

We want to make available a modular computer graphics and visualization laboratory that teaches in a "hands-on" manner the construction and operation of a computer graphics pipeline as well as elements of software engineering. The system is based on a simple yet powerful scene-graph language, SLIDE [1], designed to describe interactive and dynamic environments. We propose to turn our working prototype of such a program into a robust and well documented system that will be freely available on the Internet to academic institutions teaching graphics and visualization courses.

The SLIDE laboratory and its renderer are aimed at introductory college-level courses in computer graphics. Experience with such a software environment will benefit students in the scientific, mathematical, and engineering disciplines. Students learn good software engineering skills as well as the ability to create informative visualizations through a modest amount of programming effort, which are invaluable skills in these fields. The release of the SLIDE system will make the development efforts and experience gained at Berkeley over several years available to many instructors who may not themselves be experts in computer graphics or who don't have the resources to develop extensive instructional software. Contacts have been made with a set of rather different colleges to act as beta test sites for early releases of this software, so that we can better understand the needs of these schools and adjust our software to serve as wide a range of users as possible.