Welcome to

Join the conversation: #NIEM
Follow Us: @NIEMConnects

November 4th, 2014

WELCOME

Donna Roy,
Executive Director, NIEM

Join the Conversation:
Use #NIEM and @NIEMConnects to tweet about

NIEM in November

BEST OF NIEM

Kshemendra Paul,
Program Manager, Information Sharing Environment

Donna Roy, *Executive Director, NIEM*

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NIEM in November

NATIONAL SECURITY THROUGH RESPONSIBLE INFORMATION SHARING

Kshemendra Paul,
Program Manager, Information Sharing Environment

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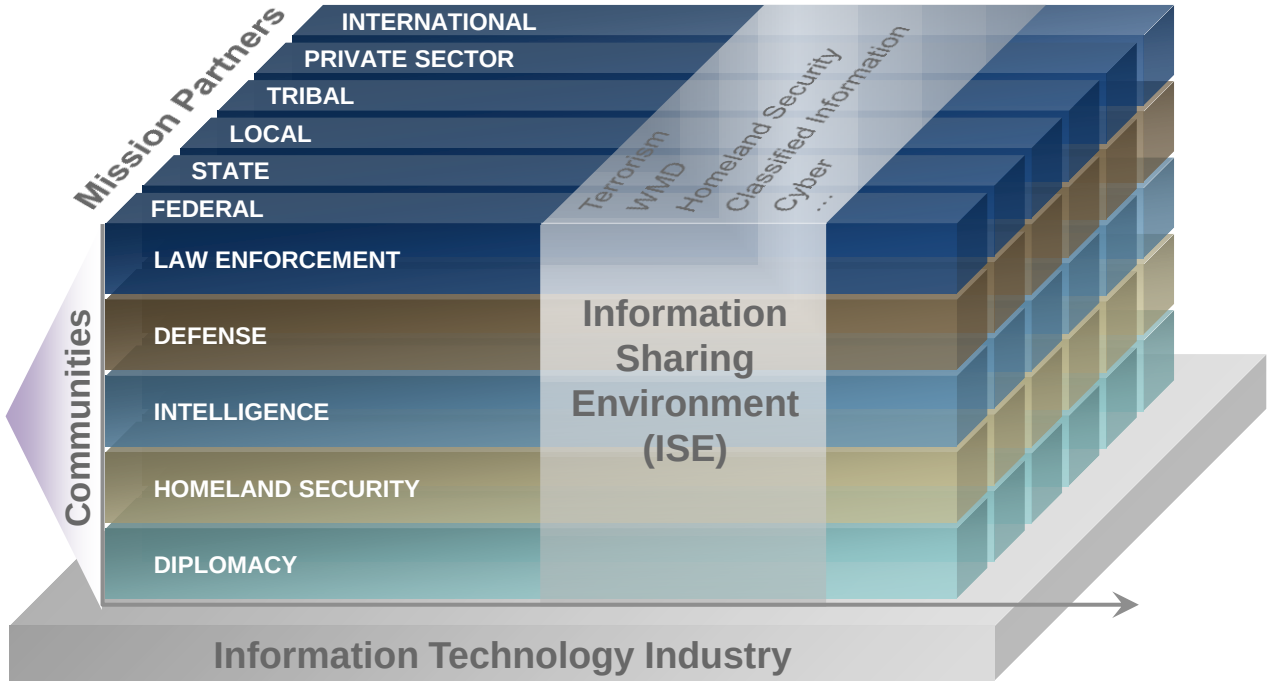
NIEM in November

SCOPE

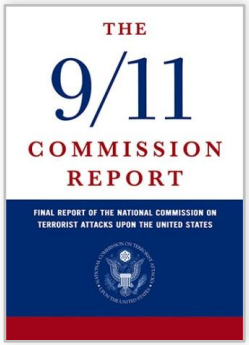
NIEM in November

Frontline
- Investigators
- Analysts
- Operators

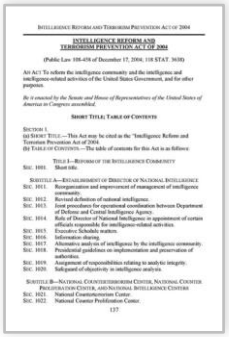


FOUNDATION

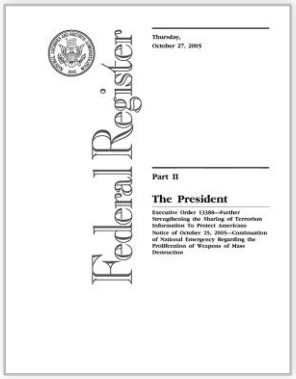
NIEM in November



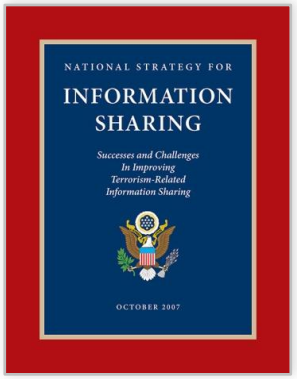
IRTPA: Intelligence Reform and Terrorism Protection Act of 2004



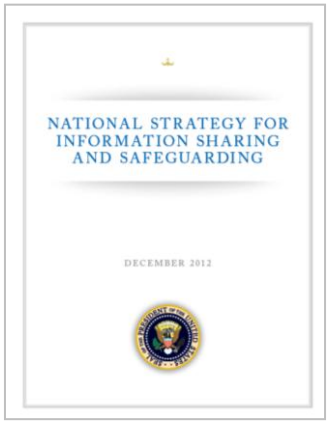
Executive Order 13388



2007 National Strategy

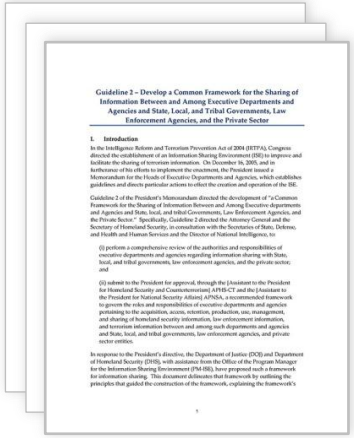


2012 National Strategy

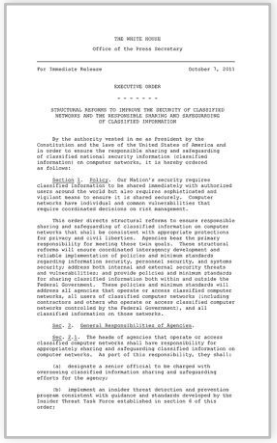


Markle Task Force

Presidential Guidelines



Executive Order 13587



NATIONWIDE CHALLENGES:
Protection of Privacy, Civil Rights, and Civil Liberties

NIEM in November

Multiple Missions & Authorities → National Approaches to Interoperability

Crushing Financial Pressures → Integrated Capabilities & Shared Services

Evolving & Converging Threats → Common Operating Models

300+ million
People

750,000+
Officers

1.2 million
Firefighters

18
CI/KR Sectors

18,000
LE Agencies

250,000
911 Operators

2.2 million
Security Officers

* Numbers are estimates

6
RISS Centers

77
Fusion Centers

28
HITDAs

FBI
NCIJTF • CJIS • FIGs • JTTFs • JRIGs • TSC

DHS
I&A • ICE • CBP • TSA • DNDO • NPPD

Maritime
Domain

DOJ
ATF • DEA • USMS • OJP

NCTC
JCAT

State

DoD

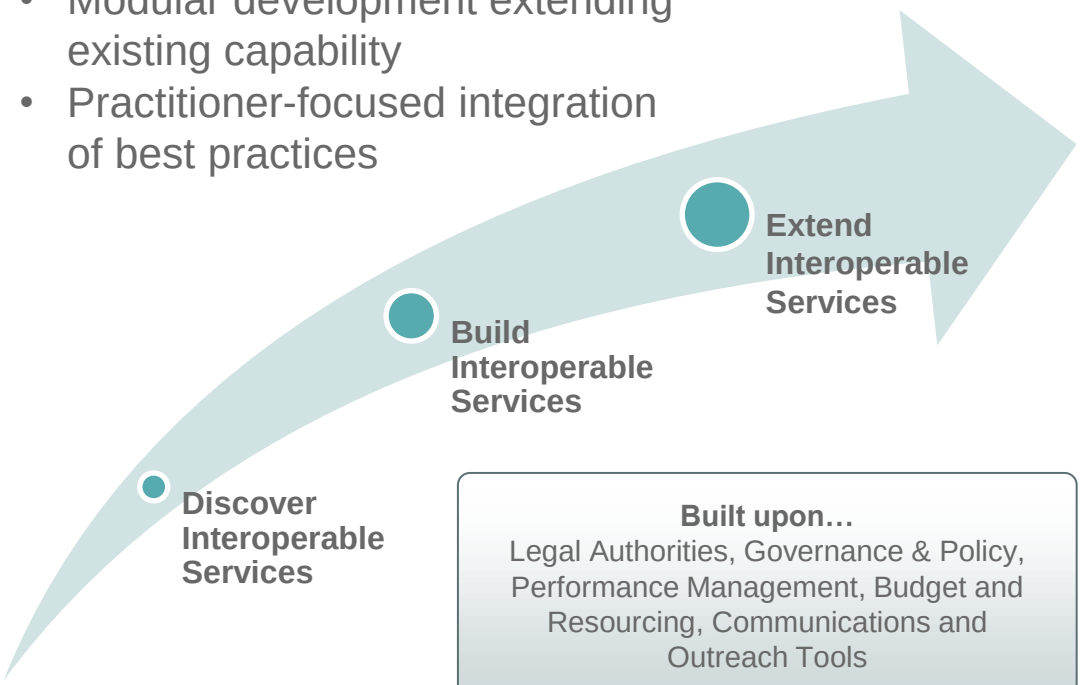
Air
Domain

Nlets

PROJECT INTEROPERABILITY

NIEM in November

- Focused on the white-space between Agencies
- Mission & framework agnostic
- Modular development extending existing capability
- Practitioner-focused integration of best practices



Built upon…
Legal Authorities, Governance & Policy, Performance Management, Budget and Resourcing, Communications and Outreach Tools

ISE Interoperability Tools

- Architecture Alignment
- Attribute Exchange
- Common Profile
- Data Aggregation
- Exchange Patterns
- Geospatial
- Identity and Access Management
- Maturity Model
- **National Information Exchange Model**
- Reference Architecture
- Standards and Specification Framework
- Springboard

STANDARDS COORDINATING COUNCIL

NIEM in November

SEARCH

AFCEA

OASIS
The Organization for the Advancement of Structured Information Standards

OMG
WE SET THE STANDARD®

IJIS Institute

Nlets

AFEI
The Association for Enterprise Information
People – Process –Technology

NATIONAL STRATEGY FOR TRUSTED IDENTITIES IN CYBERSPACE
Enhancing Online Choice, Efficiency, Security, and Privacy

American Council for Technology | Industry Advisory Council
Advancing Government Through Collaboration, Education and Action

OGC™
Open Geospatial Consortium, Inc.

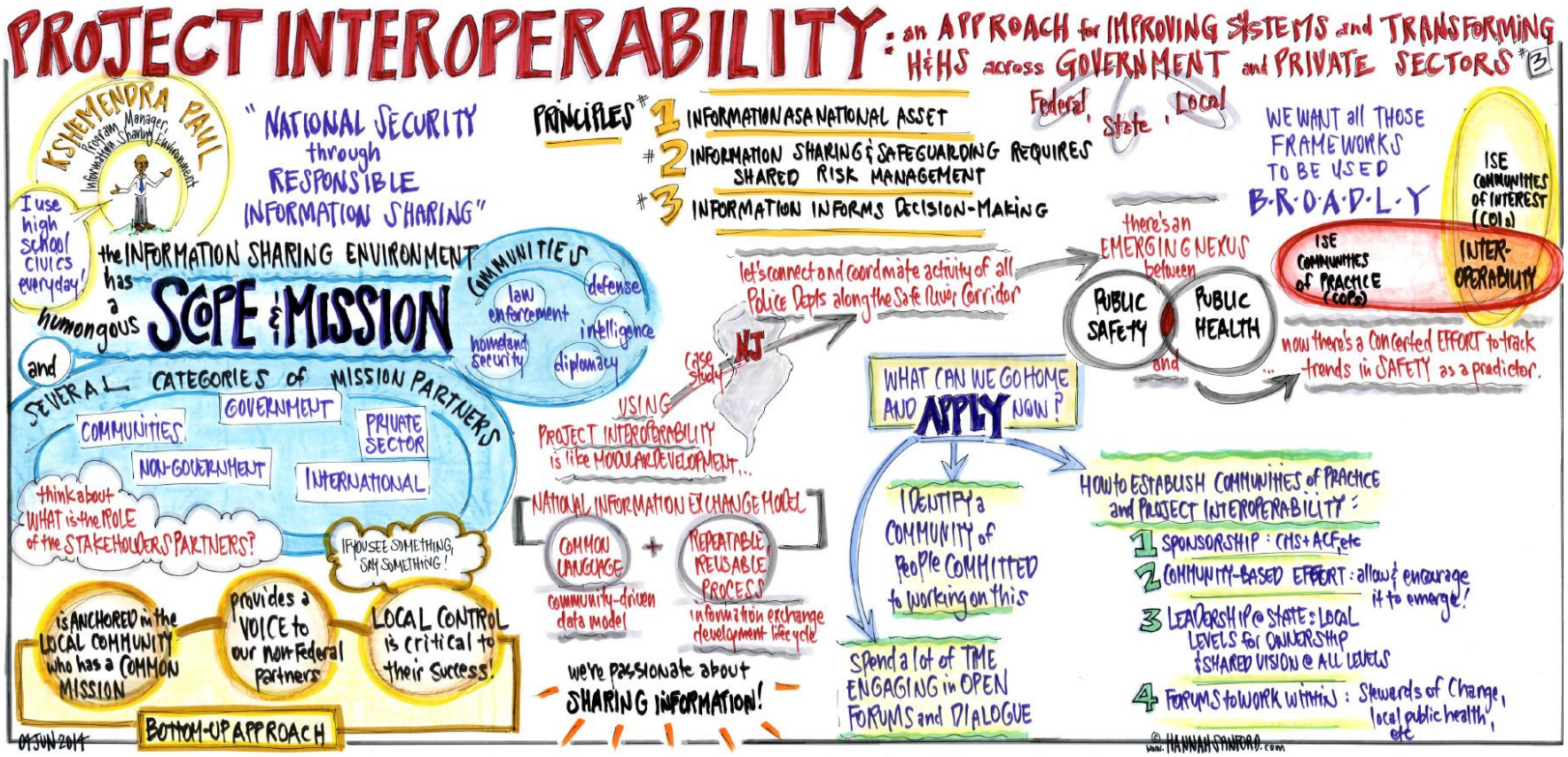
Global Justice Information Sharing Initiative

NIST

NIEM
NATIONAL INFORMATION EXCHANGE MODEL

STEWARDS OF CHANGE

NIEM in November



VISIT ISE.GOV

NIEM in November

@shareandprotect

BEST OF NIEM HALL OF FAME

NIEM in November

BEST OF NIEM 2009 Winners

- *USCIS Enterprise Service Bus Program*
- *HHS Connect, Information Architecture and Development*
- *Disaster Assistance Improvement Program Management Office*
- *Colorado Integrated Criminal Justice Information System*
- *Emergency Operation Center--Interconnectivity*

BEST OF NIEM 2011 Winners

- *Northern Virginia CAD2CAD Exchange*
- *State of Iowa Criminal Justice Information Sharing Project*
- *Pennsylvania Data Quality Framework Project*
- *New York State Integrated Justice Portal*
- *U.S. Department of State, Bureau of Consular Affairs, Consular Systems and Technology, Enterprise Service-Oriented Architecture Migration*

BEST OF NIEM HALL OF FAME

BEST OF NIEM 2013 WINNERS

- *City of Richmond Automated Secure Alarm Protocol*
- *Maritime Information Sharing Environment*
- *New York State Justice Center Incident Report*
- *Open Justice Broker Consortium*
- *Temporary Resident Biometrics Project*

BEST OF NIEM WINNER

NIEM in November

BEST OF NIEM 2014 PRESENTED TO

Shared Computer Operations for the Protection and Enforcement (SCOPE) II

Nevada Department of Public Safety, Clark County, Las Vegas Metropolitan Police Department, City of Henderson, City of Las Vegas, City of North Las Vegas

BEST OF NIEM WINNER

NIEM in November

BEST OF NIEM 2014 PRESENTED TO

North Carolina Families Accessing Services Through Technology (NC FAST)

North Carolina Department of Health and Human Services (DHHS)

BEST OF NIEM WINNER

NIEM in November

BEST OF NIEM 2014 PRESENTED TO

Wisconsin Department of Corrections

State of Wisconsin

BEST OF NIEM WINNER

NIEM in November

BEST OF NIEM 2014 PRESENTED TO

Tactical Infrastructure Enterprise Services Coalition Warfare Program (TIES CWP)

U.S. Army

BEST OF NIEM WINNER

NIEM in November

BEST OF NIEM 2014 PRESENTED TO

PIMA County, AZ Justice—Health Integration Project

Pima County, Arizona

PIMA COUNTY JUSTICE – HEALTH COLLABORATIVE

NIEM in November

PIMA COUNTY

- Danna Whiting, Pima County Behavioral Health Administrator
- Sarah Davis, Pima County Health Department
- Steve Charlton, Pima County ITD
- Chris Schumacher, Pima County ITD
- Wyatt Spencer, Pima County ITD
- Linda Volkerink, Pima County ITD
- Patrick Jarvis, Pima County ITD
- Captain India Davis, Pima County Sheriff
- Captain Joshua Arnold, Pima County Sheriff
- Lieutenant James Smead
- Philip Allen, Pima County Sheriff IT
- Ted Martin, Pima County Sheriff IT

SEARCH, National Consortium for Justice and Statistics

- Mo West
- Yogesh Chawla
- Andrew Owen
- Adam Matz

HINext

- Jonathan Stelgis
- Aurino Correia
- Peggy Lucas
- Ruby Lederman

Correct Care Solutions (Conmed)

- Shella Ladd
- Cory Turco
- John Ream
- Keith Pelchat
- Marcus Capehart
- Paul Winterton
- Austen, Coremr

Community Partnership of Southern Arizona

- Freya Johnson
- Suzanne Hodges
- Theresa Dorazio
- Vanessa Seaney
- Ann Ventola
- Annette Hernandez
- Kathy Carson
- Kate Lawson
- Phyllis Bentlage

ASK A NIEM EXPERT:
NIEM AND NLETS

Frank Minice, *Deputy Executive Director, Nlets*

Kate Silhol, *Lead Software Engineer Nlets*

Join the Conversation:
Use #NIEM and @NIEMConnects to tweet about

NIEM in November

NLETS NETWORK

All state, county, local, and federal agencies with a law enforcement component are connected to the Nlets network.

