

METS change request: <area> attributes

The National library of France is leading an experiment on 3D digitization of 17th to 19th century globes. These complex digital objects are made up of high and medium resolution representations of each globe (3D meshes - OBJ and MTL files for the medium resolution, X3D for the high resolution - and a different number of images for the textures)

The <par> element should be used in this case: all the texture images have to be displayed together in order to present the whole globe. However, accessing particular files, which was achieved by the BnF qualifying ARKs with the METS attributes¹, is not possible in this case. Indeed, all the <area> elements being at the same level there is no way (except by using the order of the xml itself) to address each one.

That is why LABEL, ORDER and ORDERLABEL attributes should be allowed in <area> elements. Conceptually, a set of files, whether to be displayed sequentially or concurrently, may bear information about how to be processed, read or displayed.

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Use case:

```
<?xml version="1.0" encoding="UTF-8"?>
<mets xmlns="http://www.loc.gov/METS/" xmlns:premis="info:lc/xmlns/premis-v2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:dcterms="http://purl.org/dc/terms/" xmlns:spar_dc="http://bibnum.bnf.fr/ns/spar_dc"
xmlns:xlink="http://www.w3.org/1999/xlink">
  <dmdSec ID="DMD.1">
    <mdWrap MIMETYPE="text/xml" MDTYPE="DC">
      <xmlData>
        <spar_dc:spar_dc>
          <dc:title>Sphère-reliefs / par Thury instituteur. Dijon rue de l'Ecole de Droit, 51 ; Lith. Carré
& Cie r[ue] Vauban 46 ; Lauffer sculp[sit]</dc:title>
          <dc:creator>Thury (18..-18.. ; géographe). Cartographe</dc:creator>
          <dc:creator>Lauffer (18..-18.. ; Graveur à Dijon)</dc:creator>
          <dc:creator>Carré et Cie (Impr. lithographique à Dijon)</dc:creator>
          <dc:creator>Guillemin & Delmont (Paris ; éditeurs)</dc:creator>
          <dc:publisher>Editeurs Guillemin & Delmont Rue Croix-des Petits-Champs, 33
[adresse imprimée sur un papillon collé sous le cartouche de titre] (Paris)</dc:publisher>
```

¹ E.g.: ark:/12148/bc6p03qg1/physical1/master gives access to the master of the first <div> of the physical <structMap>.

