 1 | \* | Exchange of a centrally managed common, uniform nomenclature |  |
| Restricted Metadata Update (RMU) | 5 | 0 | 0 | \* | Provides a mechanism for changing Document Sharing metadata both within and across community | Supports document sharing profiles |

# vendor @CThon is a total count of successful vendors from Connectathon-results.ihe.net   
# product @Registry is a count of registered Statements from Product-registry.ihe.net.

\* = not evaluated in 2021

Significant Deployment Activity:

Profiles specified in projects and offered at Projectathons (from IHE Catalyst):

* e Health Suisse [Swiss EPR Projectathon](https://www.e-health-suisse.ch/fileadmin/user_upload/Dokumente/E/EPR-Projectathon-2022_Final-Report_e.pdf): ATNA, HPD, MHD, PDQV3, PIXm, PIXV3, XDS, XDS-I, XUA and SVS
* Canada Health Infoway [pan-Canadian Projectathon](https://infoscribe.infoway-inforoute.ca/download/attachments/149160307/Infoway%20Projectathon%20March%202022%20-%20Final%20Report.pdf): CT, ATNA, MHD, IUA, XDS and PIX
* epSOS /eHDSI/EXPAND: XCA, XCPD, ATNA, CT, XDS-SD, XDR
* Greek NeHIF: XDS.b, ATNA, CT, XUA
* Ireland: ATNA, CT, PDQ, XDS.b, BPPC
* Abrumet: ATNA, CT, MHD, XDS, XUA
* Pan Canadian: CT, ATNA, MHD

Other Deployment Activity:

* US CareQuality, CommonWell, eHealthExchange, TEFCA, QTF: XCA, XCPD, XUA
* WHO profiling for Covid Credential -- <https://worldhealthorganization.github.io/ddcc/>

Connectathons and Other Events:

* The last Connectathon was in-person joint event for IHE North America & IHE Europe. The number of ITI profiles tested, and participating vendors was similar to the combined total of the 2021 NA & EU virtual Connectathons.

New Profiles:

* See: <https://github.com/IHE/IT-Infrastructure/projects/2>

| **Trial Implementations** | **Status** | **Date** |
| --- | --- | --- |
| Mobile Access to Health Documents (MHD) | Revised | 12/7/2022 |
| Secure Retrieve (SeR) | Revised | 10/24/2022 |
| Basic Audit Log Patterns (BALP) | Revised | 10/21/2022 |
| Sharing Valuesets, Codes, and Maps (SVCM) | Revised | 10/21/2022 |
| Mobile Care Services Discovery (mCSD) | Revised | 8/12/2022 |
| Patient Master Identity Registry (PMIR) | Revised | 8/9/2022 |
| Extensions to Document Metadata Subscription | Revised | 7/22/2022 |
| Internet User Authorization (IUA) | Revised | 6/17/2022 |
| Remove Metadata and Documents (RMD) | Revised | 6/17/2022 |
| XDS Metadata Update | Revised | 6/17/2022 |
| Mobile Health Document Sharing (MHDS) | Revised | 3/1/2022 |
| Patient Demographics Query for Mobile (PDQm) | Revised | 3/1/2022 |
| Patient Identifier Cross-reference for Mobile (PIXm) | Revised | 3/1/2022 |
| **White Papers** | **Status** | **Date** |
| Document Sharing Metadata | Publish | 3/1/2022 |
| **Public Comment** | **Status** | **Date** |
| Mobile Care Services Discovery (mCSD) Use Cases White Paper | Publish | 11/8/2022 |

In Development

* Scheduling for Mobile
* Document Sharing Across Network Topologies
* Privacy Consents on FHIR

FHIR Implementation Guides (http://www.fhir.org/guides/registry/)

* FormatCode Vocabulary
* Mobile access to Health Documents (MHD)
* Mobile Health Document Sharing (MHDS)
* Mobile Care Services Discovery (mCSD)
* Basic Audit Log Patterns (BALP)
* Patient Master Identity Registry (PMIR)
* Sharing Valuesets, Codes, and Maps (SVCM)
* Patient Identifier Cross-reference for Mobile (PIXm)
* Patient Demographics Query for Mobile (PDQm)

Publication of Final Text Volumes to HTML

* Publication site: <https://profiles.ihe.net/>
* Staging / archive: https://github.com/IHE/publications

Trends:

* There is strong interest in profiles using FHIR for API use, and for green fields.
* The Document Sharing infrastructure continues to be the dominant HIE.
* There is interest in using FHIR-Document (International Patient Summary) over the Document Sharing infrastructure
* There is a need for more formal testing and support for projects.
* Connectathon registrations are improving, but do not yet show a trend for IT-Infrastructure

\*Last datapoint from Japan 2019

Summary of Future Plans:

See: <https://github.com/IHE/IT-Infrastructure/projects/2>

* Use of $match to support Patient lookup
* Define Finance and Insurance Services
* Convert more PDF supplements on FHIR to IG format
* Federate MHDS
* RESTful document subscription