

Character_String_Extended_Types

ISO 19139 created three extensions for the CharacterString type in order to improve the utility of 19115 metadata in a web environment: Anchor, MimeFileType, and FileName. These extensions are in the gmx namespace, so they all require addition of xmlns:gmx="http://www.isotc211.org/2005/gmx" to the root element of the XML document.

Anchor

Without the gmx namespace, the code in an MI_Identifier is a geo:CharacterString.

```
<gmd:identifier>
  <gmd:MI_Identifier>
    <gmd:code>
      <gco:CharacterString>HLY0805</gco:CharacterString>
    </gmd:code>
  </gmd:MI_Identifier>
<gmd:identifier>
```

With the gmx namespace added, gmx:Anchor is a valid substitute for any geo:CharacterString in the ISO XML. The gmx:Anchor includes the simple xlink attributes: xlink:href, xlink:role, xlink:arcrole, xlink:title, xlink:show, and xlink:actuate. The xlink:href attribute includes a URL to the definition of the code in a controlled vocabulary. The xlink:actuate="onRequest" tells the client reading this XML traverse to the xlink when the user requests the information rather than while the XML is being rendered. This prevents the inclusion of the definition directly in the ISO XML.

```
<gmd:keyword>
  <gmx:Anchor xlink:href="http://vocab.ngdc.nerc.ac.uk/term/C161/0/55" xlink:actuate="onRequest">Be
```

Many groups are migrating to persistant URL's as unique and resolvable identifiers. The gmx:Anchor type supports this approach by allowing the inclusion of a URL directly as the code:

```
<gmd:identifier>
  <gmd:MI_Identifier>
    <gmd:code>
      <gmx:Anchor>http://get.rvdata.us/voc/cruise/HLY0805</gmx:Anchor>
    </gmd:code>
  </gmd:MI_Identifier>
<gmd:identifier>
```

FileName

The FileName type is particularly useful in the MD_BrowseGraphic Class. Without the gmx namespace an MD_BrowseGraphic looks like:

```
<gmd:graphicOverview>
  <gmd:MD_BrowseGraphic>
    <gmd:fileName>
      <gco:CharacterString>http://www.nosa.noaa.gov/image/global/LgFLUXNET.jpg</gco:CharacterString>
    </gmd:fileName>
    <gmd:fileDescription>
      <gco:CharacterString>Fluxnet image</gco:CharacterString>
    </gmd:fileDescription>
    <gmd:fileType>
      <gco:CharacterString>JPEG</gco:CharacterString>
    </gmd:fileType>
  </gmd:MD_BrowseGraphic>
</gmd:graphicOverview>
```

Character_String_Extended_Types

With the gmx namespace this MD_BrowseGraphic becomes:

```
<gmd:graphicOverview>
  <gmd:MD_BrowseGraphic>
    <gmd:fileName>
      <gmx:FileName src="http://www.nosa.noaa.gov/image/global/LgFLUXNET.jpg">Browse Graphic
    </gmd:fileName>
    <gmd:fileDescription>
      <gco:CharacterString>Fluxnet image</gco:CharacterString>
    </gmd:fileDescription>
    <gmd:fileType>
      <gco:CharacterString>JPEG</gco:CharacterString>
    </gmd:fileType>
  </gmd:MD_BrowseGraphic>
</gmd:graphicOverview>
```