WELCOME TO THE NIEM 3.0 BETA TECH TALK



June 25th, 2013

For Conference Audio:

1-888-566-6149 Passcode: 5825994

AGENDA & SPEAKERS

NIEM 3.0 – What does that mean?

- Major vs. Minor Release
- NIEM Versioning
- Why 3.0?

3.0 Release Cycle

- Release Cycle Overview
- What is Funneling?
- Beta Timeline

What's Beta?

- NIEM 3.0 Beta Review
- What's in 3.0 that isn't in 2.0
- Architectural Enhancements in 3.0

How you can contribute!

Feedback guidelines



JUSTIN STEKERVETZ







WEBB ROBERTS

Questions? E-mail them to information@niem.gov OR type it in the



NIEM 3.0 WHAT DOES THAT MEAN?

FEATURING: JUSTIN STEKERVEZ



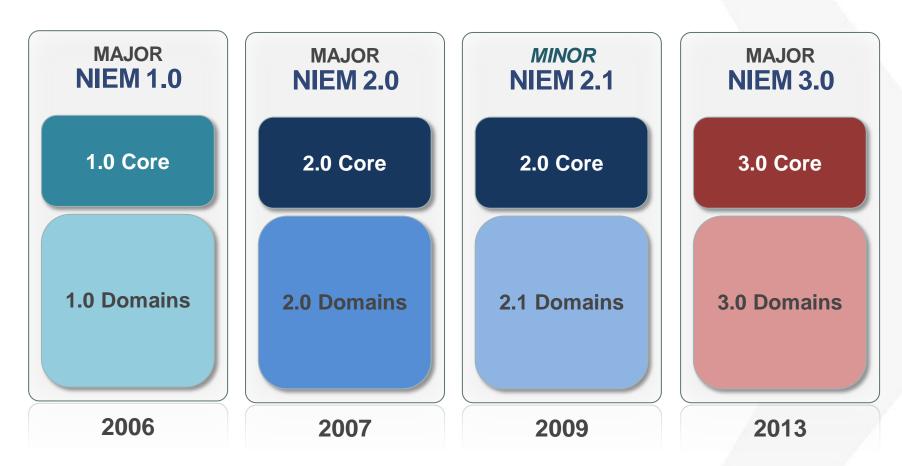
MAJOR VS. MINOR RELEASE

NIEM 3.0 is a *major release* of the NIEM data model—containing updates to the NIEM Core as well as changes to several Domains.

A minor NIEM Domains include mission **NIEM Core** release consists of data elements that involves are commonly understood across limited domains. changes to **Domains** Future Domains are added to NIEM as necessary based NIEM on an established need



HOW HAS NIEM EVOLVED OVER THE YEARS?



Reference Schemas



WHY A NIEM 3.0?

The NIEM data model is driven by community needs, 3.0 addresses those identified to date.

Technical Challenges Organizational Challenges







New Domains & Requirements



NIEM.gov

NIEM 3.0 RELEASE CYCLE

STARRING: MARK KINDL



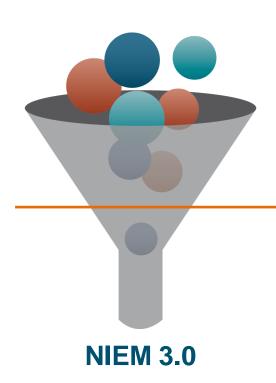
3.0 RELEASE CYCLE



APPROXIMATELY 13 MONTHS → 2013 2012 ← SEP OCT NOV DEC JAN **FEB** MAR APR MAY JUN JUL AUG SEP/OCT 3.0 PRE-ALPHA RC 1 ALPHA 1 ALPHA 2 BETA 1 Kick-off 90-day deadline for domain and NBAC change requests Funneling begins Launch! In the After **Beta** continues **Pre-alpha** is the requirements gathering Alpha 1 and Alpha 2 are Governance Release phase when all significant content changes the feedback the first two rounds of review Body are identified. During this phase: process and is Candidate where inputs and feedback approval, Domains prepare change requests for the last regarding (RC) phase, the model is new and changed content. opportunity to changes/requirements are final **Finalized** provide *public* • Domains indicate domain updates to be collected and organized into adjustments, feedback on the integrated. & coherent lists. These lists are refinements, full model. Like then made ready for **Published** and Alpha 1 and 2, Governance review. Alpha 2 corrections inputs from was the first opportunity for are made Beta are public review. hefore reviewed by the Governance Governance body review. body. 06/25: Beta Release We are here!



