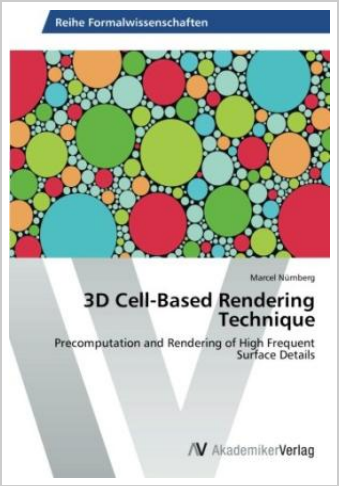

DOWNLOAD

3D Cell-Based Rendering Technique

By Nürnberg, Marcel

Condition: New. Publisher/Verlag: AV Akademikerverlag | Precomputation and Rendering of High Frequent Surface Details | Today's real-time applications, such as computer games or virtual environments, need to display more and more geometrically complex surfaces. The appearance of such surfaces are achieved by local parallax, correct occlusions, convincing silhouettes and even by sophisticated effects such as self-reflection, refraction, translucency, self-shadowing and caustics to name a few. Hence simple texturing mapping is insufficient to produce such high geometric complexity. This thesis proposes a cell-based approach to model and render repetitive fine scaled details with a high visual quality. The main idea of the precomputation is to decompose the object into a low frequent geometry (the general shape of the object) and high frequent surface details. The high frequent surface details are represented by so-called cells tiled all over the object space. The precomputed cell-based object representation is displayed by a ray tracer providing correct parallax, occlusions and silhouettes. This thesis proves that sophisticated effects such as specular self-reflection and refraction can easily be rendered with the cell-based approach. | Format: Paperback | Language/Sprache: english | 104 pp.

READ ONLINE
[2 MB]