

US Office of National Coordinator (ONC)
Standards and Interoperability (S&I) Framework
Cross Initiative – S&I Simplification Work Group

Simplification & UCAT Priorities

In collaboration with NIST and AHRQ

31 July 2014

S&I Simplification - Analysis Status - 1 July 2014 - Core Matrix Version 3.1 DRAFT
Incorporation of Use Case Initiatives in S&I Simplification Core Matrix

Initiative	Initial Analysis Phase - Core Matrix					FHIM	AHRQ	Consensus Core Matrix			
	Analysis Type	Common Requirements	Common Actors, Systems, Roles	Scenarios, Event Steps	Common Actions	Common Data Objects, Elements	US Health Information Knowledgebase				
Transitions of Care (TOC)	Retro	COMPLETE	COMPLETE	COMPLETE	COMPLETE	FHIM Mapping in Progress	REGISTERED	v1			
Lab Results Interface (LRI)								v2.1			
Longitudinal Coordination of Care (LCC) 1								TBD			
LCC 2											
Lab Orders Interface (LOI)		In Progress					FHIM Mapping in Progress	REGISTERED	v2.1		
Provider Directory (PD) - Digital Certificate											
PD - Electronic Address											
esMD 1 - Electronic Submission of Medical Documentation, Provider Profiles Authentication											
esMD 2 - Structured Content of Electronic Medical Documentation Request (eMDR)		Concurrent	COMPLETE	COMPLETE	COMPLETE	COMPLETE	FHIM Mapping in Progress	Awaiting Tooling	v3		
esMD 3 - Author of Record Level 1											
esMD 3 - Author of Record Level 2											
esMD 3 - Author of Record Level 3	Retro	Future					FHIM Mapping in Progress	REGISTERED	v2.1		
Query Health (QH)	Retro	COMPLETE	COMPLETE	COMPLETE	COMPLETE	FHIM Mapping in Progress				Awaiting Tooling	v3
Data Segmentation for Privacy (DS4P)											
Public Health Reporting (PHRI)											
HeD 1 - Health eDecisions - Clinical Decision Support (CDS) Artifact Sharing											
HeD 2 - CDS Guidance Service											
Structured Data Capture											
EU/US eHealth Initiative	Concurrent	In Progress								TBD	TBD
DAF 1 - Data Access Framework - Local Access	Retro	TBD									
DAF 2 - Targeted Access											
Data Provenance	Concurrent	In Progress					In Progress	REGISTERED	N/A		
RESTful Health Exchange (RHEX)	TBD	TBD									
Automated Blue Button		N/A									
Electronic Certificate		N/A					In Progress	REGISTERED	N/A		

General Priorities

- Analyze Components from Latest S&I Use Case Requirements
 - Most Recent Analysis: Data Access Framework
- Solicit/Compare Use Case Templates
 - S&I Plus Strategy
 - Identify Core Use Case Template
 - » Now evident in the Use Case Exchange Format
- Leverage Opportunities

Leveraging Opportunities

- S&I Use Cases – Buildout
- ISO and CEN National Members (via ISO 19669)
 - Often tied to National HIT Programs
- **Federal Health Architecture**
 - DoD, VA, IHS, FDA, CMS, HHS, ONC – CDC or NLM or NIH
- NIST: Cross Industry
- Canada Health Infoway
- West Health Institute
- Health Services Platform Consortium (HSPC)

Leveraging Opportunities

- Federal Health Architecture (FHA)
Health Information Modeling (HIM)
 - Month Meetings
- Requesting demo focused on UCAT, particularly FHIM Integration
 - Using latest FHIM Update – Posted each Month-end
- Two demos planned
 - 12 August – Sparx Systems
 - 9 September – Prometheus
- NIST to be invited

Leveraging HL7 Standards

- Via FHIM:
 - Version 2 Messages
 - Clinical Document Architecture (CDA) Release 2
 - » Consolidated CDA, Continuity of Care Document
 - Fast Health Interoperable Resources (FHIR)
- Via Use Case Events/Actions
 - EHR System Functional Model R2 Functions
 - PHR System Functional Model R1 Functions
 - EHR and PHR System Functional Profiles
- Results4Care FM/FP EA-based Tooling (HL7 contract)

ISO 19669

- Re-Usable Component Strategy for Use Case Development
 - Approved as New Work Item Proposal: April 2014
 - Scope: S&I Use Case Simplification Methodology
 - In collaboration with ISO and CEN Appointed Experts
 - Possible Example:
 - EU/US eHealth Cooperation Initiative
Interoperability Use Case (S&I Framework project)