WHAT IS FUNNELING?



The Funneling process helps to zone in on all of the the essential changes in a efficient and effective way.

Alpha through Beta: Actions will be taken for comments on all portions of the model.

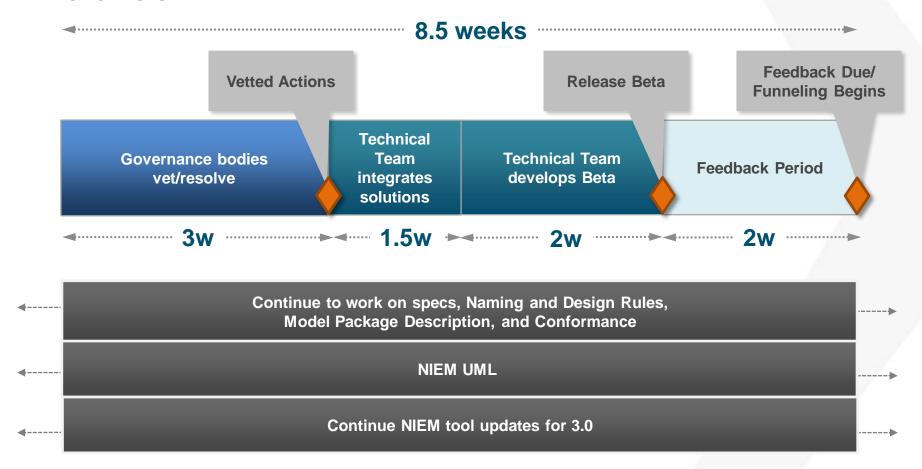
After Beta: Action for comments on portions of the model that previously passed review without revision, will be discretionary. No new requirements or content will be added.

Exception: Errors will be always be corrected (even if missed in a previous review).

Beta needs to be reviewed in detail or we risk lingering issues in RC or final release products! **Silence is consent!** Please make your concerns known.

BETA TIMELINE: IN DETAIL

The Beta release include changes to the schemas, model spreadsheet, Quality Assurance report, the Schema Subset Generation Tool (SSGT) and more.



