National Information Exchange Model (NIEM)

NIEM Biometrics Domain Working Group Brief-out to ANSI/NIST Biometrics Workshop

Wednesday, 2 March 2011
Thank you WG Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Section</th>
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<tr>
<td>Alex Nunez</td>
<td>IIR</td>
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<tr>
<td>Anthony Hoang</td>
<td>DHS</td>
<td>4</td>
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<tr>
<td>Boris Shur</td>
<td>DOJ</td>
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<tr>
<td>Brad Wing</td>
<td>NIST</td>
<td>2</td>
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<tr>
<td>C. J. Lee</td>
<td>Terrorist Screening Center</td>
<td>1</td>
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<tr>
<td>Cathy Plummer</td>
<td>NLETS</td>
<td>3</td>
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<tr>
<td>Cathy Tilton</td>
<td>DAON</td>
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<tr>
<td>Charles Schaeffer</td>
<td>Florida Department of Law Enforcement</td>
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<td>Eric Sharp</td>
<td>Aware</td>
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<td>Gerry Coleman</td>
<td>Trusted Federal</td>
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<tr>
<td>Jennifer Stathakis</td>
<td>FBI</td>
<td>3</td>
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<tr>
<td>Justin Stekervetz</td>
<td>DHS</td>
<td>4</td>
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<tr>
<td>Kamran Atri</td>
<td>Paragon Technology</td>
<td>2</td>
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<tr>
<td>Lynn LaChance</td>
<td>New York State Division of Criminal Justice Services</td>
<td>2</td>
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<tr>
<td>Marie Sciocchetti</td>
<td>New York State Division of Criminal Justice Services</td>
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<td>Mary Ann Pelletier</td>
<td>New York State Division of Criminal Justice Services</td>
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<td>Priscilla Walmsley</td>
<td>Trusted Federal</td>
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<tr>
<td>Sudhi Umarji</td>
<td>Trusted Federal</td>
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<tr>
<td>Will Graves</td>
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Key WG objectives

- **DONE:** Develop a joint concept-of-operations between the NIST/ITL ANS Process (as implemented for biometric standard) and the NIEM Domain Model Management Process
- **DONE:** Map the existing ANSI/NIST ITL Biometrics governance activities to NIEM domain governance framework
- **DONE:** Review of NIST/ITL ANS process
- **DONE:** Review NIEM concept-of-operations, tools and processes
- **DONE:** Develop cross-process mapping
WG work plan

- Review of NIST/ITL ANS process
- Review NIEM concept-of-operations, tools and processes
- Develop cross-process mapping
- Document findings & joint concept-of-operations
- Develop findings and summary out-brief
Key consensus points

The **establishment of a NIEM Biometrics Domain** that would be chartered under NIST or some other entity that could effectively facilitate commercial industry and government stakeholders in the stewardship of the domain.

The **general management processes** that would be necessary within NIEM Domain Stewardship (e.g. the management of changes, errata updates, publication processes, etc.) by incorporating concepts from both the NIEM Domain Model Management process and the ANSI/NIST ITL ANS process.
Key consensus points (cont.)

The **three business triggers** or types of events that could initiate some form of change request or update to the NIEM Biometrics Domain

- 1) When the A/N standard changes
- 2) When a bug is found (i.e. the content therefore does not accurately reflect the standard and hence would be changed)
- 3) External content; i.e. the possibility of supporting “external” change requests for the NIEM Biometrics Domain that originate from sources other than from the ANSI/NIST ITL Biometrics Workshops (e.g. change requests associated with EBTS)
Next steps

- Develop plans to Biometrics Domain development work – working via DHS NPPD/USVISIT leadership
- Maintain strong alignment and support for A/N
Backup slides
## Objectives and Mission Comparison

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<th>NIST-ITL ANS</th>
<th>NIEM</th>
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<td><strong>Process Objective</strong></td>
<td><strong>Organization or body that works with NIEM governance to manage data component definitions for some COI or agency; is independent of NIEM and has its own rules, procedures, schedules, and priorities</strong></td>
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<td>Procedures develop evidence of consensus for the approval, reaffirmation, revision, or withdrawal of American National Standards through the use of a canvass process</td>
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<td><strong>Organization Mission</strong></td>
<td><strong>An inter-agency initiative providing a foundation for seamless information exchange. NIEM is more than a data model, it is a community and has a technical and support framework.</strong></td>
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<td>“Standards and guidelines for information exchange relating to automatic data processing and related systems.”</td>
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Process Comparison

**NIST-ITL ANS Process**
- Submit PINS Form (Standards Action Public Review Request)
- List PINS Announcement w/ 30-day Public Comment Period
- Consensus Body Developed
- Workshop(s) Held to Determine Requirements
- Respond to PINS Comments; Canvass List Developed
- Develop and Issue ANS for Ballot
- Submit to ANSI for 45-day Public Review
- Submit Draft ANS to ANSI BSR for Approval
- Publish Approved ANS

