FAST Birds of a Feather
Where Are We in Our Journey to Build the Needed Infrastructure?
Presenters

**Alex Kontur**
Public Health Analyst, Office of the National Coordinator (ONC), Lead, ONC FAST

**Alix Goss**
Vice President & Sr. Consultant, Imprado Co-Lead, FAST Directory, Versions and Scale Tiger Team

**Luis Maas, MD, PhD**
CTO, EMR Direct Co-Lead, FAST Security Tiger Team
FAST Taskforce Antitrust Notice

• The ONC FHIR At Scale Taskforce (FAST) (Hereinafter “Taskforce”) is committed to full compliance with existing federal and state antitrust laws.

• All members involved in the Taskforce effort, including its advisory groups, will comply with all applicable antitrust laws during the course of their activities. During Taskforce meetings and other associated activities, including all informal or social discussions, each member shall refrain from discussing or exchanging competitively sensitive information with any other member. Such information includes, but may not be limited to:
  – Price, premiums, or reimbursement charged or paid for products or services
  – Allocation of customers, enrollees, sales territories, sales of any products or contracts with providers
  – Any other competitively sensitive information that is proprietary to a member company

• If you have any specific questions or concerns, seek guidance from your own legal counsel.

• Members should not bring confidential information or intellectual property (hereinafter “Intellectual Property”) owned by their respective member companies into Taskforce meetings. To the extent such Intellectual Property is shared with the Taskforce that shall not be construed as a waiver of member company’s rights to, or ownership in, the Intellectual Property.
FAST is composed of a highly representative group of motivated healthcare industry stakeholders and health information technology experts who have identified HL7® Fast Healthcare Interoperability Resources (FHIR®) scalability gaps and are actively working on solutions to address current barriers to enable scalable FHIR solutions.
**FAST Isn’t New**

**ONC FHIR at Scale Taskforce (FAST)**
- **Problem:** Ecosystem and infrastructure barriers prevent wide-scale adoption and deployment of FHIR
- **Purpose:** Identified ecosystem barriers and defined initial solution concepts to enable scalable FHIR solutions

**HL7 FAST Accelerator**
- **Problem:** Ecosystem and infrastructure barriers prevent wide-scale adoption and deployment of FHIR
- **Purpose:** Expand participation to build comprehensive, collaborative solutions and identify additional infrastructure needs to enable scalable FHIR solutions

---

**Timeline:**
- **2017:** Payer + Provider (P2) FHIR Taskforce Established
  - Originally focused on Payer/Provider collaboration
- **2018:** Analysis, Barrier identification, Solution Concepts, Gather Industry Feedback
- **2019:** Implementation Guide Dev Begins
- **2020:** Transition to FHIR Accelerator
- **2021:** and the Future
  - Continue collaborative work to develop FAST solutions (IGs) under the HL7 FHIR Accelerator Program
- **2022:** and the Future
FAST as FHIR Accelerator

HL7® FHIR® ACCELERATOR / COMMUNITY

**Functional Use Cases**
- Payers/Providers
- Social Determinants of Health
- Provider/Provider
- Cancer Care and Research
- Consumers
- Codex

**ARCHITECTURE**
- Sandbox, Testing, Feedback
- HLS Working Groups
- Pilots & Certification
- TBD

**STAKEHOLDERS**
- Non-Accelerator/Use Case Specific Initiatives
- SDOs
- IHE
- Networks/HIEs
- And More...

**ADOPPTION AND FEEDBACK**
- Government Participation/Contributions (ONC, CMS, CDC, VA, DoD, etc.)
What is the Problem?

TODAY - Exchange
API adoption requires point to point projects
Current adoption trajectory is slow, expensive, and at risk of significant fragmentation

FUTURE - Interoperability
A consistent infrastructure approach to API implementation
Consensus on implementation guides for key enablers, such as directory, security, patient matching, exchange and testing