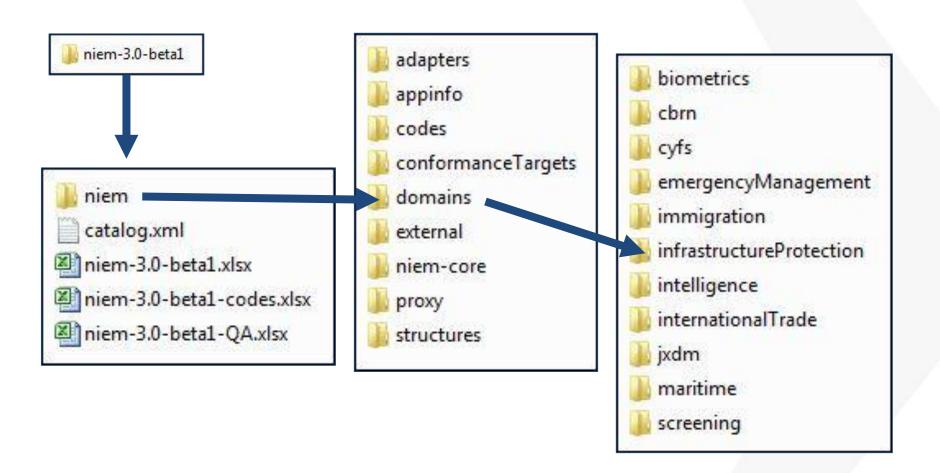


NIEM 3.0 OVERVIEW

STARRING: MARK KINDL



NIEM 3.0: BETA PACKAGE

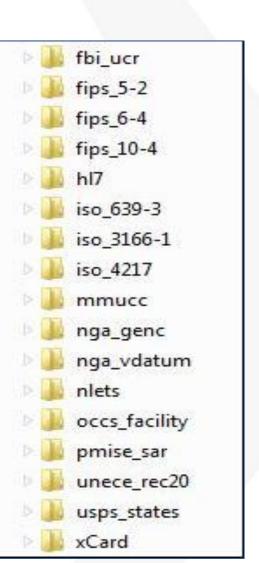




NIEM 3.0: BETA SCHEMAS

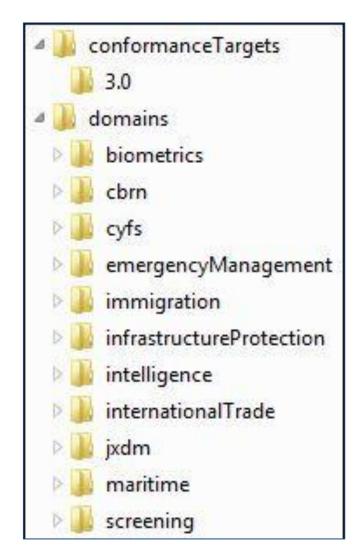








NIEM 3.0: BETA SCHEMAS CONT.







OASIS CATALOG (FOR XSD)

catalog.xml

```
<!DOCTYPE catalog PUBLIC</pre>
     "-//OASIS//DTD Entity Resolution XML Catalog V1.0//EN"
     "http://www.oasis-open.org/committees/entity/release/1.0/catalog.dtd">
<catalog xmlns="urn:oasis:names:tc:entity:xmlns:xml:catalog"</pre>
         prefer="public">
  <uri name="http://release.niem.gov/niem/structures/3.0/"</pre>
       uri="niem/structures/3.0/structures.xsd"/>
  <uri name="http://release.niem.gov/niem/domains/internationalTrade/3.0/"</pre>
       uri="niem/domains/internationalTrade/3.0/internationalTrade.xsd"/>
  <uri name="http://release.niem.gov/niem/domains/immigration/3.0/"</pre>
       uri="niem/domains/immigration/3.0/immigration.xsd"/>
  <uri name="http://release.niem.gov/niem/domains/maritime/3.0/"</pre>
       uri="niem/domains/maritime/3.0/maritime.xsd"/>
  <uri name="http://release.niem.gov/niem/domains/cbrn/3.0/"</pre>
       uri="niem/domains/cbrn/3.0/cbrn.xsd"/>
  [...]
</catalog>
```



MODEL SPREADSHEET

niem-3.0-beta1.xlsx

AA	В	С	D	E F	G	Н
T	ype/Sub-properties	Type	<u>Definition</u>	2.1 Status Keywords	Example Content	Usage Info
2						
n	c:ActivityConveyanceAssociationType	extends nc:AssociationType	A data type for an association between an activity and a			
3			conveyance.			
1	Click here for object properties					
5	nc:Activity	nc:ActivityType	A single or set of related actions, events, or process steps.	mod		
6	nc:Conveyance	nc:ConveyanceType	A means of transport.	mod		
	nc:ActivityConveyanceAssociationAugn	<abstract element,="" no="" type=""></abstract>	An augmentation point for	mod		
7			ActivityConveyanceAssociationType			
8						
9						
n	c: Activity Document Association Type	extends nc:AssociationType	A data type for an association between an activity and a			
10			document.			
11	Click here for object properties					
12	nc:Activity	nc:ActivityType	A single or set of related actions, events, or process steps.	mod		
13	nc:Document	nc:DocumentType	A paper or electronic document.	mod		
14	Substitutable Elements:					
15	+ it:AdditionalDocument	it:AdditionalDocumentType	Applied augmentation for type nc:DocumentType			
16	+ it:AdditionalInformation	it:AdditionalInformationType	Applied augmentation for type nc:DocumentType			
	nc:ActivityDocumentAssociationAugme	<abstract element,="" no="" type=""></abstract>	An augmentation point for ActivityDocumentAssociationType	mod		
17						
18						
19						
n	c:ActivityFacilityAssociationType	extends nc:AssociationType	A data type for an association between an activity and a	mod		
20			facility.			
21	Click here for object properties					
22	nc:Activity	nc:ActivityType	A single or set of related actions, events, or process steps.	mod		
	nc:Facility	nc:FacilityType	A building, place, or structure that provides a particular	mod		
23		45	service.			
24	nc:ActivityFacilityAssociationAugmenta	<abstract element,="" no="" type=""></abstract>	An augmentation point for ActivityFacilityAssociationType	mod		
25		3/0	100 II II II II II			
26						