NLETS NETWORK

- **Over 800,000** mobile, handheld, and desktop devices in the U.S. and Canada are connected to the Nlets network.
- There are 35,000 agencies and over **1 million users** using Nlets services.

NLETS NETWORK

Total Transactions in 2014*

- 1,051,141,662
- On pace for 1.57 billion transactions this year!

System Uptime

- 99.99%

Network Uptime

- 99.97%

Avg. Round Trip Message Response Time

- 1.16 seconds

Avg. Round Trip Message Response Time

- RQ, DQ, IPQ, CR, IQ

*As of September 1st, 2014

THE HISTORY OF NLETS AND XML

- ANSI-NIST Criminal History Rapsheet Standardization Project
- Nlets XML (XML 1.0)
- Nlets and AAMVA CANDLE specification
- GJXDM
- JTF for Rapsheet Standardization
- NIEM

CHALLENGES

- Varying degrees of technology within the user community
- Complex structure to allow for gradual adoption
- Transformation between multiple formats through multiple protocols
- Storage and audit

NLETS' XML IMPLEMENTATION

- Users may specify message format (legacy text, GJXDM, NIEM) per ORI, per message key
  - Example: Receive DMV data in XML, but all other data in legacy text
- Nlets transforms all messages traversing system into recipient's specified format before sending
- XSLTs made available to users for in-state rendering

NLETS' USE OF NIEM

- Wiki NIEM Update is complete!
- All message types available in NIEM
  - Queries, responses with "response text"
- Rapsheet versions 4.0 and 4.1
- CANDLE
- Parsed message types

NLETS NIEM DETAILS

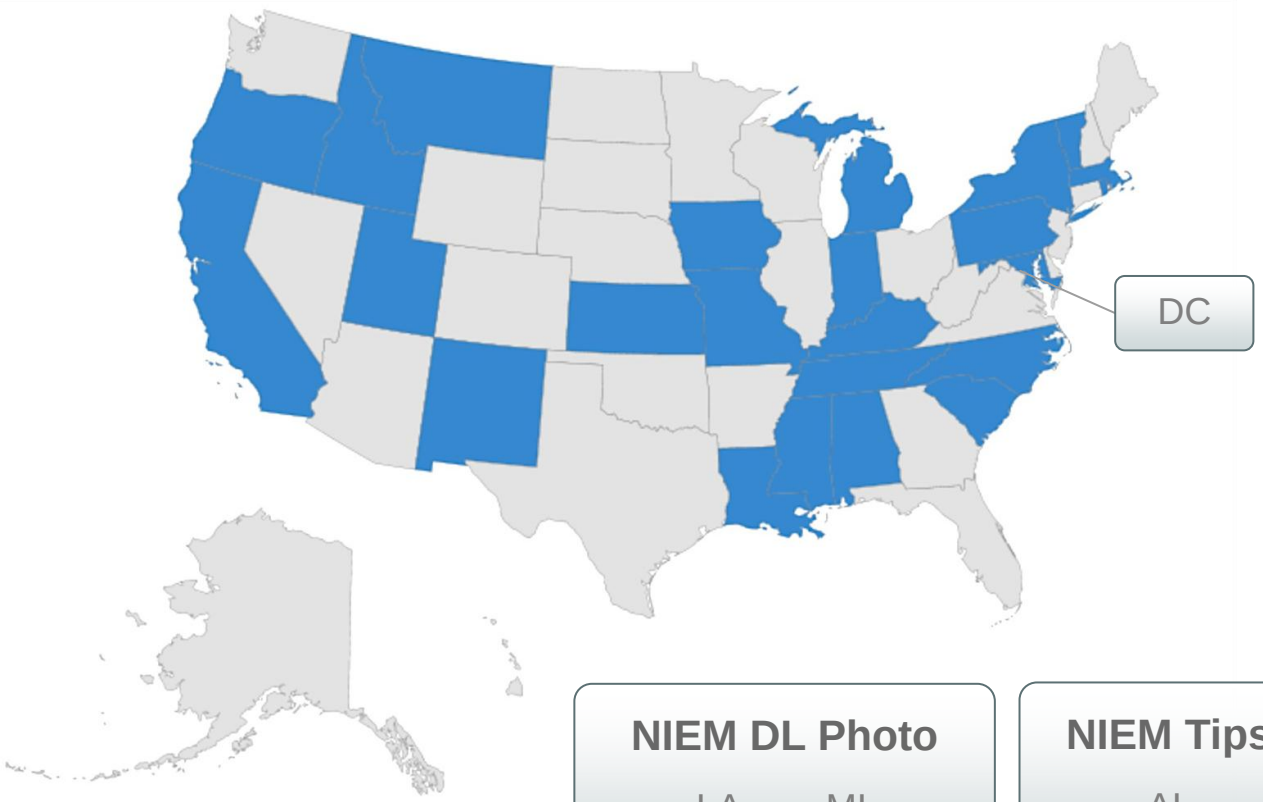
- Continue to specify format per ORI, per message type
- XSLT transformations
  - Between NIEM and GJXDM, to text, between 4.0 and 4.1 Rapsheet versions

USER ADOPTION OF NIEM

- 25 states and the FBI using NIEM
- Most using NIEM for Rapsheet
- Several using for DMV, Corrections Photo, TIPS
- 2.5 million NIEM Rapsheets received in September 2014
- Average 275,000 outbound NIEM messages each week

STATES USING NIEM

NIEM in November



NIEM Rapsheet

AL	MA	PA
CA	MI	SC
DC	MS	*SD
ID	MO	TN
IN	NM	UT
KS	NY	VT
KY	NC	FBI
MD		

*receive only

NIEM Corrections Photos

DC	MA	NC
IN	MT	OR
*IA	NM	RI

*receive only

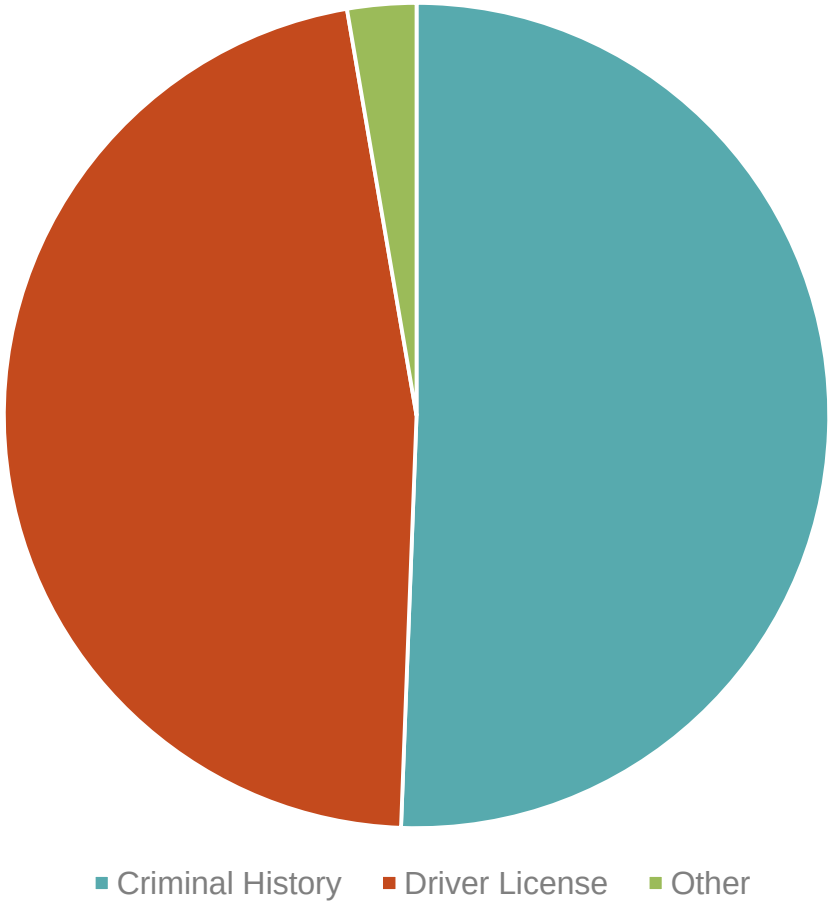
NIEM DL Photo

LA MI

NIEM Tips

AL

OUTBOUND NIEM



PARSING SERVICES USING NIEM

- Criminal History
- Stolen Vehicle Feed
- DMV Responses

CRIMINAL HISTORY

- Criminal Alien Identification Initiative (CAII)
- Project funded by Immigration and Customs Enforcement (ICE) to assist with prioritization of criminal alien process at the ICE Law Enforcement Support Center (LESC)
  - Anticipated to improve LESC response time from 20 minute average down to only a few minutes

CAII BACKGROUND

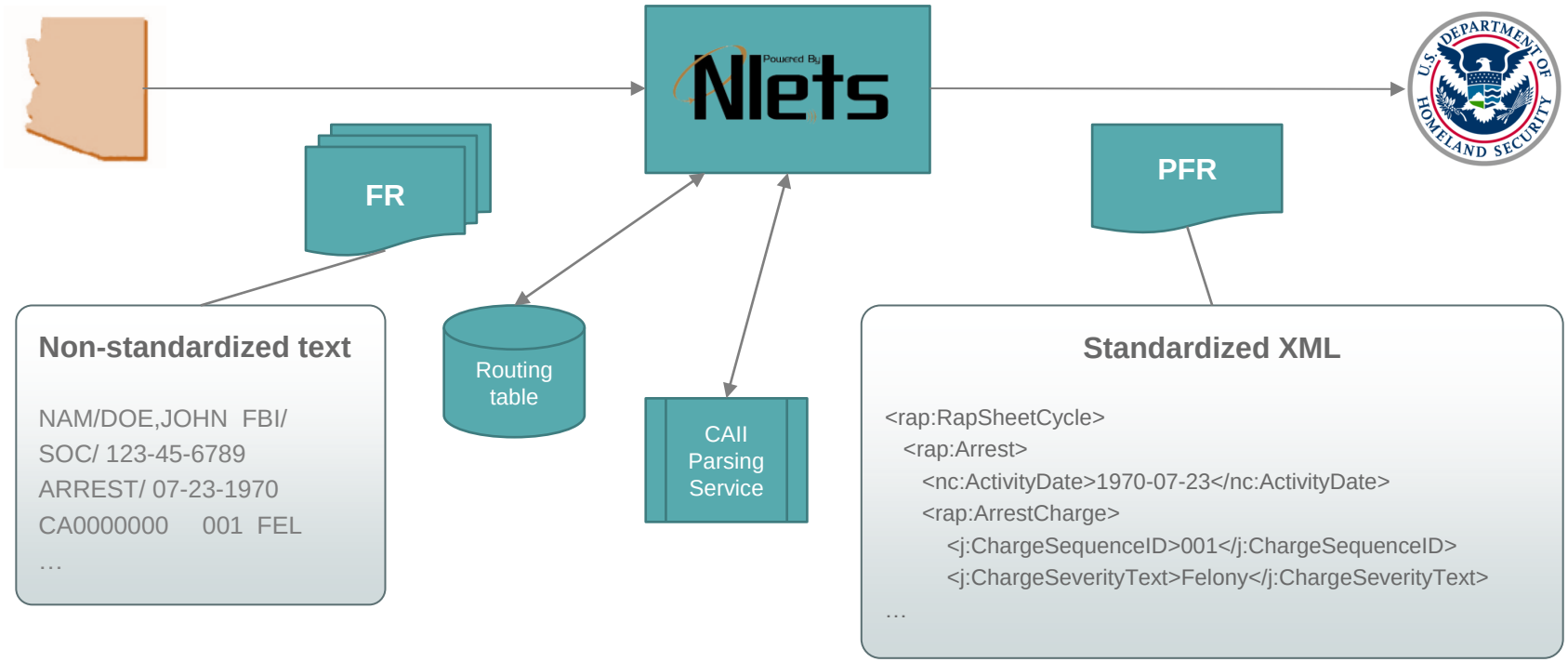
- CHRIS project funded by grants from Bureau of Justice Statistics has laid groundwork
  - CHRIS parses data of interest to BJS into flat files
- Currently 25 states and the FBI return standardized XML formatted rapsheets
- Fields being parsed include:
  - Subject information ie, name, dob, sex, race, ethnicity, FBI, SID, SOC, place of birth, citizenship, deceased y/n and date
  - Cycle information ie, arrest date, agency, charges, disposition, sentence and supervision details including restitution, min and max confinement, court and supervision agencies, etc.

CAII CONSIDERATIONS

- Parsed data sent via new message keys; minor modifications to standardized rapsheet format
- Criminal history records frequently sent with multiple pages, thus need to aggregate before parsing
- Parsing service requires unique control field in order to assemble pages
- Configurable timeout before parsing and sending incomplete response
  - With caveats indicating potential incompleteness

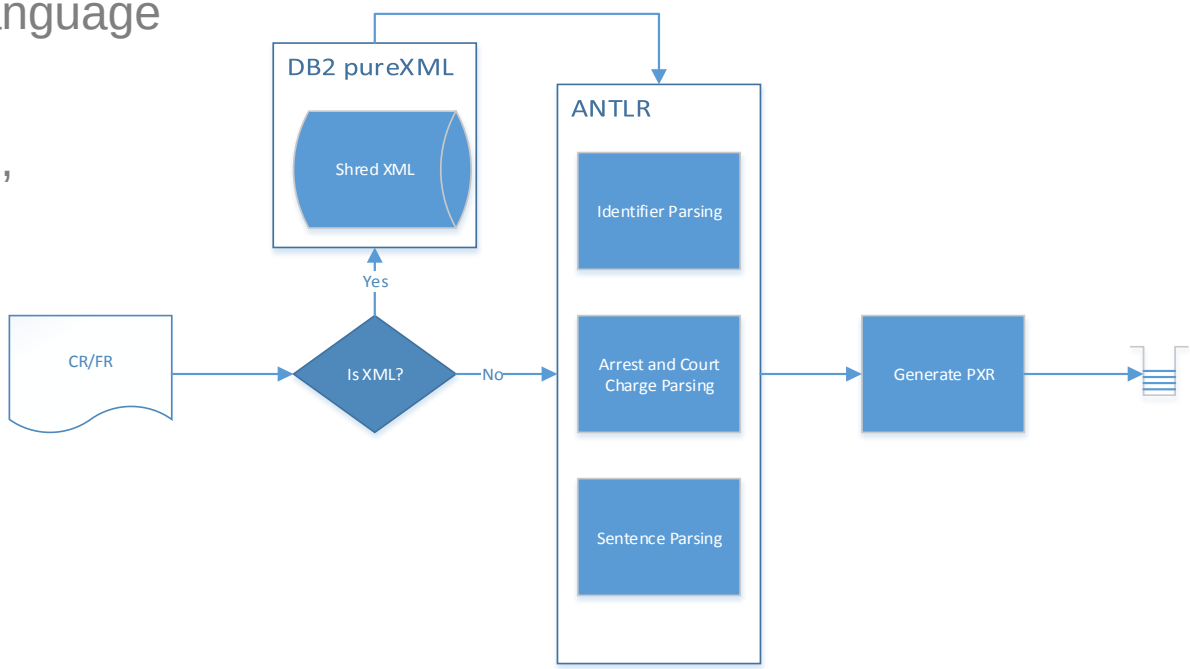
CAII DATA FLOW

NJIN checks routing table and delivers parsed PFR to ICE



CAII PARSER DETAIL

- XML parsed using DB2 pureXML
- Text parsed using ANTLR (Another Tool for Language Recognition)
- After XML is parsed, some field contents still require text parsing



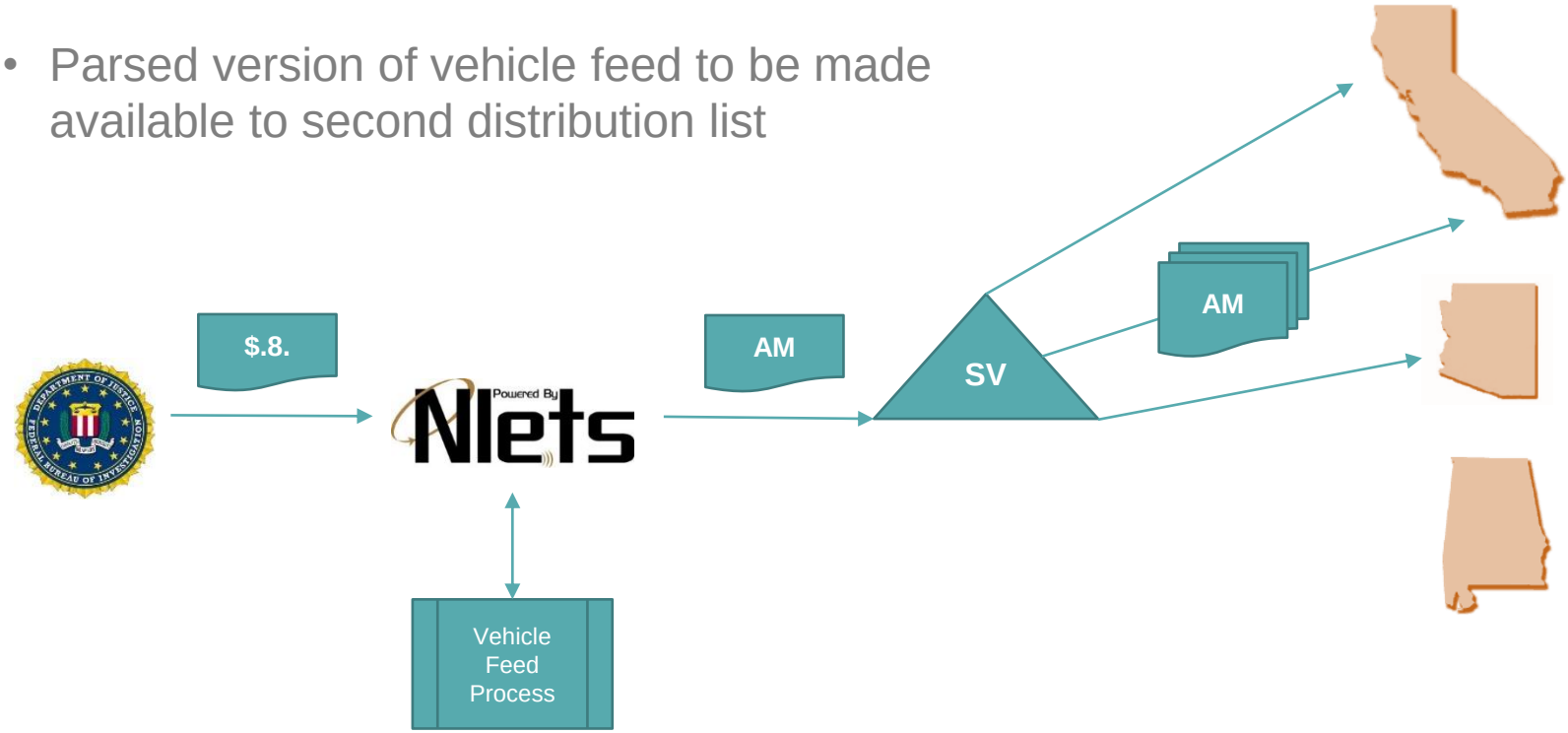
STOLEN VEHICLE FEED

- NCIC stolen vehicle feed available via Nlets (August 2013)
- NCIC forwards all vehicle-related messages to Nlets as $.8. messages
- Nlets forwards to distribution list as AM messages

