This presentation is on videotape and chronicles the developments which took place at the University of Guelph following the introduction in 1989 of the NeoVisuals 3-D modelling and animation package.

Many of the colleges at the Guelph campus were quick to realise the potential of this new addition to the software library and started utilising NeoVisuals for making videos for presentations, for research and for teaching purposes. Excerpts from some of these projects are reproduced on this SUGI 15 presentation tape and an overview of some of these undertakings now follows.

Initially considered a tool primarily for research, it soon became apparent that it also showed great promise as a teaching aid and this encouraged lecturers and students at the University School of Landscape Architecture to begin using it to produce animation sequences as course project assignments.

The first opportunity to use the software for "production" research came when a local consulting engineering company asked the University to simulate a drive along a proposed new roadway development being considered for a neighbouring city. There had been concern that truck traffic might have difficulty coping with the undulations and curves along the six kilometre highway. Also, the high cost of producing graphic artist drawings for illustrating the layout details of the road at public hearings suggested that animation might be a cost effective solution to both these dilemmas.

Meantime, the University Veterinary College began using the software to produce an instructional videotape on the digestive processes of canines. This was a welcome development because of the increasing trend away from using live animals for teaching purposes.

Zavitz Hall is a splendid old building on the University campus. As the years have passed it has become increasing difficult for this structure to meet modern safety code regulations. After considering various alternatives, it was decided that renovation and upgrading was preferable to demolition and rebuilding. The videotape simulates a selection of orbits and close-ups of the improvements proposed for Zavitz Hall.

The College of Physical and Engineering Sciences has produced an instructional videotape on the mathematics of wave motions and the SUGI 15 tape contains excerpts from this.

As some SUGI attendees will be unfamiliar with modelling and animation technologies, a section of the tape contains a short tutorial on the modelling process used in the canine motility study. Details of a project investigating low cost urban housing is also demonstrated.

As NeoVisuals has become integrated into the mainstream of computer graphic simulation over the months, the animators at Guelph have gradually built up an object library which contains many useful everyday objects which can be called up on demand and used many times. A selection of these is shown.

On the lighter side, the tape contains an exciting opening sequence depicting planetary motions and collisions. This should appeal to astrophysicist and science fiction fan alike. Similarly, the closing shots comprise several flying logos developed by a member of the animation team.

To summarise, the arrival of NeoVisuals software complements perfectly the new generation graphic workstation now on the market. These are able to offer levels of compute power unimaginable just a few years ago. The work of many groups at Guelph has been transformed by the coming together of this perfect match and a plethora of new visualisation possibilities has been opened up, be these in teaching, research or general presentation videotapes, as this tape shows.

Readers having an interest in this type of work who would like to have additional information about these developments at the University, are invited to contact the author:

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