**NIEM Domain Management Process**
- Establish Domain*
- Define Domain Leadership*
- Sign a Domain Stewardship Agreement (DSA)*
  - NBAC Approval of DSA*
- Define Domain Content
- Map Domain Content to NIEM
- Run Quality Checks
- Generate Domain Artifacts
- Request NIEM Inclusion*
  - ESC Approval of New Domain*
- Publish Domain
- Name NBAC Representatives*
- Maintain Domain

* Refers to tasks related to initial domain stand-up activities
Role Comparison

ANSI
- NIST-ITL ANS
  - NIST-ITL
  - Consensus / Canvass Body
  - Public

NIEM ESC
- NIEM
  - Domain Steward
  - Domain Members
  - Community of Interest

Consensus / Canvass Body
Process Integration

Domain Stand-up

Submit Form → List Announcement → Develop Consensus Body → Determine Requirements → Respond to Comments → Issue for Ballot → Submit for Approval → Publish ANS

- Establish Domain
  - Define Domain Leadership
  - Sign DSA

- Define Domain Content
  - Map Domain Content to NIEM
  - Run Quality Checks

- Generate Domain Artifacts

- Request NIEM Inclusion
  - Publish Domain
  - Name NBAC Representative
  - Maintain Domain

NIEM Biometrics Domain Steward

NIST-ITL ANS
Process Integration

Domain Update

Submit Form → List Announcement → Develop Consensus Body → Determine Requirements → Respond to Comments → Issue for Ballot → Submit for Approval → Publish ANS

| Define Domain Content → Map Domain Content to NIEM → Run Quality Checks → Generate Domain Artifacts |
| NIEM Biometrics Domain Steward |

NIST-ITL ANS
Process Integration

Domain Update: Bug Fix

NIEM Biometrics Domain Steward
Process Integration

Domain Update: External Alignment

NIEM Biometrics Domain Steward

NIST-ITL ANS

1. Collaborate w/ External Entity
2. Identify Update Requirement(s)
3. Determine Update Needs (Document vs. Schema)
4. Coordinate Updates
5. Update Document
6. Publish ANS

- Identify Changes
  - Modify Domain Update Working Copy
  - Run Conformance Check(s)
  - Run Harmonization Check(s)
  - Run Quality Assurance Check(s)

- Generate Change Log
- Generate Documentation
- Generate Schema
- Run Impact on Other Domains
- Publish to NIEM Publication Area

- NIEM Biometrics Domain Steward
ANSI/NIST informational slides
This Flow Chart is to be used as a reference guide only. The authoritative procedures shall be the NIST/ITL ANS Development Process posted on its website.
Procedural complaints?

Yes

-> Appeal upheld?

Yes

-> Processing reverts to prior stage based upon the appeal decision.

No

-> NIST ITL submits draft ANS to ANSI BSR for approval.

No

-> ANSI Approval?

Yes

-> NIST ITL publishes approved ANS.

No

-> NIST ITL reviews procedural issues and decides on course of action.

C

-> NIST ITL considers revising or discontinuing project.
NIEM informational slides
NIEM Domain Governance

**Domain** refers to a business enterprise broadly reflecting the agencies, units of government, operational functions, services, and information systems that are organized or affiliated to meet common objectives.

- NIEM domains are mission-based and organized to facilitate governance, and each has some measure of compliance
- Domain stewards are community members responsible for actively managing and updating their community’s data model
- Each domain traditionally includes a cohesive group of domain stewards who are part of a Community of Interest
### Domain Independence and Self-Service

#### Domain Independence
- Specifications and processes that decouple a domain from other domains and from Core
- **Allows:**
  - Domains to publish updated content (domain updates) on their own timeline
  - IEPD developers to use that new content immediately, without waiting for the next major or minor release

#### Domain Self-Service
- Development tools and collaboration areas that support domains in building and publishing their own content on their own timeline
- **Allows:**
  - Domains to use tools that assist in content development and management
  - NIEM to scale up more easily as the number of domains and the size of the model increase;
NIEM Governing Structure

- NIEM’s governing structure is comprised of Federal, State, Local, Tribal and private organizations
- NIEM is jointly managed at an executive level by the Department of Homeland Security (DHS) and the Department of Justice (DOJ)
Communities of Interest

Communities of interest (COIs) are collaborative groups of users who exchange information in pursuit of shared goals, interests, missions, or business processes and who, therefore, must have a shared vocabulary for the information they exchange.

Coordination is an important aspect of NIEM

- COIs reuse data components and artifacts found in NIEM to document their information exchanges
- One or more COIs can coordinate to develop new domain content needed for documenting information exchanges
NIST-ITL ANS and NIEM Process Integration

Domain Stand-up

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