MODEL CODES (ENUMERATIONS)

niem-3.0-beta1-codes.xlsx

1	Α	В	C	D			
1	NS	Link	NS Definition	<u>URI</u>			
2			**				
3	ansi d20	Type List	Motor vehicle administration codes from ANSI D20, the Data Dictionary for Traffic Record Systems, maintained by AAMVA, the American Association of Motor Vehicle Administrators.	http://release.niem.gov/niem/codes/ansi_d20/3.0/			
4	<u>apco</u>	Type List	Association of Public-Safety Communications Officials (APCO) - International, Inc.	http://release.niem.gov/niem/codes/apco_event/3.0/			
5	atf	Type List	Bureau of Alcohol, Tobacco, and Firearms	http://release.niem.gov/niem/codes/atf/3.0/			
6	biom	Type List	Biometric Schema Version 1.0	http://release.niem.gov/niem/domains/biometrics/3.0/			
7	can	Type List	Province codes for Canada.	http://release.niem.gov/niem/codes/canada_post/3.0/			
8	cbrncl	Type List	Radiological and Nuclear Code List	http://release.niem.gov/niem/codes/cbrncl/3.0/			
9	census	Type List	County codes from US Census.	http://release.niem.gov/niem/codes/census_uscounty/3.0/			
10	core misc			http://release.niem.gov/niem/codes/core_misc/3.0/			
11	cyfs	Type List	Children, Youth, and Family Services	http://release.niem.gov/niem/domains/cyfs/3.0/			
12	dea	Type List	Drug Enforcement Administration	http://release.niem.gov/niem/codes/dea_ctlsub/3.0/			
13	dod jcs-pub2.0	Type List	Intelligence discipline codes from the U.S. Department of Defense (DoD) Joint Publication 2.01.	http://release.niem.gov/niem/codes/dod_jcs-pub2.0/3.0/			
14	dol	Type List	US Department of Labor occupation codes	http://release.niem.gov/niem/codes/dol_soc/3.0/			
15	edxl rm	Type List	Emergency Data Exchange Language	http://release.niem.gov/niem/codes/edxl rm/3.0/			
16	em	Type List	Emergency Management	http://release.niem.gov/niem/domains/emergencyManagement/3.0/			
17	fips 10-4	Type List	Countries, dependencies, areas of special sovereignty, and their principal administrative divisions from the Federal Information Processing Standards (FIPS) 10-4.	http://release.niem.gov/niem/codes/fips_10-4/3.0/			
18	fips 5-2	Type List	Codes for the identification of the states, the District of Columbia and the outlying areas of the U.S., and associated areas from the Federal Information Processing Standards (FIPS) 5-2.	http://release.niem.gov/niem/codes/fips_5-2/3.0/			
	fips 6-4	Type List	Counties and equivalent entities of the U.S., its possessions, and associated areas from the Federal	http://release.niem.gov/niem/codes/fips_6-4/3.0/			



