3D Webpages

PETER PAULIS

Univerzita Komenského, FMFI

We present an overview of the current technologies in area of 3D web and propose a new 3D webpage model. This model is based on declarative geometry, which is integrated into the DOM tree of a webpage. Our model ties up to the XHTML, CSS and JavaScript model, trying to reuse as much logic from this concept as possible. We hope that this approach will enable an easy switch-over from the current 2D web model to 3D. A key aspect in our approach, is the introduction of 'websurfaces'. These enable simple integration of today's webpages into 3D. So our approach doesn't separate 3D from 2D and enables backward compatibility. Any existing webpage can be extended to 3D without no needs of changing its original code. Our model not only separates raw geometry, '3D style', scripting and interaction, but also provides a way for 'effect' separation, with the use of 'systems'. We look at lightning, shadows, physics, even the camera model as abstract elements, separated from the scene, but yet influencing it.