“I love it when a plan comes together!”

– COL Hannibal Smith, The A-Team

Justice XML Structure Task Force

December 2002
Why JXDD Version 3.0?

- Aligned with standards (some were not available to RDD)
- Model-based $\rightarrow$ consistent
- Requirements-based – data elements, processes, documents
- Object-oriented $\rightarrow$ efficient extension and reuse
- Expanded domain (courts, corrections, juvenile, etc.)
- Extensions to activity objects / processes
- Relationships (to improve exchange information context)
- Can evolve / advance with emerging technology (RDF/OWL)
- Basis for an XML component registry that can provide
  - Searching / browsing components and metadata
  - Assistance for schema development / generation
  - Reference / cache XML schemas for validation
  - Interface (via std specs) to external XML registries
### What Sources of Requirements Are Being Used?

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>SOURCE DOCUMENTS / SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global ISWG</td>
<td>Reconciliation Data Dictionary (RDD) v1.0.0</td>
</tr>
<tr>
<td>JTF for ICHTS</td>
<td>Rap Sheet v2.2 schema</td>
</tr>
<tr>
<td>RISS</td>
<td>RISSIntel v2.0 schema</td>
</tr>
<tr>
<td>LegalXML</td>
<td>CourtFiling v1.1 DTD</td>
</tr>
<tr>
<td>AAMVA</td>
<td>Driver History v1.02 schema</td>
</tr>
<tr>
<td>NIJ</td>
<td>InfoTech v2.0 Data Dictionary and schema</td>
</tr>
<tr>
<td>LA County CA</td>
<td>Incident Report schema</td>
</tr>
<tr>
<td>SEARCH</td>
<td>Justice Info Exchange Model (JIEM) data sets</td>
</tr>
<tr>
<td>LegalXML</td>
<td>Arrest Warrant schema</td>
</tr>
<tr>
<td>LegalXML</td>
<td>Charging Document schema</td>
</tr>
<tr>
<td>LegalXML</td>
<td>Sentencing Order schema</td>
</tr>
<tr>
<td>Minnesota</td>
<td>CriMNet v1.0 Data Dictionary and schema</td>
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<tr>
<td>NCSC</td>
<td>Data element spreadsheets (civil, criminal, juvenile)</td>
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<tr>
<td>Maricopa Co AZ</td>
<td>ICJIS Data Dictionary v1.3</td>
</tr>
<tr>
<td>CISA</td>
<td>Southwest Border States DD (TX, AZ, NM)</td>
</tr>
<tr>
<td>FBI</td>
<td>NCIC 2000 Data Dictionary and Code Tables</td>
</tr>
<tr>
<td>NIBRS</td>
<td>Incident Report schema</td>
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</tbody>
</table>
### What Standards Are Being Applied?

<table>
<thead>
<tr>
<th>Organization</th>
<th>Specification/Standardization</th>
</tr>
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<tbody>
<tr>
<td>XML.gov</td>
<td>Draft Federal XML Schema Developer’s Guide (04/02)</td>
</tr>
<tr>
<td>ISO / IEC</td>
<td>11179 Specification &amp; Standardization of Data Elements</td>
</tr>
<tr>
<td>UN / CEFACT</td>
<td>ebXML Core Components Technical Spec 1.85 (09/02)</td>
</tr>
<tr>
<td>FBI</td>
<td>Electronic Fingerprint Transmission Spec v7 (01/99)</td>
</tr>
<tr>
<td>ANSI / NIST</td>
<td>Data Format for Interchange of Fingerprint, Facial, &amp; SMT</td>
</tr>
<tr>
<td>OASIS</td>
<td>XML Common Biometrics Format Committee (09/02)</td>
</tr>
<tr>
<td>Dept of Navy</td>
<td>Draft XML Registry Requirements (09/02)</td>
</tr>
<tr>
<td>DoD</td>
<td>DoD 5015.2-STD Design Criteria Std for E-RMS Apps (06/02)</td>
</tr>
<tr>
<td>W3C</td>
<td>XML Schema Specification (05/01)</td>
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<tr>
<td>W3C</td>
<td>RDF and RDF Schema Specification (02/99)</td>
</tr>
</tbody>
</table>
Justice Data Dictionary View

Activity ~60%
(Other objects ~30%)

Registry Metadata

ContactInfo

Location

Organization

Person

Property

Content Metadata

Document

Relationships

Infrastructure Metadata

ReferenceDocument.xsd

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December 2002
According to one Government data consultant, all branches and departments of a typical State Government use about 20,000 unique data elements.
Validation of JXDDS V3.0 RFC
December 2002

Complete Person
    Organization
    Location
    ContactInformation
    (personal)Property

and enough Activity objects to build …

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<td>Driver History</td>
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What Work Remains To Be Done?

- Implement objects: *Activity, property*
- Map source data requirements
- Define data components (definitions)
- Identify / install internal enumerations
- Define / implement special constraints
  (e.g. partial values, nulls, etc.)
- Implement metadata (content, registry, infrastructure)
- Implement or refine user tools for database
- Document user interface, design, etc.
- Implement interface to an ebXML registry
- Designate namespaces (naming policy)
- Define policies, procedures, CONOPS
Where Are We Going and Why?
How Does It All Fit Together?

The Big Picture – An XML Registry/Repository
Why a Justice XML Registry/Repository?

- History shows that long term success of data exchange within and between communities of interest is facilitated by:
  - Discovery and re-use of standard vocabularies
  - Discovery and re-use of components
  - de facto standards due to voting “by feet”

- How is this different from the Justice Standards Registry?
  - Different scope, objectives, functional requirements, specifications, management scheme, and operational guidelines
Basic Overview of Using a Metadata Registry

1. Developer needs XML tags, schema, stylesheet, etc.

2. Developer queries Justice Metadata Registry

3. Results returned based on the components stored in repositories

4. Developer either uses an existing component, or builds a new component and registers it for others to use
Justice XML Data Dictionary Registry/Repository Model

Data Requirements, Business Processes, Models, ...

Justice XML Repository

Other J/PS artifacts

Justice Data Dictionary Model and Repository

Map

ebXML compliant

LM = Lifecycle Mgt
QM = Query Mgt

Justice Registry Server

Registry Client

COTS Application

Web Server

Browsers

EPA Registry Server

DoD Registry Server

ebXML compliant

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XML Development Using the Registry

XML Registry

- Creates Schema Using Objects from Registry
- Develops Business Process Documents
- Creates Collaboration Protocol Profile
- Establishes Collaboration Protocol Agreement with User
- Searches Registry for Provider of Needed Info
- Establishes Collaboration Protocol Agreement with Provider

Standards Developer
Information Provider
Information User
Potential Issues for I/SWG

- Prioritize and evaluate registry features.
- Establish validation/approval processes
  - New components
  - Modifications of components
  - Criteria for different approval schemes
- Recommend operational oversight body
- Proposing and maintaining a stable funding process
  - Implementation, operation, maintenance
- Namespace management recommendations