Rendering Information & SBGN-ML

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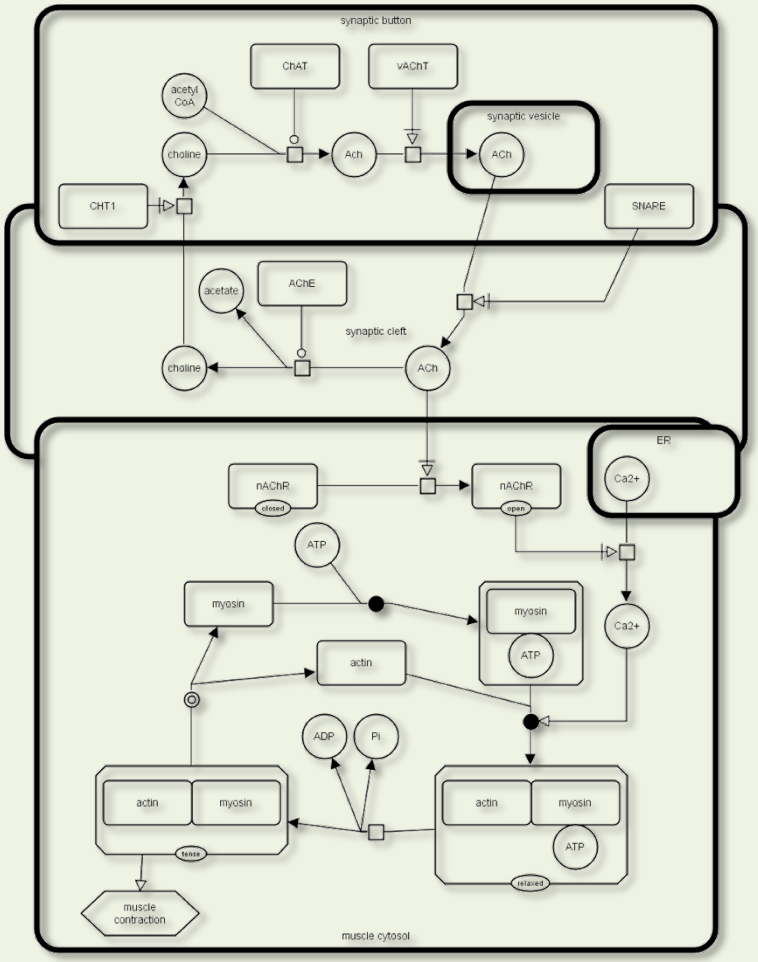
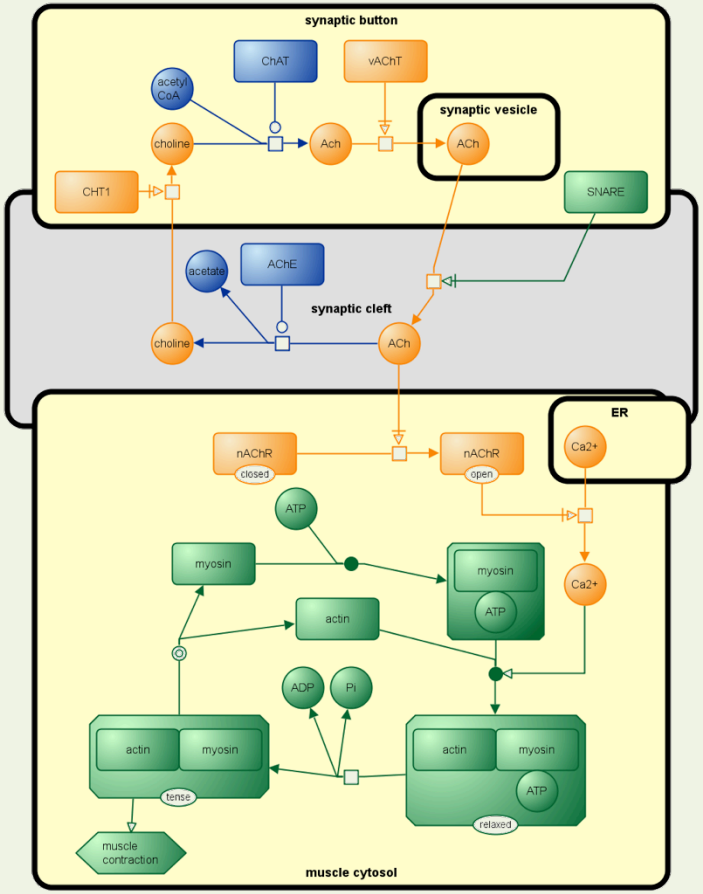
Image: http://bingfotos.blogspot.co.uk/2013/03/people-holding-powder-paints-to.html

