

# BIM and 3D Property Visualisation

Martin Andrée, Jesper Paasch, Jenny Paulsson and Stefan Seipel (Sweden)

**Key words:** Cadastre; Digital cadastre; e-Governance; Geoinformation/GI; Land management; Standards; BIM; 3D

## SUMMARY

The concept of 3D property has only existed a short period of time in Sweden, being introduced in 2004 and expanded in 2009 by the addition of condominium (apartment) ownership. It is therefore a rather new form of land management, and the demand for 3D property formation has not been as high as initially expected. There is however an increased interest in 3D property and ownership apartments today, also as being part of the nation's geospatial infrastructure together with related 3D information for e.g. buildings, utility networks and other features. An effective management of 3D property is depending on, among other things, visualization, representation and storage of 3D real property data, such as legal boundaries and real property rights. There are at present a number of ongoing 3D development and research projects focusing on visualization and standardization of 3D cadastral boundaries. They are part of the national "Smart Built Environment" development and research programme, which includes the use of BIM in the (future) 3D property formation process with focus on visualization of 3D real property and condominiums, and specification of requirements and evaluation of 3D digital real property information created and managed in the processes.

This paper presents the preliminary results of the working group on visualization of 3D boundaries in the project "Smart planning, construction and management processes throughout the life cycle". The aim is to test the results produced in the project "Information for planning, real property formation and building permission", working group "BIM for 3D property formation." The purpose of this working group is to set the requirements for and evaluate the test bed for 3D property information.. The focus is on visualization of 3D property and ownership apartments. The proposed model for digitization and visualization of 3D property formation will be tested in a test bed environment. A pilot case from the Stockholm area is then used in the test bed to see how it could work in

practice.

The expected outcome is recommendations for the exchange of documentation and other digital information in 3D processes, the visualization of legal boundaries for stakeholders, registration of legal 3D objects in the Swedish national real property register and how to communicate 3D models to right holders/stakeholders for 3D property and condominiums and the property market, as well as suggestions for a homogeneous, effective and digital flow of 3D information to be used by actors and other stakeholders in the property formation, planning and building processes.

---

BIM and 3D Property Visualisation (9367)

Martin Andréé, Jesper Paasch, Jenny Paulsson and Stefan Seipel (Sweden)

FIG Congress 2018

Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies  
Istanbul, Turkey, May 6–11, 2018