The Fourth IEEE International Workshop on Embedded Computer Vision

Saturday, June 28, 2008
Anchorage, Alaska
USA
http://ecvw08.inf.uth.gr/

in conjunction with IEEE CVPR 2008

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Recent years have witnessed a dramatic increase in the use of computer vision in embedded systems. Computer vision was successfully used, for example, in mission-critical systems such as the landing of the rovers on Mars, and in computer-aided surgery.

Computer vision is widely used also in industrial embedded systems, taking part in production and inspection processes. Cameras find their way into everyday appliances and mobile devices such as cell phones, PDAs, presentation appliances, and vehicles. Cameras themselves are becoming "smarter," gaining capabilities for processing the acquired images inside the camera. Furthermore, distributed smart camera systems, which integrate computer vision algorithms with embedded processing and computer networking techniques, are enabling major advances in areas such as surveillance and human identification.

Traditionally, different embedded computer vision domains, such as computer aided-surgery and surveillance were treated separately due to the different nature of the domains. However, these domains share many common problems related to their real-time, embedded-system characteristics.

The **Embedded Computer Vision Workshop (ECVW)** aims to bring together researchers working on computer vision problems that share embedded system characteristics. Particularly, the workshop will address the following questions:

-- What are the current research problems and the applications within the computer vision domain that are specific to embedded systems --- for example, algorithms for efficient utilization of embedded processing architectures for computer vision, and conversely, architectures and design methods for effectively supporting embedded computer vision systems?

-- What are the specific issues in the embedded systems domain that are relevant to computer vision (for example, meeting constraints on real-time performance, power consumption, and memory requirements in embedded computer vision systems)?

Research papers are solicited in, but not limited to, the following topics:

- Analysis of computer vision problems that are specific to embedded systems.
- Analysis of embedded systems problems that are specific to computer vision.
- Verification methods for mission-critical embedded computer vision systems.
- New trends in programmable digital signal processors and their computational models.
- Reconfigurable processors and computer vision.
- Embedded multiprocessor systems and design methods.
- Hybrid / distributed models and architectures for embedded computer vision.
- Applications of embedded computer vision.
- Development tools for computer vision applications aimed at embedded systems.

The proposed workshop is the fourth in its series. The first three Workshops on Embedded Computer Vision were held in conjunction with CVPR. These events were very successful. Selected papers from the first workshop are being published in a special issue of the EURASIP Journal on Embedded Systems, and we intend to pursue similar special journal issues for ECVW 2008.

Reviewing will be blind circular.

Important Dates

Paper submission: March 14, 2008
Notification to the authors: April 18, 2008
Receipt of camera ready copy: April 28, 2008
Workshop: June 28, 2008