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Subject: Accuracy for positions required?

Posted by [Dr. Volker Knollmann](#) on Wed, 19 Nov 2008 17:28:46 GMT

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Dear all,

I received a question from a (future?) RailML user. He asked to add accuracy information to Balise locations. In this special case it is needed to derive the train location uncertainty from the stored balise position.

I suggest to see this in a wider context. What if we offer the possibility to store accuracy information for ALL positions?

We could introduce an accuracy-attribute in the attribute groups "aRelPosition" and "aAbsPosition". Via "tPlacedElement" this would be inherited to all elements that need positioning. This would be a general solution.

The attribute could be called something like "posAccuracy" and would contain the width of the uncertainty interval for the position value. A posAccuracy of 1 m for example would mean "+/- 0.5 m". Implicitly, we should assume that the "pos" value is always located in the middle of the "posAccuracy" range. Additionally we could implicitly assume that the posAccuracy refers e. g. to the 90%-limits of a gaussian normal distribution.

In other words: multiple measurements of the position would end up in 90% of all measured values within a range of "pos" +/- "posAccuracy"/2.

What do you think?

Best regards,  
Volker Knollmann

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