ICT08-011 - High-Resolution Three-Dimensional Imaging

Abstract

The project involves the design of novel image sensors to be used in high-precision three-dimensional cameras. It aims to revolutionize stereo image sensors and image processing and provide the scientific groundwork for future three-dimensional cameras for roboters, security applications and even three-dimensional TV. It draws on a new high-precision distance measuring method based on optical interference and a new 3D camera chip. For measuring, a laser source working with frequency-shifted feedback adapted to the chip is developed. The test chips are made in standard ASIC foundries in order to check the resolution and precision of the new approaches by way of experiments.

Keywords:
Range finding, optoelectronics, 3D-imaging, 3D-video, distance measurement

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Status: Completed (01.01.2009 - 30.06.2012)

Further links to the persons involved and to the project can be found under
https://wwtf.at/funding/programmes/ict/ICT08-011/