Desired result:
A national API interoperability approach that enables consistent clinical data exchange via API
We have this for administrative transactions (X12, clearinghouses, WEDI) and pharmacy transactions (NCPDP, Surescripts). We do not have this for HL7-FHIR.
Transition to HL7 Accelerator Underway
## FAST Transition Workgroup

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Representatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONC</td>
<td>Alex Kontur, ONC FAST Lead</td>
</tr>
<tr>
<td>CMS</td>
<td>Alex Mugge, CMS HIIG or designee</td>
</tr>
<tr>
<td>HL7</td>
<td>Chuck Jaffe, CEO</td>
</tr>
<tr>
<td></td>
<td>Wayne Kubick, CTO</td>
</tr>
<tr>
<td></td>
<td>Daniel Vreeman, Chief Standards Development Officer</td>
</tr>
<tr>
<td></td>
<td>Viet Nguyen, Chief Standards Implementation Officer</td>
</tr>
<tr>
<td>FAST Leadership</td>
<td>Patrick Murta, FAST Chief Architect</td>
</tr>
<tr>
<td></td>
<td>Paul Oates, FAST Chief Architect</td>
</tr>
<tr>
<td></td>
<td>Bob Dieterle, FAST Coordinating Committee Member, DVS Tiger Team Co-Lead</td>
</tr>
<tr>
<td></td>
<td>Alix Goss, FAST ESC Member, DVS Tiger Team Co-Lead</td>
</tr>
<tr>
<td></td>
<td>Ashish Atreja, FAST ESC Member</td>
</tr>
<tr>
<td></td>
<td>Lenel James, FAST ESC Member</td>
</tr>
<tr>
<td></td>
<td>Deepak Sadagopan, FAST ESC Member</td>
</tr>
<tr>
<td></td>
<td>Hans Buitendijk, FAST ESC Member</td>
</tr>
<tr>
<td>Workgroup PM Support</td>
<td>Dana Marcelonis, FAST PM Support</td>
</tr>
</tbody>
</table>
Proposed Governance Structure

Executive Committee: SC Chairs + PMO

STEERING COMMITTEE
- Payers
- Providers
- Tech/ HIT Vendors
- Govt. Agencies
- HL7

OPERATING COMMITTEE
- Use Case 1 Project Lead
- Use Case 2 Project Lead
- Use Case n+ Project Lead

Advisory Committee TBD

Program Management Office (PMO)
Form a small, cross-stakeholder team to build the plan
Define scope of FAST as Accelerator
Develop Accelerator governance framework
Define Accelerator operating model
Develop Accelerator funding model
Develop communications plan
  • Develop initial financial plans
  • Recruit initial members
  • Establish initial PMO
  • Begin transition process

FAST will continue the work already in progress through transition
Membership Value

Drive cost-effective interoperability to achieve the triple aim (cost, quality, outcomes)

Lead Strategy & Decision-Making
- Prioritize projects and use cases
- Drive what becomes the standard and how they are implemented

Provide Industry Thought Leadership
- Position yourself and your organization as an industry thought leader

Gain Efficiencies
- Save money by minimizing the need across industry stakeholders to repeatedly address common implementation barriers encountered in most projects
- Scalable FHIR solutions leads to more ubiquitous FHIR adoption to support real-time, secure data exchange between the right stakeholders at the right time

Learn more about FAST Membership by emailing FAST@hl7.org
FAST Solutions Status
Example FHIR Transaction Journey

1. **REQUESTING SYSTEM**
   - Patient visits Primary Care Physician (PCP)
   - PCP needs information from Payer

2. **RECEIVING SYSTEM**
   - Payer receives PCP request
   - Receives Transaction, Validates Requestor, Validates Version
   - Performs Patient Matching and Sends Back Not Found If Unable To Do So
   - Authenticates FHIR User’s Role
   - Filters Out Data That Does Not Have Consent
   - Generates & Returns FHIR Response

