The impact of 3D virtual landscape reconstructions on spatial planning and decision-making processes

3D geovisualizations are increasingly used to communicate information on spatial planning and to support the decision making about urban and landscape development. Future scenarios of the cityscape or the landscape are translated into 3D virtual representations using Geographic Information Systems (GIS) and Computer Graphics technology. These 3D geovisualizations are shown to policy makers and stakeholders to improve their understanding of spatial planning and to the general public to provoke its support. Similar to future scenarios, historic scenarios can be represented by using 3D geovisualizations, also referred to as 3D virtual cityscape or landscape reconstructions. This project focuses on landscape reconstructions.

More frequently, the historic situation is included in the spatial planning process. 3D virtual landscape reconstructions are used now, either to show how plans will result into the re-make of original landscape features from some time ago, or to increase the public awareness that the changes these plans will bring about, fit into a continuous series of landscape changes. Little is known about the actual impact of these virtual landscape reconstructions on the decision making process.

Research Questions: What is the impact of 3D virtual landscape reconstructions on the spatial planning decision-making process? What are the objectives of using these visualizations, and how did decision makers and the general public really use them? Did the availability of 3D virtual landscape reconstructions affect the procedure of objection against spatial planning? Did the availability of 3D virtual landscape reconstructions positively influence the internal and external communication that is involved in objection procedures? Did the number, kind and content of the objections change, compared to planning procedures that did not rely on 3D virtual landscape reconstructions? What are the costs of 3D virtual landscape reconstructions?

Supervisors: Arnoud de Boer (arnouddeboer@cs.uu.nl) & Hans Voorbij (hansv@cs.uu.nl).