NATO MTF XML SCHEMA

Using

NIEM / NCDF Methodology

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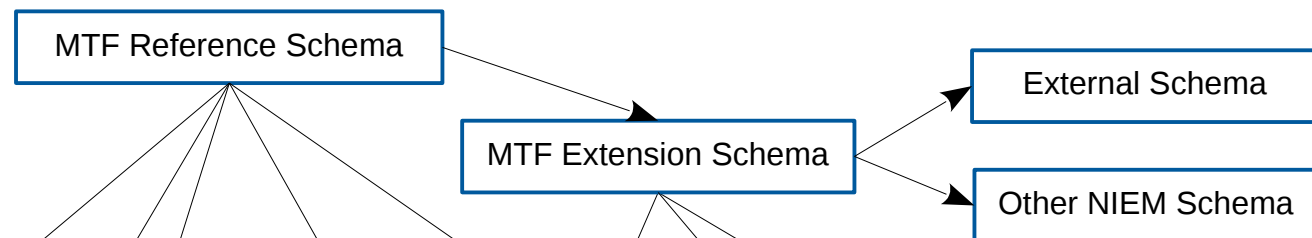MCTSSA Interoperability Branch
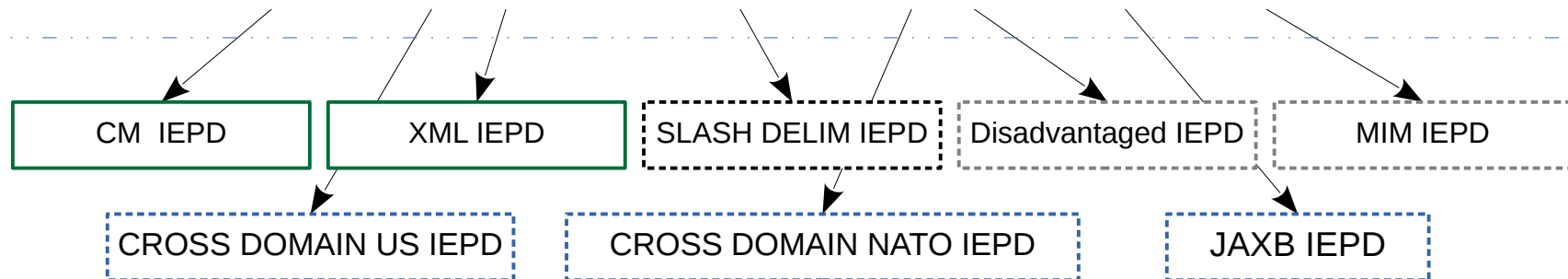
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NATO MTF XML SCHEMA IMPLEMENTATON

NIEM METHODOLOGY

- *Employ Uniform XML Schema design principles to maximize extensibility in order to achieve Interoperabilty between complex data models.*

- *Data component "Re-Use" is achieved using XML Extension and Restriction for purposes of validation and independent verification.*

EXTENSIBLE RESOURCES – Not implemented directly

MTF Reference Schema

MTF Extension Schema

External Schema

Other NIEM Schema

EXTENSION – RESTRICTION - VALIDATION

CM IEPD | XML IEPD | SLASH DELIM IEPD | Disadvantaged IEPD | MIM IEPD

CROSS DOMAIN US IEPD | CROSS DOMAIN NATO IEPD | JAXB IEPD

FINAL PRODUCTS - *NOT EXTENSIBLE*

PROJECT STATUS

All US and NATO MTF Messages have been refactored to achieve:

1. Cumulative NIEM/NCDF Conformant Reference XML Schema for each standard using a single XML Namespace

2. Separate Reference XML Schema for each Message

3. Cumulative Implementation XML Schema for each standard for which all instances are valid against the Reference Schema

4. Separate Implementation XML Schema for each Message for which all instances are valid against the Reference Schema

Implementations

Current Plans include development of IEPDs for:

1. XML based information exchange of NATO and USMTF

2. Conversion between US and NATO MTF

3. Slash Delimited Information Exchange

4. Configuration Management Implementation

In Work

Remaining tasks to complete full MTF Representation:

1. Generate tests to verify full representation of MTF standards

2. Convert existing Structural Relationships to Xpath / Schematron notations

3. Generate Code and Code Tests

4. Complete Collaborative tools to allow adustments and changes to current products without full regeneration

5. Add 4774/4778 extensions

Collaborative Efforts

1. All Products are available to Partner Nations for use in Exercises and Demonstrations in order to identify issues and allow recommendations for improvement

2. All software used to generate these documents, as well as guidance on how to implement them will be publicly available at:

   https://github.com/mil-oss/MTFXML

3. Information Exchange solutions using these products will follow the Information Exchange Product Documentation principles provided in the NIEM methodology which ensures that all necessary resources for a specific implementation are provided

NCDF MTF XML Schema

1. The entire refactored collection of MTF Schema has been uploaded to the MTF Strategy Document Repository as 3 Archives, NCDF_MTF_A-D.zip, NCDF_MTF_E-M.zip and NCDF_MTF_N-W.zip

2. All Schema are valid but there are likely many issues that will be addressed going forward.

3. The A-D Archive contains cumulative Reference and Implementaton Schema in the _ALL Directory.

4. Each Message is produced under a single namespace with Reference and Implementation Schema.

5. Reference Schema are for Extension and Validation

6. IEPD Schema are for Implementation and Validation

7. Any Instances must validate to both

Way Forward

1. Provide NCDF MTF XML as "Alpha" for next CWIX 2019 and any ACTDs, JCTDs and partner nations who want to engage

2. Incorporate inputs into "Beta" version for CWIX 2020, and update implementers

3. Incorporate inputs and propose alternate/upgrade version of NATO NCDF XML MTF in 2021

4. Incorporate MTF Objects into MIM (Maritime etc.)