VirtualComponents

(this document is adapted from the message posted by stefanomazzocchi on the cocoon development mailing list)

Currently, people abuse the map:resource part of the sitemap to create pipeline fragments to call. This was introduced by the TreeProcessor implementation of the sitemap but map:resources were *not* designed to be pipeline fragments but entire pipelines.

It has been identified in several circumstances (but mostly dealing with blocks) that the need to use pipeline fragments is required.

I propose the creation of "virtual pipeline components" by aggregating two or more components into a virtual one. An example is

```
<map:components>

 <map:generators>
  <map:generator name="filteredFile">
   <map:generator type="file"/>
   <map:transformer type="xslt" src="namespaceFilter.xsl"/>
  </map:generator>

 <map:transformers>
  <map:transformer type="skin">
   <map:transformer type="xslt" src="fancy-doc2html.xslt"/>
  </map:transformer>
 </map:transformers>

 <map:serializers>
  <map:serializer type="html">
   <map:transformer type="linkTranslator"/>
   <map:serializer type="html"/>
  </map:serializer>
 </map:serializers>

</map:components>
```

As you can see from the example, with virtual components, we can:

- reuse pipeline fragments as they were one component.
- overload existing components with additional functionality
- specify the src of a general purpose component (for example, xslt) and reuse that particular instance as a component. (useful for precompilation of general purpose transformations or for reusing pipeline services implemented by blocks)

The virtual compoments can include any other sitemap component but:

- for generators, all but serializers
- for transformers, all but generators and serializers
- for serializers, all but generators

and, obviously, the order is important.