



Kanishk Chaturvedi
16.12.2014

Minutes of Meeting CityGML 3.0 WP06 Fourth Teleconference

Participants

- Thomas H. Kolbe, TU Munich
- Gilles Gesquière, LIRIS
- Steve Smyth, OpenSitePlan
- Volker Kraut, M.O.S.S.
- Tatjana Kutzner, TU Munich
- Kanishk Chaturvedi, TU Munich
- Thomas Machl, TU Munich

The following statements refer to the presentation slides shown during the teleconference and which are also attached as an appendix:

Presentations

The discussion was related to reviewing, 'How does the versioning work in other related standards / tools?'.

IFC

- Gilles presented the state of the art on Versioning system for IFC.
- IFC does not own a versioning system, but extensions have been proposed for the same in several papers, which were discussed in the meeting.

GIT/SVN

- Steve presented on how the versioning works in content management systems and version control systems. The approaches were discussed related to SVN/CVS and Git/Mercurial.
- SVN has exactly 1 node with in-degree 0 (tail) and at least 1 node with out-degree 0 (head).
- Git has same expressiveness and editability as SVN, but it is easier to create complexities.
- Then the suggestions were put forward for versioning in WP06 by having at-least 1 node with in-degree 0 and at least 1 node with out-degree 0 and should be reachable from each of the nodes of in-degree 0.

AAA/INSPIRE

- Tatjana presented on the versioning approaches in AAA and INSPIRE.

- AAA allows for managing multiple versions by means of the AAA Versionierungsschema (engl. AAA versioning schema). However, it is not clear, how this versioning schema is connected to the AAA Fachschema (engl. AAA technical schema), so that versioning can be applied to spatial objects. It was suggested by the WP members to ask Clemens Portele.
- The INSPIRE document D2.5 provides patterns for versioning, however, it currently supports only the last published version of spatial objects. Historic versioning doesn't seem to be supported yet. It was suggested by the WP members to ask Clemens Portele, if he has more information on this or knows whom to ask.

ESRI ArcSDE Geodatabases and Oracle Workspace Manager

- Kanishk presented on ESRI approach for managing versions in ArcSDE Geodatabases and Oracle approach for managing versions in Oracle databases using Oracle Workspace Manager.
- Both vendors have similar mechanisms for maintaining different versions in the database. In ESRI "reconcile" is similar to "refresh" in Oracle.
- Both have the support for managing history, performing "what-if" analysis and conflict detection and resolution.
- However, Oracle supports a bi-temporal model, while ESRI supports a mono-temporal model.
- Also, there are no interoperable exchange formats related to them which would allow exchanging all versions of a repository as one dataset and furthermore, which would allow the same dataset to be used by both Oracle and ESRI.

Next steps

- Tatjana will get in touch with Clemens Portele to clarify the open questions regarding AAA and INSPIRE mentioned above.
- Tatjana will ask Clemens Portele and Simon Cox for their opinion on our draft versioning concept, in particular the UML schema and the example instance data.
- Kanishk will prepare a draft of the document structure for the paper the WP members intend to write on the versioning concept. The document structure will be discussed at the next teleconference and writers for the individual sections will be appointed.
- At the next meeting members of the WP will be appointed for preparing presentations on use cases which require the support of dynamics within CityGML and on other approaches for dynamic attributes. The presentations on these topics will then be scheduled for the following teleconference(s).

Other information

- The paper "Change Detection in CityGML Documents" by Richard Redweik and Thomas Becker, published in the 3D GeoInfo 2014 proceedings (<http://www.springer.com/978-3-319-12180-2>), mentions versioning, update, and historization in CityGML documents.

Next meeting

- The next teleconference will take place on January 20, 2015 (5pm-7pm CET).