Color Please!



Color Please!



What does it take?

- Edges:
  - Stroke: color, width
- Nodes:
  - Stroke: color, width
  - Fill: color / gradient
- Assigned to: id, role, type

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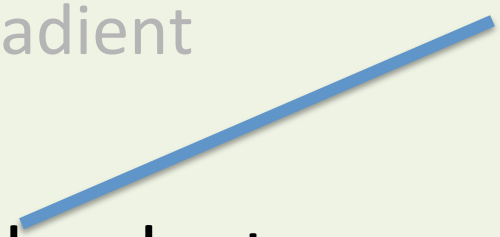

Apply style to arc / port / node with given id.

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- Edges:
  - Stroke: color, width
- Nodes:
  - Stroke: color, width
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Apply style to arc / port / node with specified class, for example all simple Chemicals

What does it take?

- Edges:
  - Stroke: color, width
- Nodes:
  - Stroke: color, width
  - Fill: color / gradient
- Assigned to: id, role, type

Apply style to arc / port / node with new attribute ‘objectRole’.

Render Extension

Complementing layout information with render information in SBML files

Ralph Gauges, Sven Sahle and Katja Wegner
University of Heidelberg
Im Neuenheimer Feld 267
D-69120 Heidelberg
Germany

May 25, 2011

http://otto.bioquant.uni-heidelberg.de/sbml

How does it work?

- List of Color Definitions:

```
<listOfColorDefinitions>
     <colorDefinition id="yellowComp" value="#ffffccff" />
     <colorDefinition id="grayComp" value="#e0e0e0ff" />
</listOfColorDefinitions>
```

- List of Gradient Definitions:

```
<listOfGradientDefinitions>
      <linearGradient x1="0%" y1="0%" x2="100%" y2="0%”
                      id="LinearGradient_0" spreadMethod="reflect">
           <stop offset="0%" stop-color="#ccffff" />
           <stop offset="100%" stop-color="#ffffff" />
      </linearGradient>
```

How does it work?

List of Styles:

