
Stage three: #29 Update <bookmap>

Revise book map design to remediate problems but avoid breaking backwards compatibility.

Champion

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Tracking information

Event	Date	Links
Stage 1 proposal accepted	23 May 2017	Minutes
Stage 2 proposal submitted	14 October 2019	DITA PDF
Stage 2 proposal discussed	15 October 2019	Minutes
Stage 2 proposal approved	22 October 2019	Minutes
Stage 3 proposal submitted to reviewers	17 November 2019	Nancy Harrison, Individual member Eliot Kimber, Individual member Eric Sirois, IXIASOFT
Stage 3 proposal (this document) submitted to TC		
Stage 3 proposal updated		

Approved technical requirements

- Modify the content model of <bookmap> to allow zero or more <ditavalref> elements after <bookmeta>
- Add a <mapresources> element to the map group domain. The <mapresources> element will:
 - Be specialized from <topicref>
 - Have a content model of:
 - Zero or one <topicmeta> elements
 - Zero or more %data.elements.incl; elements
 - Zero or more <topicref> elements
 - Have the following attributes: @href, @keys, @keyref, @keyscope, @processing-role, @type, @cascade, @scope, @format, @linking, @toc, @search, and %univ-atts; attributes
 - The attributes should have the same values as <keydef>, with the following exception: the @keys attribute is not required.
- Modify the content model of <bookmap> to allow zero or more <mapresources> elements after <ditavalref>
- Modify the content model of <booklists> to allow zero or more <amendments>

Note This solution adds hard dependencies on two domains to the bookmap module: DITAVAlref and map group. This is something that the TC has not previously done in document-type shells and will need to be clearly documented and explained to DITA practitioners.

Dependencies or interrelated proposals

None

Modified grammar files

The following files will need to be modified:

- DTDS:
 - bookmap.dtd
 - bookmap.mod
 - mapGroup.mod
 - mapGroup.ent
- RNG:
 - bookmap.rng
 - bookmapMod.rng
 - mapGroupDomain.rng

In the content below, the following conventions are used:

- Bold is used to indicate code to be added, for example, **addition**.
- Line-through and red text is used to indicate code to be removed, for example, ~~removal~~.
- Ellipses (...) indicate where code is snipped for brevity.

Figure 1: Changes to bookmap.dtd

```
...
<!-- ===== -->
<!--          DOMAIN ENTITY DECLARATIONS          -->
<!-- ===== -->
<!-- Do not remove references to the map group or DITAVAlref -->
<!-- domains. The bookmap specialization requires these domains. -->

<!ENTITY % mapgroup-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 2.0 Map Group Domain//EN"
  "../../../base/dtd/mapGroup.ent"
>%mapgroup-d-dec;

<!ENTITY % ditavalref-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 2.0 DITAVAl Ref Domain//EN"
  "../../../base/dtd/ditavalrefDomain.ent"
>%ditavalref-d-dec;

<del>!ENTITY % mapgroup-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 2.0 Map Group Domain//EN"
  "../../../base/dtd/mapGroup.ent"
>%mapgroup-d-dec;
```

```

>%ditavalref-d-def;
...
<!-- ===== -->
<!-- MAP ELEMENT INTEGRATION -->
<!-- ===== -->

<!ENTITY % map-type
  PUBLIC "-//OASIS//ELEMENTS DITA 2.0 Map//EN"
         "../..base/dtd/map.mod"
>%map-type;

<!ENTITY % mapgroup-type
  PUBLIC "-//OASIS//ELEMENTS DITA 2.0 Map Group Domain//EN"
         "../..base/dtd/mapGroup.mod"
>%mapgroup-type;

<!ENTITY % ditavalref-type
  PUBLIC "-//OASIS//ELEMENTS DITA 2.0 DITAVAL Ref Domain//EN"
         "../..base/dtd/ditavalrefDomain.mod"
>%ditavalref-type;

<!ENTITY % bookmap-type
  PUBLIC "-//OASIS//ELEMENTS DITA 2.0 BookMap//EN"
         "bookmap.mod"
>%bookmap-type;

<!-- ===== -->
<!-- DOMAIN ELEMENT INTEGRATION -->
<!-- ===== -->

<del>!ENTITY % mapgroup-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 2.0 Map Group Domain//EN"
         "../..base/dtd/mapGroup.mod"
>%mapgroup-d-def;

```

Figure 2: Changes to bookmap.mod

```

...
<!-- LONG NAME: Book Map -->
<!ENTITY % bookmap.content
  "(%title; |
   %booktitle;)?,
   (%bookmeta;)?,
   (%ditavalref;)*,
   (%mapresources;)*,
   (%frontmatter;)?,
   (%chapter;)*,
   (%part;)*,
   ((%appendices)? |
   (%appendix;)*),
   (%backmatter;)?,
   (%reltable;)*)"
>
...
<!-- LONG NAME: Book Lists -->
<!ENTITY % booklists.content
  "(%abbrevlist; |
   %amendments; |
   %bibliolist; |
   %booklist; |
   %figurelist; |

```

```

%glossarylist; |
%indexlist; |
%tablelist; |
%trademarklist; |
%toc;)*"
>
...