3. **DIRECTORY**
   - Formulates FHIR Request
   - Looks Up the FHIR Endpoint for Recipient
   - Transaction Information (eg, Header) Appropriately Configured

4. **EXCHANGE**
   - Requesting System Receives Data

5a. **IDENTITY**
   - PCP views patient information

5b. **VERSIONING**

6. **CONFORMANCE & CERTIFICATION**

7. **SECURITY**

8. **PILOTS**
**FAST Solutions in Development**

- **Directory, Version & Scale**
- **Identity**
- **Exchange Process**
- **Testing & Certification**
- **Security**

**A US Wide Solution for a National Healthcare Directory**
- HL7 Implementation Guides:
  3. National Directory – Attestation & Validation

**A US Wide Methodology for Supporting Multiple Production Versions of FHIR**

**US Wide Scaling Requirements for FHIR RESTful Exchange Intermediaries**

**National Standards Based Approaches for Individual Identity Management**
- HL7 Implementation Guide: Interoperable Digital Identity and Patient Matching

**An HL7 FHIR Standard Based Solution for Exchange with or without Intermediaries**
- HL7 Implementation Guide: Hybrid/ Intermediary Exchange (Jan 2022 Ballot Cycle)

**FAST Proposed Infrastructure Solutions**

**FHIR Testing & Certification Platform**

**US Wide Model(s) for Scalable Security Solutions**
- HL7 Implementation Guide: Scalable Registration, Authentication, and Authorization (Sept 2021 Ballot Reconciliation)
Conceptual Integrated Architecture

Security (Authenticate/Authorize)
UDAP Trusted Dynamic Client Registration - UDAP Tiered OAuth User Authentication - UDAP JWT-Based Client Authentication - UDAP JWT-Based Authorization Assertions

Exchange Routing
RESTful Headers – FHIR Meta Tags

Intermediaries

Identity
Collaborative/Mediated Patient Matching – Collaborative/Mediated Identity Management

National Directory
Endpoints – Profiles – Versioning – Trust - Conformance

CONFORMANCE & CERTIFICATION  (Testing & Certification Program)

PILOTS (FAST Capability Vetting with Existing HL7 Accelerators)
FAST Security for Registration, Authentication, and Authorization
Overview and status – Scalable Security Solutions

**BARRIER**

Today, we have limitations on our ability to ensure, in a scalable way, that the requestor of information using a FHIR based information exchange is appropriately authenticated and has the authorization to see the data requested. Current registration processes are manual and too time-consuming to support expected growth.

**SOLUTION**

Leverage existing credentials and authorizations and best practice standards to establish common security processes that facilitate automated exchange and reuse existing infrastructure where possible.

**IN SCOPE**

Trusted Dynamic Client Registration using Unified Data Access Profiles (UDAP)

JWT-Based Client Authentication & Authorization

**OUT OF SCOPE**

Directory for Endpoint Discovery, Trust Policy Governance, Requirements for a specific architecture, Patient/provider or provider/patient

**STATUS**

Published IG for HL7 Sept 2021

STU Ballot

**OPEN ITEMS**

Ballot reconciliation

Continue testing at Connectathons

**CURRENT SOLUTION**

Security for Scalable Registration, Authentication, and Authorization (CI Build)
UDAP JWK-Based Client Authentication:
Uses asymmetric cryptography to authenticate client apps

UDAP Server Metadata:
Endpoint validation for added confidence

UDAP Trusted Dynamic Client Registration:
Identify and dynamically register trusted client applications, streamlining app management

UDAP JWK-Based Authorization Assertions:
Extensible JWT-based client authorization grants & other claims incidental to a token request

UDAP Certifications & Endorsements: Trusted informational assertion

UDAP Tiered OAuth:
Reusable identities via scalable, dynamic, cross organizational use

Connectathon Track Page:
2022-01 FAST Security & Identity

Implementation Guide:
Security for Scalable Registration, Authentication, and Authorization (CI Build)
Now What?