AM.AZNLETS00
09:22 08/19/2013 02050
09:22 08/19/2013 00130
AZNLETS34
*0705585466
TXT * Powered by NLETS *
REQUEST FOR STATEWIDE
BROADCAST
$.8.NLETS AZNLETS99 NLETS
NOTIFICATION AT 1222 EDT 20130819
1N011A7B01FFC33EV
.EV.NC0410300.....CCL146F310451.1976.
CHEV.C10.PK.BLU/WHI.
20130805.201330655... ST0LEN
VEHICLE C0NTACT 0WNER D0W IJOHN
123 PARAM0UNT ST HIGH P0INT NC
123 123 0 123.Y.... SEE IDENTIFIER(S)
VIN/CCL123F123456 NIC/V123456789
OCA/123456789

STOLEN VEHICLE FEED PARSING

- Parsed version of vehicle feed to be made available to second distribution list



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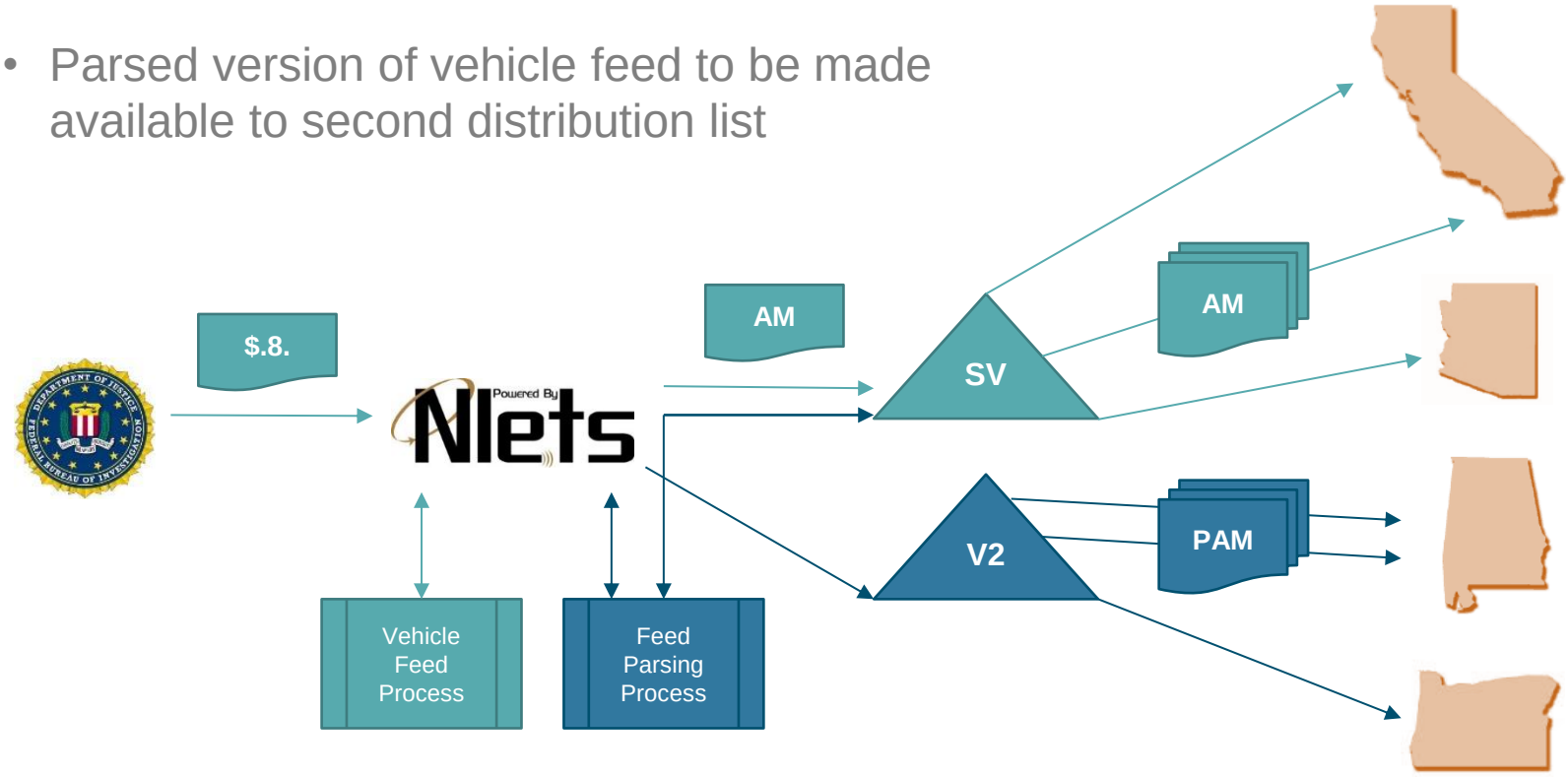

STOLEN VEHICLE FEED TASKS AND STATUS

NIEM in November

- ✓ Assemble sample messages to represent all possible formats
- ✓ Create standardized XML format(s) for data
  - Leveraged NCIC's NIEM and GJXDM specifications
- Build a service to receive the feed from NJIN
- Produce parsers for each relevant NCIC format
- Target completion date: November 2014

DMV PARSING SERVICE

- Parsing of DRs and RRs from legacy text and non-standardized XML into CANDLE-like format
  - Minor changes needed (similar to parsed rapsheet format)
- Opportunity to provide value-add for users
- Well positioned based on recent parsing work

DMV PARSING CONSIDERATIONS

- Parsers required for each state
  - Each state may have multiple formats
- State can change formats without warning
  - Must proactively identify changes/problems and resolve

NLETS FUTURE NIEM

- All response data IEPDs built by the EOY 2015 (140 Nlets message keys.)
- Nlets participation in NIEF
- Nlets sunset of legacy protocols by July 2017
- Nlets sunset of dot delimited text by December 2018

RESPONSE STANDARDIZATION

- Will result in over 50 new IEPDs
- IEPD Requirements Gathering and Focus Groups
  - Many response types have potential for reuse within and outside of Nlets community
  - Beginning to stand up focus groups of interested parties

BEST OF NIEM!

- Automated Secure Alarm Protocol (ASAP to PSAP)
  - *City of Richmond, Department of Information Technology Public Safety Team*

Q & A

BREAK

2:15 – 2:30 PM

Join the Conversation:
Use #NIEM and @NIEMConnects to tweet about

NIEM in November

OPEN SOURCE COLLABORATION

Christina Bapst, *NIEM Communications and Outreach*
Mark Kindl, *NIEM Lead Developer*
Webb Roberts, *NIEM Lead Developer*
Kamran Atri, *NIEM Emergency Management Domain*
Scott Renner, *Co-Chair, NIEM Technical Architecture Committee*

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NIEM in November

COMMUNITY.

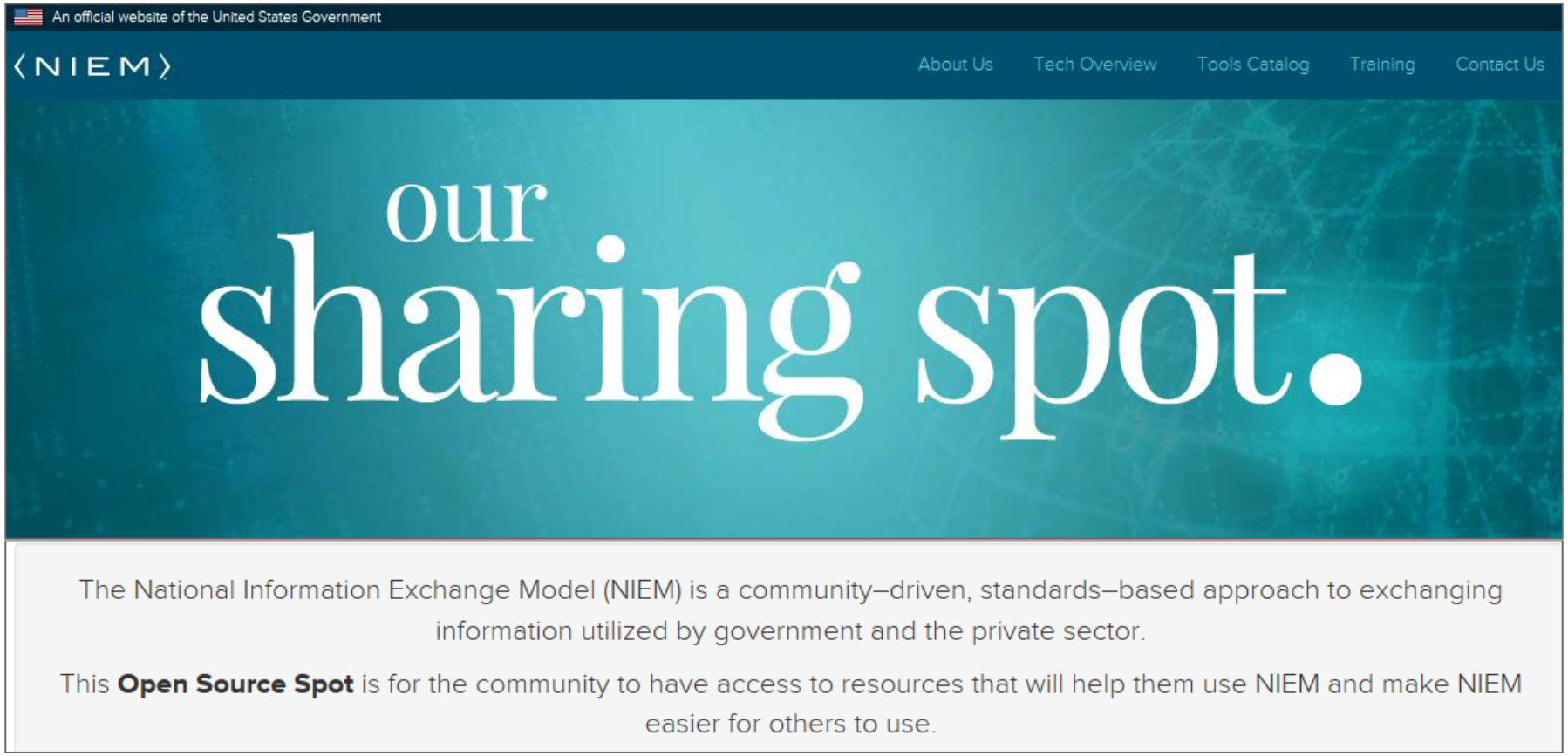
GIT CONNECTED

NIEM in November

NIEM.github.io

NIEM GITHUB HOMEPAGE

NIEM in November



OUR SHARING SPOT FEATURES

NIEM in November

NIEM–UML

The NIEM Unified Modeling Language (UML) Profile allows UML tool providers to build NIEM into their products. Contribute to the development of the NIEM–UML Profile for v3.0.

Learn More | GitHub Repo

NIEM Developer Network

The NIEM developer network serves as a one–stop resource for IEPD templates, examples, and tutorials for developers and implementers.

Participate Now | GitHub Repo

IEPD Library

A golden rule of NIEM is "if it exists, use it." So share your Information Exchange Package Documentation (IEPDs) for reuse! They can be reused partially or fully, saving time and money.

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Implementation Cookbook

A catalog of commonly used ways to implement NIEM—including Java, web services, and others. Help us add more!

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Model Management

Help pilot the use of GitHub to update the NIEM Emergency Management domain model content!

Learn More | GitHub Repo

Feedback & Ideas

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NIEM DEVELOPER NETWORK

NIEM in November

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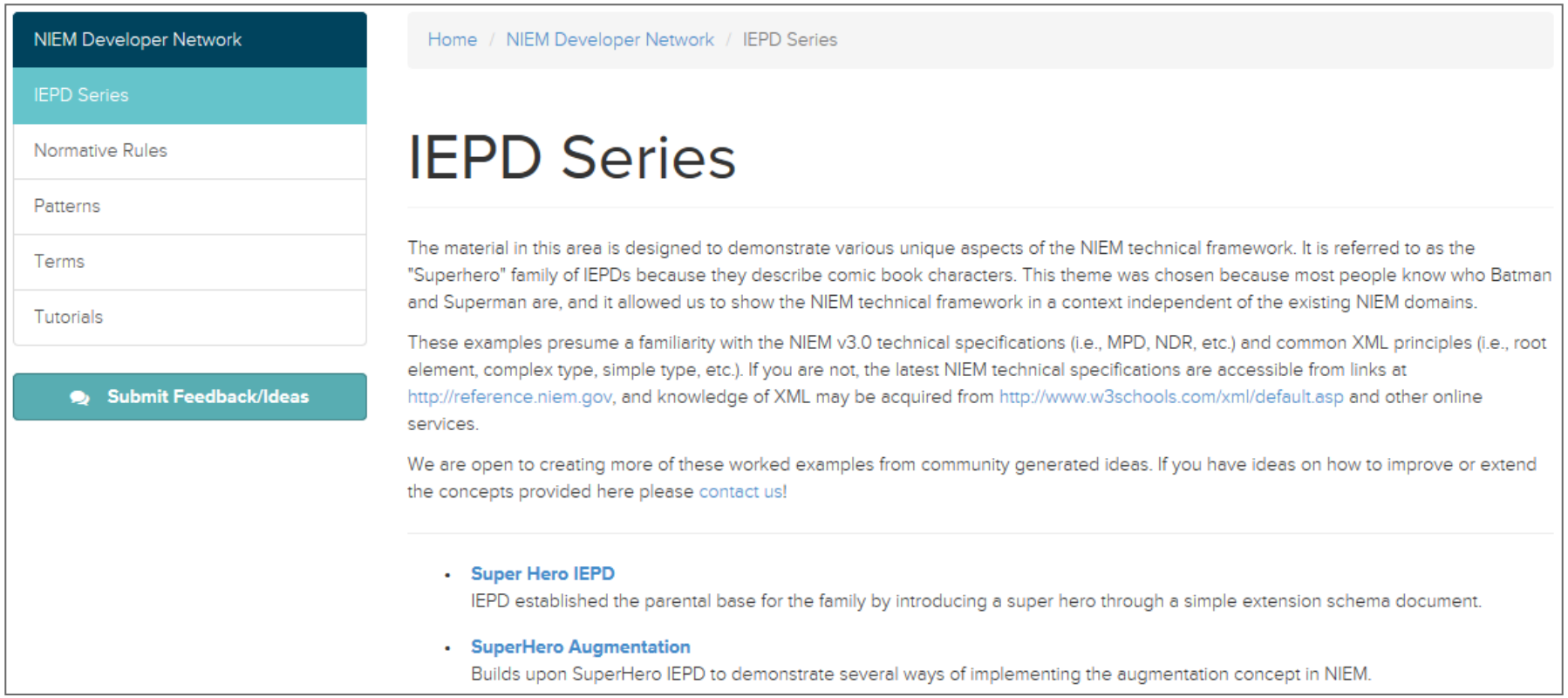
IEPD SERIES

NIEM in November



NIEM Developer Network

- IEPD Series
- Normative Rules
- Patterns
- Terms
- Tutorials

Submit Feedback/Ideas

Home / NIEM Developer Network / IEPD Series

IEPD Series

The material in this area is designed to demonstrate various unique aspects of the NIEM technical framework. It is referred to as the "Superhero" family of IEPDs because they describe comic book characters. This theme was chosen because most people know who Batman and Superman are, and it allowed us to show the NIEM technical framework in a context independent of the existing NIEM domains.

These examples presume a familiarity with the NIEM v3.0 technical specifications (i.e., MPD, NDR, etc.) and common XML principles (i.e., root element, complex type, simple type, etc.). If you are not, the latest NIEM technical specifications are accessible from links at http://reference.niem.gov, and knowledge of XML may be acquired from http://www.w3schools.com/xml/default.asp and other online services.

We are open to creating more of these worked examples from community generated ideas. If you have ideas on how to improve or extend the concepts provided here please contact us!

- **Super Hero IEPD**
  IEPD established the parental base for the family by introducing a super hero through a simple extension schema document.
- **SuperHero Augmentation**
  Builds upon SuperHero IEPD to demonstrate several ways of implementing the augmentation concept in NIEM.