```

Figure 3: Changes to mapGroup.ent

```

...
<!-- ===== -->
<!-- ELEMENT EXTENSION ENTITY DECLARATIONS -->
<!-- ===== -->

<!ENTITY % mapgroup-d-topicref
"anchorref |
keydef |
mapref |
mapresources |
topicgroup |
topichead"
>
...

```

Figure 4: Changes to mapGroup.mod

```

...
<!-- ===== -->
<!-- ELEMENT NAME ENTITIES -->
<!-- ===== -->

<!ENTITY % topichead "topichead" >
<!ENTITY % topicgroup "topicgroup" >
<!ENTITY % anchorref "anchorref" >
<!ENTITY % mapref "mapref" >
<!ENTITY % keydef "keydef" >
<!ENTITY % mapresources "mapresources" >
...
<!-- LONG NAME: Map resources -->
<!ENTITY % mapresources.content
" (
(%topicmeta;)?,
(%data.elements.incl; | %topicref;)*
)"
>
<!ENTITY % mapresources.attributes
"href
CDATA #IMPLIED
keyref
CDATA #IMPLIED
keys
CDATA #IMPLIED
keyscope
CDATA #IMPLIED
processing-role
(normal |
resource-only |
-dita-use-conref-target)
'resource-only'
type
CDATA #IMPLIED
cascade
CDATA #IMPLIED
scope

```

```

        (external |
         local |
         peer |
         -dita-use-conref-target)
        #IMPLIED

    format          CDATA
                   #IMPLIED

    linking

    (none |
     normal |
     sourceonly |
     targetonly |
     -dita-use-conref-target)
    #IMPLIED

    toc

    (no |
     yes |
     -dita-use-conref-target)
    #IMPLIED

    search

    (no |
     yes |
     -dita-use-conref-target)
    #IMPLIED

    %univ-atts;"
>
<!ELEMENT mapresources %mapresources.content;>
<!ATTLIST mapresources %mapresources.attributes;>

<!-- ===== -->
<!-- SPECIALIZATION ATTRIBUTE DECLARATIONS -->
<!-- ===== -->

<ATTLIST anchorref class CDATA "+ map/topicref mapgroup-d/anchorref ">
<ATTLIST keydef class CDATA "+ map/topicref mapgroup-d/keydef ">
<ATTLIST mapref class CDATA "+ map/topicref mapgroup-d/mapref ">
<ATTLIST mapresources class CDATA "+ map/topicref mapgroup-d/mapresources ">
<ATTLIST topicgroup class CDATA "+ map/topicref mapgroup-d/topicgroup ">
<ATTLIST topichead class CDATA "+ map/topicref mapgroup-d/topichead ">

```

Figure 5: Changes to bookmap.rng

```

...
<div>
  <a:documentation>MODULE INCLUSIONS</a:documentation>
  <!-- Do not remove references to the map group or DITAVAlref -->
  <!-- domains. The bookmap specialization requires these domains. -->
...

```

Figure 6: Changes to bookmapMod.rng

```

...
<div>
  <a:documentation>ELEMENT TYPE PATTERNS</a:documentation>

  <div>
    <a:documentation>LONG NAME: Book Map</a:documentation>
    <define name="bookmap.content">
      <optional>
        <choice>
          <ref name="title"/>
          <ref name="booktitle"/>
        </choice>
      </optional>
      <optional>
        <ref name="bookmeta"/>
      </optional>
      <zeroOrMore>
        <choice>
          <ref name="ditavalref"/>

```

```

        <ref name="mapresources"/>
    </choice>
</zeroOrMore>
<optional>
    <ref name="frontmatter"/>
</optional>
...
<div>
    <a:documentation>LONG NAME: Book Lists</a:documentation>
    <define name="booklists.content">
        <zeroOrMore>
            <choice>
                <ref name="abbrevlist"/>
                <ref name="amendments"/>
                <ref name="bibliolist"/>
                <ref name="booklist"/>
                <ref name="figurelist"/>
                <ref name="glossarylist"/>
                <ref name="indexlist"/>
                <ref name="tablelist"/>
                <ref name="trademarklist"/>
                <ref name="toc"/>
            </choice>
        </zeroOrMore>
    </define>
...

