

Linking between COMBINE standards

What is the idea?

Let's assume I have an SBML model and a respective SBGN map ...

... and from the SBGN map I want to get more information about a species of the SBML model, or ...

... when I update the SBML model I want to update the respective glyph on the SBGN map as well.

This means I need linking between the SBML model and the SBGN map.

COMBINE namespace

- use a COMBINE namespace for the XML elements
- a suitable namespace URL was not proposed

Proposal 1a

- separate the document reference and the reference to the appropriate part(s) of the document

```
<combine:externalDoc url="resource" id="doc1"
type="http://identifiers.org/
combine.specifications/SBML..." />
```

```
<combine:externalRef docId="doc1">
  <!-- Choice of -->
  <sbml ref="meta-id"/>
  <rdf id="ref-id"/>
  <xpath expr="meta-id"/>
</combine:externalRef>
```

Proposal 1b

- use a URL which contains a document reference and a pointer type
- the type of pointer is indicated by the protocol of the URL

```
<!-- Use URL protocol -->
```

```
<combine:external ref="xpointer:///pty"/>
```

Proposal 1b

- use a URL which contains a document reference and a pointer type
- the type of pointer is indicated by the protocol of the URL

```
<!-- Use URL protocol -->
```

```
<combine:external ref="xpointer:///pty"/>
```

- many different protocols could be allowed, even protocols that are not commonly used, such as
 - "rdf:<rdf identifier>", "xpointer:<xpointer expression>", "sbml:<sbml-meta-id>"
- tools are free to handle or ignore different protocols

Proposal 1

- the majority (in the room) preferred proposal 1a
- direct linkage from a file / to a file
 - incorporation in XML directly
 - using these elements in RDF-XML to describe the subject of an RDF triple

Proposal 2

- a mapping file was proposed for bi-directional linking between different resources
- the mapping entry would point to both resources, for example SBML and SBGN-ML

Proposal 2

```
<combine:externalDoc url="file:///sbmlfile.xml"
id="sbml"/>
<combine:externalDoc url="file:///sbgnfile.xml"
id="sbgn"/>
<combine:mappingEntry id="mapping1">
  <combine:externalRef docId="sbml">
    <sbml ref="meta1"/>
  </combine:externalRef>
  <combine:externalRef docId="sbgn">
    <sbgn ref="glyph4"/>
  </combine:externalRef>
</combine:mappingEntry>
```

Summary

- use a COMBINE namespace
- proposal 1: direct linkage from a file / to a file
 - proposal 1a: separate the document reference and the reference to the part(s) of the document
 - proposal 1b: use a URL which contains a global document reference and a pointer type
- proposal 2: mapping file for bi-directional linking