Subject: Re: Platform @belongsToParent and <ownsPlatformEdge>
Posted by Thomas Nygreen JBD on Mon, 11 Feb 2019 17:11:56 GMT
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Dear Christian,

christian.rahmig wrote on Mon, 11 February 2019 15:29
The hierarchical reference between objects of the same type (platform to
platform or platform edge to platform edge) shall be done using the
attribute @belongsToParent. One example for this type of referencing:
grouping together platform edges with different height to a long
platform edge.
This assumes that the hierarchy is given, but the current model allows doing this in multiple ways.
Let's say we have a symmetrical platform between tracks 1 and 2; 200 meters of it is 5 meters
wide, 0.76 meters high and made of concrete, while the remaining 150 meters is older with gravel
surface, tapering off to 1 meters wide, 0.55 meters high. The hierarchy can be:

Either:
Platform 1/2, length=350m
|- PlatformEdge 1, length=350m
| |- PlatformEdge 1a, length=200m, width=? (5m or 2.5m?), height=0.76m
| \- PlatformEdge 1b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m
\- PlatformEdge 2, length=350m
  |- PlatformEdge 2a, length=200m, width=? (5m or 2.5m?), height=0.76m
  \- PlatformEdge 2b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m

Or:
Platform 1/2, length=350m
|- Platform 1a/2a, length=200m
| |- PlatformEdge 1a, length=200m, width=? (5m or 2.5m?), height=0.76m
| |- PlatformEdge 2a, length=200m, width=? (5m or 2.5m?), height=0.76m
\- Platform 1b/2b, length=150m
  \- PlatformEdge 1b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m
  \- PlatformEdge 2b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m

Or:
Platform 1/2, length=350m
|- PlatformEdge 1a, length=200m, width=? (5m or 2.5m?), height=0.76m
|- PlatformEdge 1b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m
|- PlatformEdge 2a, length=200m, width=? (5m or 2.5m?), height=0.76m
\- PlatformEdge 2b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m

Or even just:
PlatformEdge 1a, length=200m, width=? (5m or 2.5m?), height=0.76m
+ PlatformEdge 1b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m
+ PlatformEdge 2a, length=200m, width=? (5m or 2.5m?), height=0.76m
+ PlatformEdge 2b, length=150m, width=? (somewhere between 0.5m and 5m), height=0.55m
Without an independent grouping element, but instead just references to one platform edge from

the other platform edges.

Also, in all these examples, the lower levels of the hierarchy can be skipped. There are also multiple ways to assign <linearLocation>s: either all elements have them (and platforms have one for each track), or only the lower levels have them, or something in between.

christian.rahmig wrote on Mon, 11 February 2019 15:29
we need to think about alternatives of how to distinguish between
platforms and platform edges.

Alternative 1:
Introduce a boolean flag in <platform>: @isPlatformEdge

Alternative 2:
Re-Introduce the functional infrastructure element <platformEdge>
If we need or want a strict hierarchy, considering platforms and platform edges as separate entities, then I think it would make the most sense to have them as separate elements. But do we really need to? I would rather keep using one type and leave the hierarchy up to the writing system. One thing we could do to make life a bit easier for the reading systems is to introduce one semantic constraint: If attributes describing a parent <platform> such as length and height are given, they must include other <platform>s that @belongsToParent.

I see that, apart from <ownsPlatformEdge>, there is only one other occurrence of "platformEdge" in the XSD, and that is <stoppingPlace>@platformEdgeRef. Since platformEdge does no longer exist, it is probably better to rename this to @platformRef. The documentation can still specify that the reference can be to a platform edge, in the form of a <platform> element.