

Memorandum of Understanding

between

buildingSMART International (bSI)

and

The Open Geospatial Consortium (OGC)

concerning alignment functionality

This Memorandum of Understanding (the Memorandum) is made on 27 March 2014, by and between:

buildingSMART International, hereinafter referred to as bSI, and
The Open Geospatial Consortium, hereinafter referred to as OGC.

WHEREAS bSI and OGC desire to enter into an agreement in which bSI and OGC will work together on the implementation of Alignment functionality in IFC and GML.

This MOU is entered into in the context of the general cooperation arrangements, as set out in the MOU entered dated 1 March 2013 between buildingSMART International and the Open Geospatial Consortium. In accordance with **Exhibit A. Scope of buildingSMART International/OGC MOU**, the 'IFC alignment model project' has been identified as a very first prioritised group of co-operative activities in the use of building and infrastructure information in the context of 3D urban models and geospatial applications.

It is foreseen that the subject 'Data Dictionary of object types' will be the next activity to be covered in a specific MOU.

Background

InfraGML

Within OGC, the LandInfraSWG decided that to be able to support LandXML as an interoperability standard, it would be necessary to fix a number of problems that had been identified. But it felt that for a number of reasons this would be difficult to do. The LandInfraSWG therefore proposed developing a new standard, dubbed InfraGML, that would encompass a subset of LandXML functionality, but would be supported by the OGC and would incorporate GML. It would also be defined by a UML conceptual model.

IFC Alignment Model

For enabling data exchange and open data access in the context of planning, realisation and maintenance of road and rail infrastructure, a comprehensive neutral data model capable to present both semantic and geometric aspects is necessary.

One of the most crucial parts of infrastructure projects is the alignment. The construction of roads, tunnels, rail tracks and eventually bridges depends solely on the alignment.

The functionality of Alignment is not available in the current IFC-standard (the ISO standard for BIM data). The steering committee of the Infrastructure Room decided in 2013 that Alignment is needed in the next version of IFC and gave it high priority. A project plan has been prepared and its execution, supported by funding from Rijkswaterstaat (Netherlands) and Trafikverket (Sweden), will be delivered in 2014.

Alignment project understanding

A general MOU has been signed by OGC and bSI in 2013, in order to co-operate on building and infrastructure information standards.

Concerning the alignment project, it is mutually agreed upon and understood by and among Partners of this Memorandum that:

- The alignment part of InfraGML will overlap the announced IFC Alignment development work of buildingSMART International (bSI).
- The full facility life cycle list of use cases to be supported by InfraGML will be broader than the IFC Alignment focus on design, construction, and handover.
- OGC and buildingSMART International shall work together on the use case definitions and conceptual model so that the two resultant implementations (IFC and GML) shall be harmonised.
- The resultant IFC version shall be consistent with the buildingSMART International standards baseline and the GML version shall be consistent with the OGC standards baseline.
- This shall enable interoperability within each respective baseline. The shared conceptual model shall allow cross-baseline interoperability.

List of actions

1. In order to execute the strong collaboration in developing the InfraGML and the IFC Alignment use cases and conceptual schemas,


- a representative of the OGC DWG/SWG 'Land and Infrastructure' is invited to participate in the IFC Alignment project, and
- a representative of the bSI IFC Alignment project is invited to join the OGC DWG/SWG on 'Land and Infrastructure'.

2. In accordance with the subject areas for InfraGML to be defined, it has to be clarified how the alignment project will be integrated within CityGML, InfraGML and the IFC Alignment model.

3. The UML conceptual model needs to be issued as soon as possible in accordance with the IFC Alignment project programme.

4. Further to the definition of use cases by InfraGML, a first list of use cases could be proposed for the buildingSMART International IFC Alignment experts group.

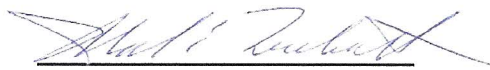
This Memorandum is signed on behalf of bSI by Christopher Groome, Company Secretary


Date: 7 May 2014

and countersigned by Christophe Castaing, Chair of the Steering Committee of bSI Infrastructure Room


Date: 20 May 2014

This Memorandum is signed on behalf of OGC by Mark Reichardt, OGC President and CEO


Date: 27 March 2014