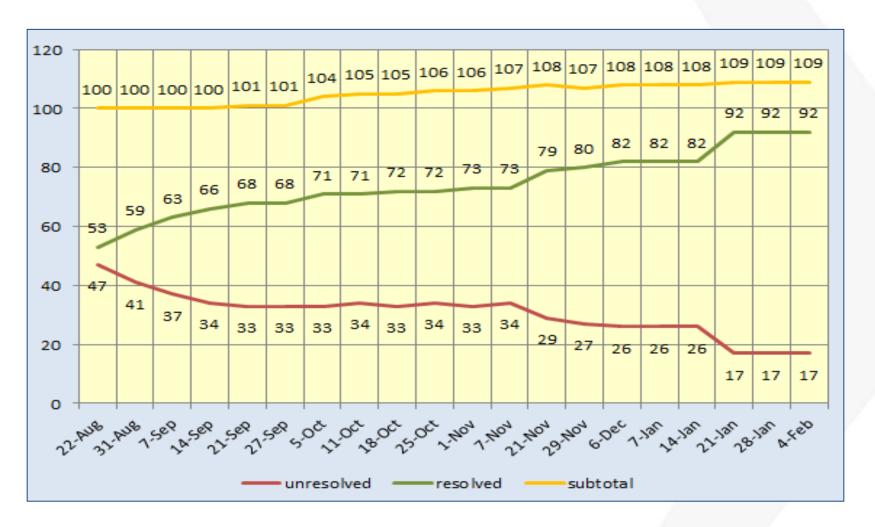
QA REPORT

niem-3.0-beta1-QA.xlsx

- 14	A	В	С	D	E	F	G	Н	1	J	K	L	M	N
1	Test	Tab	Core	Biom	CBRN	CYFS	EM	IM	Intel	InfrProt	IntTrade	JXDM	Mar	Scr
2	Types should have definitions	TypeBlankDef	fail		fail							fail		
3	Type names end with representation term "Type"	TypeRepTerm			fail									
	CSC type names should usually correspond to their base													
4	simple type name (optional)	TypeNameMismatch			check	check								
5	Elements should have definitions.	EltBlankDef					fail							
	Association names should use "Association" as a													
6	representation term	EltAssnName						fail						
7	Elements should have complex data types	<u>EltSimpleType</u>		fail	fail	fail								
8	Element names should not contain the reserved term "Type"	<u>EltTermType</u>			fail									
9	Element names should be upper camel case	EltUCC			fail									
10	Codes and other facets should have definitions.	<u>FacetBlankDef</u>	fail	fail			fail					fail		
11	Codes should not begin or end with a space	<u>CodeSpace</u>			fail									
	Definitions of abstract elements should begin with "A data													
12	concept for"	EltDefAbstract		fail	fail	fail	fail	fail	fail		fail			fail
	Definitions of association elements should begin with "An													
13	association " or "A relationship "	<u>EltDefAssn</u>				fail	fail	fail	fail		fail			fail
	Definitions of augmentation elements should begin with													
14	"Additional information about"	EltDefAug			fail	fail								
	Definitions of category text elements should begin with "A													
15	kind of"	EltDefCatText			fail	fail	fail	fail	fail		fail			fail
16	Definitions of date elements should begin with "A date"	<u>EltDefDate</u>	fail		fail	fail	fail	fail			fail	fail		fail
	Definitions of description text elements should begin with "A													
17	description of"	<u>EltDefDescText</u>			fail	fail	fail	fail			fail			fail
	Definitions of image elements should begin with "A(n)													
18	(optional adjective) image/picture/photograph of"	<u>EltDefImage</u>				fail								
	Definitions of identification elements should begin with "A(n)													
19	(optional adjective) identification"	EltDefIdentification			fail	fail	fail	fail	fail		fail			fail
	Definitions of identifier elements should begin with "An													
20	identifier"	EltDefIdentifier	fail	fail	fail	fail	fail	fail	fail	f	fail	fail		fail
	Definitions of indicator elements should begin with "True if;													
21	false otherwise/if"	EltDefIndicator			fail	fail		fail	fail		fail			fail
14	Notes Overview TypeBlankDef TypeRepTerm Type	eNameMismatch / EltAs	snName /	EltBlankDe	f / EltSim	pleType	EltTermTy	pe / EltU	CC / Face	tBlankDef	CodeSpac	e / Attrib	oMin / El	ltMinMa□ 4



NCCT ISSUE RESOLUTION (SINCE AUGUST 2012)





WHAT'S IN NIEM 3.0? (CHANGES FROM 2.1)

Domains

New Domain: Biometrics

Updates: Justice, CBRN, Immigration, Screening, Biometrics, International Trade,

Maritime

Family Services (FS) changed its name to Children, Youth, & Family Services (CYFS)

Resolved issues in NIEM Configuration Control Tool (NCCT)

100+ NCCT issues backlogged after NIEM 2.0 and 2.1 ~100 issues resolved since the NIEM 3.0 Kickoff in August

Significant object updates: LocationType (refactored), DocumentType, ContactInformation (types and associations), FacilityType, ItemType, BiometricType, Measures and MeasureType.

New code lists: HL7 (religion), GENC, Census-USCounty, occs-facility, DoL-soc (occupations), XCard (v-card XML representation)

Code list updates: FIPS (sunset lists), mmucc, nga-vdatum, ansi-d20

Harmonization: Justice & Biometrics, Immigration & Screening, CBRN & International Trade, Screening & Biometrics, Core & Biometrics



UPDATES TO NIEM TECHNICAL ARCHITECTURE IN 3.0

ALSO STARRING: WEBB ROBERTS



TECHNICAL ARCHITECTURE

- These updates are not final
- Please make comments
- NIEM Technical Architecture Committee (NTAC) vets comments
- Goals: simplification, usability
- NIEM Naming and Design Rules (NDR) is being updated; please comment on the artifacts in the release!