• Further develop the Reference Implementation
• Continue to engage the community in further solution development, testing
• Ongoing collaboration with Carequality, CommonWell, and other stakeholders/implementers
• Continue to participate in HL7 Connectathons
• Incorporate community input from Connectathon testing and ballot comments

Join our public working sessions on the 2nd and 4th Tuesdays each month for ballot reconciliation – view the project page for details

<table>
<thead>
<tr>
<th>HL7 Milestone</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>Project Scope Statement (PSS)</td>
<td>✓</td>
</tr>
<tr>
<td>FHIR IG Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>September 2021 Ballot</td>
<td>✓</td>
</tr>
<tr>
<td>Ballot Reconciliation</td>
<td>In Progress</td>
</tr>
<tr>
<td>Publish STU 1</td>
<td>Q1 2022</td>
</tr>
</tbody>
</table>
FAST Hybrid/
Intermediary Exchange
Overview and Status - Hybrid/Intermediary Exchange

**BARRIER**
FHIR information exchange is typically performed “point-to-point” between trusted system endpoints. Because healthcare participants may also wish to leverage intermediaries in FHIR exchanges, a solution for conveying routing metadata is needed.

**SOLUTION**
Employ standard methods to convey routing information between exchange intermediaries.

**IN SCOPE**
Exchange using intermediaries in addition to point-to-point connections.
Methods for exchanging routing information among participating intermediaries.

**OUT OF SCOPE**
Value set defining exchange identifiers.
Capturing provenance information from exchange through multiple intermediary “hops”.

**STATUS**
Targeting HL7 Jan 2022 STU Ballot
Incorporating industry feedback into draft HL7 Implementation Guide

**OPEN ITEMS**
Continue testing proposed technical approaches during Connectathons

**CURRENT SOLUTION**
Hybrid/Intermediary Exchange Implementation Guide - Balloted
**FAST Exchange Barriers to FHIR Scalability**

<table>
<thead>
<tr>
<th>EXCHANGE BARRIERS</th>
<th>IMPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USE OF DIFFERENT IDENTIFIERS</strong></td>
<td>The metadata will need to have a standardized identifier set and attribute name (NPI, Payer ID, etc.)</td>
</tr>
<tr>
<td><strong>SYNCHRONOUS &amp; ASYNCHRONOUS MODELS</strong></td>
<td>Both models need to be supported with reliable routing</td>
</tr>
<tr>
<td><strong>HYBRID ENVIRONMENTS</strong></td>
<td>The environment will consist of both dynamic point to point &amp; intermediary models</td>
</tr>
</tbody>
</table>
Hybrid/Intermediary Exchange

Connectathon Track Page:
2022-01 FAST - Hybrid/ Intermediary Exchange

Implementation Guide: Hybrid/ Intermediary Exchange (CI Build)
**Now What?**

- Continue to engage the community and intermediaries in further solution development, testing
- Continue to participate in HL7 Connectathons
- Reconcile ballot comments and update the Implementation Guide

---

**Hybrid/Intermediary Exchange (Exchange With or Without Intermediaries)**

<table>
<thead>
<tr>
<th>HL7 Milestone</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>Project Scope Statement (PSS)</td>
<td>✓</td>
</tr>
<tr>
<td>FHIR IG Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>January 2022 Ballot</td>
<td>✓</td>
</tr>
<tr>
<td>Ballot Reconciliation</td>
<td>Q1 2022</td>
</tr>
</tbody>
</table>

Join our public working sessions on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesdays each month – view the [project page](#) for details
FAST National Healthcare Directory
The industry lacks a generally available method to find all FHIR endpoints and their associated capabilities and attributes, as well as a common process for maintaining the information and validating its accuracy.

**SOLUTION**
One national source for validated directory information that is available to any national or local directory workflow environment.

