Implementing ISO 19115-2 for the US EPA and State of Idaho Clearinghouses

FGDC ISO CAP Grant Update 6/19/2012
by Dan Spinosa
Acknowledgments

Thanks To:

– NOAA: Jacqueline Mize & Staff
  • ISO Transform over 8,500 lines of XSLT code

– ESRI:
  • Aleta Vienneau, Metadata
  • Martin Hogeweg, Geoportal
Lessons Learned with ISO

• Multiple Technologies
  – Metadata Editing: Tools & Processes
  – XML: Schema, Namespace, XSLT, XPath, etc.
  – Clearinghouse infrastructure: ESRI Geoportal, Asp.Net, SQL Server & other custom applications

• Investment of time to understand!
  – Increased functionality but an evolving and complex standard with multiple flavors
  – Team Effort to understand
  – Leverage the work of others

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Project Tasks

1. Identify Goals
2. Analyze Links and Flows
3. Recommend ISO Solution
4. Apply Solution
5. Share Results

ISO 19115-2
Shared Goals & Challenges

• Support ISO 19115-2 w/in their clearinghouses
  – Upgrade Expense, Level of Effort...
• Provide assistance to contributors
  – Adapt training documentation and tools
  – Selecting the correct tool w/the needed functionality
• Implement the same as others (best practices)
• Acquire better knowledge of the ISO standard among clearinghouse staff
  – Understand implications for existing and future applications
  – Adapt Business Processes
Project Tasks

FGDC CSDGM

1. Identify Goals
2. Recommend ISO Solution
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4. Apply Solution
5. Share Results

ISO 19115-2
EDG Business Processes

EDG METADATA STEWARD- CREATION PROCESS

<table>
<thead>
<tr>
<th>Primary Input</th>
<th>Review Process</th>
<th>Delivery Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESRi ArcCatalog</td>
<td>Send an RMS file in the project folder</td>
<td>Website edg.epa.gov</td>
</tr>
<tr>
<td>EPA Metadata Editor</td>
<td>UUID Incorporation*</td>
<td>Metadata</td>
</tr>
<tr>
<td>EDG Editor</td>
<td>Website edg.epa.gov</td>
<td>Metadata</td>
</tr>
<tr>
<td>Additional Inputs</td>
<td>EDG generates UUID</td>
<td>Metadata</td>
</tr>
</tbody>
</table>

*Designated from EPA Region 9 GIS Center SDE for EDG metadata synchronization

EDG METADATA-DATABASE PROCEDURES

CLIENT SUBMITTAL

- Website
- SDE Database

INTERNAL PROCESSES

- Website
- SDE Database

ADMINISTRATIVE DECISION PROCESS

- Website
- SDE Database

END USER INTERFACE

- Website
- SDE Database
- XSALT & Style Sheets

End users access metadata via EDG
Project Tasks

FGDC CSDGM

1. Identify Goals
2. Recommend ISO Solution
3. Apply Solution
4. Share Results
5. Analyze Links and Flows

ISO 19115-2
Develop & Test Solution

• Creating Clean ISO 19115-2 records
  – Transformation, Validation, & Corrections

• Harvesting and Displaying ISO 19115-2
  – Test & Document ISO w/in Clearinghouses

“No, you back off! I was here before you!”
Transforming Metadata

- Web-based Tool
  - MetaData.InnovateTeam.com (Transform Tool)
  - Available to anyone & easy to use
  - Consistent transform & validation test platform
  - Leverages NOAA’s investment (transforms, style sheets, crosswalk)
  - Supports both clearinghouse needs (CSDGM, ArcGIS, & ISO)
- .NET-code base reusable by clearinghouse BP’s
  - .NET XML objects
  - Altova free XPath 2.0 processor
Transforming Metadata

ArcCatalog ArcGIS2ISO Export

Customized ArcGIS 1.0 to ISO

- Header Content
- Namespaces
- metadataStandardName & Version
Validating ISO Metadata

- Processing Sample Records
- Documenting common errors and solutions (Resolve w/in CSDGM record, or transformed ISO record??)

![Validation Results](image)
The Next Steps

• Creating Clean ISO 19115-2 records
  – Transformation, Validation, & Corrections

• Harvesting and Displaying ISO 19115-2
  – Test & Document ISO w/in Clearinghouses

"No, you back off! I was here before you!"
ISO Test Run (In Progress)

• EDG & INSIDE Idaho capabilities
• Problem Areas
• Solutions
  – Code developed from Online Transform Tool
  – NOAA transforms, style sheets, documentation, & staff!
  – Create roadmap for supporting ISO 191* series
    • Tools for authoring metadata (e.g., EME v4.0?)
    • EDG & INSIDE Idaho Clearinghouse under review
Thank you!

Visit us at the ESRI UC:
UC391 - Implementing ISO Metadata for EPA and Idaho Geospatial Clearinghouses
Thursday July 11, 10:15am - 11:30am Room 27 A

CAP Grant Metadata Resources:
Metadata.InnovateTeam.com

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