67x4: Display-Wall User Interfaces
(a.k.a. GigaPixel Display)

Instructor: Chris North

Description:

This course will cover advanced HCI topics related to the design, development, and evaluation of large, high-resolution, interactive display systems. This will be a research-intensive course that will examine current state-of-the-art literature on the subject, involve students in currently funded VT research, and engross students in semester-long research projects, all with the goal of contributing back to the literature. The class itself will use the GigaPixel Display facility for lectures and in-class discussion.

Topics will include:
- Display technologies and physical construction of tiled displays
- Hardware and software architectures for high-resolution rendering
- High-resolution visualization and display design
- Multi-modal and multi-user interaction techniques
- Evaluation methodologies
- Novel applications in geospatial analysis, bioinformatics data visualization, etc.

Justification:

This course should be taught for the following reasons:
- To apply VT's exciting new GigaPixel facilities in an educational setting, and explore pedagogical opportunities of high-resolution display as a model for future classroom design (an activity that CHCI is currently engaged in at VT).
- To initiate the development of a publicly available curriculum in this important emerging area of HCI.
- To expose and inspire students in a novel aspect of the future of HCI and computing in general.
- To involve students in an active high-profile research project that is a central focus of VT's CHCI, backed up by multiple funded grants.
- To prepare students for high-level research in useful areas of HCI, visualization, human factors, parallel computing.
- To prepare students for advanced careers in a fast-growing emerging market of display technologies.
- Chris North has never taught a 6xxx level course yet!