EEI-KOLLOQUIUM

Content Creation for Stereoscopic 3D and Beyond

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2010 was the year of breakthrough for 3D video. Stereoscopic 3D is established in cinema, on Blu-ray, TV, PCs, laptops, and mobile devices. Since technology for stereo 3D is mature and content creation is understood well enough, these developments are expected to be sustainable this time. Most current systems rely on classical approaches to 3D video, i.e. representation as stereo or multiview video, coding and transmission using simulcast, frame-compatible composition or MVC. More advanced "next generation" approaches exploit some kind of understanding of the 3D scene geometry such as depth or disparity, in order to extend functionality and increase efficiency. This includes for instance flexible adjustment of depth impression to viewing conditions and user preferences or support of autostereoscopic multiview displays. Also content creation for classical stereo 3D can greatly benefit from such 3D geometry aware processing. Naturally such advanced 3D video representation formats require advanced processing algorithms, e.g. to extract 3D geometry and to render virtual views. Such advanced 3D video representation and processing will be the focus of this talk.