Blazing a Trail: Better Care, Healthier People and Lower Costs through the Interoperability Roadmap

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Introductions

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1. What is the problem we’re trying to solve?

2. What is the US Government doing about it?

3. What is HL7 doing about it?

4. Why is this important?
Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap

Steven Posnack
Director | Office of Standards and Technology
Big Picture: The Federal Health IT Strategic Plan & the Interoperability Vision for the Future

Federal Health IT Strategic Plan

**VISION**
High-quality care, lower costs, healthy population, and engaged people

**MISSION**
Improve the health and well-being of individuals and communities through the use of technology and health information that is accessible when and where it matters most

**Goal 1**
Advance Person-Centered Health and Self-Management

**Goal 2**
Transform Health Care Delivery and Community Health

**Goal 3**
Foster Research, Scientific Knowledge, and Innovation

**Goal 4**
Enhance Nation’s Health IT Infrastructure

**Goal 4**
**Objective A:**
Implement the Shared Nationwide Interoperability Roadmap
**Overarching Goals**

**2015-2017:** Send, receive, find and use priority data domains to improve health care quality and outcomes.

**2018-2020:** Expand data sources and users in the interoperable health IT ecosystem to improve health and lower cost.

**2021-2024:** Achieve nationwide interoperability to enable a learning health system, with the person at the center of a system that can continuously improve care, public health, and science through real-time data access.
Structure of the Final Roadmap

- Drivers
- Policy & Technical Components
- Outcomes

**Drivers**
- A Supportive Payment & Regulatory Environment

**Policy & Technical Components**
- Send
- Receive
- Find
- Use
- Shared Decision-Making
- Rules of Engagement & Accountability
- Ubiquitous Secure Network Infrastructure
- Verifiable Identity & Authentication
- Consistent Representation of Authorization
- Consistent Understanding & Technical Representation of Permission
- Industry-wide Testing & Certification Infrastructure

**Standards & Functions**
- Secure, Standard Services
- Directories & Resource Location
- Consistent Data Formats
- Consistent, Secure Transport Technique(s)
- Consistent Data Semantics
- Accurate Individual Data Matching

**Outcomes**
- A learning health system enabled by nationwide interoperability, that supports all stakeholders, especially individuals and providers.
How the Roadmap’s Organized

2015-2017
Send, receive, find and use priority data domains to improve health and health care quality

A1.1 Milestone Text
- Calls to Action
- Commitments

2018-2020
Expand interoperable health IT and users to improve health and lower cost

A1.2 Milestone Text
- Calls to Action
- Commitments

2021-2024
A learning health system enabled by nationwide interoperability

A1.3 Milestone Text
- Calls to Action
- Commitments
Structure of the Final Roadmap

A. A Supportive Payment and Regulatory Environment
B. Shared Decision-Making, Rules of Engagement and Accountability
C. Ubiquitous, Secure Network Infrastructure
D. Verifiable Identity and Authentication of All Participants
E. Consistent Representation of Authorization to Access Electronic Health Information
F. Consistent Understanding and Technical Representation of Permission to Collect, Share and Use Identifiable Electronic Health Information
G. An Industry-wide Testing and Certification Infrastructure
H. Consistent Data Semantics
I. Secure, Standard Services
J. Consistent, Secure Transport Techniques
K. Accurate Individual Data Matching
L. Health Care Directories and Resource Location

N. Individuals Have Access to Longitudinal Electronic Health Information, Can Contribute to that Information, and Can Direct It to Any Electronic Location
O. Provider Workflows and Practices Include Consistent Sharing and Use of Patient Information from All Available and Relevant Sources
P. Tracking Progress and Measuring Success
ONC Updates and Roadmap Implementation Highlights

Cooperative Agreement with HL7:
• Improve C-CDA Implementation Consistency
• Provide more detailed guidance
• C-CDA “implementation-a-thons”
• C-CDA rendering challenge
• C-CDA scoring
What is the HL7 doing about it?

Next generation standards framework that leverages the latest web standards and applies a tight focus on implementation based on RESTful APIs.

Four years ago FHIR emerged from the HL7 Fresh Look Initiative.

Composed of reusable resources

Relies upon the rule of 80/20 (Pareto’s Principle)

Developed from modern web technologies and RESTful services

Supports leading specifications for Privacy and Security

Solutions are human-readable

Flexible

Faster to Learn Faster to Develop Faster to Implement
**HL7 Fast Healthcare Interoperability Resources (FHIR)**

<table>
<thead>
<tr>
<th>Enables an evolutionary development path with other HL7 standards (many embedded in global regulation)</th>
<th>Supports application development for Mobile Health, Social Media, Personal Health Records and other cutting-edge solutions</th>
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</thead>
<tbody>
<tr>
<td><strong>Focuses on implementation</strong></td>
<td><strong>FHIR is free</strong></td>
</tr>
<tr>
<td><strong>Development is global</strong></td>
<td><strong>Faster to Learn Faster to Develop Faster to Implement</strong></td>
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<tr>
<td><strong>Supports agile development</strong></td>
<td><strong>Faster to Learn Faster to Develop Faster to Implement</strong></td>
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The Argonaut Project was launched in December 2014 to address the recommendations of the JASON Task Force, a joint task force of the HIT Standards and Policy Committees. The goal of the project is to accelerate the development and adoption of HL7 FHIR.

<table>
<thead>
<tr>
<th>Argonaut Phase I</th>
<th>Argonaut Phase II</th>
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<tbody>
<tr>
<td>FHIR data-level API</td>
<td>Support the development of resources for a FHIR implementation registry, FHIR conformance testing, and a robust source of stable resources and artifacts.</td>
</tr>
<tr>
<td>MU Common Dataset resources / profiles &amp; document-level APIs</td>
<td>Complete the development of reliable specifications for security and authorization</td>
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<tr>
<td>Argonaut Implementation Guide</td>
<td>FHIR.ORG Website</td>
</tr>
<tr>
<td>Argonaut Security Phase I</td>
<td></td>
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**Project Sponsors**
- Health IT vendors and health care organizations
- Accenture

Accenture is one of the Argonaut sponsors.
A Gentle Word of Caution About FHIR

The Gartner Hype Cycle

- **Current Status**
- **Peak of Inflated Expectations**
- **Trough of Disillusionment**
- **Plateau of Productivity**
- **Slope of Enlightenment**

**Argonaut Project**

**Technology Trigger**

**TIME**

**VISIBILITY**

**The Gartner Hype Cycle**

**2016-2017**
### Achieving Better Care, Healthier People and Lower Costs

Achieving nationwide health IT interoperability and adoption requires collaboration from all stakeholders in the healthcare industry.

<table>
<thead>
<tr>
<th>People who receive care or support the care of others</th>
<th>People and organizations that deliver care and services</th>
<th>Organizations that pay for care</th>
<th>People and organizations that support the public good</th>
</tr>
</thead>
<tbody>
<tr>
<td>People and organizations that generate new knowledge</td>
<td>People and organizations that provide health IT capabilities</td>
<td>People and organizations that govern, certify and/or have oversight</td>
<td>People and organizations that develop and maintain standards</td>
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