
Subject: Re: Globally Unique IDs (GUIDs)
Posted by [thomas.kauer](#) on Fri, 28 May 2004 10:22:31 GMT
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Hello,

at first sight I would agree with you.

But this needs an global definition of the "real" object. When is it still the same object and when does it change it's ID!?

For example in an application for the needs of track maintenance you will probably change the internal ID of an object (track, switch, ...) when after a rework the object has moved a little bit. For them they got 2 objects at 2 different positions and 2 different times. For most other users this is still the same object with just changed attributes.

And if you agree on when to change an ID - what could build the ID? What is the manufacturer of a track or switch and what the serial number of the asset? What is to use when you are designing new tracks that are only used for studies and never will be constructed? What else should be used?

Most systems I know use a combination of different attributes like "station name" and "switch name" to identify the objects they exchange with other systems (most of them also use an arbitrary ID that is only valid within the application or DB system). To integrate external data they have to apply these attributes to match the elements with those they already have - if existing.

So for the integration of the data from a RailML data file the use of attributes will be the choice for most of the systems. The ID's defined in RailML can be used to get the connected/referenced data like visualisation of an element within one RailML data set - they are consistent and unique and easy to use.

If you need to have different states of the same object in your system you have to add information to make this difference. For that you might need a complex status attribute.

To make the match after a changing in the key attributes set is more complicated - you need information about the former values of the attributes.

For me this subject is not solved in a global way yet and needs more discussion.

Best regards,
Thomas Kauer

Wolfgang Keller wrote:

- > Hello,
 - > sorry for bursting into the group just like this, but...
 - > Am Mon, 05 Apr 2004 11:00:01 +0200 schrieb Nils Poldrack:
 - >> Joachim Buechse from Ergon (CH) suggested on 2003-09-25 to use globally
 - >> unique
 - >> identifier for railML elements. He suggested to use the IP of the
 - >> creating computer concatenated with the milliseconds (e.g. since
 - >> 1970-01-01).
 - > Such a GUID schema would not fulfil one essential requirement: It would not
 - > allow to exchange data edited by different people on different computers at
 - > different moments with different software in a consistent way (therefore,
 - > such a GUID would be essentially useless).
 - > To achieve this, a GUID must be defined in such a way that the same
 - > physical "real world" object gets always the same GUID, no matter who edits
 - > the set of data representing the object in the computer system, when and
 - > with what software.
 - > In other standardisation groups working on data models of any kind where
 - > the data represents physical objects in the "real world" this requirement
 - > is usually respected.
 - > In maintenance software, for example, maintenance assets are identified
 - > within the computer system by the ID of the manufacturer of the asset plus
 - > the serial number of the asset as it is indicated on the identification
 - > plate.
 - > Best regards,
 - > Wolfgang Keller
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