```

Figure 7: Changes to mapGroupMod.rng

```

...
<div>
    <a:documentation>ELEMENT TYPE NAME PATTERNS</a:documentation>
    ...
    <define name="mapref">
        <ref name="mapref.element"/>
    </define>
    <define name="mapresources">
        <ref name="mapresources.element"/>
    </define>
    <define name="topicgroup">
        <ref name="topicgroup.element"/>
    </define>
    ...
</div>
<div>
    <a:documentation>Define domain extension patterns</a:documentation>
    <define name="mapgroup-d-topicref">
        <choice>
            <ref name="anchorref.element"/>
            <ref name="keydef.element"/>
            <ref name="mapref.element"/>
            <ref name="mapresources.element"/>
            <ref name="topicgroup.element"/>
            <ref name="topichead.element"/>
        </choice>
    </define>
    <define name="topicref" combine="choice">
        <ref name="mapgroup-d-topicref"/>
    </define>
</div>

<div>
    <a:documentation>Define elements content and attributes</a:documentation>
    ...
    <div>
        <a:documentation>Map resources</a:documentation>
        <define name="mapresources.content">
            <optional>
                <ref name="topicmeta"/>
            </optional>
            <zeroOrMore>
                <choice>
                    <ref name="data.elements.incl"/>
                    <ref name="topicref"/>
                </choice>
            </zeroOrMore>
        </define>
    </div>

```

```

    </choice>
  </zeroOrMore>
</define>
<define name="mapresources.attributes">
  <optional>
    <attribute name="href"/>
  </optional>
  <optional>
    <attribute name="keyref"/>
  </optional>
  <optional>
    <attribute name="keys"/>
  </optional>
  <optional>
    <attribute name="keyscope" dita:since="1.3"/>
  </optional>
  <optional>
    <attribute name="processing-role" a:defaultValue="resource-only">
      <choice>
        <value>normal</value>
        <value>resource-only</value>
        <value>-dita-use-conref-target</value>
      </choice>
    </attribute>
  </optional>
  <optional>
    <attribute name="type"/>
  </optional>
  <optional>
    <attribute name="cascade" dita:since="1.3"/>
  </optional>
  <optional>
    <attribute name="scope">
      <choice>
        <value>external</value>
        <value>local</value>
        <value>peer</value>
        <value>-dita-use-conref-target</value>
      </choice>
    </attribute>
  </optional>
  <optional>
    <attribute name="format"/>
  </optional>
  <optional>
    <attribute name="linking">
      <choice>
        <value>none</value>
        <value>normal</value>
        <value>sourceonly</value>
        <value>targetonly</value>
        <value>-dita-use-conref-target</value>
      </choice>
    </attribute>
  </optional>
  <optional>
    <attribute name="toc">
      <choice>
        <value>no</value>
        <value>yes</value>
        <value>-dita-use-conref-target</value>
      </choice>
    </attribute>
  </optional>
  <optional>
    <attribute name="search">
      <choice>
        <value>no</value>
        <value>yes</value>
        <value>-dita-use-conref-target</value>
      </choice>
    </attribute>
  </optional>
</ref name="univ-atts"/>

```

```

</define>
<define name="mapresources.element">
  <element name="mapresources">
    <a:documentation>The <mapresources> element is a convenience element that is
used to ... .</a:documentation>
    <ref name="mapresources.attlist"/>
    <ref name="mapresources.content"/>
  </element>
</define>
<define name="mapresources.attlist" combine="interleave">
  <ref name="mapresources.attributes"/>
</define>
</div>
<div>
<a:documentation>Specialization attributes. Global attributes and class defaults</
a:documentation>
...
<define name="mapresources.attlist" combine="interleave">
  <optional>
    <attribute name="class" a:defaultValue="+ map/topicref mapgroup-d/mapresources "/>
  </optional>
</define>
...

```

Modified terminology

None

Modified specification documentation

The following topics need to be modified:

- <amendments>
- <booklists>
- "DITA elements, A to Z" (add link to new <mapresources> topic)

The following new topics need to be added:

- <mapresources> topic (add to map group submap)

Note All numeric references here are to the [DITA 1.3 Errata 02 specification](#).

The following table contains precise suggestions for changes to be made to topics. Deletions are indicated with line through and red text, for example, ~~deletion~~.

