Envision Center for Data Perceptualization

A shared high performance visualization facility and teaching laboratory, the *Envision Center* opened in April of 2004, with a mission to serve, support and collaborate with faculty, students, and industry in scientific visualization.
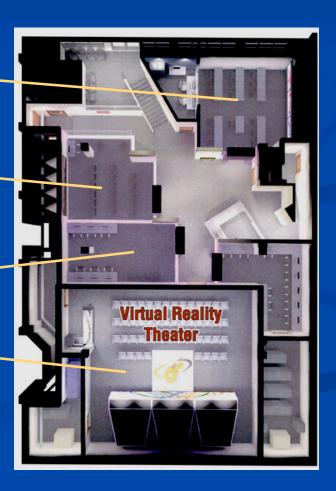
Access Grid

Tiled Wall Display

Haptics Laboratory

Virtual Reality CAVE
- 4 wall CAVE (front, left, right, floor)
- Can unfold into single VR wall

Issues and Opportunities

Current CAVE Operations

-All VR content must be mediated to the displays using difficult programs

-VR Juggler is most common, a UNIX-Based application

-Most content must be prepared through a programming middleman before it can be functional at all in the VR CAVE

-Users of GIS and Remote Sensing are used to GUI applications and can be deterred by the complex and slow process currently in place

There are too many steps and it takes too much time to get anything of quality into the CAVE.

This prevents a large number of projects from becoming active in the Envision Center, which is bad for everyone.

Statement of Purpose

The development of a practical workflow which will allow non-programmers to prepare and display visual GIS data in a virtual reality CAVE with greater ease and economy.

Questions

Can the words *"ease"* and *"economy"* really describe anything done in a university?

Can I create something relatively *"simple"* and *"efficient"* without getting booted off campus?

How ?

EON Reality

"EON Reality, Inc. is the world's leading interactive visual content management software provider."

"…brings the power and versatility of advanced, high-end simulation technology to the PC platform and the Internet."

EON Studio

-High level GUI application which deals well with interactive 3D

-Works well with VRML models and DEMs

-Can add interactivity to VR must faster than current techniques

Behaviors and Prototypes

-Modules which before complex functions

-Compact mini-programs which can be linked together as desired

-Can be created by experts then used by amateurs

General Overview of My Project

- Discover preferred techniques for getting GIS into the CAVE quickly

- Create required modules for others to use the process simply

- Develop clear and easy-to-follow instructions for non-programmers

- Have non-programming GIS faculty test and tweak the procedures

- Wait for everyone to beat a path to my door

Where this is all going?

- From 3D GIS to basic interactivity

- Remote Sensing data layers

- "Real-Time" Remote Sensing display

- VR display with analysis features