
Subject: Re: Some problems with/questions about the infrastructure schema...

Posted by [Volker Knollmann](#) on Wed, 16 Jun 2004 15:49:26 GMT

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Wolfgang Keller wrote:

- > 1. Generally I propose that identifiers such as "type", "length", "value"
- > etc. should not be used at all, as they risk to collide with typical
- > reserved keywords.

Do you speak of reserved keywords within your database-dialect (SQL, etc) or your programming language? If so, it should always be possible to escape such keywords with single / double /triple quotes, backslash and other means. And regarding SQL: I don't think that a statement like

```
SELECT * from switches WHERE type="ordinarySwitchRight"
```

causes problems, does it?

- > It would be best imho if all identifiers were unique
- > within the entire schema in order to avoid confusion.

Hmmm, I would prefer the opposite syntax. For example, I would appreciate a common attribute "elemID" for all elements. Right now, we have "ID", "elemID", "ocplID", "connectionID", etc. "elemID" is used in many children of <trackData>, why not everywhere?

- > 2. Why are the <x>ChangeType definitions not based on the corresponding
- > <x>Type definitions (by reference, inclusion of a subelement or whatever
- > method)?

IMHO, this is a good suggestion for the sake of consistency. A xChangeType could be a combination of xType and something like "positionType", which encapsulates the typical attribute pos, absPos, dir and (occasionally) a track- and line-ID.

- > 3. The part of the schema about connections appears to be especially
- > "unstable" at the moment.

I plead "not guilty", your honor! ;)

BTW: I spent the last days implementing a fictional example track in RailML and I came across a bunch of missing elements, attributes and structures. I will create a summary of my "problems" and post it to this newsgroup in the next days.

- > 4. Wouldn't it be useful/would it be impossible to include such
- > considerations as technology-independence in the design of the schema, so
- > that the logical structuring can also be used for plain-ASCII data exchange

- > (such as datagrams sent over narrow-bandwidth wireless connections etc.),
- > for relational databases and maybe also other implementations...?

What exactly do you mean? A formal description like ER-Diagrams or similar?

Imho XML is the best choice for our needs:

- * structured and hierachical
- * extensible without compatibility problems
- * human readable
- * can be edited with a simple editor
- * supports encodings and complex character sets, but...
- * ... can be used with 7-bit ASCII as well (works ALWAYS!)
- * no bothering about linefeed, newlines and special characters when exchanging data between different platforms
- * can be formaly validated used DTDs or XSDs
- * easy to parse, libraries available for every language and platform
- * not proprietary at all

I agree, that due to a certain redundancy within the file (opening / closing tags, ...) the file size is not optimal.

But for the transmission over bandwidth- or volume-critical connections, you can apply \$FAVOURITE_COMPRESSION_UTILILITY to your data and you should get satisfying results...

Best regards,
Volker Knollmann