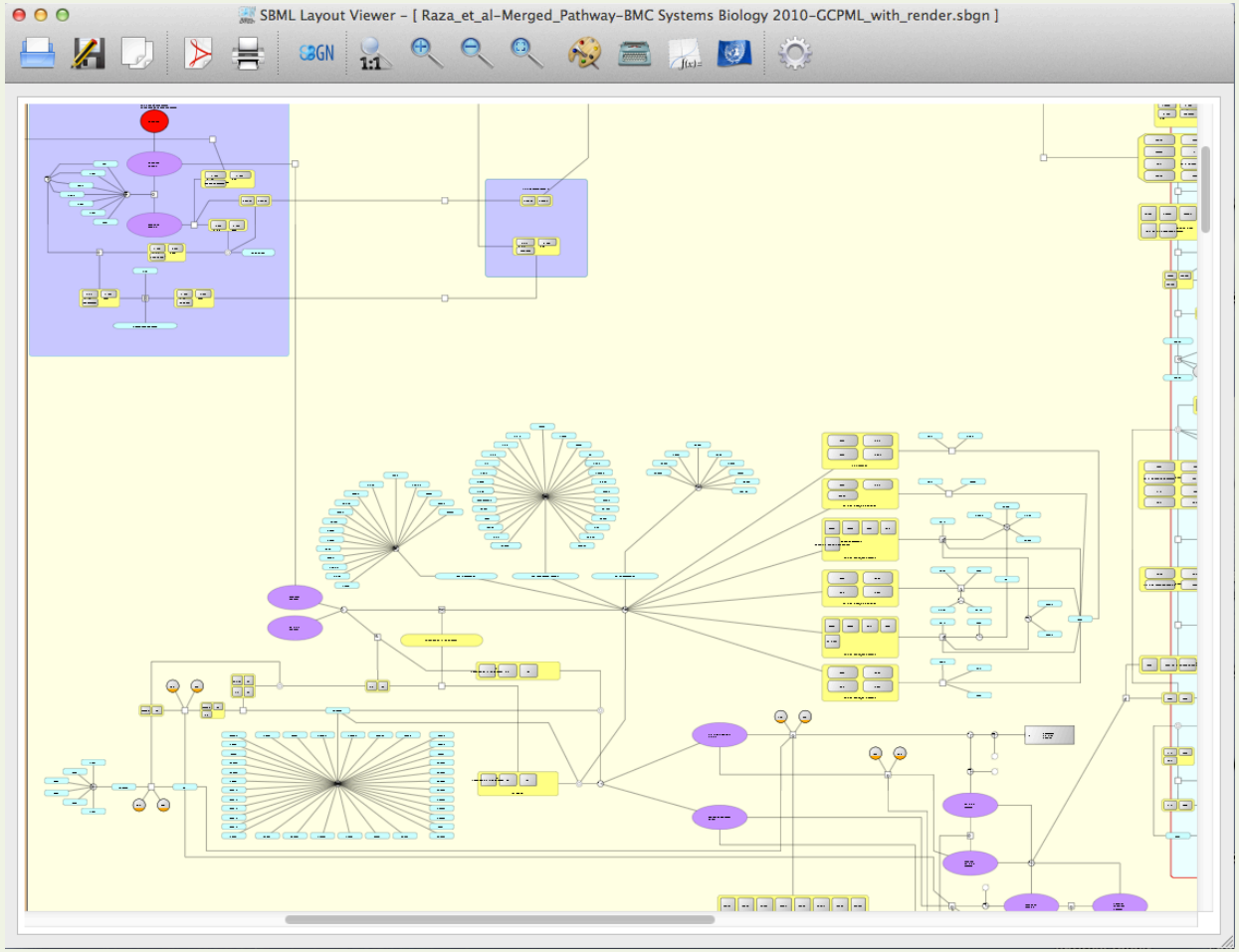
```
<listOfStyles>
   <style idList="glyph0 glyph2 glyph14 glyph34 ">
     <g stroke="Color_2" stroke-width="5" fill="yellowComp"  />
   </style>
   <style idList="glyph1">
     <g stroke="Color_2" stroke-width="5" fill="grayComp"  />
   </style>
   <style idList="glyph8 glyph23 glyph5 glyph12 …">
     <g stroke="orange" stroke-width="2" fill="OrangeGradient_0" />
   </style>
   …
```

SBGN-ML

Extensions:

