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High Speed Video Capturing in the Area of Earthquake Research

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Wischgoll

Kolloquium am 10.06.2003

High Speed Video Capturing in the Area of Earthquake Research

Dr. Thomas Wischgoll

A new approach in the area of earthquake related research is to use optical sensors to capture the motion of objects inside a structure. During earthquakes shaking frequencies of 30 Hz can occur. According to the Nyquist theorem, high speed cameras that are capable of capturing at at least 60 frames per second are needed. Since usually more than one camera is used to capture the observed objects this results in an amount of data that easily exceeds the transfer rate of regular desktop computers. Instead, a server system mainly consisting of off the shelf components is used to cope with the high bandwidth needs of this application. This presentation will describe this system driving four Basler A301fc cameras running at 80 frames per second with a resolution of 658 by 494 monitoring typical objects appearing in a laboratory. In addition, an overview of the potential of optical sensor technology in the field of earthquake research and in particular risk assessment will be given.

Termin : Dienstag, 10.06.2003, 10.00 Uhr

Raum : Gebäude 36, Raum 232