SIMPLIFIED STRUCTURES

NIEM 2.0	NIEM 3.0
structures:linkMetadata attribute	Replaced with structures:relationshipMetadata attribute
structures:sequenceID	Removed
structures:Augmentation element	Removed
structures:Metadata element	Removed
structures:ComplexObjectType	Replaced with structures:ObjectType and structures:AssociationType
structures Object and Association resources (for appinfo:Base)	Removed; extend from base types
structures:ReferenceType	Removed



SIMPLIFIED ANNOTATIONS

NIEM 2.0	NIEM 3.0					
appinfo:ConformantIndicator	Schema: use attribute ct:conformanceTargets. Imports: use attribute appinfo:externalImportIndicator					
appinfo:Base	Use the base types structures:ObjectType, structures:AssociationType.					
appinfo:ReferenceTarget	Use the element's type attribute.					
appinfo:AppliesTo	Augmentations: use the augmentation element's substitutionGroup attribute. Metadata: use attributes appinfo:appliesToTypes, appinfo:appliesToElements.					
appinfo:ExternalAdapterTypeIndicator	Use attribute appinfo:externalAdapterTypeIndicator					



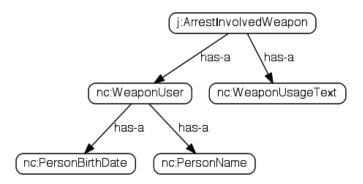
SIMPLIFIED ANNOTATIONS

```
<xs:complexType name="MultiCurveType" appinfo:externalAdapterTypeIndicator="true"</pre>
  <xs:annotation>
    <xs:documentation>[...]</xs:documentation>
   <xs:appinfo>
      <appinfo:Base
       appinfo:namespace="http://niem.gov/niem/structures/2.0"
        appinfo:name="Object"/>
      <appinfo:ExternalAdapterTypeIndicator
                   >true</appinfo:ExternalAdapterTypeIndicator>
    </xs:appinfo>
 </xs:annotation>
  <xs:complexContent>
    <xs:extension base="structures: ComplexObjectTypeObjectType">
      <xs:sequence>
        <xs:element ref="gml:MultiCurve"</pre>
                    minOccurs="1"
                    maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>[...]</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```



UNIFIED CONTENT & REFERENCE ELEMENTS

CONTENT



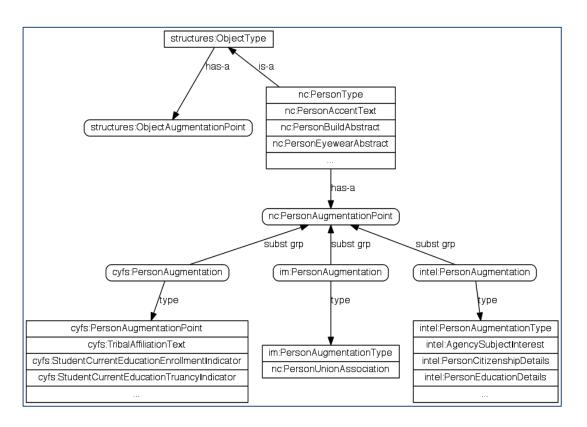
REFERENCE

SIMPLIFIED SCHEMAS