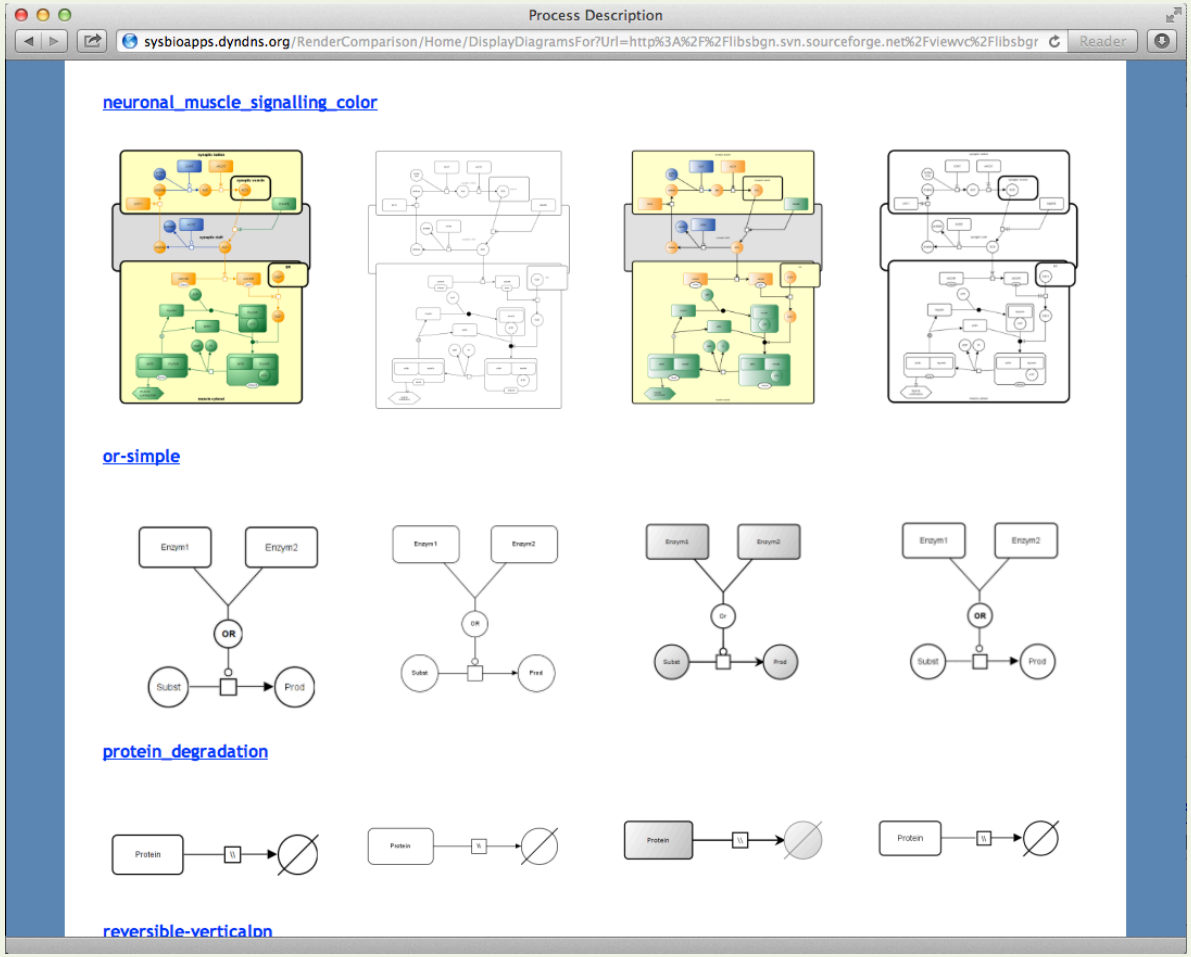
```
<map language="process description">
  <extension>
   <renderInformation id="example" programName="SBML Layout"
    programVersion="3.0"
    xmlns="http://projects.eml.org/bcb/sbml/render/level2">

     <listOfColorDefinitions>…</listOfColorDefinitions>
     <listOfGradientDefinitions>…</listOfGradientDefinitions>
     <listOfStyles>…</listOfStyles>

   </renderInformation>
  </extension>
…
```

