



FEDERAL METADATA COORDINATORS' WEBINAR:  
**ISO GEOSPATIAL METADATA  
IMPLEMENTATION**

Day One  
*Metadata  
Components*

Tuesday  
April 16, 2013  
12:00-4:00 PM

# WHAT IS A METADATA 'COMPONENT'?

XML enables the creation of fixed 'snippets' of metadata:

- Contacts
- Sources
- Symbology
- Data Processing
- Distribution Methods
- Features
- Application Schemas (data models)
- and more...

■ Known as components, the content can be referenced by or included in multiple metadata records

■ Components support:

- Consistency in content
- Single point for edits
- Organizational or 'enterprise' metadata

# CREATING COMPONENTS

- Components are created as stand alone pieces of ISO XML metadata
- A link to the component is embedded into the full metadata record using XML Linking Language (XLink)
  - `href xlink` is the component location (URL)
  - `title xlink` is the human readable name for the component

# ISO Attributes

## XLinks

The XML Linking Language (**XLink**) allows elements to be inserted into XML documents in order to create and describe links between resources, similar to HTML hyperlinks. Linking elements are recognized based on the use of a designated attribute named `xml:link` and a set of accompanying global attributes. The global attributes are `type` , `href` , `role` , `arcrole` , `title` , `show` , and `actuate`. If an XLink is used, the following ISO component is not used.

# Metadata Components

## xlink:href

The value of the href attribute in linking elements contains a locator that identifies a resource, e.g., by a URI-reference or by an XPointer specification.

The xlink href attribute is used to reference a component, and the xlink title attribute is used to apply a human understandable name to the component. *Components* are snippets of XML describing a specific piece of metadata content, such as information about people, websites, documents, archives, instruments, etc.

XLinks can be used to reference a component from an unresolved metadata record (*unresolved* meaning that the metadata record contains xlink).

# Metadata Components

## Unresolved Component

```
<gmd:contact  
  xlink:href="http://www.ngdc.noaa.gov/docucomp/08D95C427FB128479  
945893256DADE37" xlink:title="NOAA/OAR/OER - Ocean Exploration  
and Research"/>
```

## Resolved Component

```
<gmd:contact xlink:title="NOAA/OAR/OER - Ocean Exploration and Research">  
  <gmd:CI_ResponsibleParty uuid="08D95C427FB128479945893256DADE37">  
    <gmd:organisationName>  
      <gco:CharacterString>NOAA/OAR/OER - Ocean Exploration and Research  
    </gco:CharacterString>  
    </gmd:organisationName>  
    <gmd:contactInfo>  
      <gmd:CI_Contact>  
        <gmd:phone>  
          <gmd:CI_Telephone>  
            <gmd:voice>  
              <gco:CharacterString>301-713-9444</gco:CharacterString>
```

# COMPONENT MANAGEMENT

Components should be stored at a well-known and easily accessed central location

- Location within the organization
  - Limits access
  - Provides control, e.g. records should be resolved prior to publication
  
- Location external to the organization
  - Enables others to resolve records if the detailed information is needed

# DOCUCOMP COMPONENT REGISTRY

- Docucomp is a NOAA managed web application for managing XML [components](#)
- Components are stored in a database and managed with [REST](#) web services
  - REST services support insert, search, update and delete operations
  - [https://geo-ide.noaa.gov/wiki/index.php?title=Docucomp\\_Component\\_Management\\_System](https://geo-ide.noaa.gov/wiki/index.php?title=Docucomp_Component_Management_System)
- Docucomp GUI
  - <https://www.ngdc.noaa.gov/docucomp/>