IEPD SERIES

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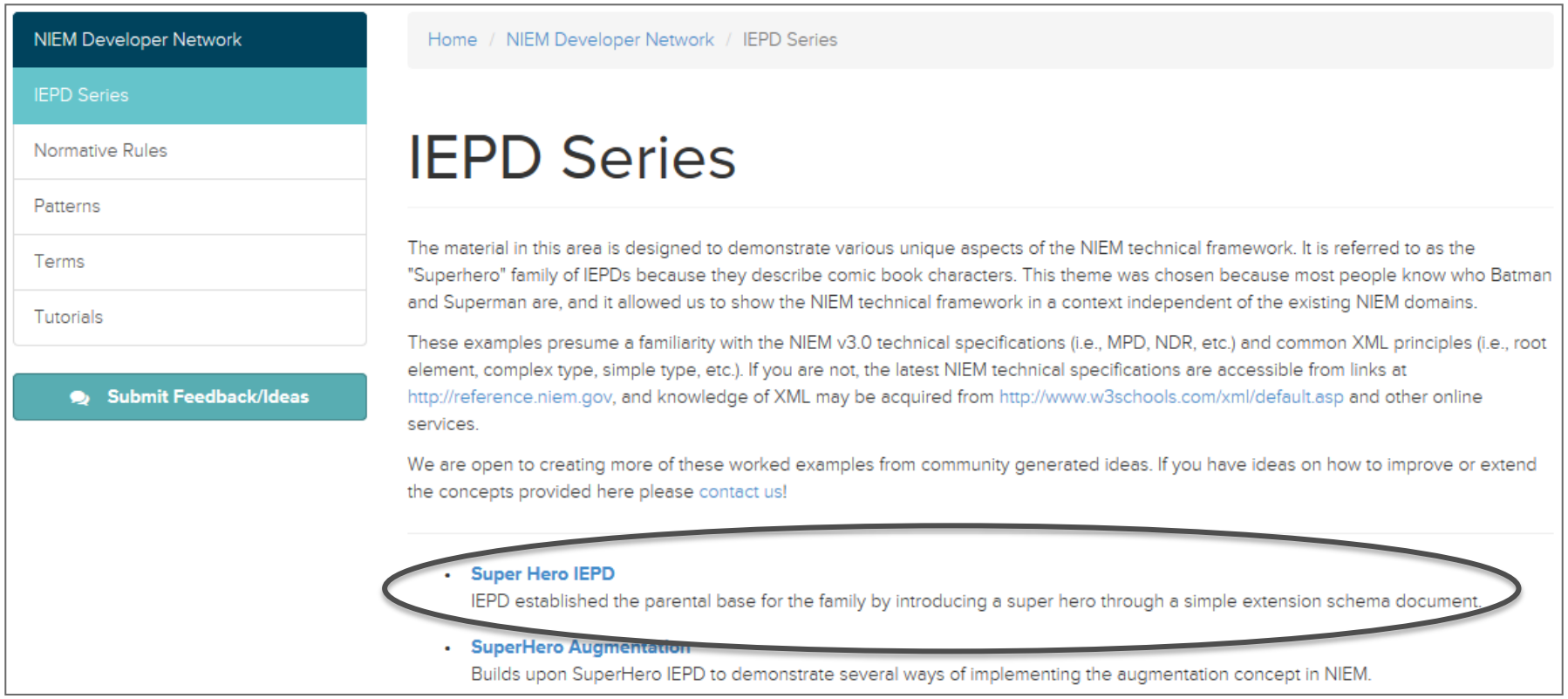
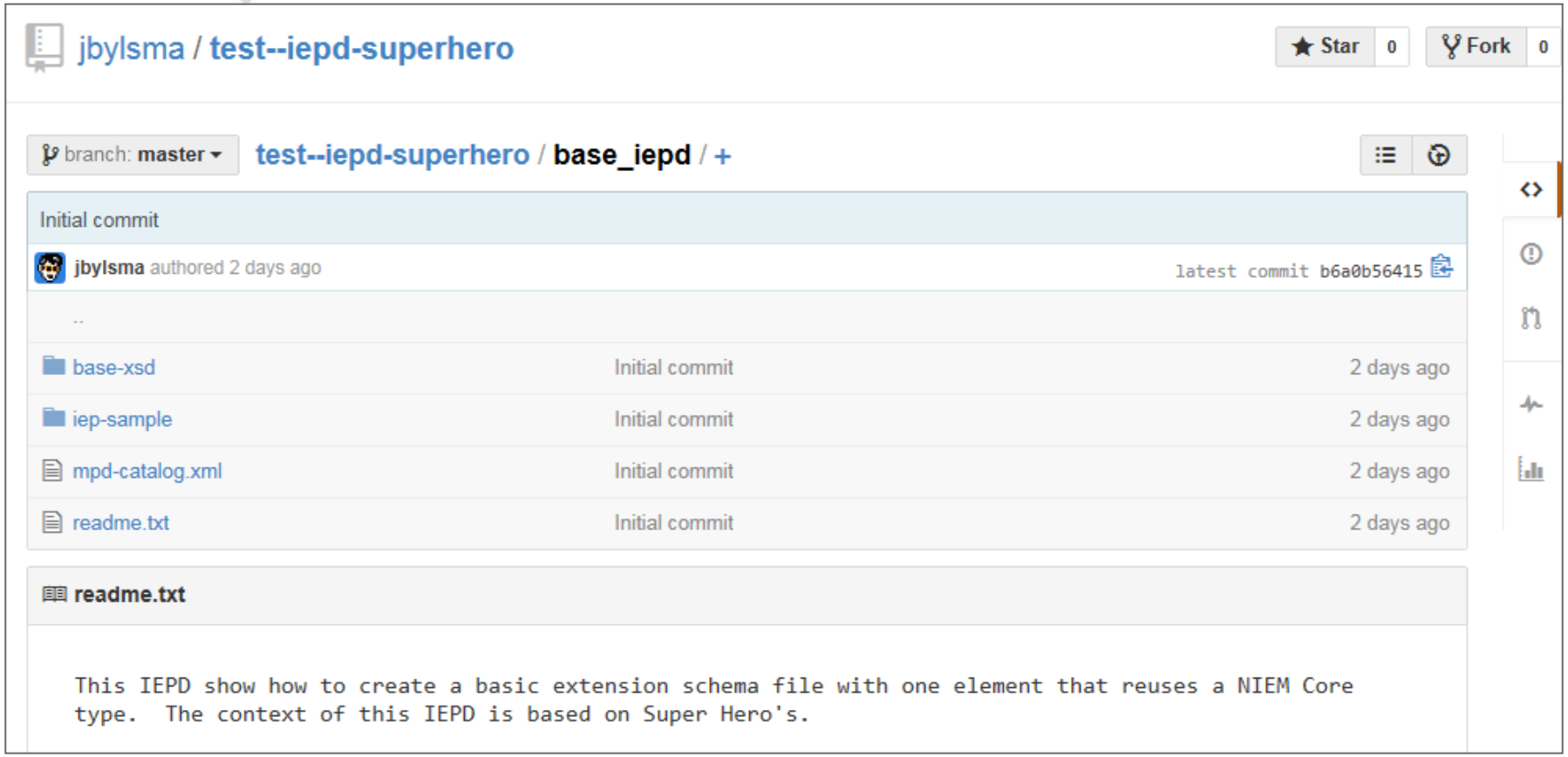
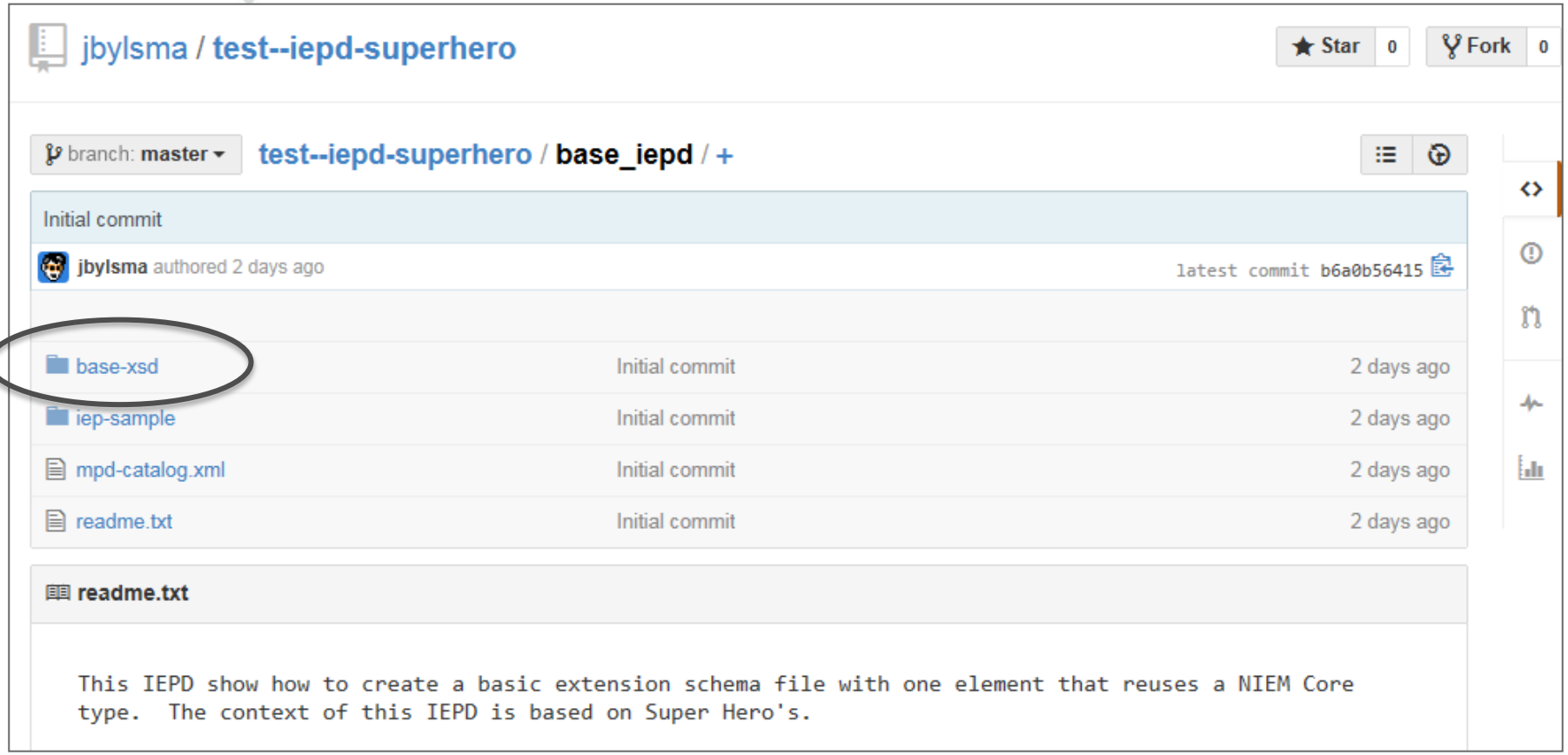


