

Access Grid Script

The Access Grid is an Internet-based video conferencing system. It is different from point-to-point video conferencing in that it provides for presentation of multiple simultaneous video and audio streams from multiple sites. We are producing three video streams from this room using the two audience cameras mounted under the screen and the presenter camera mounted in the back of the room. Access Grid rooms such as this one use a large screen to show multiple video views as well as presentation media such as PowerPoint slides. The audio system is bi-directional, like a telephone, and uses microphones mounted on the tables.

The Access Grid is organized into a series of virtual rooms in which participants can meet to exchange audio and video. Rooms are allocated in a similar fashion to rooms at a conference center via an on-line scheduling system. There are over 200 registered Access Grid nodes world-wide, with many more appearing. The software is a free download and can scale across a wide range of computer systems from a multiple computer cluster with several cameras and microphones, like we have in this room, down to a simple laptop with a USB camera and a headset.

We use the Access Grid in the Envision Center to connect to remote events, meet with colleagues and develop remote collaboration and visualization tools. Classes and seminars are a typical usage. A course was taught this past spring with half of the class at Purdue and half at IU. The screen layout was similar to what you see here with views of local and remote groups and the presenter's slides on the screen at the same time.

Screen format

- 3 sections

 - Center where materials are shown

 - Outside screens where participants screen images are shown

Hardware –

- 3 computers to support node

 - much of the node hardware is designed to support audio and cancel echoes

<<Access Grid>>



Access Grid in the Envision Center

In the Envision Center, our Access Grid room is used to support the discovery, learning and engagement missions of the University by providing a connection point for researchers, students and industry, access to a wide variety of seminars and talks, and a tool for research into collaboration and remote visualization.

The Access Grid is a group-to-group video conferencing system and evolving portal to Grid resources and collaboration tools. Using the Globus toolkit and the Internet, Access Grid provides multiple streams of video and audio between multiple sites. Hundreds of Access Grid rooms and smaller personal nodes are installed at universities, research institutions and companies world-wide. Meetings, seminars and gatherings of many kinds occur in the virtual rooms that make up the Access Grid.

Our Access Grid room consists of a meeting room and a control room. The meeting room is outfitted with a large, multiple projector display screen. This screen can be configured to display video from remote sites, presentations, or shared applications. The screen in this room has the additional capability of displaying stereoscopic applications and video.

The Access Grid control room provides the operator with easy access to the Envision Center's video, audio and data resources. The operator can feed material to and from the Access Grid and other devices in the Envision Center. Phone and H.232 video conference calls can be routed into the Access Grid room as needed to connect sites without Access Grid capability.

ACCESS GRID

The Access Grid (AG) network links Purdue with more than 200 high-speed multimedia research and academic facilities on five continents, via Internet2. Equipped with an 18' by 5' screen, the Access Grid room in Envision offers the ideal components for multi-site conferencing and collaboration. Similar to video teleconferencing, the Access Grid enables researchers to demonstrate projects and convey information in a way not possible through standard teleconferencing. This Access Grid is equipped with 3 projectors, each covering 1/3 of the screen space. Often one projector will show material being discussed, such as PowerPoint slides, another projector will show video of the current speaker, and another projector will show video windows of all the remote participants. In addition, The AG has a pair of vertically stacked Mitsubishi projectors that can be used to display passive polarized stereo images. The Envision staff is currently researching ways in which stereo graphics and virtual environments can be shared across the AG.

What does this system cost?

The price for an Access Grid node can vary a great deal. Small personal nodes can be setup on a laptop equipped with a web cam and microphone for a very low price. Larger nodes intended for larger group meetings, such as the Envision Center's AG room can cost tens of thousands of dollars, depending on components such as screens, projectors, microphones, computers, networking, and other A/V devices.