

# Country Wide 3D City Model of Denmark

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## **SUMMARY**

Detailed, three dimensional city models are one of the mapping products which have seen widespread use in recent years. Such 3D city models are used for urban planning, the telecom sector, environmental analysis, transportation, risk management, and visualization of proposed new developments. Emerging applications include tourism, real estate and the game industry. Various mapping techniques have been utilized for the creation of these city models, e.g. simple adding of heights to building polygons, photogrammetry, laser scanning (LIDAR) etc., or a combination of these techniques. Most projects have until now covered parts of a city or in some cases a complete coverage of the urban area. An ambitious project in Denmark will in 2008 consist of a country wide 3D building model including app. 4,200,000 buildings.

The 3D model will be based on a country wide DEM produced in 2007 from LIDAR data, digital orthophotos captured in 2008 and oblique facade images of all larger cities in Denmark captured in 2006, 2007 and 2008. The level of detail (LOD) will vary depending on area type, e.g. urban center, outskirts, rural area etc. Further to this images will be textured on the façades for all larger cities in Denmark. The presentation will describe the 3D urban model, application areas, working with the model, database connections, WMS, visualizations and distribution over the Internet, interactive communication with the model as well as future developments.

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