Implementation



Layout Viewer as Available With SBW: http://sbw.sf.net

Implementation



Online under: http://sysbioapps.dyndns.org/RenderComparison

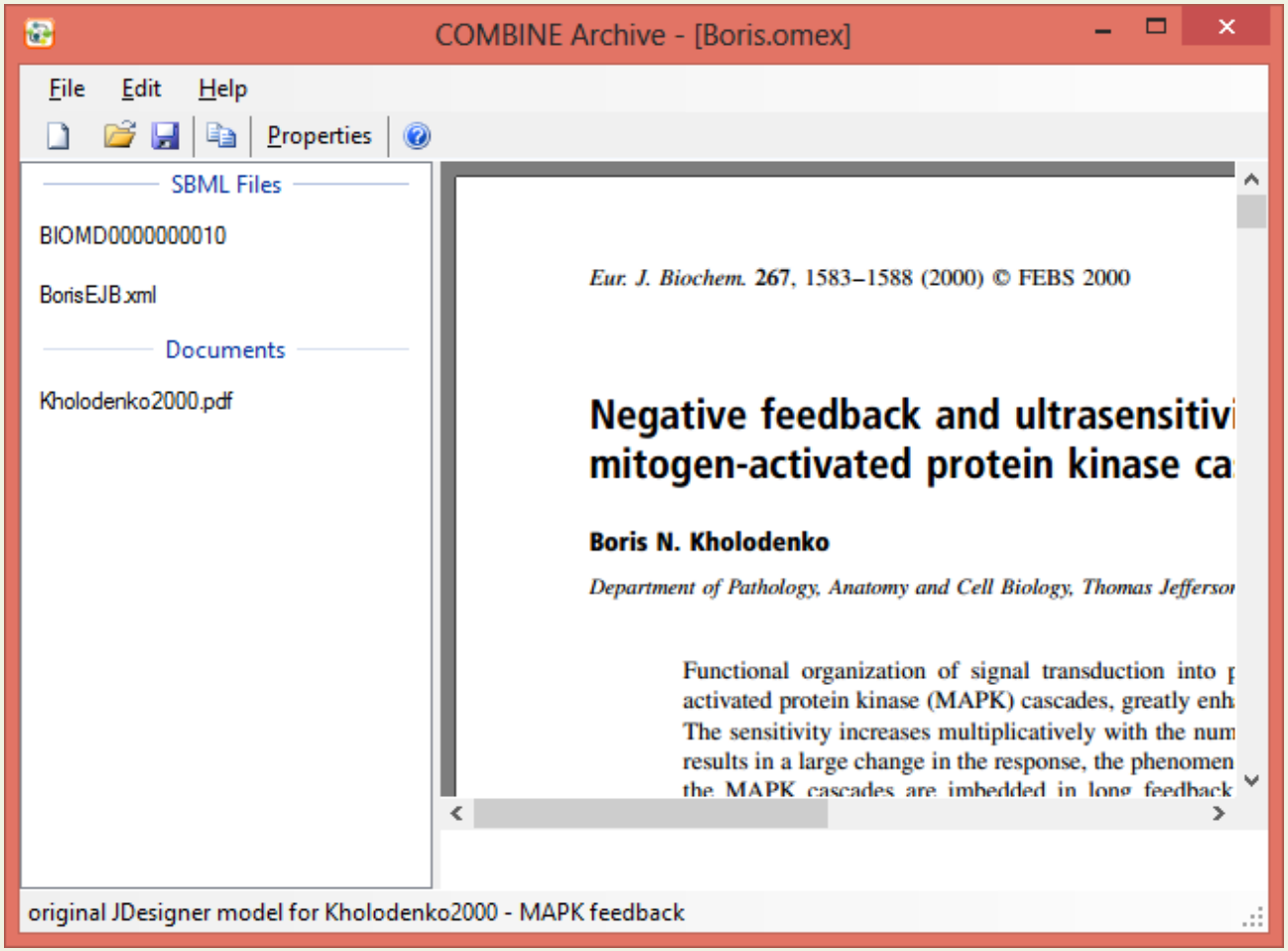
LibSBGN

- Code Available to:
  - Assign color to SBGN diagram through:
    - id, color pairs
    - Extracting color from GraphML files
  - Could be adapted to read into dictionaries when unmarshalling SBGN from JAXB
  - Commit to SVN?

What is next?

- Cross Referencing:
  - Connecting an SBGN map with underlying SBML model
  - Linking SBGN node to PDF / additional information

COMBINE Archive



http://fbergmann.github.io/CombineArchive/

More Information

- Blog:

  http://frank-fbergmann.blogspot.com
- Java example:

  http://www.sbgn.org/LibSBGN/SBGN-ML_Extensions
- Online Application for testing:

  http://sysbioapps.dyndns.org

Thank You!

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