Update on EU-US MoU on Interoperability and support from the Trillium Bridge Project

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eHealth market is demanding!

- **HL7 CDA is a powerful tool for incremental interoperability**
  - Endorsed and adopted by several governments
  - Constrained with Templates and Implementation Guides
  - Developed independently... a cost to interoperability

- **eHealth market calls for agile processes**
  - Interoperability to lower costs
  - plug-n-play interoperability assets

- **Can SDO’s do better?**
EU/US MoU 2010

The scope of the EC-HHS MoU is “...cooperation on topics directly pertaining to the use and advancement of eHealth/health IT, in pursuit of improved health and health care delivery as well as economic growth and innovation...”

“...the development of internationally recognized and utilized interoperability standards and interoperability implementation specifications for electronic health record systems that meet high standards for security and privacy protection...”

“...to support an innovative collaborative community of public and private-sector entities including suppliers of eHealth solutions working together for the shared objective of developing, deploying and using eHealth science and technology to empower individuals, support care, improve clinical outcomes, enhance patient safety and improve the health of the populations..”
For Trillium to bloom, timing is everything!

- **EU and US Information and Communication Technology Policies** embrace the triple win: quality, sustainability, innovation and growth:
  - Digital Agenda for Europe 2020
  - Affordable Care Act, HIEs, and Meaningful Use

Ensure **sustainability** of the healthcare system

- Unlock the **market** for innovation
- Deliver Quality Care - better care

- **EU/US Memorandum of Understanding & Roadmap on eHealth/Health IT collaboration**
- **HL7 Foundation established in Brussels in 2010**
EU/US MoU Roadmap

- Create initial set of use cases from community and stakeholder input
- Compare existing US and EU vocabularies, terminologies and clinical models to identify areas of overlap and commonality
- Identify available resources and opportunities for aligning vocabularies, models, and interoperability
- Agree on specifications, standards and architecture for pilots
- Compare the document structures used in US and EU by comparing the HL7 C-CDA/CCD and EU Patient Summary Guideline Specifications
- Compare existing US and EU legal, policy and organizational frameworks regarding eIdentification of patients and healthcare providers, data privacy, security and exchange to identify barriers
- Define framework requirements for semantic infrastructure and services
EU/US MoU Roadmap: outcomes

- Development of use cases/user stories
- Perform Vocabulary Analysis
- Perform Infrastructure Alignment
- Perform Healthcare provider Mediated Exchange analysis
- Semantic and syntactic mapping of scenario related health data
- Pilots
Why Trillium Bridge?

What can we do to lower the cost of transatlantic business engagement in eHealth?

- Reduce barriers for transatlantic coordination, health care, trade
- Decrease standards development and implementation costs
- Accelerate convergence towards global standards
- Support right of citizens to their health data and safety

Well, perhaps we could try building...

...a Transatlantic Bridge for EHR summaries!
Trillium Bridge Project

What:
- Pragmatic Feasibility study on the exchange of Patient Summaries across the Atlantic

How:
- Comparing, analyzing, and mapping patient summaries starting with Meaningful Use 2 C-CDA/CCD and EU patient summaries (epSOS)

When:
- From: July 2013 to February 2015

Who:
- A stellar consortium comprising EU member state ministries, provider networks, industry, associations, SDOs
Trillium Bridge: transatlantic community of Knowledge and Action
Objectives of Trillium Bridge

Building the Transatlantic bridge for patient summaries

- Use cases → gap analysis → demo→identify barriers /easy wins
- Interoperability assets → Implementations → Validation
- Policy alignment, future standardization, and sustainability
- Feasibility study to set the tone and pace for interoperability in the global eHealth ecosystem.

Attain the vision of EU-US eHealth MoU and roadmap!
Milestones to success

Selecting Grounds:
- Pilot Use Cases
- Business Architecture
- Gap Analysis

Building the Bridge:
- Aligning Structure & Terminology
- Trust Agreements
- Interoperability assets

Testing the Bridge:
- Testing Tools
- Data Sets
- Validation Reports

Policy Alignment:
- Organizational, Legal, Regulatory Interoperability
- Feasibility Analysis
- Cross-vendor integration
- Incentives
- Standardization
- Innovative Business models
- eIdentification,
- Security and privacy
- Education
- Clinical Research

We are here!
European Patient Summary Guideline (based on epSOS)

The patient feels sick and seeks healthcare in a country that is not his/her country of origin. As he/she frequently visits that country, the health professional may have some clinical information about that patient in his/her own records. They will not normally have a language in common.
US Meaningful Use: Consolidated-CDA/CCD

§ 170.205 Content exchange standards and implementation specifications for exchanging electronic health information.


170.205(h) CDA Guide for Quality Reporting Document Architecture, Category I

170.205(i) CDA Guide for Reporting to Central Cancer Registries

170.205(k) CDA Guide for Quality Reporting Document Architecture, Category III (QRDA-III)
Meaningful Use Use Cases

§ 170.314(b) Care Coordination

- (1) Transitions of care – receive, display, and incorporate transition of care/referral summaries.
  - Incorporate medications, problems, allergies
- (2) Transitions of care – create and transmit transition of care/referral summaries.
  - Create C-CDA
- (4) Clinical information reconciliation.
  - Medications, problems, allergies
- (7) Data portability.