In Context of FHA UCAT Introduction (12 Aug/9 Sep)

Priorities

1. Ensure the latest/greatest FHIM updates – now covering ~90% of S&I data requirements across most all Initiatives - are released and fully incorporated in the two UCATs.
2. Allow FHA agencies time to submit their use case templates with examples so that the UCAT developers can speak to how they might deal with variances from the S&I Use Case Requirements Template (the current basis for UCAT design and functionality).
 - Nancy Orvis (DOD MHS): expected
 - David Bass (VHA): RECEIVED
3. Allow UCAT developers time to refine their products.
 - Updated S&I Use Case Requirements Template
 - User-Friendly Front-End Improvements

In Context of FHA UCAT Introduction (12 Aug/9 Sep)

Priorities

4. Allow time for our Use Case Exchange schema to be documented and reviewed - by the UCAT developers (Art/J.D.), FHIM leads (Galen/loana), NIST leads (Kevin Brady/Rob Snelick), AHRQ/USHIK (Robin Barnes and team).
5. Allow time to present our S&I Simplification and UCAT strategy to Steve Posnack. We seek to get the S&I Simplification methodology (including the FHIM and UCATs) mainstreamed in current S&I Initiative(s) - possibly EU/US or Data Provenance.
6. Going forward: Planned alignment of multiple efforts to catalog S&I data requirements: a) S&I Simplification - DESs for TOC/LRI (John Donnelly), b) then CEDD, c) now FHIM (Galen/loana), d) current S&I Initiatives including EU/US, SDC and DAF (Mark Roche, et al), e) AHRQ/USHIK (Robin Barnes and colleagues).

S&I Simplification

Use Case Template Examples

Seeking	Requests to	Status
<ul style="list-style-type: none"> • Blank Use Case Requirements Template • Template with one or more example Use Case(s) filled in 	Nancy Orvis, DOD MHS	Expected
	David Bass, VHA	Received
	Other FHA Agencies, via FHA HIM	Requested
	ISO TC215 National Member Bodies - Beatriz Leao (Brazil)	Received
	CEN TC215 WG1 – Stephen Kay (UK)	Expected
	Canada Health Infoway – Ron Parker	Requested
	Health Services Platform Consortia (HSPC) - Craig Parker, MD, Laura Heerman	Discussed
	West Health Institute – Todd Cooper	Discussed