**IN SCOPE**
- Individual and entity demographics to determine endpoint relationships, computable endpoint information such as accessibility requirements, metadata for routing, trust framework, implementation guides and certification status
- Federated access by HIEs, state directories, EHRs
- A FHIR standard implementation guide for use of the directory

**OUT OF SCOPE**
- Manual / portal access, creation of a trust framework, non-FHIR related endpoints, application certification process

**STATUS**
Targeting 2022 Ballot Cycle
- Incorporating feedback from industry stakeholders

**OPEN ITEMS**
- Define the minimum viable product (MVP) and outline the incremental steps/roadmap to build a directory of endpoints

**CURRENT SOLUTION**
- National Healthcare Directory FHIR IG (Draft)
- National Healthcare Directory Endpoint Query IG (Draft)
Healthcare Organizations and Providers contribute attested information

Providers and organizations declare relationships

Request validation of attested information

Respond to validation request

Issuing Organizations and Assigned Parties contribute attested Endpoint information

May include validation information

Attested Endpoint information is validated against primary sources

Authenticate/Authorize

Validation

Testing and Certification

Synchronize

End User Application

Federated directory responds with endpoint information

Federated Directory Subscribes to specific scope of Organizations and Providers

On update push information to Subscriber

Application requests endpoint information

Federated Healthcare/Endpoint Directory

Validated Healthcare / Endpoint Directory

Population/Validation Implementation Guide

Primary Source

Authenticate/Authorize

Authenticate/Authorize

Authenticate/Authorize

Authenticate/Authorize
National Healthcare Directory

Now What?
- Further develop the Reference Implementation
- Continue to participate in HL7 Connectathons
- Continue to engage the community in further solution development, testing
- Continue development of three Implementation Guides:
  - National Directory – Exchange
  - National Directory – Endpoint Query
  - National Directory – Attestation & Validation

Join our public working sessions for:
- Attestation & Validation, Mondays at 3-4 PM ET
- Exchange & Endpoint Query, Thursdays 11AM-12PM ET

View the project page for details

<table>
<thead>
<tr>
<th>HL7 Milestone (May 2022 Ballot Cycle)</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>Project Scope Statement (PSS)</td>
<td>✓</td>
</tr>
<tr>
<td>FHIR IG Proposals:</td>
<td>✓</td>
</tr>
<tr>
<td>- National Directory Endpoint Query</td>
<td></td>
</tr>
<tr>
<td>- National Directory Exchange</td>
<td></td>
</tr>
<tr>
<td>- National Directory Attestation and Validation</td>
<td></td>
</tr>
<tr>
<td>Notice of Intent to Ballot (NIB)</td>
<td>February 27, 2022</td>
</tr>
<tr>
<td>Ballot Signup Starts</td>
<td>March 7, 2022</td>
</tr>
<tr>
<td>Final IG Content</td>
<td>April 3, 2022</td>
</tr>
<tr>
<td>Ballot Signup Ends</td>
<td>April 6, 2022</td>
</tr>
<tr>
<td>Ballot Voting Starts</td>
<td>April 8, 2022</td>
</tr>
<tr>
<td>Ballot Voting Ends</td>
<td>May 8, 2022</td>
</tr>
</tbody>
</table>
FAST Identity Management
Overview and status - Identity Management

**BARRIER**
The industry currently employs a range of patient matching and identity management processes with inconsistencies and limited scalability as volume and the number of participants increase.

**SOLUTION**
Establish a set of patient matching and identity management patterns and best practices that the industry can adopt to reduce the variations that exist today and provide a bridge to new approaches in the future.

