Bauhaus University Weimar

Media Systems
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Core Competence

Virtual and Augmented Reality Environments, Real Time Rendering, Volume Graphics, Discrete Graphics, Multimedia, Tele-teaching

Charles Wüthrich, Bernd Fröhlich, Marc Stamminger (yes, there are 3 heads)

History

Computer Graphics activities have a long tradition in Weimar, dating back to one of the first GKS implementations of GKS for civil engineers. After the German reunification, a chair of Computer Graphics was installed, and integrated in the new Faculty of Media which was founded in 1996. Since 1998, a new program in Media Systems is taught which has significant elements of Computer Graphics and Interactive Systems. Media Systems was expanded from the original nucleus with the addition of professorships in the areas of Virtual Reality Systems, Computer Based Gaming, CSCW, and Psychophysiology.

Staff

3 Professors: Bernd Fröhlich, Marc Stamminger, Charles Wüthrich
2 Post Docs: Grit Thuermer, Wolfgand Kaiser.
10 Research assistants: Oliver Bimber, Florian Goersdorf, Jan Hochstrate, Tobias Hofmann, Matthias Hupfer, Christoph Lincke, Marko Meister, Jan Springer, Hendrik Wendler, Anne Zobel.

2 Technicians: Dietmar Bratke, Christiane Aszmann.
1 Secretary: Christin Glaeser

Rooms and Locations

The institute occupies one floor of one of the buildings of the Faculty of Media. This space includes dedicated labs for virtual reality, Teleteaching, and advanced game programming research.

Financing

The basic staff, the rooms and other infrastructure are financed by the Goverment of Thuringia. Additional staff is paid from projects funded by the German Federal Ministry of Education and Research.

Current Structure and Important Partners

The Media Systems research is currently organized in four work areas:

- Virtual Reality Systems (Bernd Fröhlich)
- Computer Based Gaming (Marc Stamminger),
- Volume Graphics and Multimedia Teleteaching (Charles Wüthrich).

The groups cooperate actively with the Fraunhofer institute IMK in St. Augustin and a variety of other partners in European and Government funded projects.

Current Research

The three research groups perform research in joint projects and in collaborations on the national and international level.

Virtual Reality Systems group (Bernd Fröhlich)

- New hardware concepts for virtual and augmented reality systems
- Input devices and interaction techniques for virtual environments
- Visualization in virtual environments
- Distributed virtual environments
- High quality real time rendering techniques
- Virtual environment system software development

Details can be found at
www.uni-weimar.de/medien/vr/index_en.html
Computer Based Gaming group (Marc Stamminger)

- Real time rendering
- Game technologies

Volume Graphics and Multimedia Tele-teaching group (Charles Wüthrich).

- Fast algorithms for volume visualization
- Discrete topology for volume data
- Multimedia content management systems
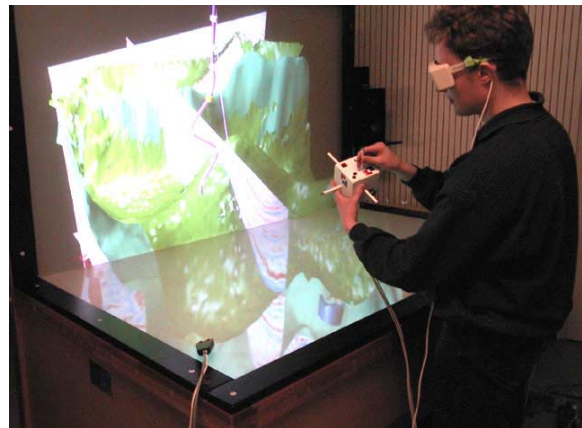- Web technologies

Important Recent Project Participations

The group is relatively new, and is starting only now to have the critical mass to be able to participate to important projects.

- "medienquadrat" (lead), German government funded project, www.uni-weimar.de/~m2
- "Virtual Showcase" (associated partner), EU-IST project, www.virtualshowcases.com
- "VRIB" (associated partner), German government funded project, www.vrib.de

Important Recent Industrial Partners

Partners in a our German and European projects are Barco (Belgium), 3D-Connexion (Germany), DaimlerChrysler (Germany), Imagination (Austria), and museums in Austria, Portugal, and Germany.

Future of the Lab

The Media Faculty at the Bauhaus University Weimar provides an environment, where computer graphics and media technology experts work shoulder to shoulder with media designers, media culture experts, and media economists. This combination of groups with different backgrounds clusters experts from all media relevant areas under the roof of a single department and provides a unique opportunity for multi-disciplinary projects. Goal of the Media systems group is to establish its presence in the international research market, and to actively seek new collaborations with partners in Europe and overseas.