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Subject: Concerns about RailML interoperability

Posted by [tuomas.tiihonen](#) on Fri, 06 May 2011 09:56:00 GMT

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Hi,

I am concerned. My concern is the semantic interoperability of the RailML standard now and in the future.

RailML syntax is defined in schema files, so it is easy for any member of community or outside of community to make implementation that can accept RailML as long as it passes XML validation. Problem comes from semantics. As I have understood, the semantics are documented only in wiki pages. Wiki pages are not complete and creates this huge risk for fragmenting the railML to different branches, where each branch is one-to-one agreement between users of the railML.

How is this handled currently? Does every implementation using railML have separate agreements of semantics? Are there n-amount of undocumented semantics?

Does the community recognize this problem and are there any actions ongoing to make the semantics complete? I have now only power of guessing in most parts of railML semantics.

I know that there exists standards where this problem has risen too late. So late that there can be tens or hundreds of different implementations of valid standard-using-software, but that can only inter operate out-of-the-box with 1-3 other implementations.

This is huge stumbling stone and must be overcome to keep railML usable. Overcoming comes more difficult day by day.

With Kindest Regards,  
Tuomas Tiihonen

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----- posted via PHP Headliner -----

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Subject: Re: Concerns about RailML interoperability

Posted by [Susanne Wunsch railML](#) on Tue, 06 Nov 2012 09:14:40 GMT

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Hello Tuomas and others

I'm sorry for the late answering of this posting. In that time I was not aware of our quite good documentation in the wiki pages.

tuomas.tiihonen@mitron.com (Tuomas Tiihonen) writes:

- > I am concerned. My concern is the semantic interoperability of the RailML
- > standard now and in the future.

I know that other users share this concern with you. Some want a `_stable_` railML. But if new customer wishes arise they want a `_flexible_` railML. ;-)

- > RailML syntax is defined in schema files, so it is easy for any member of
- > community or outside of community to make implementation that can accept
- > RailML as long as it passes XML validation. Problem comes from semantics.
- > As I have understood, the semantics are documented only in wiki pages.
- > Wiki pages are not complete and creates this huge risk for fragmenting the
- > railML to different branches, where each branch is one-to-one agreement
- > between users of the railML.

We try to develop XML Schemas that don't fragment into different branches. The sub-schema coordinators try hard not to define further redundancies in order to keep the schemas specific to their component. We just inherited some redundancies and sub-schema-specific definitions of the same topic from the very first railML version 1.0. But with the next major release of railML (3.0) we will get rid of them.

Anyway there will be one-to-one agreements on how to use railML in a specific use case. Each software tool has a special focus on data. Only data that can be handled in the software tool may be exported with railML. On the other side a software tool will only import railML components it may handle, others will be dropped or kept unused.

- > How is this handled currently? Does every implementation using railML have
- > separate agreements of semantics? Are there n-amount of undocumented
- > semantics?

We hope that the semantics are most clearly documented in the wiki pages as possible. If not, please enhance the wiki pages with your experiences. We know that there are some wiki pages (especially regarding the infrastructure sub-schema) that are not satisfactory filled with semantic content.

The one-to-one agreements should mostly restrict the railML components to a subset that is needed for the exchange. Additional extensions that are not of common interest for railML may also be defined in extension XML schemas.

But nevertheless the semantics should be clearly stated at the railML

documentation (wiki).

- > Does the community recognize this problem and are there any actions
- > ongoing to make the semantics complete? I have now only power of guessing
- > in most parts of railML semantics.

Please, don't guess. Ask in the forum for each topic! (We try to answer more quick!)

What else than the wiki documentation, the public forum and the XML Schemas would you suggest for overcoming the problem of clear defined semantics?

Thanks for sharing your concerns and experiences with us. I hope we will manage this problem step by step in a more satisfying way.

Kind regards...  
Susanne

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Susanne Wunsch  
Schema Coordinator: railML.common

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