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```
<dc:date>1855</dc:date>
<dc:type xml:lang="eng">object</dc:type>
<dcterms:provenance>BnF</dcterms:provenance>
<dc:language xsi:type="dcterms:ISO639-3">fre</dc:language>
<dc:relation xsi:type="spar_dc:ark">ark:/12148/cb407715222</dc:relation>
</spar_dc:spar_dc>
</xmlData>
</mdWrap>
</dmdSec>
<amdSec>
<sourceMD ID="AMD.1">
<mdWrap MIMETYPE="text/xml" MDTYPE="DC">
<xmlData>
<spar_dc:spar_dc>
<dc:description xml:lang="fr">Objet</dc:description>
</spar_dc:spar_dc>
</xmlData>
</mdWrap>
</sourceMD>
</amdSec>
<fileSec>
<fileGrp USE="master" ID="GRP.1">
<file CHECKSUMTYPE="MD5" CHECKSUM="28c82bac48d9e565b0cf3fc9a010a59e"
ADMID="AMD.24 AMD.25 AMD.26" ID="master.1" MIMETYPE="text/xml" SIZE="1001201">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678.x3d"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="8135086ebe61cbebbd03358f1c8b27f9"
ADMID="AMD.1" ID="master.2" MIMETYPE="image/tiff" SIZE="7941">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_1.tif"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="47345c830d43420d208640efdb3e3cce"
ADMID="AMD.1" ID="master.3" MIMETYPE="image/tiff" SIZE="5249">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_2.tif"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="3a8e72365b7ad5e3d60054d51915d5eb"
ADMID="AMD.1" ID="master.4" MIMETYPE="image/tiff" SIZE="7570">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_3.tif"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="301724787d6a220440ab01ffc1f931fb"
ADMID="AMD.1" ID="master.5" MIMETYPE="image/tiff" SIZE="9535">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_4.tif"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="fadc208d9e270a61160c518e9a0f389d"
ADMID="AMD.1" ID="master.6" MIMETYPE="image/tiff" SIZE="7515">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_5.tif"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="28c82bac48d9e565b0cf3fc9a010a59e"
ADMID="AMD.1" ID="master.7" MIMETYPE="image/tiff" SIZE="6902">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/H12345678_6.tif"/>
</file>
</fileGrp>
<fileGrp USE="medres" ID="GRP.2">
<file CHECKSUMTYPE="MD5" CHECKSUM="3a8e72365b7ad5e3d60054d51915d5eb"
ADMID="AMD.33 AMD.34 AMD.35" ID="mediumres.1" MIMETYPE="text/plain" SIZE="1070">
<FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="L3D/L12345678.obj"/>
</file>
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<file CHECKSUMTYPE="MD5" CHECKSUM="301724787d6a220440ab01ffc1f931fb"
ADMID="AMD.36 AMD.37 AMD.38" ID="mediumres.2" MIMETYPE="text/plain" SIZE="9535">
  <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="L3D/L12345678.mtl"/>
</file>
<file CHECKSUMTYPE="MD5" CHECKSUM="8135086ebe61cbebbd03358f1c8b27f9"
ID="mediumres.3" MIMETYPE="image/jpg" SIZE="1541">
  <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="L3D/L12345678_1.jpg"/>
</file>
<file CHECKSUMTYPE="MD5"
CHECKSUM="47345c830d43420d208640efdb3e3cce" ID="mediumres.4" MIMETYPE="image/jpg"
SIZE="1649">
  <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="L3D/L12345678_2.jpg"/>
</file>
</fileGrp>
<fileGrp USE="container" ID="GRP.3">
  <file CHECKSUMTYPE="MD5" CHECKSUM="8135086ebe61cbebbd03358f1c8b27f9"
ADMID="AMD.1" ID="container.1" MIMETYPE="image/tiff" SIZE="6541">
    <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="T/T0000001.tif"/>
  </file>
  <file CHECKSUMTYPE="MD5" CHECKSUM="47345c830d43420d208640efdb3e3cce"
ADMID="AMD.1" ID="container.2" MIMETYPE="image/tiff" SIZE="6649">
    <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="T/T0000002.tif"/>
  </file>
</fileGrp>
<fileGrp USE="colorProfile" ID="GRP.4">
  <file CHECKSUMTYPE="MD5" CHECKSUM="47345c830d43420d208640efdb3e3cce"
ID="colorProfile.1" MIMETYPE="image/tiff" SIZE="6649">
    <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="H3D/M12345678.tif"/>
  </file>
  <file CHECKSUMTYPE="MD5" CHECKSUM="8135086ebe61cbebbd03358f1c8b27f9"
ID="colorProfile.2" MIMETYPE="image/tiff" SIZE="6541">
    <FLocat xlink:type="simple" LOCTYPE="URL" xlink:href="M12345678.tif"/>
  </file>
</fileGrp>
</fileSec>
<structMap TYPE="physical">
  <div TYPE="group" ID="DIV.1" DMDID="DMD.1">
    <div TYPE="object" ORDER="1" ID="DIV.2" LABEL="mesh">
      <fptr FILEID="master.1" />
    </div>
    <par>
      <area FILEID="mediumres.1" LABEL="geometry"/>
      <area FILEID="mediumres.2" LABEL="material"/>
    </par>
  </div>
  <div TYPE="object" ORDER="2" ID="DIV.3" LABEL="texture">
    <fptr>
      <par>
        <area FILEID="master.2" ORDER="1"/>
        <area FILEID="master.3" ORDER="2"/>
        <area FILEID="master.4" ORDER="3"/>
        <area FILEID="master.5" ORDER="4"/>
        <area FILEID="master.6" ORDER="5"/>
        <area FILEID="master.7" ORDER="6"/>
      </par>
    </fptr>
  </div>
</structMap>
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</fptr>
<fptr>
  <par>
    <area FILEID="mediumres.3" LABEL="north"/>
    <area FILEID="mediumres.4" LABEL="south"/>
  </par>
</fptr>
</div>
<div TYPE="object" ORDER="3" ID="DIV.3" LABEL="colorProfile">
  <fptr FILEID="colorProfile.1"/>
</div>
</div>
</structMap>
<structMap TYPE="container">
  <div TYPE="group" ID="DIV.4" DMDID="DMD.1">
    <div TYPE="object" ORDER="1" ID="DIV.5">
      <fptr FILEID="container.1"/>
    </div>
    <div TYPE="object" ORDER="2" ID="DIV.6">
      <fptr FILEID="container.2"/>
    </div>
    <div TYPE="object" ORDER="3" ID="DIV.7">
      <fptr FILEID="colorProfile.2"/>
    </div>
  </div>
</structMap>
</mets>
```