§ 170.314(e) Patient Engagement

- (1) View, download, and transmit to 3rd party.
  - Patient’s ability to download clinical summary
- (2) Ambulatory setting only – clinical summary.
  - Patient receives patient summary after encounter
Trillium Bridge Use Cases

One Value proposition:

- When patient needs unplanned care overseas, a EHR summary fit for the purpose of safe and efficient health care is available.
- After the health care encounter, patient receives encounter report in a format and language that can be understood back home.

Two use cases:

- Provider mediated (citizen controlled, provider initiated)
- Patient mediated (citizen initiated, citizen controlled)

Blazing the transatlantic path – constraints and assumptions

- Translation of narrative unstructured content (not in scope)
- Incorporate patient summary elements in EHR or PHR (not in scope)
- Preconditions: citizen empowerment
  - EU Citizens have access to their EU Patient Summary (e.g. epSOS PAC)
  - US Citizens have access to their Clinical Summary in C-CDA/ CCD
Provider Mediated Case:  
Technical Architecture Overview

- National Contact Point (Italy)
- National Contact Point (Spain)
- National Contact Point (Portugal)

**Technical Architecture Overview**

- IHE XCA
- IHE XCPD
- IHE ATNA (epSOS)

**Trillium Bridge Gateway** (based on the epSOS Open NCP)

- Local Connector & eHealth Exchange Gateway
  - MU2
  - C-CDA/ CCD

**Transformer**

- EU Patient Summary
- epSOS pivot document (EN)

**Terminology Services**
- EU epSOS master value sets (MVC/MTC)
- US core value sets (NLM)

- National Contact Points other interested MS
  - Lux, Finland, Greece, Slovenia..
Patient Mediated Case: Technical Architecture Overview

Doctor Displays PS
In local lang prepares encounter report

Italian (Lombardy) Portal (epSOS Patient Access)

Transformer

Tethered Personal Health Record or Health App or BlueButton+

Get patient summary

Paolo has his EU Patient Summary epSOS pivot (EN)

Request transform.. 

CTS-2

Get clinical report

Paolo has encounter report in CCDA/CCD

Terminology Services
- EU epSOS master values (MVC/MTC)
- US core value sets (NLM)
Comparing EHR Summaries: EU Patient Summary vs US Clinical Summaries

- Same base Standard (HL7 CDA)
- Different philosophy: capture vs continuity of care
- Different IGs: C-CDA/CCD (US realm) vs epSOS IG
- Different technical approach: Open vs Closed Template
Trillium Bridge: work ahead

- **Completed initial Gap analysis**
  - Align with S&I WG EHR Interoperability work stream
  - Released Deliverable D2.2: Comparing Patient Summaries in the EU and US: Gap Analysis and Pilot Use Case Definition

- **Identify interoperability Assets**
  - Deliver specs for Trillium Gateway and transformer
  - Provide prototype CTS-2 service

- **Inform and support ONC S&I-led effort towards an HL7 SD WG project and JIC work item**

- **Demonstrate our early wins**
  - eHealth Forum in Athens May 12-14, 2014
Next stop: Athens May 12-14, 2014

www.ehealth2014.eu

Looking forward to welcome you to Athens and meet Martha and Paolo crossing the Trillium Bridge with their patient summary
Trillium Bridge @eHealth Forum

MoU Roadmap / Trillium Bridge Workshop (by invitation only) Tue May 13, 2014, 16-17:30

Chairs: Benoit Abeloos European Commission, Catherine Chronaki, HL7 Foundation

- Insights from the Trillium Bridge Use Cases - Extending epSOS and MoU across the Atlantic, Marcello Melgara
- Demo of EU/US exchange of EHR summaries, Licinio Mano
- Testing the patient- and provider-mediated use cases, Giorgio Cangioli,
- From Gap Analysis to Interoperability Assets, Ana Estelrich
- Next Steps Transatlantic Patient Summary Exchange: Policy Alignment in seven areas, Dipak Kalra,
- Discussion Panel, Q&A Moderators: Jamie Ferguson, KP, Catherine Chronaki

Workshop EU-US MoU Roadmap Workstream Part II – Interoperability, Wednesday May 14, 12:00-13:00, Banqueting Hall

Co-chairs Benoit Abeloos, European Commission, Doug Fridsma, US ONC

- Update on the Trillium Bridge Project, Catherine Chronaki
- Interoperability Assets in the EU/US Exchange Patient Summaries, Ana Estelrich
- Key aspects of Policy Alignment for Trillium Bridge, Dipak Kalra
- Industry Perspectives, Antti Pohjolainen, Microsoft Director for Health Central & Eastern Europe
Parting Thoughts...

**eHealth standards are the safety net that strengthens the fabric of the global eHealth infrastructure.**
- Interoperability at affordable cost
- Built once used anytime and anywhere
- Working across cultures and borders

**Trillium Bridge leads health IT in enabling safe informed health care**
- Key to new market opportunities
- Milestone in the path to a healthier world
- Culture of collaboration, creativity, and understanding for the eHealth ecosystem.

Deploy or Die!
Joi Ito, Director MIT Media Lab