**IN SCOPE**
- Patient matching during payer/provider interactions: *Mediated Patient Matching*
- Patient-directed workflows focusing on identity management: *Networked Identity Management*

**OUT OF SCOPE**
Patient as a requester or responder, contractual arrangements. (Security and directory considerations are addressed by other FAST solutions)

**STATUS**
Targeting 2022 Ballot Cycle
Incorporating feedback from industry stakeholders

**OPEN ITEMS**
Define Implementation Guide scope and test proposed solutions during Connectathons

**CURRENT SOLUTION**
*Interoperable Digital Identity and Patient Matching Implementation Guide* (Draft)
Solution Options: Low to High Complexity

Multiple options progressing from lower to higher complexity (technical and process)

1. Collaborative Patient Matching
   - Current state enhanced with best practices
   - Eg, roster exchanges
   - Trusted Identity Providers as source of demographic data and metadata for matching

2. Mediated Patient Matching
   - Best practices compliant matching service using demographic data from Requestor

3. Networked Identity Management
   - Patient directed access to identity and demographic data, support for multiple identities

4. Distributed Identity Management
   - Includes Patient directed workflows
   - Focus on identity management
   - Focus on patient matching
   - Payer/Provider interactions

LM
Solutions 2 and 3 have been prioritized for further development as they are the most likely to be implementable in the near future.
Interoperable Digital Identity & Patient Matching

Now What?

• Further develop the Reference Implementation
• Continue to engage the community in further solution development, testing
• Continue to participate in HL7 Connectathons
• Ongoing collaboration with stakeholders for solution input
• Continue development of the Implementation Guide

Join our public working sessions on the 1st and 3rd Thursday each month – view the project page for details

<table>
<thead>
<tr>
<th>HL7 Milestone (May 2022 Ballot Cycle)</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>Project Scope Statement (PSS)</td>
<td>✓</td>
</tr>
<tr>
<td>FHIR IG Proposal</td>
<td>✓</td>
</tr>
<tr>
<td>Notice of Intent to Ballot (NIB)</td>
<td>February 27, 2022</td>
</tr>
<tr>
<td>Ballot Signup Starts</td>
<td>March 7, 2022</td>
</tr>
<tr>
<td>Final IG Content</td>
<td>April 3, 2022</td>
</tr>
<tr>
<td>Ballot Signup Ends</td>
<td>April 6, 2022</td>
</tr>
<tr>
<td>Ballot Voting Starts</td>
<td>April 8, 2022</td>
</tr>
<tr>
<td>Ballot Voting Ends</td>
<td>May 8, 2022</td>
</tr>
</tbody>
</table>
FAST Solutions and Path to Execution
Moving Solutions to Standards Development & Implementation Readiness

**SOLUTIONS**

- An HL7 FHIR Standard Based Solution for EXCHANGE with or without Intermediaries
- HL7 IG: FAST: Exchange with or without Intermediaries
- HL7 IG: Update VHD for US Realm
- HL7 IG: Endpoint Query
- HL7 IG: Attestation and Validation
- BUILD ASSET: National Source of Truth Directory
- HL7 IG: Security for Scalable Registration, Authentication, and Authorization

**ARTIFACTS**

- Implementation Guide Development & Balloting
  - JOIN the HL7 Sponsoring Workgroup: FHIR Infrastructure
    - January 2022 STU Ballot
  - Implementation Guide Development & Balloting
  - JOIN the HL7 Sponsoring Workgroup: Patient Administration
    - Targeting 2022 STU Ballots
- Support Naming the Developer Organization
  - Contact the FAST Directory, Version & Scale Tiger Team Leads
- Implementation Guide Development & Balloting
  - JOIN the HL7 Sponsoring Workgroup: Security
    - Sept 2021 STU Ballot

**INDUSTRY ENGAGEMENT**

- Pilots, Testing, Validation & Industry Stakeholder Engagement
  - Provider
  - Payers
  - IT Vendors
  - Research
  - Networks
  - Intermediaries
  - EHRs
  - Population Health
  - Public Health

**2022 Connectathons**

Look for us at [Connectathons](#)
Moving Solutions to Standards Development & Implementation Readiness

**SOLUTIONS**
- National Standards Based Approaches for Individual IDENTITY Management
- HL7 IG: Interoperable Digital Identity & Patient Matching
- Finalizing the Solution Path Forward Exploring potential for RFI
- BUILD ASSET: Testing & Certification Tooling
- Finalizing the Solution Path Forward FAST solution documentation
- Finalizing the Solution Path Forward FAST solution documentation