```
<xs:complexType name="WeaponType">
 <xs:annotation>
   <xs:documentation>[...]</xs:documentation>
  <xs:appinfo>
     <appinfo:Base appinfo:namespace="http://niem.gov/niem/structures/2.0"</pre>
appinfo:name="Object"/>
  </xs:appinfo>
-</xs:annotation>
 <xs:complexContent>
   <xs:extension base="structures: ComplexObjectTypeObjectType">
     <xs:sequence>
       <xs:element ref="nc:WeaponUser" minOccurs="0" maxOccurs="unbounded"/>
     <xs:element ref="nc:WeaponUserReference" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
   </xs:extension>
 </xs:complexContent>
</xs:complexType>
<xs:element name="WeaponUser" type="nc:PersonType">
 <xs:annotation>
   <xs:documentation>A person who uses a weapon.
 </xs:annotation>
</xs:element>
<xs:element name="WeaponUserReference" type="structures:ReferenceType">
<xs:annotation>
  <xs:documentation>A person who uses a weapon.</xs:documentation>
  <xs:appinfo>
    <appinfo:ReferenceTarget appinfo:name="PersonType"/>
  </xs:appinfo>
</xs:annotation>
</xs:element>
```



UPDATED AUGMENTATIONS



Augmentations are extensions without subclasses

Each object or association type contains an augmentation point element

Augmentation elements are substitutable for the augmentation point



STRUCTURES BASE TYPES

- Split ComplexObjectType into ObjectType, AssociationType
- Added augmentation point element
- Added structures:ref attribute
- Renamed linkMetadata to relationshipMetadata
- Added attribute wildcard for IC ISM, NTK namespaces



LOCAL VOCABULARY

- Annotations in the schema identify non-dictionary terminology: jargon, acronyms, slang
- Removes NDR 1.3 Table 9-1: Abbreviations
- Used in Immigration namespace

ICEEmployeeType
ICEOfficerType
SEVISPersonDependentAssociationType
ICEEmployee
ICEEmployeeAssistantUSAttorneyIndicator

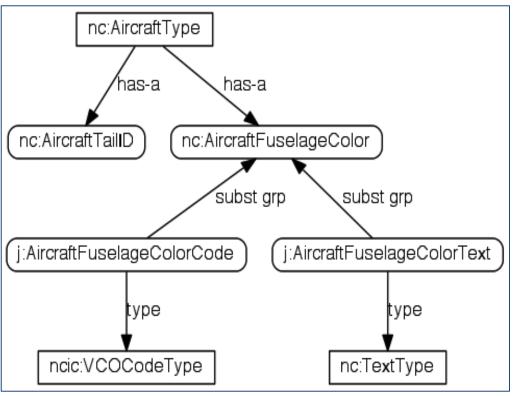
ICEEmployeeAttorneyIndicator

ICEEmployeeBadgeIdentification ICEEmployeeK9Indicator ICEEmployeePINIdentification ICEEmployeePayGradeNumeric ICEEmployeeTitleText

ICEEmployeeAugmentationPoint



ABSTRACT ELEMENTS FOR CODES



- Code + Text with the same basic meaning
- Release defines an abstract, typeless element for each
- Code + Text are substituted for the base element



HOW YOU CAN CONTRIBUTE

BACK TO...JUSTIN STEKERVETZ



HOW TO PROVIDE FEEDBACK

More on NIEM 3.0: NIEM.gov/version3



The Beta model is available from now until **July 8th** for public review. Providing feedback is easy!

Step 1: Download the Beta Model

Go to https://www.niem.gov/technical/coming-soon/Pages/Public-Review.aspx to download the latest Beta Model. The Beta release package contains both XML schemas and a Microsoft Excel spreadsheet.

Step 2: Determine your Review Type and Access Materials

We are looking for both technical and non-technical feedback!

- > Non-Technical Review: You can review the Model in Excel without having to understand XML schemas.
- > Technical Review: You can also review the Extensible Markup Language (XML) schemas.

