Subject: Re: Branches and connections - a neverending story
Posted by Volker Knollmann on Mon, 14 Jun 2004 08:03:25 GMT
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Matthias Hengartner wrote:
> We decided to remove the <singleCrossOver>-element, because it would raise
> unnecessary work for importing applications. So <switch> will be the only
> child element of <connections> for the present. Of course we could discuss
> about the sense and the naming of this <connections>-container.

Fine! I totally agree with you that <singleCrossOver> caused only
confusion and overhead.

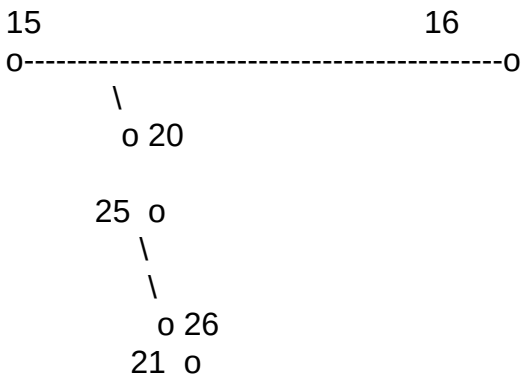
> Here a simple example (I removed attributes which are not relevant for this
> topic and added the attribute "trackType" to show roughly what we mean).
>
> [....]
>
> As you can see, we have an additional third track for the crossover.
>

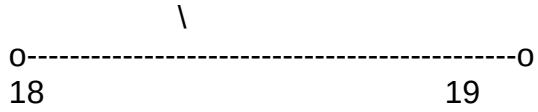
Yes, this structure is much easier to understand and to implement.
And it is closer to reality: a switch is a <switch> and a track is a
<track>. So far, so good.

But this way of describing the infrastructure is very close to a
vertex-edge-graph and if I remember correctly, a
vertex-egde-representation of the track was rejected in the early stage
of the development of the schema.

Just think of edges as <track> elements and nodes as
connectionID-attributes. The connections between nodes are made via
<branchConnection>, which effectively connects to vertices (the
connectionID of the parent element and its own branchIDRef).

So here is your example with "vertices" (o), their IDs and egdes (-----):





Personally, I like vertex-edge-representations and therefore I can live with this structure without problems (the only tricky thing about this graph is, that a switch has only ONE vertex and not three vertices like in normal graphs).

Additionally, some attributes of <branchConnection> make no sense anymore (e. g. branchDist, which is given by the track length).
And: Is <branchConnection> still neccessary if the branch is a separate track? Perhaps the information which is now stored in <branchConnection> can be merged into the parent element (either <switch> or <simpleConnection>). As an alternative, we could think of a pure <conenction>-element, which combines the functions of <branchConnection> and <simpleConnection>; this is possible, since both elements now just connect to nodes. Or we can only use <simpleConnection> and remove <branchConnection>, since effectively we only have connections between <track>-elements which should originally be handled by <simpleConnection>. Or.....

So these are my suggestions for today... don't kill me if they are too blasphemic... ;)

Best regards,
Volker