**ARTIFACTS**
- Implementation Guide Development & Balloting
- Consider overlaps with other industry initiatives
- Support RFI Process
- Incorporate feedback from SME Session
- Incorporate feedback from SME Session

**INDUSTRY ENGAGEMENT**
- JOIN the HL7 Sponsoring Workgroup: Patient Administration Targeting 2022 STU Ballot
- Socialize recommended solutions with relevant industry stakeholders
- Contact the Identity Tiger Team Leads
- Respond to RFI Contact the Testing & Certification Tiger Team Leads
- Look for results from SME Session on the FAST project page
- Look for results from SME Session on the FAST project page

Follow the FAST Technical Learning Community on LinkedIn for updates

**Pilots, Testing, Validation & Industry Stakeholder Engagement**

- Provider
- Payers
- IT Vendors
- Research
- Networks
- Intermediaries
- EHRs
- Population Health
- Public Health

**AK**
FAST Upcoming Events and Resources
### Simple Ways to Join FAST’s Work

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• HL7 Project page <a href="https://confluence.hl7.org/display/FHIRI/FHIR+at+Scale+%28FAST%29%3A+Exchange+with+or+without+Intermediaries">https://confluence.hl7.org/display/FHIRI/FHIR+at+Scale+%28FAST%29%3A+Exchange+with+or+without+Intermediaries</a></td>
<td>• HL7 Project Page <a href="https://confluence.hl7.org/display/SEC/FAST%3A+Scalable+Registration%2C+Authentication%2C+and+Authorization+for+FHIR+Ecosystem+Participants">https://confluence.hl7.org/display/SEC/FAST%3A+Scalable+Registration%2C+Authentication%2C+and+Authorization+for+FHIR+Ecosystem+Participants</a></td>
<td>• HL7 Project Page <a href="https://confluence.hl7.org/display/PA/National+Healthcare+Directory">https://confluence.hl7.org/display/PA/National+Healthcare+Directory</a></td>
<td>• HL7 Project Page <a href="https://confluence.hl7.org/display/PA/Interoperable+Digital+Identity+and+Patient+Matching+Capabilities">https://confluence.hl7.org/display/PA/Interoperable+Digital+Identity+and+Patient+Matching+Capabilities</a></td>
</tr>
</tbody>
</table>
| • Public meetings the 1\textsuperscript{st} and 3\textsuperscript{rd} Tuesdays each month from 1-2 PM ET [https://global.gotomeeting.com/join/262996117](https://global.gotomeeting.com/join/262996117) | • Public meetings the 2\textsuperscript{nd} & 4\textsuperscript{th} Tuesdays each month at 2PM ET [https://global.gotomeeting.com/join/784708421](https://global.gotomeeting.com/join/784708421) | • Public meetings:  
  • Mondays at 3pm ET [https://zoom.us/j/98517334633](https://zoom.us/j/98517334633)  
  • Thursdays at 11 am ET [https://zoom.us/j/98424232906?pwd=dHV0T2hrN3o1Q1NQVTNHaTVaQURSQT09](https://zoom.us/j/98424232906?pwd=dHV0T2hrN3o1Q1NQVTNHaTVaQURSQT09) | • Public meetings the 1\textsuperscript{st} and 3\textsuperscript{rd} Thursdays each month at 2PM ET [https://global.gotomeeting.com/join/919790117](https://global.gotomeeting.com/join/919790117) |

AK
Want to learn more about becoming a member of the FAST HL7 FHIR Accelerator?

Contact fast@hl7.org

All content is available on the FAST Project Page or https://tinyurl.com/ONC-FAST
Thank you!

For more information on the FAST Initiative, visit the FAST Project Page

Have any further questions/suggestions?

Please contact fast@hl7.org