Step 3: Conduct Your Review

What to look for in your review.

✓ Definitions

- ✓ Grammar/Spelling/Punctuation ✓ Code Lists
- ✓ Technical Architecture
- √ Harmonization
 √ Other

Step 4: Submit Your Feedback on NIEM.gov

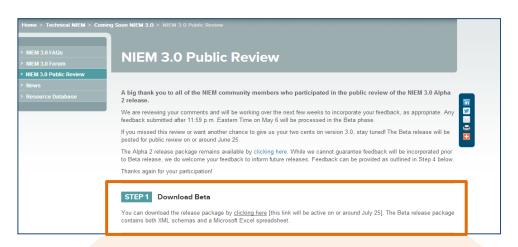
To submit feedback go to https://www.niem.gov/Pages/contact.aspx. Select "NIEM 3.0 Feedback" under "Category" in the online form.



STEP 1

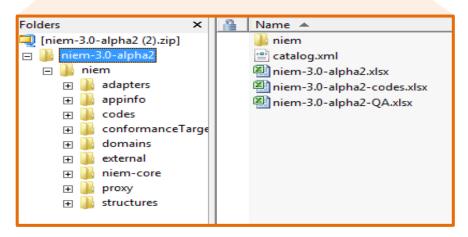
DOWNLOAD THE BETA MODEL

Go to: https://www.niem.gov/technical/coming-soon/Pages/Public-Review.aspx



NOTE: You can also go to NIEM.gov/version3 & click the "public review" button to get to this page!

The Beta link will allow you to download a Zip File of the model



Similar to the Alpha 2 model for public review, the Beta release package contains both XML schemas and a Microsoft Excel spreadsheet.

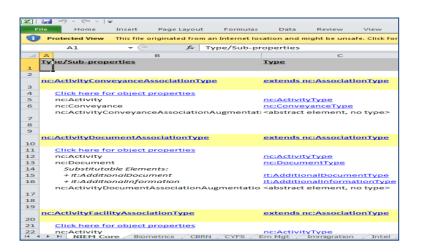


STEP 2

DETERMINE REVIEW TYPE & ACCESS MATERIAL

We are looking for both Non-Technical and Technical review feedback!

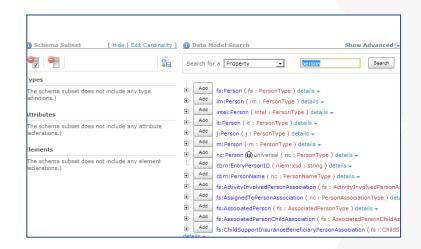
NON-TECHNICAL REVIEW



Excel File:

The first tab contains the content of NIEM Core. The other tabs each contain an individual NIEM domain. All domains are included.

TECHNICAL REVIEW



Text or XML Editor:

Schemas can be viewed via a text editor or an XML Editor

SSGT:

http://tools.niem.gov/niemtools/ssgt/SSGT-SearchSubmit.iepd



STEP 3 CONDUCT YOUR REVIEW: WHAT TO LOOK FOR



Definitions

Do you see a definition that appears to be incorrect? Do any definitions appear to conflict with each other? Are definitions distinct and distinguishable (or at least different)?



Grammar/Spelling/Punctuation

Do you see errors in the text of the model?



Technical Architecture

NIEM 3.0 has over a dozen technical improvements to architecture and structure. Review available schemas and artifacts.



Harmonization

Do data element exists only once? Are they semantically precise and clear? Are they e-usable and scalable across domains and the NIEM community?



Code Lists

Are code lists up-to-date and relevant?



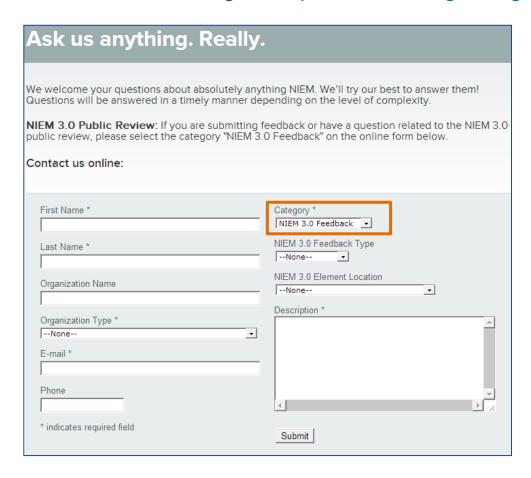
Other

Are there additional content or structural items or issues that need to be addressed?



STEP 4 SUBMIT YOUR FEEDBACK

To submit feedback go to https://www.niem.gov/Pages/contact.aspx.



Select "NIEM 3.0 Feedback" under "Category" in the online form.



DON'T MISS YOUR LAST CHANCE! SUBMIT YOUR FEEDBACK TODAY!

Beta is your **LAST CHANCE** to provide feedback on the entire version 3.0 release. To ensure that 3.0 is a success, your review of Beta is critical!

Feedback Submission Period:

June 25th, 2013 - July 8th, 2013

To download the model:

https://www.niem.gov/technical/coming-soon/Pages/Public-Review.aspx

To submit feedback:

https://www.niem.gov/Pages/contact.aspx

Questions?

E-mail information@niem.gov with subject: "3.0 HELP"

Run...don't walk, and SUBMIT YOUR FEEDBACK TODAY!

