

Dallas Chapters of IEEE Computer Society and IEEE Signal Processing Society Present

Smart Camera Technology Trends

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**12:15pm, Friday, Feb 22, 2008
Conference Rooms S1&S2, TI South Campus**

A smart camera is a software-programmable camera in which raw video digitized from an image sensor is fully exposed to software for processing. In this presentation, we will discuss the features of programmable processors used in millions of smart cameras, particularly focusing on the capabilities of several TI programmable processors. We will also address the application-specific requirements of real-time image, video and vision processing in camera systems, emphasizing consumer electronics, automotive vision and video surveillance equipment. After reviewing requirements and trends, we'll focus on what's next for future smart camera systems, as well as related challenges for embedded vision research. The seminar will conclude with a discussion and real-time demonstration of a TMS320DM6437 evaluation board for rapid prototyping of new smart camera functions.

Dr. Bruce Flinchbaugh, TI Fellow, is director of the Video and Image Processing Laboratory in the DSP Solutions R&D Center, Dallas. Current activities target embedded vision systems, camera image processing, adoption of H.264 / AVC and China AVS video standards, and OpenGL ES graphics in cellular phones and other end equipment. Since 1982, Dr. Flinchbaugh and his R&D teams have enabled TI products for diverse systems, including the development of algorithms and DSP-based prototypes for autonomous video surveillance, digital video recording and digital cameras. He was principal investigator for the DARPA Image Understanding Research program at TI in the 1990's. He holds twenty patents for TI methods and has published or presented in over 75 technical forums including journals, industry magazines, conferences and universities.

Directions: Note TI's Forest Lane site has been given a new official entrance address at 12500 TI Boulevard and been renamed as TI's "South Campus." Head to the site's SouthEast (SE) entrance off 8505 Forest Lane (Richardson, TX) just west of Greenville Avenue. Preferred parking is at extreme SE corner of the building. Enter the public lobby at the building's SE corner and ask guard to direct you to the conference rooms S-1/S-2 (very near this entrance).