SUPER HERO IEPD

NIEM in November



SUPER HERO IEPD



SUPERHERO IEPD BASE-XSD EXTENSION

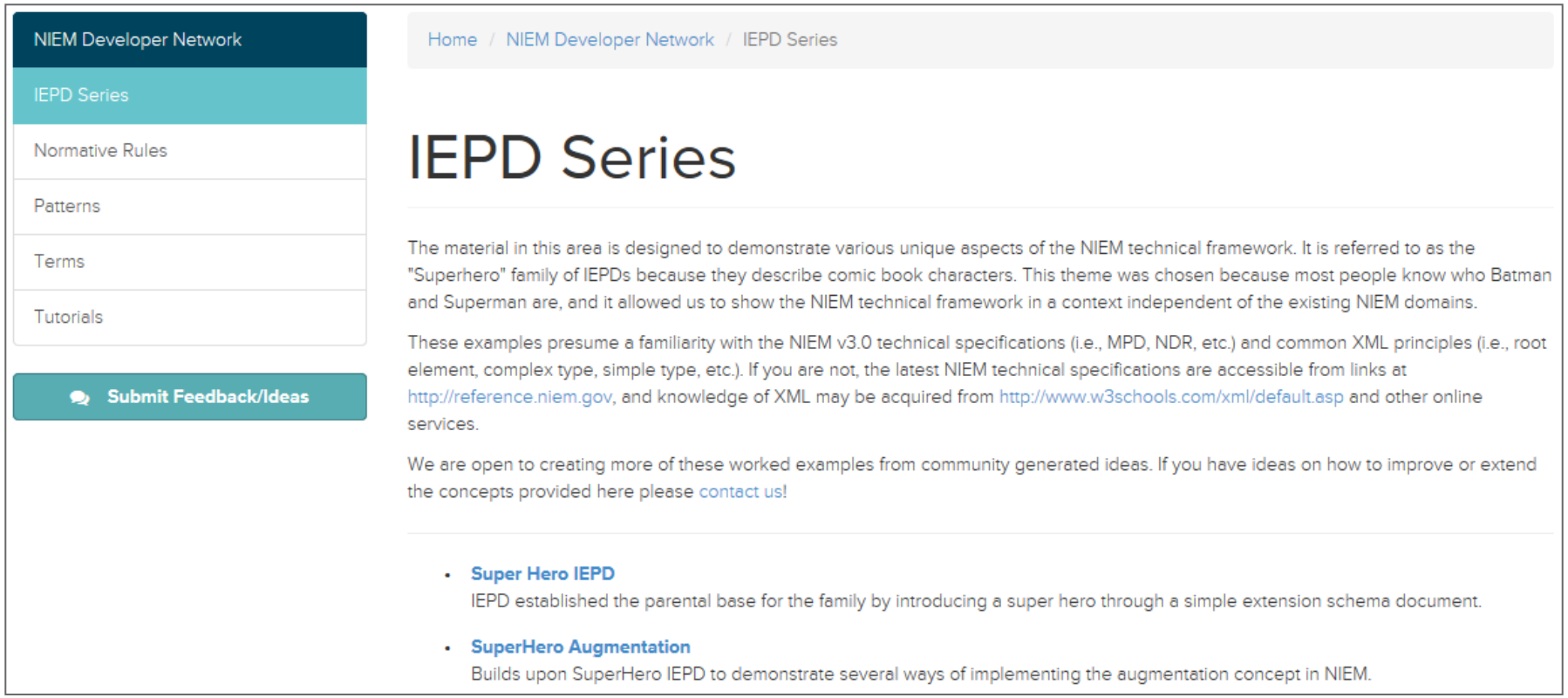
NIEM in November

27 lines (23 sloc) | 1.105 kb Raw | Blame | History

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <xs:schema version="1.0"
3      xmlns:xs="http://www.w3.org/2001/XMLSchema"
4          targetNamespace="http://www.example.org/SuperHero-extension"
5          xmlns:tns="http://www.example.org/SuperHero-extension"
6          xmlns:nc="http://release.niem.gov/niem/niem-core/3.0/"
7          ct:conformanceTargets="http://reference.niem.gov/niem/specification/naming-and-design-rules/3.0/#ExtensionSchemaDocument"
8          xmlns:ct="http://release.niem.gov/niem/conformanceTargets/3.0/"
9          elementFormDefault="qualified">
10
11         <xs:annotation>
12                 <xs:documentation>This IEPD shows how to create a basic extension schema file with one element that reuses a NIEM
13                         The context of this IEPD is based on Superheros.
14                 </xs:documentation>
15         </xs:annotation>
16
17         <xs:import namespace="http://release.niem.gov/niem/niem-core/3.0/"
18                 schemaLocation="../niem/niem-core/3.0/niem-core.xsd" />
19
20         <xs:element name="SuperHero" type="nc:PersonType">
21                 <xs:annotation>
22                         <xs:documentation> A person with super human abilities generally used to help others.
```

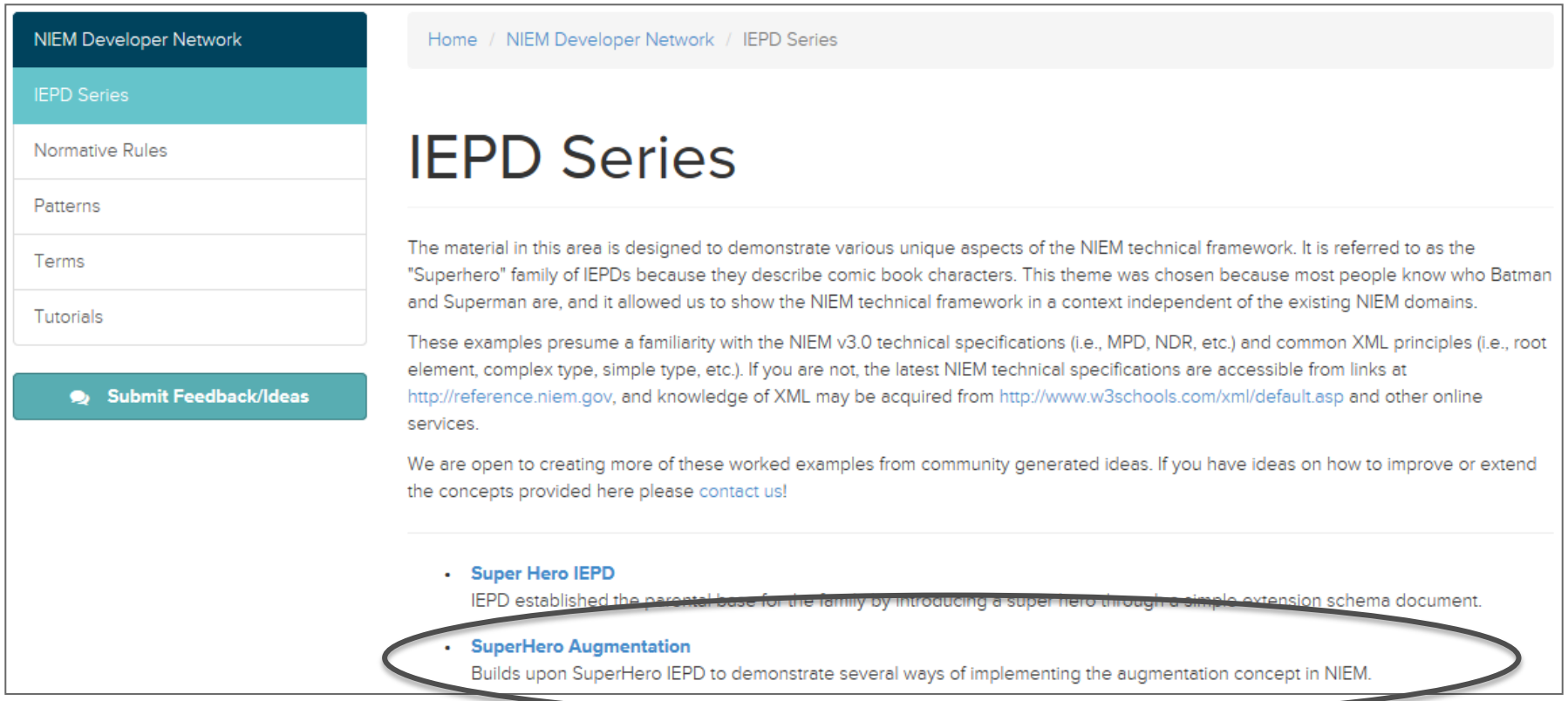
IEPD SERIES

NIEM in November



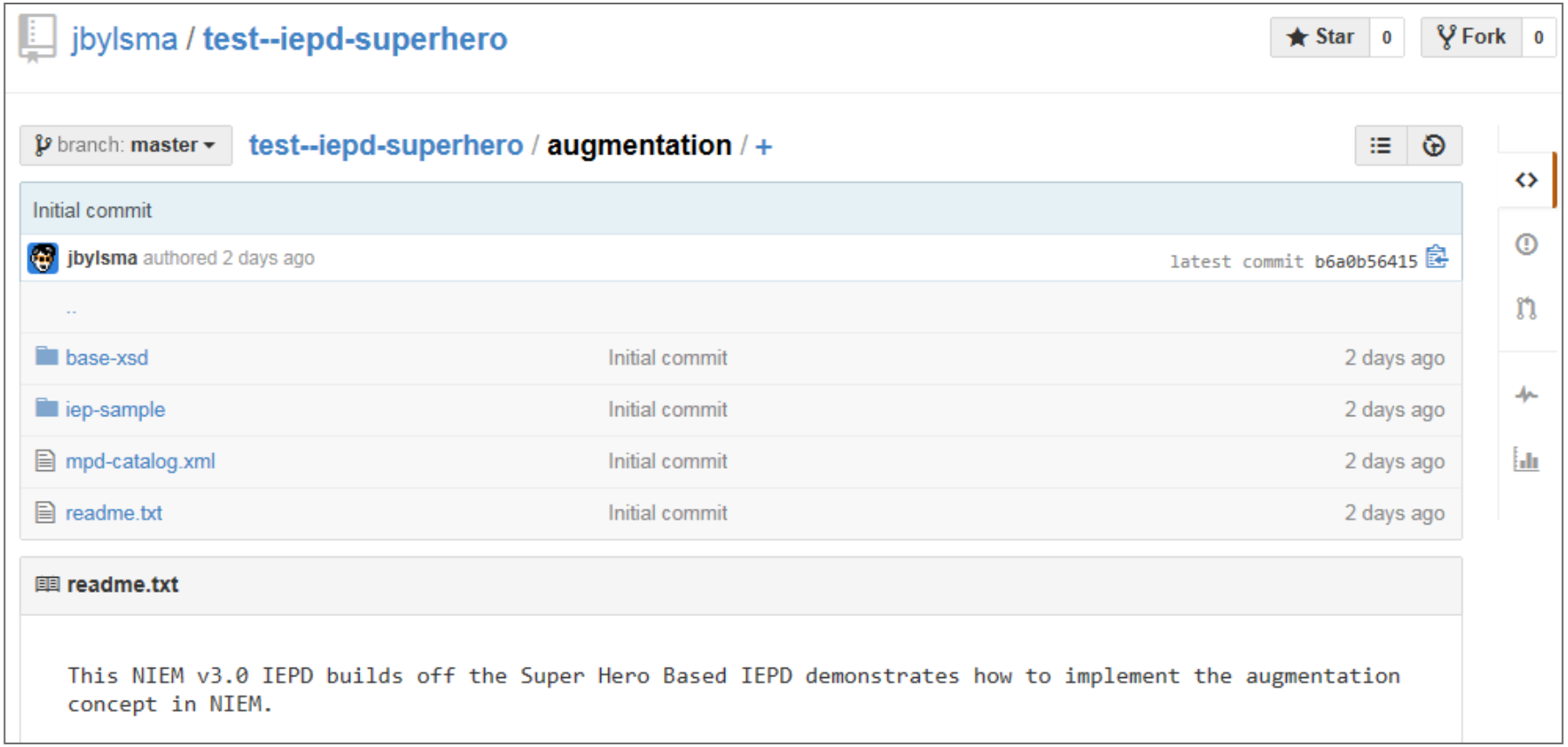
IEPD SERIES

NIEM in November



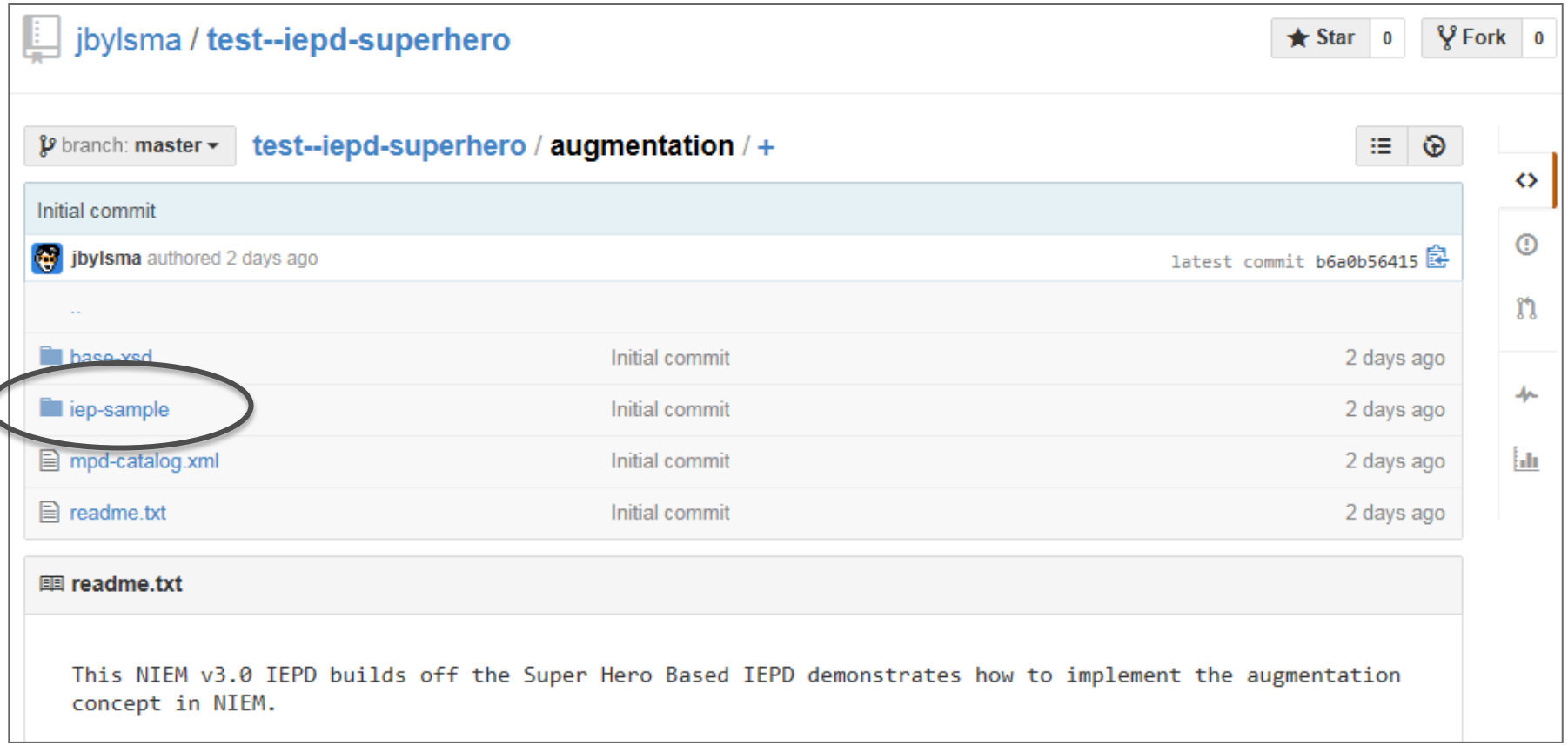
SUPERHERO IEPD AUGMENTATION

NIEM in November



SUPERHERO IEPD AUGMENTATION

NIEM in November



SUPERHERO IEPD AUGMENTATION TEST-IEPD

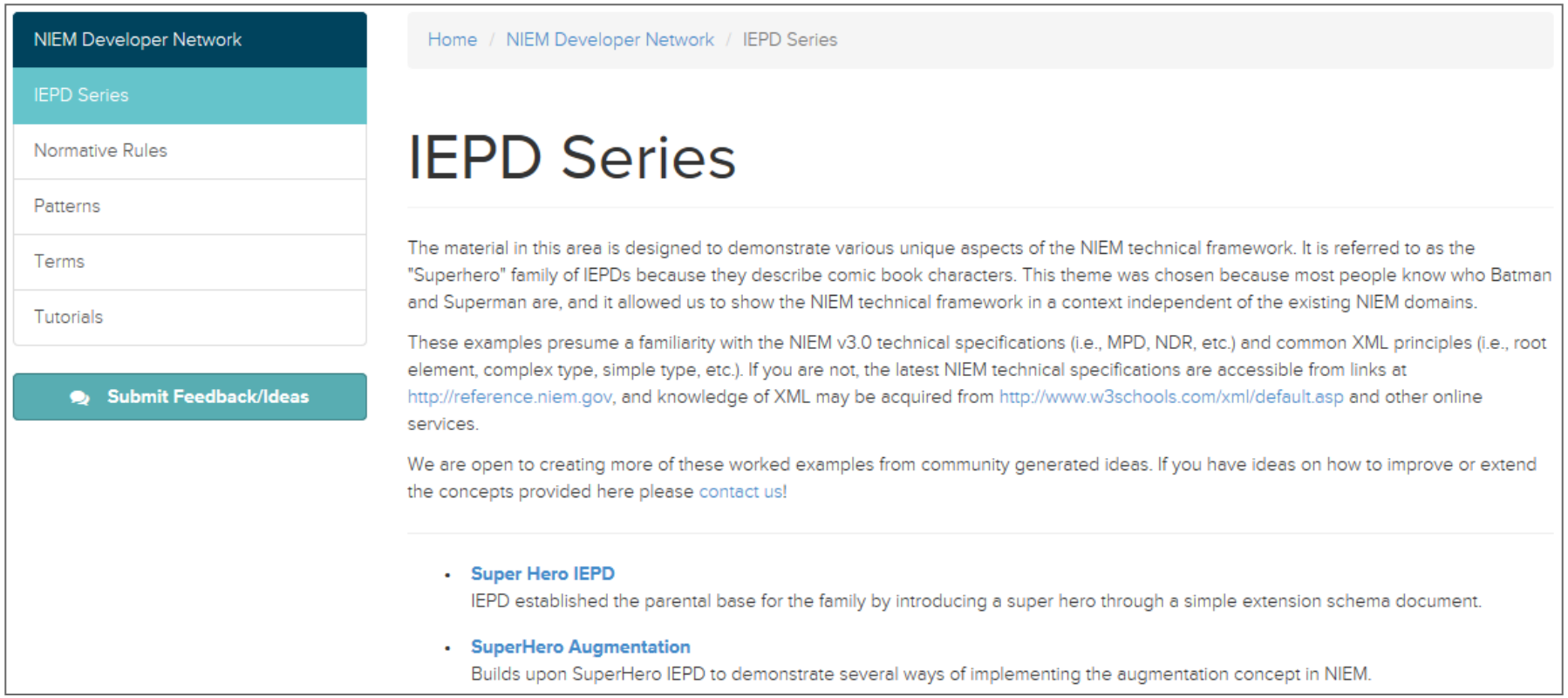
NIEM in November

16 lines (15 sloc) | 0.888 kb — Raw | Blame | History

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <nc:Person xmlns:tns="http://www.example.org/SuperHero-extension"
3   xmlns:nc="http://release.niem.gov/niem/niem-core/3.0/"
4   xmlns:niem-xsd="http://release.niem.gov/niem/proxy/xsd/3.0/"
5   xmlns:structures="http://release.niem.gov/niem/structures/3.0/"
6   xmlns:ct="http://release.niem.gov/niem/conformanceTargets/3.0/"
7   xmlns:appinfo="http://release.niem.gov/niem/appinfo/3.0/"
8   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
9   xsi:schemaLocation="http://release.niem.gov/niem/niem-core/3.0/ ../base-xsd/extension/SuperHero-extension_A.xsd">
10     <nc:PersonName>
11         <nc:PersonGivenName>Bruce</nc:PersonGivenName>
12         <nc:PersonSurName>Wayne</nc:PersonSurName>
13     </nc:PersonName>
14     <tns:PersonClothingDescriptionText>Blue and gray cape, utility belt and face covering with bat like ears.</tns:PersonClothingD
15 </nc:Person>
```

IEPD SERIES

NIEM in November



NIEM Developer Network

- IEPD Series
- Normative Rules
- Patterns
- Terms
- Tutorials

Submit Feedback/Ideas

Home / NIEM Developer Network / IEPD Series

IEPD Series

The material in this area is designed to demonstrate various unique aspects of the NIEM technical framework. It is referred to as the "Superhero" family of IEPDs because they describe comic book characters. This theme was chosen because most people know who Batman and Superman are, and it allowed us to show the NIEM technical framework in a context independent of the existing NIEM domains.

These examples presume a familiarity with the NIEM v3.0 technical specifications (i.e., MPD, NDR, etc.) and common XML principles (i.e., root element, complex type, simple type, etc.). If you are not, the latest NIEM technical specifications are accessible from links at http://reference.niem.gov, and knowledge of XML may be acquired from http://www.w3schools.com/xml/default.asp and other online services.

We are open to creating more of these worked examples from community generated ideas. If you have ideas on how to improve or extend the concepts provided here please contact us!

- **Super Hero IEPD**
  IEPD established the parental base for the family by introducing a super hero through a simple extension schema document.
- **SuperHero Augmentation**
  Builds upon SuperHero IEPD to demonstrate several ways of implementing the augmentation concept in NIEM.

IMPLEMENTATION COOKBOOK

NIEM in November

NIEM–UML

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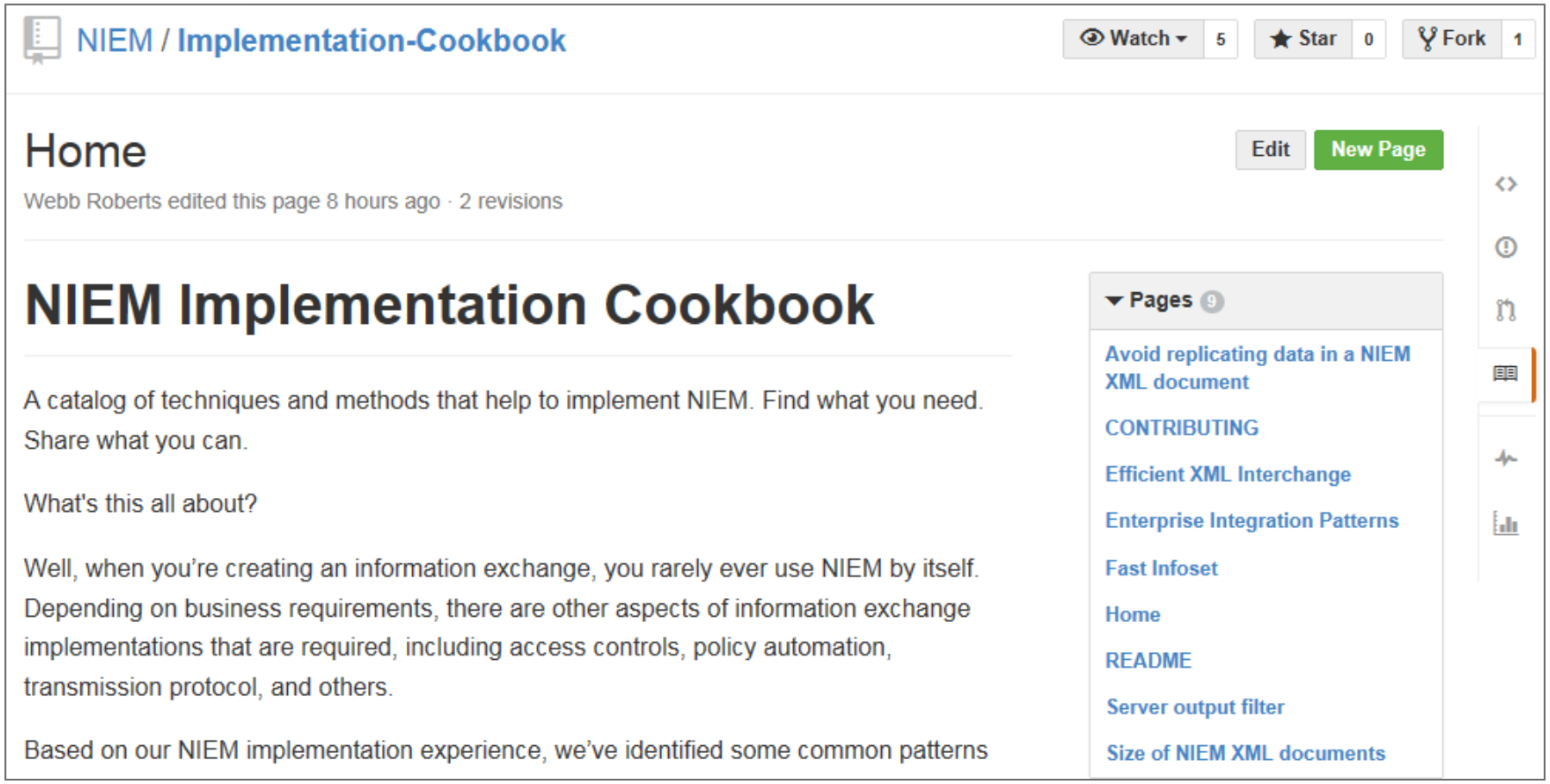
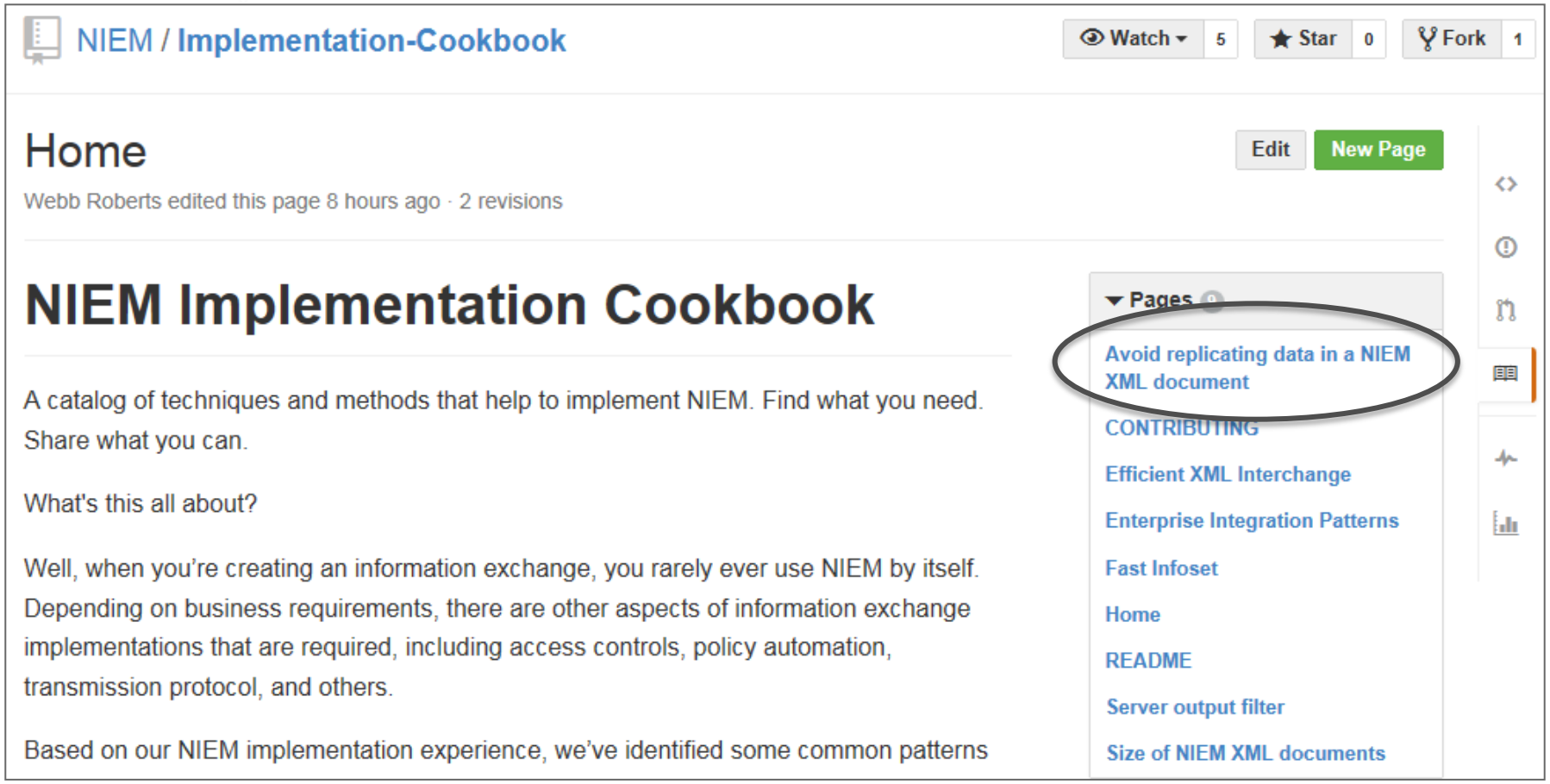
NIEM in November



NIEM IMPLEMENTATION COOKBOOK

NIEM in November



EXAMPLE PATTERN

NIEM in November

Avoid replicating data in a NIEM XML document

Edit | New Page

Webb Roberts edited this page 8 hours ago · 1 revision

There are several NIEM-specific strategies to avoid replicating data within a NIEM XML document.

