

15.7.2014

Volker Coors (volker.coors@hft-stuttgart.de), Volker Kraut (vkraut@moss.de)

**Requirements for the CityGML LoD concept from the perspective of energy analysis on regional scale based on experiences in project SimStadt**

**Project partners:**

* HFT Stuttgart – Institute für Bauphysik, erneuerbare Energietechnik, Geoinformatik und Softwareentwicklung.
* M.O.S.S. Computer Graphik Systeme
* GEF Ingenieur AG

**Scope of the project:**To test and establish CityGML as an exchange file format for energy simulations. We are working with simulations for heating demand, heat distribution networks and solar potential analysis. For more details seehttp://simstadt.eu/de/index.html

**CityGML – Usage and deficits concerning the LoD-concept**

|  |  |  |  |
| --- | --- | --- | --- |
| **LOD** | **Usage** | **Deficits** | **Comments** |
| 0 | - |  |  |
| 1 | For simple and large scale simulations | No boundary surfaces available. Therefore attributes can´t be attached to facades and also the orientation of the facade is harder to determine. |  |
| 2 | For most of the simulations | A simple indoor model would be helpful to separate buildings in volumes of different usage.  Thereby BuildingFurniture & IntBuildingInstallation wouldn´t be prohibited.  Storeys would be helpful | Apart from that well suited. |
| 3 | - | A simple indoor model would be helpful to separate buildings in volumes of different usage. | For our purpose it is sufficient that openings are only available in LoD3 |
| 4 | For detailed simulations of individual buildings | Relationship to IFC-models not clearly defined. | At the moment IFC models are used. |