Low Cost Virtual Reality: Expanding Horizons
Call for Papers
(A Special Track of ISVC'10)

Symposium:
The 6th annual International Symposium on Visual Computing
November 29 – December 1, 2010
Las Vegas, Nevada, USA
www.isvc.net

Submissions:
Due: **July 12, 2010**
Acceptance notification: **August 31, 2010**
Submission system: **www.isvc.net/openconf**

For consideration as part of this special track, authors must indicate their intent to be included in the track when the paper is submitted. The proceedings will be published by Springer-Verlag in the Lecture Notes in Computer Science (LNCS) series.

Scope of this special track:
Commercial, off-the-shelf (COTS) hardware is now making inexpensive but highly-usable virtual reality (VR) display systems within the reach of small research labs, regional colleges, and even secondary education institutions. In fact, a basic fishtank VR system is currently attainable with a slightly above-average home theater system with a stereoscopic TV, home theater PC, and a Wii controller. The increasing quality and accessibility of these technologies are opening up new opportunities for applications in education, entertainment, training, visual simulation, social networking, and scientific visualization. They are also creating new opportunities for students to learn about and experiment with these underlying technologies, while also allowing seasoned practitioners to widen the scope and impact of their research and development.

However promising these technologies are, the meaningful and widespread adoption of COTS-based VR systems is not without some real challenges. Key among those challenges is defining open and flexible standards for hardware and software configurations, content development workflows, and software tool interoperability. The goal is to make things standard enough to allow software libraries, content, applications, and system "recipes" to be shared effectively (so that everyone is not required to be a "VR hacker," spending months getting their system to work), but to also make things open enough to encourage the experimentation and development of new ideas that has brought the field to this exciting junction.

The purpose of this special track is to bring practitioners together, providing a cohesive venue to share their experiences, technologies, applications, and case studies, and to determine what the community can do to make these efforts more than a series of one-off experiments, but rather a sustained endeavor that enables the field of immersive interfaces to become established in new venues of education, research, and entertainment.

Possible Topics:
- Hardware
  - Display hardware: stereoscopic TVs, HMDs, projection-based devices
  - Input devices: tracking systems, multi-touch screens, wireless controllers
  - Computing & rendering: PCs and gaming consoles
- Software & Content
  - VR libraries
  - Integration to existing APIs (game engines, scene graphs, visualization libraries)
  - Stereoscopic video
- Applications
  - Education
  - Training
  - Visualization
  - Entertainment
  - Design
- Research
  - Comparative analysis with large-scale immersive systems (e.g. CAVEs, etc.)
  - Software methods for bridging with desktop tools
  - Role of affordable VR with high-end computational research
- Community-Building
  - Case studies of deployments
  - Communities established around specific technologies (GeoWall, WiiVR, etc.)

Names of organizers and contact information:

Bill Sherman – shermanw@indiana.edu
Eric Wernert – ewernert@indiana.edu

Special track committee:

Bill Sherman, Indiana University
Eric Wernert, Indiana University
Daniel Coming, Desert Research Institute
Alan Craig, University of Illinois/NCSA
Daniel Keefe, University of Minnesota
Oliver Kreylos, University of California at Davis
Patrick O'Leary, Idaho National Laboratory
Randy Smith, Oakland University
Simon Su, Princeton University
Jeffrey Will, Valparaiso University