Topic	DITA 1.3 content	DITA 2.0 content
3.10.6.1.3 <amendments>	<p>The <amendments> element references a list of amendments or updates to the book. It indicates to the processing software that the author wants an amendments list generated at the particular location.</p> <p>...</p> <p>Example</p> <p>See bookmap.</p>	<p>The <amendments> element references a list of amendments or updates to the publication.</p> <p>Processing expectations</p> <p>The <amendments> element indicates that an amendments list will be generated at that location. If the <amendments> element does not specify a resource, the amendments list is auto-generated by the processor.</p> <p>...</p> <p>Example</p> <p>The following code sample specifies that that a change history list is generated in the publication frontmatter.</p>

Topic	DITA 1.3 content	DITA 2.0 content
		<p>The content of the change history list is contained in the DITA resource referenced by @keyref.</p> <pre> <frontmatter> <booklists> <amendments keyref="change-history"/> </booklists> </frontmatter> </pre> <p>If the <amendments> element did not reference a resource, the change history list would be auto-generated by the processor.</p>
<p>3.10.6.1.11
<booklists></p>	<p>The <booklists> element references lists of various kinds within the book publication. For example, it can be used within <frontmatter> to reference a <toc>, <tablelist>, and <figurelist>, or within <backmatter> to reference a <glossarylist>, <indexlist>, and <abbrevlist>. It indicates to the processing software that the author wants the lists generated at the <booklists> location.</p> <p>...</p> <p>Example</p> <p>See the example in bookmap.</p>	<p>The <booklists> element references lists of various kinds within the publication.</p> <p>Processing expectations</p> <p>The <booklists> element indicates to processors that lists are to be generated at that location in the front or back matter.</p> <p>...</p> <p>Example</p> <p>The following code sample indicates that the lists that are generated in the front and back matter of the publication.</p> <pre> <bookmap> <booktitle> <mainbooktitle>Sample publication</mainbooktitle> </booktitle> <frontmatter> <booklists> <toc> <amendments/> <figurelist/> <tablelist/> </booklists> </frontmatter> ... <backmatter> <booklists> <abbrevlist/> <glossarylist/> <indexlist/> </booklists> </backmatter> </bookmap> </pre>

Migration plans for backwards incompatibilities

Not applicable

<mapresources>

The <mapresources> element serves as an intuitive location for map authors to place objects with @processing-role set to "resource-only", for example, key definitions and subject scheme maps

Specialization hierarchy

The <mapresources> element is specialized from <topicref>. It is defined in the map group module.

Attributes

The following attributes are available on this element: [Universal attribute group](#), [Link-relationship attribute group](#) (with the exclusion of @chunk, @collection-type, @locktitle, and a narrowed definition of @href, given below), [Attributes common to many map elements](#) (with a narrowed definition of @processing-role, given below), @keys, @keyref, and the attributes defined below.

@href

Points to the resource that is represented by the <topicref> element. See [The href attribute](#) for detailed information on supported values and processing implications. References to DITA content cannot be below the topic level: that is, you cannot reference individual elements inside a topic. References to content other than DITA topics should use the @format attribute to identify the kind of resource being referenced.

@processing-role

The default value for @processing-role is set to "resource-only". Otherwise, the definition matches the one in [Attributes common to many map elements](#).

Examples

This section provides examples of how the <mapresources> element can be used.

Figure 8: Specifying resource-only objects in an intuitive location in a book map

The following code sample illustrate how the <mapresources> element can group references to key definitions, subject schemes, and other resources in a bookmark:

```
<bookmark>
  <booktitle>
    <mainbooktitle>Test bookmark</mainbooktitle>
  </booktitle>
  <mapresources>
    <mapref href="key-definitions.ditamap"/>
    <mapref href="subject-scheme.ditamap" type="subjectscheme"/>
    <topicref href="cover-page.dita outputclass="cover-page"/>
  </mapresources>
  ...
</bookmark>
```

Note that this example illustrates that <mapresources> can be used to make topics available for resource-only processing. In this scenario, the company uses a processor that uses content contained in the cover-page.dita file to generate a PDF cover page.

Figure 9: Specifying resource-only objects in a map

The following code sample shows a map that contains information for a specific model of a controller. This map is referenced in an omnibus publication that contains information for an entire family of controllers.

```
<map keyscope="model-XNP09">
  <title>Model XNP09</title>
```

```
<mapresources>
  <keydef keys="model-illustration" href="model-XNP09.png" format="png"/>
  <keydef keys="remove-cover" href="remove-cover-XNP09.png" format="png"/>
</mapresources>
<topicref href="model-overview.dita"/>
<topicref href="installing.dita"/>
<topicref href="uninstalling.dita"/>
...
</map>
```