

# ***Computer Graphics for Large-Scale Immersive Theaters***

## **Resources**

*Course # 25*



## Bibliography

This bibliography is provided for those wishing to research spherical display history, applications and related technologies. Following the alphabetical listing, sources are listed according to category. These sources span many disciplines, including planetaria, immersive projection technologies, motion simulation, psychophysics and cognitive science, military systems, virtual reality and computer graphics. We have also added a list of related web links, professional societies and vendors. We hope you find it useful.

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## TRADE ORGANIZATIONS

### **Giant Screen Theater Association**

The Giant Screen Theater Association (GSTA), is a network of organizations and individuals that are involved with or interested in the large-format screen industry. The GSTA was founded in 1977 by four educational institutions that housed 15 perforation/70mm projection equipment. The goal of the GSTA was to foster information exchange and to work collaboratively on film production. The organization is incorporated as a nonprofit group. The GSTA has grown steadily since 1977 and currently has 81 regular members, 60 developing members, and 204 associate members, representing 31 countries. In addition to the 15 perforation /70mm theaters, GSTA also welcomes 8 perforation/70mm and 10 perforation /70mm theaters as Theater Members. The organization is not directly involved in film production, although individual members and groups of members have produced large-format films.

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### **Large Format Cinema Association**

The Large Format Cinema Association is a non-profit corporation created to benefit the large format cinema community of film makers, distributors, equipment manufacturers, consultants, exhibitors and others. Membership and full participation are available to all, without reference to specific film or video format.

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## **International Planetarium Society**

The International Planetarium Society is the largest organization of professional planetarians in the world. It is made up of members from nearly every continent, and has nearly 20 smaller affiliate organizations. Publications include the “Planetarian” quarterly journal and directories of planetariums.

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Advanced Visualization Lab, Indiana University

<http://www.avl.iu.edu/>

American Widescreen Museum

<http://www.widescreenmuseum.com/widescreen/intro.htm>

Cybersphere Spherical Projection System

<http://www.ndirect.co.uk/~vr-systems/sphere1.htm>

Fulldome Video Discussion Group moderated by Ryan Wyatt

<http://groups.yahoo.com/group/fulldome>

GRASP Lab Omnidirectional Vision Home Page

<http://www.cis.upenn.edu/~kostas/omni.html>

Immersive Image Acquisition

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<http://www.fh-furtwangen.de/~dersch/>

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<http://www.iqtvra.org/>

Immersive Projection Technology Workshop

<http://www.vrac.iastate.edu/ipt98/>

<http://www.vrac.iastate.edu/ipt2000/>

<http://vr.iao.fhg.de/ipt-egve/>

Immersive Projection Displays

[http://www.isdale.com/jerry/VR/IPD\\_Links.html#Events](http://www.isdale.com/jerry/VR/IPD_Links.html#Events)

Iowa State U. Virtual Reality Applications Center (VRAC)

<http://www.vrac.iastate.edu/>

National Center for Supercomputing Applications (NCSA)

<http://www.ncsa.uiuc.edu/>

National Tele-immersion Initiative - NTII

<http://www.advanced.org/tele-immersion/introduction.html>

UNC sites with numerous technical papers on edge-blending and projector-based graphics

<http://www.cs.unc.edu/Research/stc/publications.htm>

<http://www.cs.unc.edu/~raskar/Projector/>

Princeton University Immersive Interactive System

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Ryan Wyatt's discussion of fulldome standards

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Spherical Rendering References, Tools, and Techniques

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University of Illinois - Chicago (UIC) EVL - Electronic Visualization Laboratory

<http://www.evl.uic.edu/EVL>

University of New Mexico – Arts and Technology Center student programs in production for digital dome theaters

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Tel: 512 894 0562  
<http://www.flogiston.com>

Flodome and Flostation provide single user rear projected dome immersive displays.

Goto Optical Manufacturing Co.  
4-16 Yazaki-cho, Fuchu City,  
Tokyo 183-8530, Japan  
Tel: 81-423-62-5311  
<http://www.goto.co.jp/product/virtuarium-e.html>  
<http://www.goto.co.jp/index-e.html>

Manufacturers the Virtuarium, a full color real time fulldome projector system for realtime computer generated imagery.