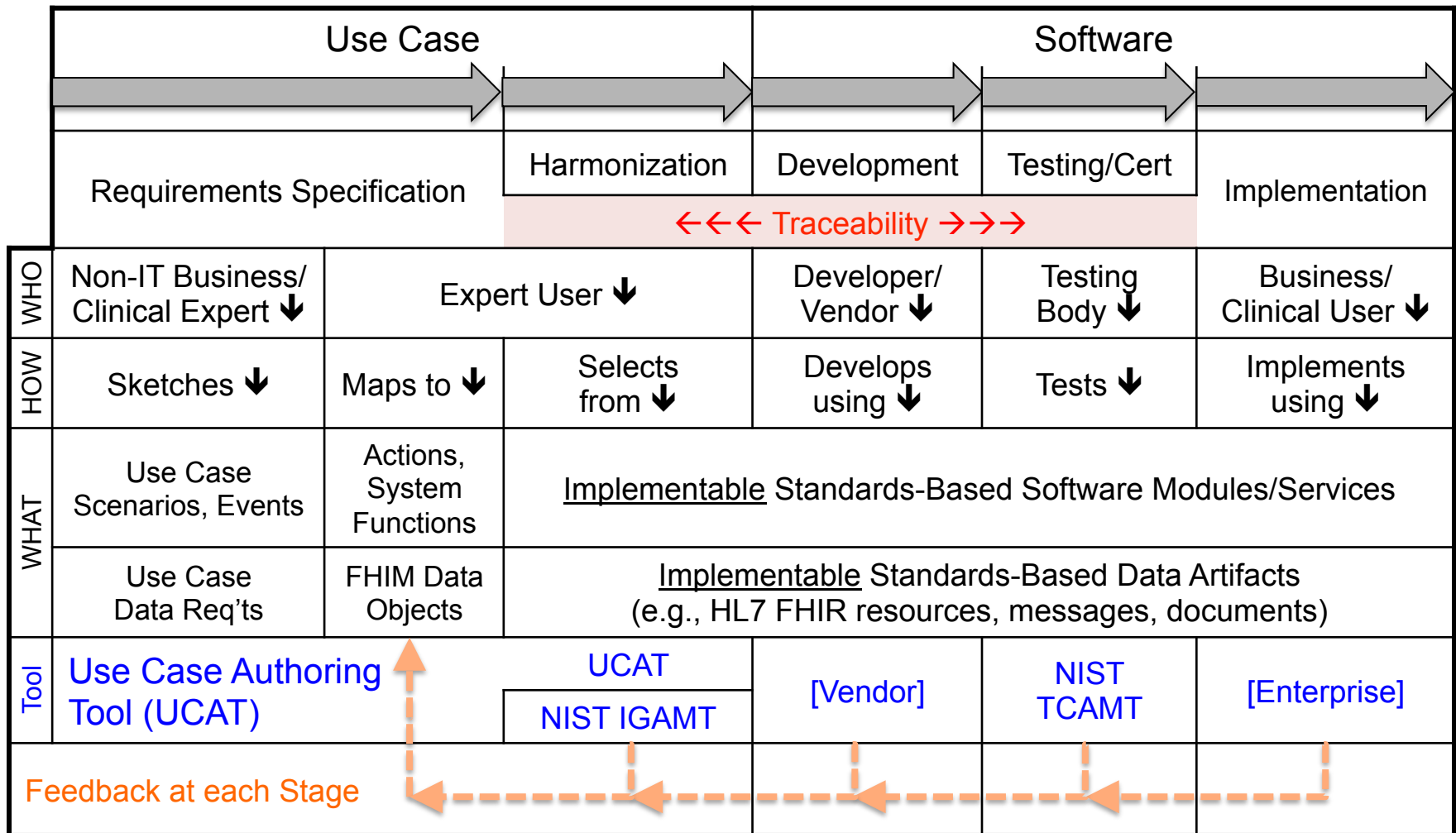
S&I Simplification

Basic Use Case

	S&I Framework Use Cases	Other Use Cases
	S&I Use Case Template	Basic Use Case Template?
Requirements	<ul style="list-style-type: none"> • Assumptions • Pre/Post Conditions • System Functional Reqt's • Traceability 	Same?
Actors, Roles	Person, Organization, System	Mapped to Domain Specific Actors/Roles
Scenarios, Event Steps	<ul style="list-style-type: none"> • Event Description • Actor, Role • Inputs, Outputs • Actions 	Same?
Actions	Mapped to EHR/PHR/Other System Functions	Mapped to Domain Specific Actions and Function Set(s)
Data Objects	Mapped to FHIM Data Objects	Mapped to Domain Specific Information Model, Data Objects

Traceability – Anchored by Use Case Authoring Tool (UCAT)

From Sketch to Implementation



S&I Simplification

Progression Steps*

Steps	Tool	Used to...
S&I Use Case Requirements (UCR) Phase		
A-B	Excel	(Current) Analyze UC Components, Update Core Simplification Matrix
C-D	UCAT	Build Use Case, specify Requirements and Details
E		Render completed Use Case per S&I UCR Template (Word .docx)
F		Identify New Core Component Candidates from this Use Case
G		For FHIM update: identify new UC data objects, elements
H		Output to USHIK: full Use Case
I		Output to NIST Tool Suite (IGAMT/TCAMT): full Use Case
S&I Harmonization Phase		
J-K	IGAMT/UCAT	Develop/manage Implementation Guides for selected standards
NIST-designed Software Testing and Certification		
M-S	IG/TCAMT	Develop/manage software test cases; support testing and validation

* See S&I Simplification – Progression Spreadsheet

S&I Simplification

Convened as S&I Work Group

- S&I acts as Convening Organization
 - S&I brings together parties with like interests, invites discourse and development
 - S&I relies on others to be repository of artifacts
 - » As: FHIM, USHIK, VSA, SNOMED, LOINC, CIMI...
 - S&I relies on others to develop and supply tools
 - » As: MDHT, HSPC...
 - S&I will adopt tools widely used by other federal agencies

S&I Framework – Cross Initiative – S&I Simplification

Links

- US Office of National Coordinator (ONC) Standards and Interoperability (S&I) Framework Wiki
 - <http://wiki.siframework.org>
- S&I Simplification Wiki
 - <http://wiki.siframework.org/Cross+Initiative+-+S%26I+Simplification+WG>
 - <http://wiki.siframework.org/Use+Case+Simplification+Reference+Materials>
- Federal Health Information Model (FHIM)
 - <http://www.fhims.org>
- AHRQ/USHIK S&I Pilot Site
 - <http://ushik-stg.dcgrouppinc.com/mdr/portals/si?system=si&enableAsynchronousLoading=true>
- HL7 EHR Interoperability Wiki
 - http://wiki.hl7.org/index.php?title=EHR_Interoperability_WG