Stage three: #647 Replace classification domain with a new attribute

Replace classification domain with a new attribute: `@subjectrefs`

Champion

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Tracking information: Stage two

Event	Date	Links
Initial suggestion	E-mail, 09 December 2021	Minutes, 04 January 2022
Stage 1 proposal accepted	11 January 2022	Minutes, 11 January 2022 GitHub issue
Stage 2 proposal submitted to TC for early feedback (not applicable to all proposals)	Not applicable	
Stage 2 proposal submitted to reviewers	E-mail, 07 March 2022	Carsten Brennecke, SAP Gershon Joseph, Precision Content I've also requested feedback from the following members of the larger DITA community: • Peyton Bentley, Kaplan • Joe Gelb, Zoomin Software • Pam Noreault, Ellucian • Shane Taylor, Cengage Group
Stage 2 proposal submitted to TC	E-mail, 17 March 2022 E-mail, 29 March 2022	
Stage 2 proposal discussed by TC	22 March 2022 29 March 2022	Minutes, 22 March 2022 Minutes, 29 March 2022
Stage 2 proposal approved by TC	05 April 2022	Minutes, 05 April 2022

Tracking information: Stage three

Event	Date	Links or notes
Stage 3 proposal submitted to reviewers	<xref to e-mail sent to reviewers and cc'd to list>	Robert Anderson, Oracle Carsten Brennecke, SAP Gershon Joseph, Precision Content
Stage 3 proposal submitted to TC	<xref to e-mail sent to list>	

Event	Date	Links or notes
Stage 3 proposal discussed	<Date>	<xref to meeting minutes where discussed>
Stage 3 proposal approved	<Date>	<xref to meeting minutes where discussed>

Approved technical requirements

Remove the classification domain and the classification map. Add a new attribute, `@subjectrefs`, to the `<topicref>` element and specializations of `<topicref>`. This includes both elements in the base and the technical content edition.

Note The `@subjectrefs` attribute has no meaning if it is specified on a key definition that does not reference a resource.

The `@subjectrefs` attribute will have the following characteristics:

- It will cascade.
- It will take multiple values, separated by white space. The values are one or more keys, defined in a subject scheme map.

While the DITA TC does not want to introduce any processing expectations for `@subjectrefs` in the DITA 2.0 time frame, it is possible that we will introduce them in the future.

Dependencies or interrelated proposals

None.

Removed grammar files

The following grammar files need to be removed. In addition, the catalog files that currently reference the above files will need to be modified.

Base

- `doctypes/dtd/subjectScheme/classifyDomain.ent`
- `doctypes/dtd/subjectScheme/classifyDomain.mod`
- `doctypes/rng/subjectScheme/classifyDomain.rng`

Technical content

- doctypes/dtd/classificationMap directory
- doctypes/rng/classificationMap directory

The classification domain and the document-type shell for the classification map will be loaded into the GitHub repository for specializations that are removed from the DITA standard.

Modified grammar files

This proposal will require modifications to the following files:

Base edition

- `dtd/base/map.mod`
- `dtd/base/mapGroup.mod`
- `rng/base/map.rng`

- `rng/base/mapGroupDomain.rng`

Technical content edition

- `dtd/technicalContent/glossrefDomain.mod`
- `rng/technicalContent/glossrefDomain.mod`

No changes are required to the bookmap grammar files, since the relevant attribute definitions reference the topicref attribute entities defined in the base grammar files.

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 map.mod

```
<!ENTITY % topicref-atts
               "...
                subjectrefs
                           CDATA
                                     #IMPLIED"
>
...
<!ENTITY % topicref-atts-without-format
               "...
                subjectrefs
                           CDATA
                                     #IMPLIED"
>
```

Figure 2: Changes to mapGroup.mod

```
<!ENTITY % keydef.attributes
               "...
                subjectrefs
                           CDATA
                                     #IMPLIED
                %univ-atts;"
>
```

Figure 3: Changes to mapMod.rng

```
  <div>
    <a:documentation>COMMON ATTRIBUTE SETS</a:documentation>

    <define name="topicref-atts">
      ...
      <optional>
        <attribute name="subjectrefs"/>
      </optional>
    </define>
...
    <define name="topicref-atts-without-format">
      ...
      <optional>
        <attribute name="subjectrefs"/>
      </optional>
    </define>
```

Figure 4: Changes to mapGroupDomain.rng

```
    <div>
      <a:documentation>Key Definition</a:documentation>
```

```
      ...
      <define name="keydef.attributes">
      ...
      <optional>
        <attribute name="subjectrefs"/>
      </optional>
        <ref name="univ-atts"/>
      </define>
```