Immersion Studios  
Exhibition Place, Music Building  
285 Manitoba Drive, Toronto, Ontario  
Canada M6K 3C3  
Phone: (416) 260-7711  
Fax: (416) 260-7495  
<http://www.imm-studios.com>  
Immersion reality theatres – complete digital interactive cinemas.

Immersive Media Company  
2112 SE Clinton St.  
Portland, OR 97202 USA  
Tel: 503.231.2656  
Fax: 503.231.2655  
E-mail: [admin@immersivemedia.com](mailto:admin@immersivemedia.com)  
<http://www.immersivemedia.com/menu.html>  
Manufactures 11-head dodecahedral spherical video camera.

MetaVR, Inc.  
37 Elm Street  
Brookline, MA 02445-6813 USA  
Tel: US 617-739-2667  
Fax: US 617-249-0151  
<http://www.metavr.com>  
Rack mounted PC-based image generators with hardware synchronization of multiple IGs.

MultiGen-Paradigm, Inc  
50 South Winchester Blvd., Suite 500  
San Jose, CA 95128 USA  
Tel: (408) 261-4100  
Fax: (408) 261-4103

<http://www.multigen-paradigm.com/>

Vega realtime authoring software with nonlinear distortion correction for curved-screen immersive displays including head tracking.

Panoram Technologies, Inc.  
10951 Pendleton St.  
Sun Valley, CA 91352 USA  
Tel: +1 (818) 504-0714  
Fax: +1 (818) 504-0636

<http://www.panoramtech.com>

Edge blending hardware, curved, flat and rear projected wall immersive displays.

SEOS Displays Ltd.  
Edward Way, Burgess Hill,  
West Sussex, RH15 9UE, U.K.  
Tel: +44 (0) 1444 870 888  
Fax: +44 (0) 1444 870 777

<http://www.seos.com>

Worlds leading supplier of visual display systems to simulation industry.

Silicon Graphics  
1600 Amphitheatre Pkwy.  
Mountain View, CA 94043  
Tel: +1 (800) 800-SGI1 (7441)

<http://www.sgi.com/features/2001/apr/planetariums/>

Offers realtime image generators and planetarium solutions.

Sky-Skan, Inc.  
51 Lake Street  
Nashua, New Hampshire 03060 USA  
Tel: +1 603 880 8500  
Fax: +1 603 882 6522  
USA Toll Free: 1-800-880-8500

[office@skyskan.com](mailto:office@skyskan.com)

[www.skyskan.com](http://www.skyskan.com)

Manufacturers and integrators of dome video hardware, software and planetarium systems.

Spitz Inc  
U.S. Route 1  
Chadds Ford, PA 19317  
Tel: +1 (610) 459-5200  
Fax: +1 (610) 459-3830

<http://www.spitzinc.com/>

Turn-key immersive theatres, fulldome productions, and advanced dome screens.

Elumenati, LLC  
27 Maple Place  
Minneapolis, MN 55401  
Tel: +1 (612) 617-9721  
[info@elumenati.com](mailto:info@elumenati.com)  
[www.elumenati.com](http://www.elumenati.com)  
Immersive projection solutions.

Trimension Systems, LTD  
Whittle House, Marchants Way  
Burgess Hill, West Sussex  
RH15 8QY  
Tel: +44 (0) 1444 480130  
Fax: +44 (0) 1444 250777  
<http://www.trimension-inc.com>  
Numerous immersive projection and stereoscopic system products. SGI partner for Reality Centers.

Carl Zeiss Jena GmbH  
Planetarium Division  
Carl-Zeiss-Promenade 10  
07745 Jena  
Tel: (0049) 3641 642283  
Fax: (0049) 3641 643023  
[planetarium@zeiss.de](mailto:planetarium@zeiss.de)  
[http://www.zeiss.de/de/planetarium/home\\_e.nsf/](http://www.zeiss.de/de/planetarium/home_e.nsf/)  
Manufacturer of planetarium instruments and dome video systems.