

CHALLENGES IN 3D GEO INFORMATION AND PARTICIPATORY DESIGN AND DECISION

Jan B.F. van Erp, Anita H.M. Cremers, Judith M. Kessens

TNO Human Factors, Kampweg 5, 3769ZG Soesterberg, The Netherlands

Commission IV, WG IV/8

ABSTRACT:

The scope of 3D geo information applications is broadening to include for instance crises management and training. These new applications are no longer restricted to expert users, but aimed at involving a multitude of (non-professional) stakeholders in a participatory design and decision process. This introduces new challenges for the user-system interaction that go beyond 3D visualization. Based on two use-scenarios in urban planning and crisis management, we identify important user-system research areas: intuitive data access and manipulation, multi-stakeholder participatory design and decision, and multisensory experience. We argue that future 3D geo information applications can benefit from the spin-in of Human Factors Engineering technology from domains such as medical visualization and serious gaming. We plead for starting a research community around user-system interaction for future 3D geo information applications that sets the research agenda and ensures that new applications benefit from advanced user-system interaction technologies.

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