Figure 5: Changes to glossrefDomain.mod

```
<!ENTITY % glossref.attributes
              "...
               subjectrefs
                          CDATA
                                    #IMPLIED
               %univ-atts;"
>
```

Figure 6: Changes to glossrefDomain.rng

```
  <div>
    <a:documentation>ELEMENT TYPE DECLARATIONS</a:documentation>

    <div>
      <a:documentation> LONG NAME: Glossary Reference </a:documentation>
      ...
      <define name="glossref.attributes">
        ...
        </optional>
        <optional>
          <attribute name="subjectrefs"/>
        </optional>
        <ref name="univ-atts"/>
      </define>
```

Modified terminology

Not applicable

Modified specification documentation

The following topics need to be removed or modified:

Topics and maps to be removed

- archSpec/base/classification-maps.dita
- langRef/classification-domain-elements.ditamap
- langRef/containers/classify-d.dita
- langRef/base/subjectCell.dita
- langRef/base/subjectref.dita
- langRef/base/subjectref.dita
- langRef/base/topicapply.dita
- langRef/base/topicCell.dita
- langRef/base/topicsubject.dita
- langRef/base/topicSubjectHeader.dita
- langRef/base/topicSubjectRow.dita

Architectural topics and maps to be modified

File	Modification
`cascading-in-a-ditamap.dita`	Add `@subjectrefs` to the list of attributes that cascade.
`cascading-of-attributes-from-map-to-map.dita`	Add `@subjectrefs` to the list of attributes that cascade from map to map.
`subject-scheme-maps.ditamap`	Remove reference to `classification-maps.dita`; add reference to new topic.

Element-reference topics and maps to be modified

Whatever attributes topic needs to contain the definition for `@subjectrefs`: Specifies one or more subject keys that are defined in a subject scheme map. Multiple values are separated by white space.

Attributes listing for the following base topics:

- `<map>`
- `<keydef>`
- `<mapref>`
- `<topichead>`
- `<topicgroup>`

Attributes listings for the following technical content topics:

- `<glossref>`
- All bookmap elements that are defined with the `topicref-atts` entity

Topics to be added

The following topics are to be added to the "DITA map processing" chapter, in the "Subject scheme maps and their usage" and "Metadata cascading" topic collections:

Subject scheme maps and their usage

- The subjectrefs attribute (6)
- Example: A subject scheme map used to define taxonomic subjects (6)

Metadata cascading

- X

Migration plans for backwards incompatibilities

Implementations that use the classification domain and classification map will need to do one of the following, if they want to move to DITA 2.0:

- Download the classification domain from the GitHub repository and integrate it into the relevant document-type shells. If the implementation currently uses the OOB OASIS-provided document-type shell for the classification map, they will need to move to using a custom document-type shell.
- Replace map markup that uses the classification domain with the new `@subjectrefs` attribute, as well as modifying any processing that is based on the classification domain.

The @subjectrefs attribute

The `@subjectrefs` attribute specifies one or more subject keys that are defined in a subject scheme map. Multiple values are separated by white space.

The `@subjectrefs` attribute cascades. It can be used on the `<topicref>` element to associate a topic with a subject defined in a subject scheme map.

Example: A subject scheme map used to define taxonomic subjects

A subject scheme map can be used to define taxonomic subjects. Once defined, the subjects can be referenced by applying a `@subjectrefs` attribute to a `<topicref>` element.

The following subject scheme map defines a set of subjects that are used to classify content:

```
<subjectScheme>
  <subjectdef keys="content-types">
    <subjectdef keys="conceptual-material"/>
    <subjectdef keys="reference"/>
    <subjectdef keys="tutorial"/>
  </subjectdef>
  <subjectdef keys="operating-systems">
    <subjectdef keys="linux"/>
    <subjectdef keys="macosx"/>
    <subjectdef keys="windows"/>
  </subjectdef>
  <subjectdef keys="user-tasks">
    <subjectdef keys="administering"/>
    <subjectdef keys="developing"/>
    <subjectdef keys="installing"/>
    <subjectdef keys="troubleshooting"/>
  </subjectdef>
</subjectScheme>
```

The keys assigned to the subject definitions can be referenced using the `@subjectrefs` attribute on topic references in a navigation map:

```
<map>
<title>User assistance for the Acme Widget</title>
<!-- ... -->
<topicref keyref="install-overview" subjectrefs="installing">
  <topicref keyref="install-linux"/>
  <topicref keyref="install-macosx"/>
  <topicref keyref="install-windows"/>
  <topicref keyref="install-troubleshooting" subjectrefs="troubleshooting"/>
</topicref>
<!-- ... -->
</map>
```