Use structures:id and structures:ref

An XML document may avoid replicating data by using references within the document. Instead of replicating the data for a vehicle, for example, the vehicle may be expressed once within an instance document, and other uses of the vehicle may be expressed by a reference to the vehicle. The use of references is described and specified by the NIEM Naming and Design Rules section on reference elements.

Take, for example, this example from the NDR:

Pages 9

- Avoid replicating data in a NIEM XML document
- CONTRIBUTING
- Efficient XML Interchange
- Enterprise Integration Patterns
- Fast Infoset
- Home
- README
- Server output filter
- Size of NIEM XML documents

TOPICS

NIEM in November

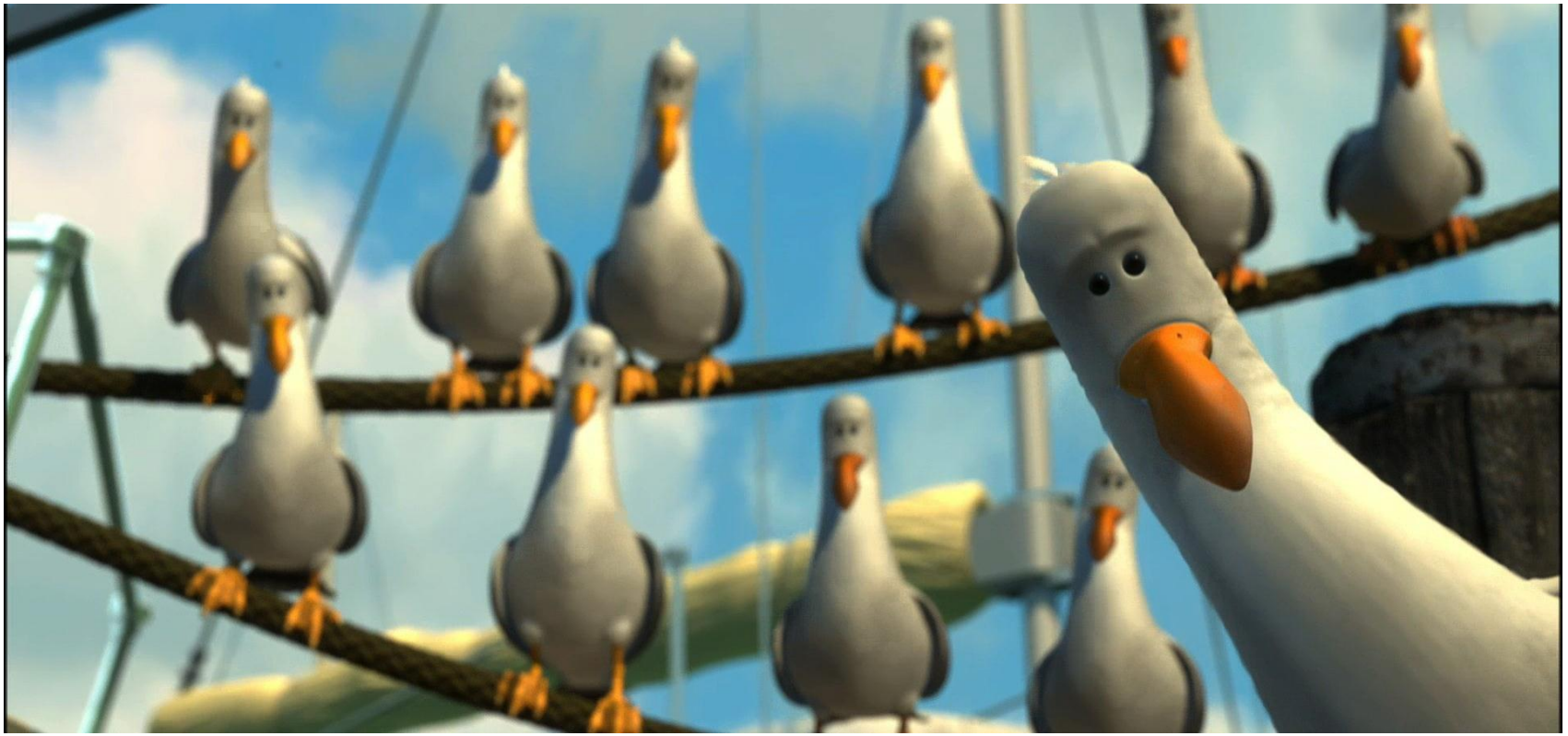
- Size of NIEM XML messages
- Enterprise Information Patterns
- Languages: Java, JSON, RDF
- Refactoring NIEM

IN-PROGRESS DEMONSTRATIONS

NIEM in November

- Enterprise Information Patterns
  - Integrate NIEM XML, JSON, Government Open Data, EIP
- Java language bindings
  - IEPD to Java objects via JAXB
  - NIEM-specific issues & configuration
    - Namespaces, ID/IDREF resolution, NIEM metadata
- JSON strategies:
  - XML-to-JSON via Camel
  - Java object annotations to marshal JSON
- The Implementation Catalog Wiki will link to GitHub repositories

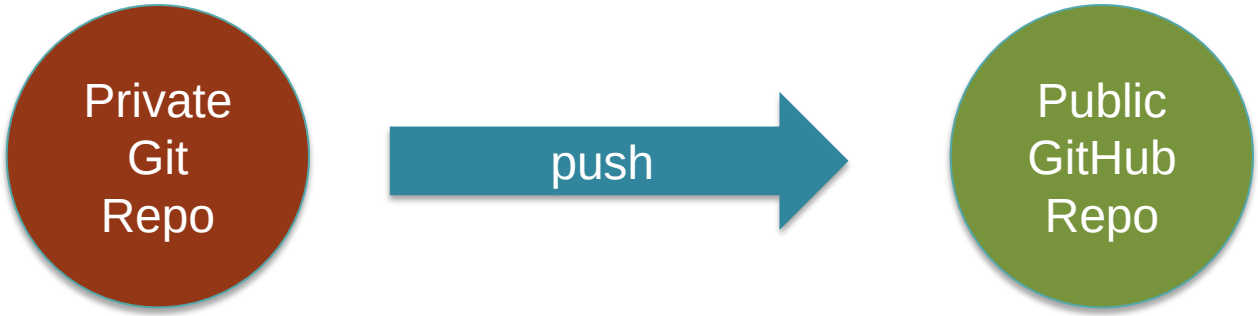
MODEL MANAGEMENT



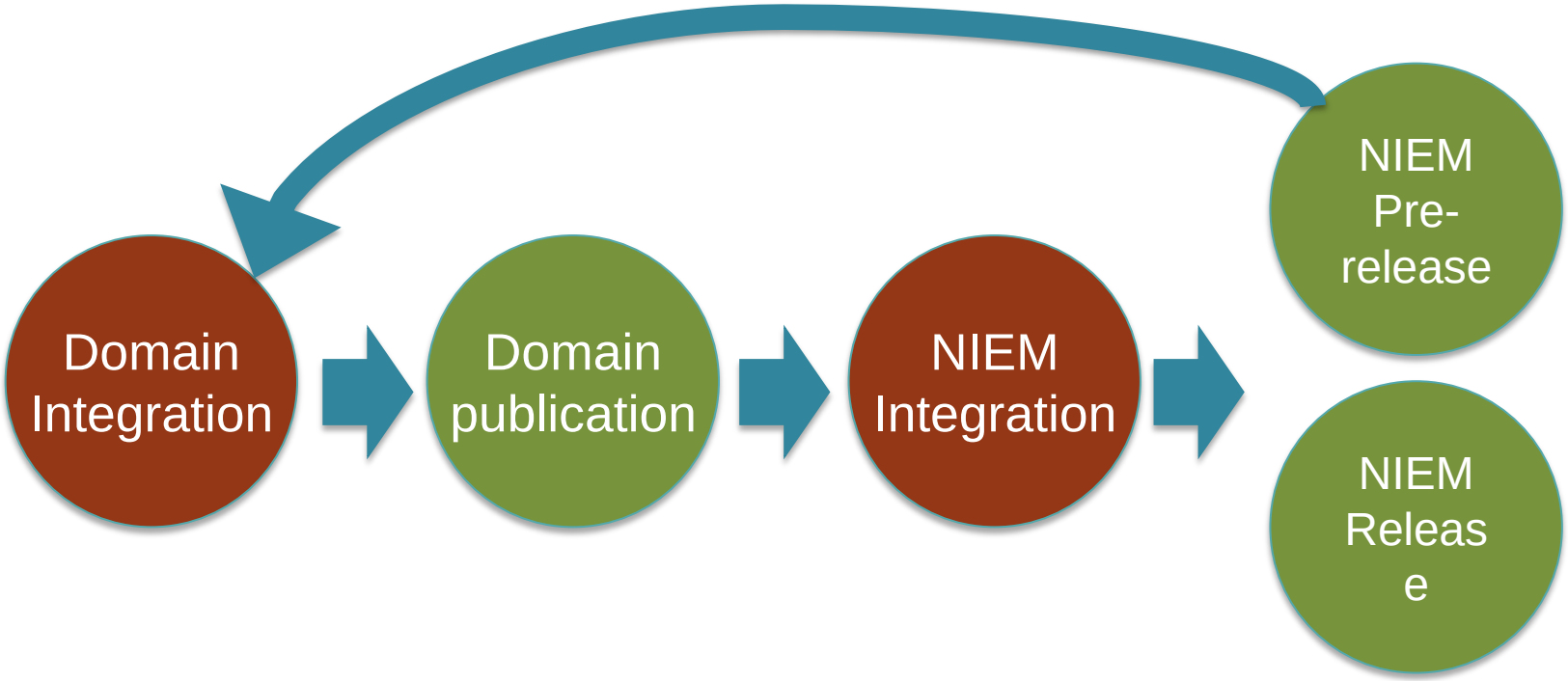
GIT VS GITHUB

- Hosted on your system
- You manage privacy
- You manage collaboration
- Accessible **only** by you & your collaborators

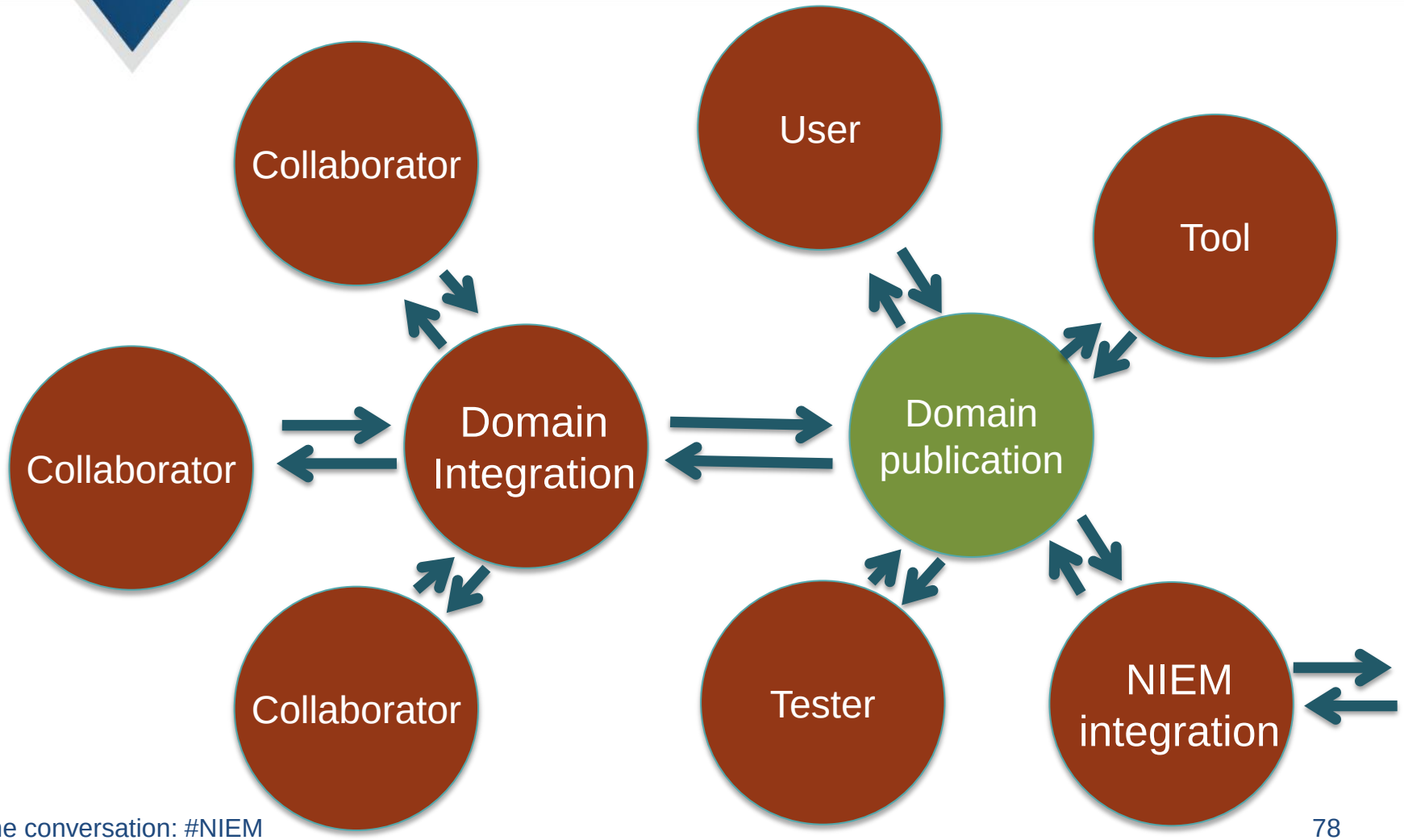
- Hosted on GitHub
- Privacy managed via GitHub accounts
- Commercial system
- Easy collaboration



NIEM RELEASE INTEGRATION



DOMAIN COLLABORATION



MODEL MANAGEMENT ACTIVITIES

- Publish NIEM pre-releases
- Publish NIEM releases
- Integrate & collaborate on NIEM releases
- Integrate & collaborate on domain schemas
- Publish domain schemas
- Track changes to NIEM and domain schemas
- Submission of domain content

NIEM IEPD LIBRARY

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IEPD Library

NIEM Template IEPD

Conformance Validation

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There is more information on IEPD construction here: **Build an Exchange**

In an era when return on investment has never been more important to government services, NIEM enables organizations to exchange information across all levels of government in a manner that is both effective and efficient.

Be sure to check out the **NIEM Cost Model**, which allows users to quantify the associated costs of adopting NIEM.

NOTE: Information exchange relies on many capabilities—NIEM provides a solid starting point. You rarely ever use NIEM by itself. Depending on business requirements, there are other aspects of information exchange implementations that are required, including access controls, policy automation, transmission protocol, and others. This is why the **NIEM Implementation Cookbook** was created!

NIEM / **Template-IEPD**

Star 0 Fork 0

This repository holds a simple IEPD template that can be forked to a new repository that a user can leverage as the starting point for his/her own IEPD (based on the template). The template conforms to the new NIEM Model Package Description (MPD) 3.0 specification. http://niem.github.io/IEPD-Library/

4 commits | 1 branch | 0 releases | 2 contributors

branch: master ▾ **Template-IEPD** / +

Update README.md

jtmrice authored 3 days ago — latest commit c54c962094

iep-samples	Initial commit	4 days ago
xsd	Initial commit	4 days ago
.travis.yml	Initial commit	4 days ago
README.md	Update README.md	3 days ago
changelog.txt	Initial commit	4 days ago
conformance-assertion.txt	Initial commit	4 days ago
mpd-catalog.xml	Initial commit	4 days ago

README.md

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Code

Issues 0

Pull Requests 0

Pulse

Graphs

HTTPS clone URL

https://github.com/

You can clone with HTTPS or Subversion.

Clone in Desktop

Download ZIP

branch: master ▾ Template-IEPD / mpd-catalog.xml

jtmrice 4 days ago Initial commit

1 contributor

43 lines (42 sloc) | 2.094 kb Raw Blame History

```
<?xml version="1.0" encoding="UTF-8"?>
<c:Catalog
    xmlns:template="http://example.com/template/1.0/"
    xmlns:c="http://reference.niem.gov/niem/resource/mpd/catalog/3.0/"
    xmlns:structures="http://release.niem.gov/niem/structures/3.0/"
    xmlns:nc="http://release.niem.gov/niem/niem-core/3.0/">
    <c:MPD
        c:mpdURI="http://example.com/template/0.1/"
        c:mpdClassURIList=
                "http://reference.niem.gov/niem/specification/model-package-description/3.0/#MPD
                 http://reference.niem.gov/niem/specification/model-package-description/3.0/#IEPD"
        c:mpdName="TemplateExchange"
        c:mpdVersionID="0.1">
        <c:MPDInformation>
            <c:AuthoritativeSource>
                <nc:EntityOrganization>
                    <nc:OrganizationName>TEMPLATE ORGANIZATION</nc:OrganizationName>
                    <nc:OrganizationPrimaryContactInformation>
                        <nc:ContactWebsiteURI>http://niem.gov</nc:ContactWebsiteURI>
                    </nc:OrganizationPrimaryContactInformation>
                </nc:EntityOrganization>
            </c:AuthoritativeSource>
            <c:CreationDate>2014-10-20</c:CreationDate>
            <c:StatusText>Alpha</c:StatusText>
        </c:MPDInformation>
        <c:IEPConformanceTarget structures:id="Template-IEP">
            <nc:DescriptionText>
                An IEP class for a timestamped exchange.
            </nc:DescriptionText>
```

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iep-samples	Initial commit	4 days ago
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conformance-assertion.txt	Initial commit	4 days ago
mpd-catalog.xml	Initial commit	4 days ago

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The NIEM-MPD specification defines the contents and structure of IEPDs including metadata, XML Schema documents, and documentation.

build passing

This template IEPD contains

1. NIEM schema subset http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_4.2

   See the NIEM Schema Subset Generation Tool (SSGT) to create a subset for the IEPD based on requirements: http://tools.niem.gov/niemtools/

2. NIEM extension schema http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_4.3

   An extension schema contains a conformance target identifier as follows: ct:conformanceTargets="http://reference.niem.gov/niem/specification/naming-and-design-rules/3.0/#ExtensionSchemaDocument"

3. Catalog file http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_5.1

4. README http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_5.4

4.2. Subset Document Schemas

4.2.1. Basic Subset Concepts

A NIEM *schema document subset* is a set of XML schema documents that constitutes a reduced set of components derived from a NIEM reference schema document or document set associated with a given numbered release or domain update.

> **[Definition: schema document subset]**
>
> An XML schema document set based on a reference schema document set intended to ensure that any ·instance XML document· valid to the schema document subset is also valid to the reference schema document set.

The primary purpose for a schema document subset is to reduce and constrain the scope and size of a full NIEM reference schema document set for use within an ·IEPD·. A schema document subset is derived from a reference schema document set (such as a NIEM release) by applying subset operations (See Section 4.2.2, *Constructing a Schema Document Subset*, below). Also, note that employing a subset of a reference schema document set within an ·IEPD· is optional; it is completely valid to reuse NIEM reference schema documents as-is within IEPDs.

The fundamental rule for a valid NIEM schema document subset is formally stated follows:

Rule 4-1. Fundamental NIEM Subset Rule

> **[Rule 4-1] (Schema-subset) (Constraint)**
>
> A schema document subset (`$SUBSET`) for a given reference schema document set (`$REFERENCE`) MUST be defined such that for all instance XML documents (`$XML`), where `$XML` is valid to `$SUBSET`, `$XML` is valid to `$REFERENCE`.

A ·schema document subset· is composed of ·XML schema documents·. A ·schema document subset· can essentially be a ·reference schema document set· (i.e., a NIEM release) that has been modified by applying subset operations to support business requirements represented in an ·IEPD·. A subset derived from a reference schema document set may differ from that reference such that its content has been reduced and/or constrained.

> **[Definition: subset schema document]**
>
> An XML schema document that meets all of the following criteria:
>
> - It is built from a reference schema document set where one or more reference schema documents have been substituted by corresponding subset schema documents.
> - It is built from a reference schema document by applying subset operations to the XML schema statements in a reference schema document.

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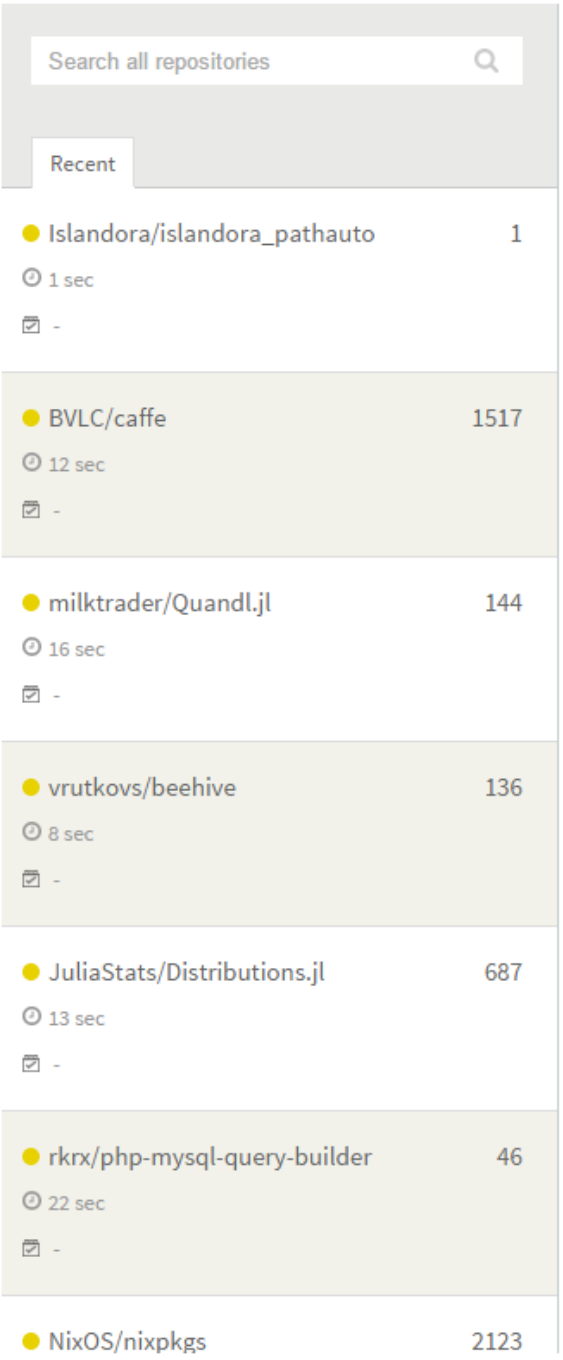
   An extension schema contains a conformance target identifier as follows: ct:conformanceTargets="http://reference.niem.gov/niem/specification/naming-and-design-rules/3.0/#ExtensionSchemaDocument"

3. Catalog file http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_5.1

4. README http://reference.niem.gov/niem/specification/model-package-description/3.0/model-package-description-3.0.html#section_5.4



NIEM/Template-IEPD

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Current | Build History | Pull Requests | Branch Summary

master - Update README.md

#2 passed

ran for 42 sec
3 days ago

John Matthews authored and committed

Commit c54c962 Compare c8aa784..c54c962

```
1  Using worker: worker-linux-10-2.bb.travis-ci.org:travis-linux-18
2
3  $ git clone --depth=50 --branch=master git://github.com/NIEM/Template-   git.1  0.04s
11 $ cd NIEM/Template-IEPD
12 $ git checkout -qf c54c9620948147c4ed286284dd6d54c5c3f98c3f               git.4
13 $ rvm use default                                                                0.18s
14 Using /home/travis/.rvm/gems/ruby-1.9.3-p547
15 $ ruby --version                                                                 0.01s
16 ruby 1.9.3p547 (2014-05-14 revision 45962) [x86_64-linux]
17 $ rvm --version                                                                  0.15s
18 rvm 1.25.33 (latest-minor) by Wayne E. Seguin <wayneeseguin@gmail.com>, Michal Papis
   <mpapis@gmail.com> [https://rvm.io/]
19 $ bundle --version
20 Bundler version 1.6.2
21 $ gem --version
22 2.4.2
23 $ sudo apt-get update -qq                                  before_install.1  8.00s
24 $ sudo apt-get install -qq libxml2-utils                  before_install.2  3.33s
30 $ xmllint --schema http://www.w3.org/2001/XMLSchema.xsd --noout              15.12s
   xsd/extension/TemplateExtension.xsd
31 Warning: program compiled against libxml 208 using older 207
32 xsd/extension/TemplateExtension.xsd validates
```

IEPD Library

NIEM Template IEPD

Conformance Validation

Search IEPDs

Submit Feedback/Ideas

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IEPD Library

NIEM Template IEPD

Conformance Validation

Search IEPDs

Submit Feedback/Ideas

NIEM IEPD Library / NIEM IEPD Search

NIEM IEPD Search

Search functionality will allow users to find IEPDs in GitHub. This functionality will be coming soon, until then use the built in GitHub search.

Search for IEPDs in GitHub

Search NIEM IEPD Search

Repositories 3
Code 304
Issues 4
Users

Advanced search Cheat sheet

jtmrice/Template-IEPD

★0 ⑂0

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Updated 4 days ago

NIEM/IEPD-Repository

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Updated 11 days ago

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Updated 4 days ago

How are these search results? Tell us!

IEPD Library

NIEM Template IEPD

Conformance Validation

Search IEPDs

Submit Feedback/Ideas

NIEM IEPD Library

To use NIEM, you normally build an Information Exchange Package Documentation (IEPD). An IEPD defines a recurring message in XML and is built to satisfy information exchange business requirements. A developer builds an IEPD by incorporating the necessary NIEM core and domain model content. The developer may also extend that content as needed to account for information requirements that are not yet addressed in NIEM. The IEPD will ultimately define XML instance documents that will contain the information to be exchanged. Extended and new content developed in IEPD extension schema documents should be considered for future model updates. In turn, domain and core model updates will be harmonized and integrated into future NIEM releases. In this way, NIEM evolves with new and changing needs.

There is more information on IEPD construction here: **Build an Exchange**

In an era when return on investment has never been more important to government services, NIEM enables organizations to exchange information across all levels of government in a manner that is both effective and efficient.

Be sure to check out the **NIEM Cost Model**, which allows users to quantify the associated costs of adopting NIEM.

NOTE: Information exchange relies on many capabilities—NIEM provides a solid starting point. You rarely ever use NIEM by itself. Depending on business requirements, there are other aspects of information exchange implementations that are required, including access controls, policy automation, transmission protocol, and others. This is why the **NIEM Implementation Cookbook** was created!

Template IEPD

Search for IEPDs

Conformance Validation

IEPD Library

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NIEM IEPD Library / NIEM IEPD Conformance

NIEM IEPD Conformance

Conformance Validation for IEPDs will be tested using the updated NIEM 3.0 ConTesA that is currently under development.

The Model Package Description 3.0 specification defines the contents and structure of IEPDs including metadata, XML Schema documents, and documentation.

The NIEM-MPD 3.0 specification defines the XML Schema documents for use with NIEM.

IEPD Library

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MODEL MANAGEMENT

NIEM in November

NIEM–UML

The NIEM Unified Modeling Language (UML) Profile allows UML tool providers to build NIEM into their products. Contribute to the development of the NIEM–UML Profile for v3.0.

Learn More | GitHub Repo

NIEM Developer Network

The NIEM developer network serves as a one–stop resource for IEPD templates, examples, and tutorials for developers and implementers.

Participate Now | GitHub Repo

IEPD Library

A golden rule of NIEM is "if it exists, use it." So share your Information Exchange Package Documentation (IEPDs) for reuse! They can be reused partially or fully, saving time and money.

Learn More | GitHub Repo

Implementation Cookbook

A catalog of commonly used ways to implement NIEM—including Java, web services, and others. Help us add more!

Learn More | GitHub Repo

Model Management

Help pilot the use of GitHub to update the NIEM Emergency Management domain model content!

Learn More | GitHub Repo

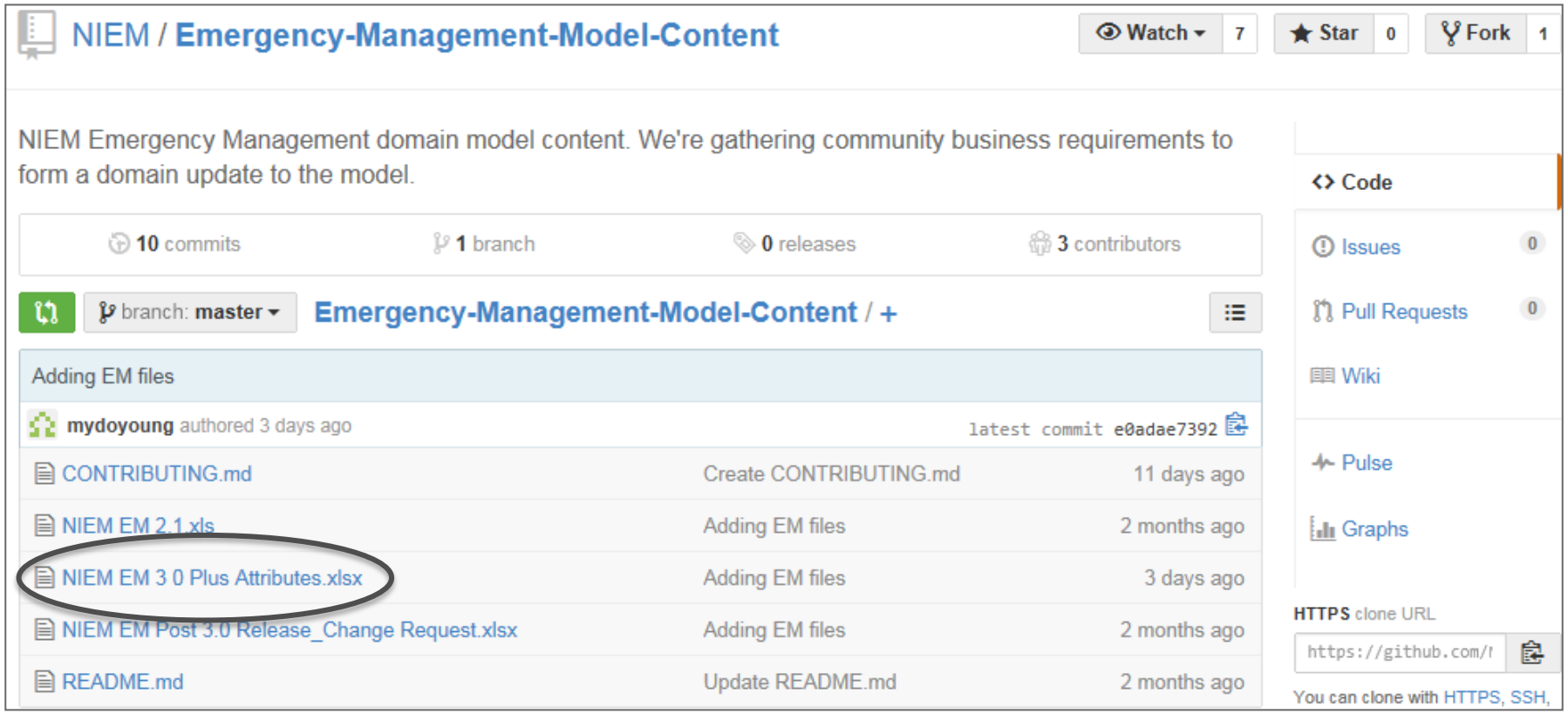
Feedback & Ideas

We're just starting out on GitHub and greatly appreciate your feedback! Share a thought. Brainstorm ideas. Submit an issue.

Submit Here

EMERGENCY MANAGEMENT MODEL MANAGEMENT PILOT

NIEM in November



COMMUNITY ROUNDTABLE

Frank Sisto, *Technical Advisor, DoD*
Yannick Asselin, *Interoperability Team Manager, Public Safety Canada*
Mo West, *Information Sharing Specialist, SEARCH*

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NIEM in November

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COMMUNITY.

Common Understanding Through Common Standards

A National Maritime Domain Awareness (MDA) Information Sharing Environment (MISE) implemented through common data standards and architectural understanding.

NIEM™ in November

National Information Exchange Model–Maritime

Reusable Components and Data Strategies Using NIEM

Brief for **NIEM in November**
National Defense University | Washington, DC | November 4, 2014

OVERVIEW

- **Objective**
  - Inform NIEM users about the benefits of using Basic Information Exchange Components (BIECs) and Enterprise Information Exchange Models (EIEM) to:
    - Define and reuse common objects for exchanges
    - Outline and implement a data strategy using NIEM
- **Agenda**
  - A Common Problem
  - The NIEM Solution
  - Benefits
  - Data Strategy
  - An Example of BIEC Value

A COMMON PROBLEM

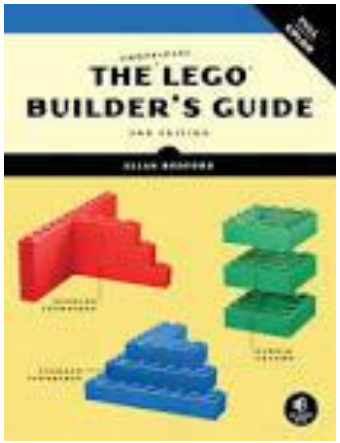
LIMITED REUSE

- **Form Based Information Exchanges**
  - Often, an information exchange is developed based solely upon the content of a form
    - Easy to develop, hard to reuse
    - Information provider—no problem
    - Information consumer—BIG problem
- **Limited or No Reuse**
  - One mission, one model, one exchange
  - Limited “common” components
  - No reuse beyond the specific exchange group
- **Continuous Interface Development**
  - Interfaces need to be developed for every exchange
  - Additional and growing development costs

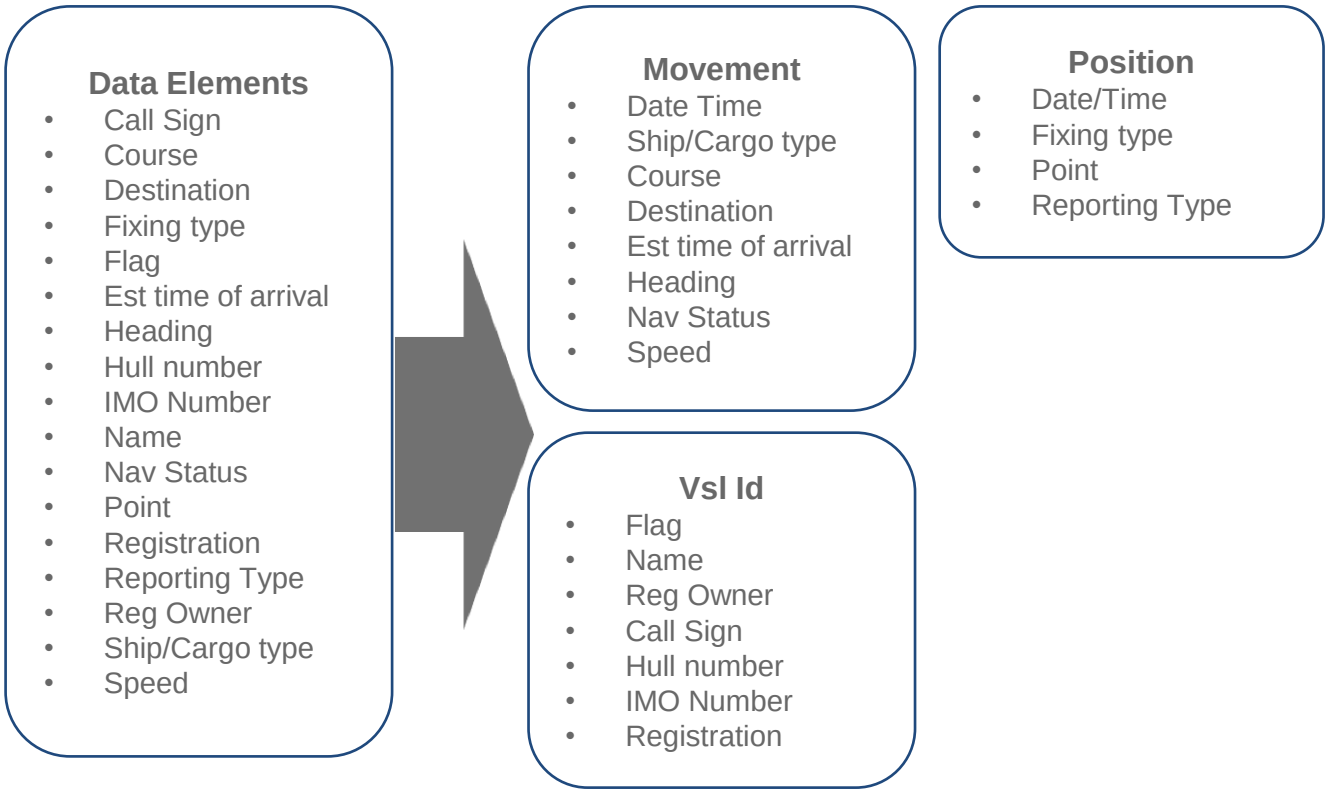
A NIEM SOLUTION

BIECS AND EIEMS

- **Basic Information Exchange Components (BIECs)**
  - Smallest *building block* used to create an exchange
  - A data object that is used in more than one exchange model
- **Enterprise Information Exchange Model (EIEM)**
  - IEPD Containing a collection of BIECs
    - Extension schemas that define business data components or other extensions common to the community
  - A domain can have multiple EIEMs

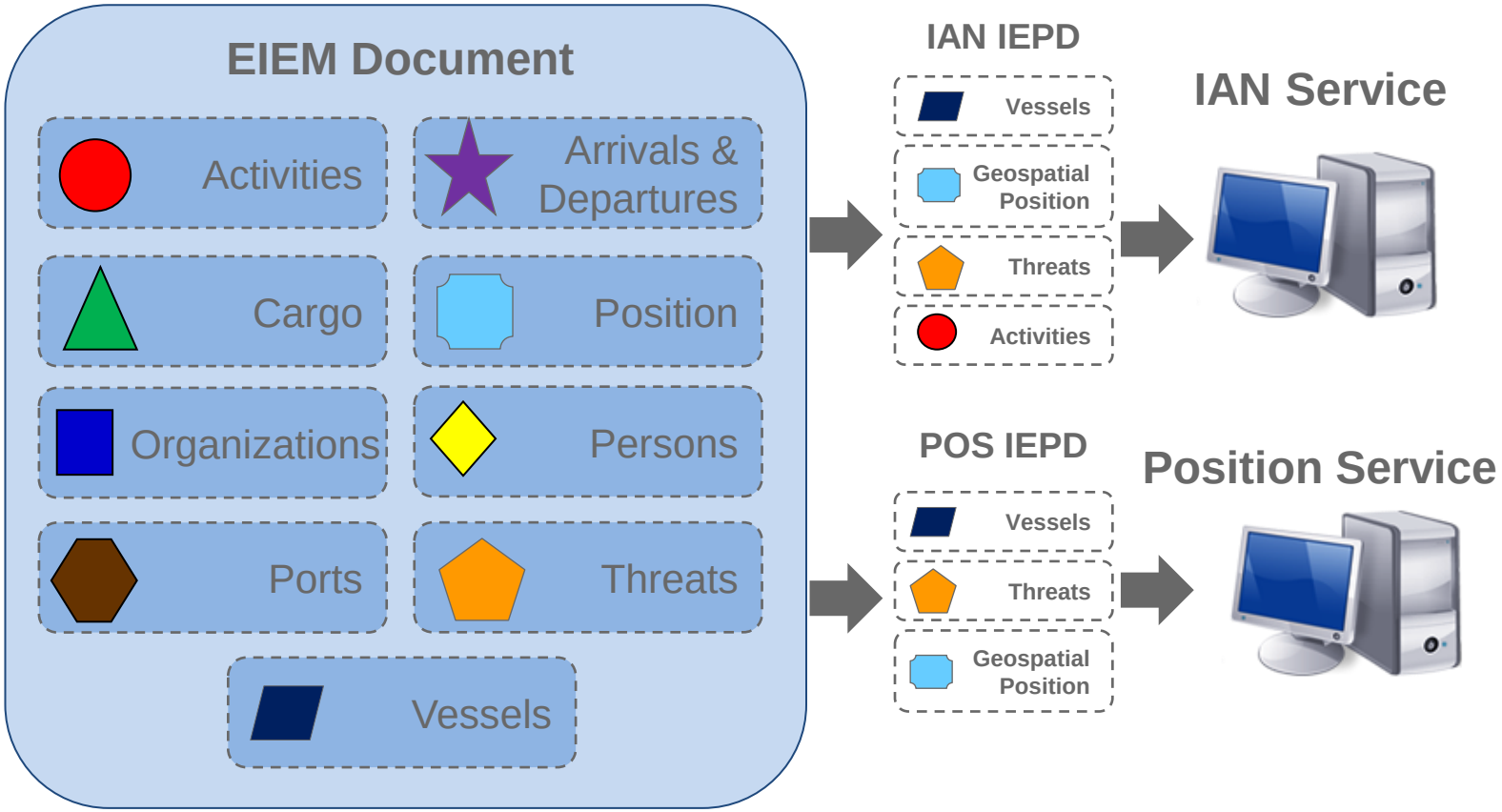


BUILDING REUSABLE BLOCKS



BUILDING REUSABLE BLOCKS CONT.

- An EIEM is a collection of BIECs within a domain



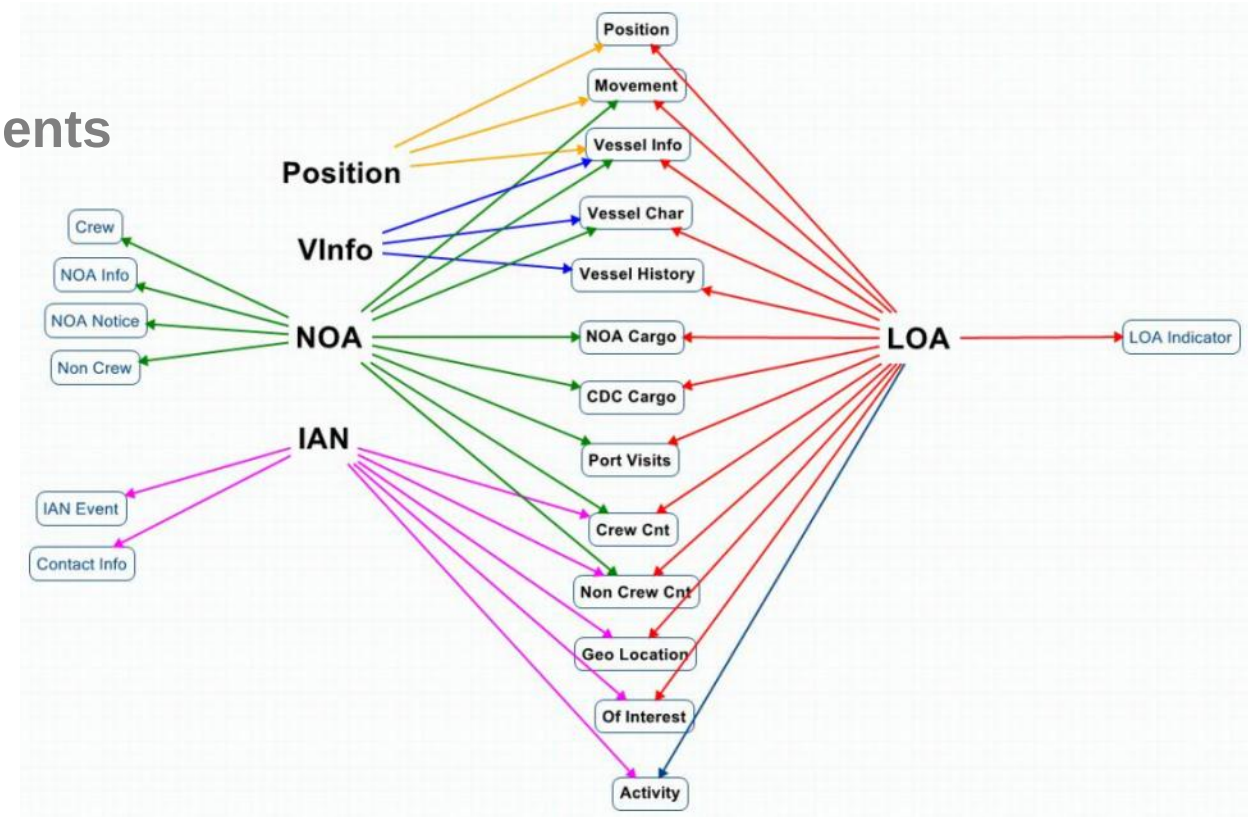
BENEFITS

BENEFITS

- **Cost**
  - Reduces cost/time to develop IEPDs
  - Reduces cost/time for implementors
  - More efficient development—no need to sift through entire NIEM library for mission-related objects
- **Define Data Strategy**
  - Reduces development/implementation cost while encouraging compliance
  - Common exchange objects enable reuse of code and increases interoperability

NIEM-MARITIME BIEC REUSE

- **Basic Information Exchange Components (BIECs) Defined**
- **Common Objects**
  - Reused across *multiple* IEPDs



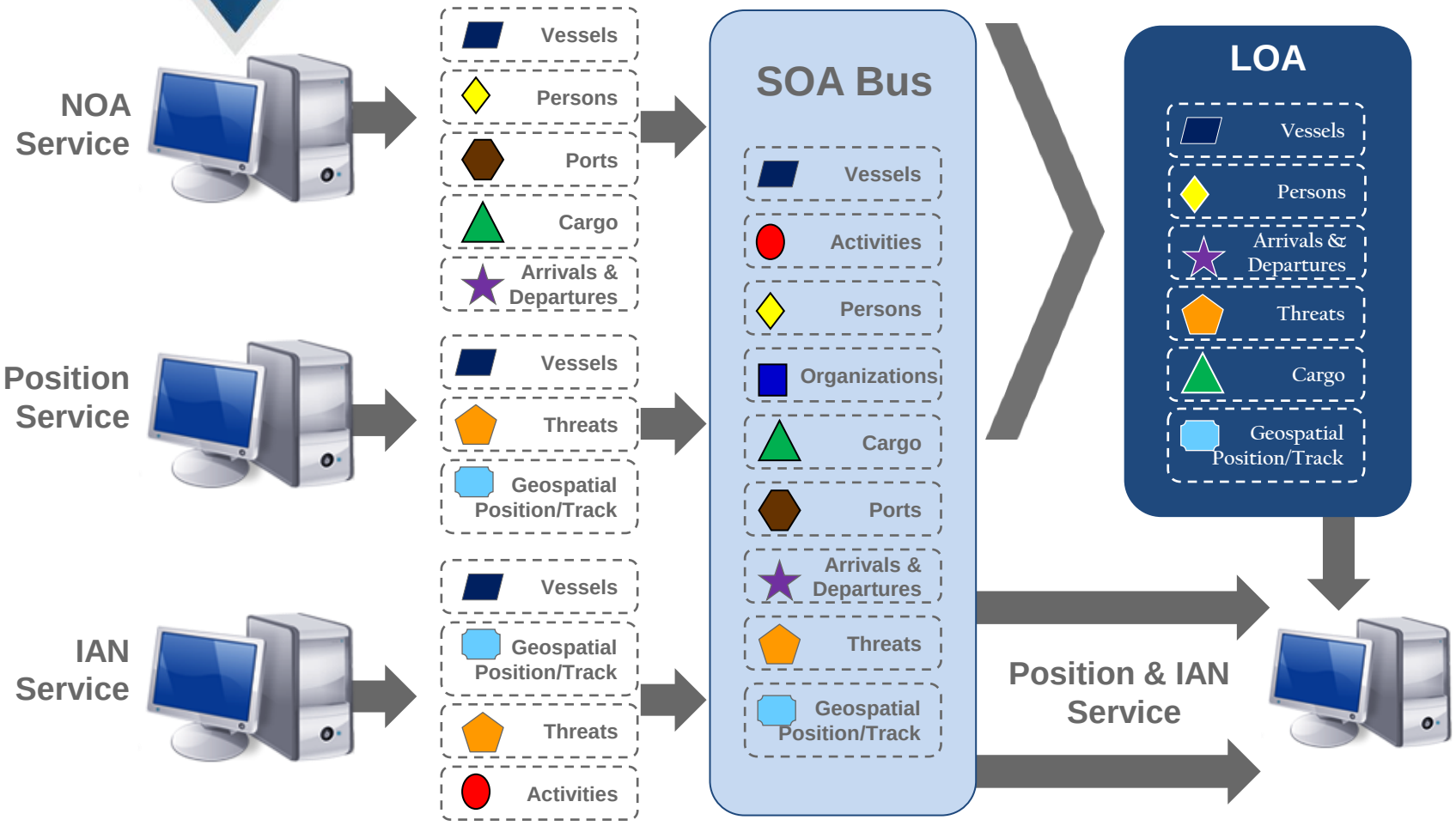
NIEM BASED DATA STRATEGY

BEGINNING TO DEFINE DATA

- **The Use of BIECs:**
  - Enable information management AND information sharing
  - Encourages domain to reconcile data elements across Basic Information Exchange Components (BIECs)
  - Results in mature understanding of each data element required for missions

AN EXAMPLE OF BIEC VALUE

VALUE-ADDED SERVICE



THANK YOU!

NIEM in November

MISE

Maritime Information Sharing Environment

Common Understanding Through Common Standards

Visit MDA.GOV for all NIEM-Maritime related information

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PIMA COUNTY EXCHANGE

Mo West
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PIMA COUNTY, AZ
JUSTICE-HEALTH EXCHANGES

NIEM in November

Business Context

- Jail medical staff conduct intake assessment for every subject ~ 40,000 annually.
- Assessments include complete medical evaluation and determination of previous treatment services – within 30 minutes of booking
- Treatment service inquiries conducted via phone calls

Objective

- Automate treatment history exchange among jail, behavioral health, and corrections medical provider

SOLUTION DESIGN & SERVICE ORCHESTRATION

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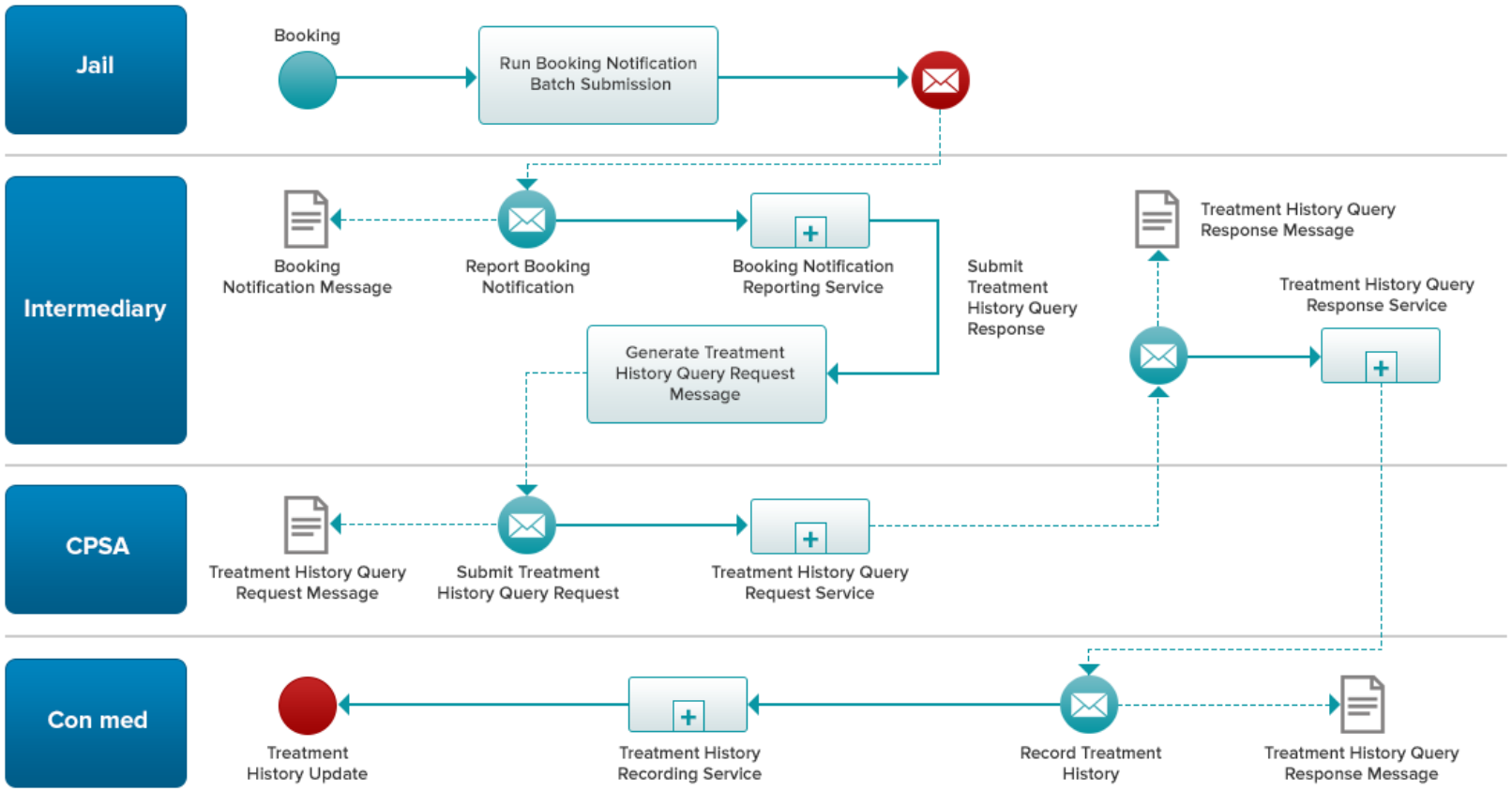

STANDARDS USE

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Deployed four Global Reference Architecture (GRA) conformant services

- Booking Notification
- Treatment History Query Request and Response
- Treatment History Recording

Leverage NIEM 3.0 in three Information Exchange Package Documents

- IEPD reuse for Treatment History Query Response and Treatment History Recording Services

Open source broker handles routing, transformation, messaging – decoupling service interactions

OUTCOMES

Reduce (and eventually eliminate) 40,000+ phone calls between medical staff and the regional behavior health authority; freeing up over 20,000 personnel hours annually

Return on investment ($75K grant award) expected to save $300,000 annually

- Interfaces with existing systems
- Open source broker (no licensing costs, upgrades, maintenance, etc.)

Practitioners focused on their specialty: Nurses, Corrections, Behavior Health administrators with fewer distractions

Q & A

NIEM STATE, LOCAL, AND TRIBAL OUTREACH COMMITTEE

Randi Lorah
Commonwealth of Pennsylvania

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STATE, LOCAL, AND TRIBAL OUTREACH SUBCOMMITTEE

NIEM in November

Randi Lorah

Applications Manager

Pennsylvania Commission on Crime and Delinquency

Phone: 717-265-8536

Email: rlorah@pa.gov

State, Local, & Tribal Subcommittee

FINAL THOUGHTS

Hudson Hollister, *Executive Director, Data Transparency Coalition*

Kshemendra Paul, *Program Manager, Information Sharing Environment*

Justin Stekervetz, *Managing Director, NIEM*

David DeVries, *Principal Director (Acting), Department of Defense Chief Information Office*

Steve Ambrosini, *Executive Director, IJIS Institute*

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COMMUNITY MEET UP!

Please join us at the entryway
right outside Liberty Hall

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