When the University took the decision in 1989 to make its presence felt on the graphics map, its long association with the Institute's statistical products and the timely introduction of the new animation package called NeoVisuals made it a natural choice for consideration.

Out of the fledgling steps into the mystical world of computer animation emerged a visualisation team dedicated to catering to the 3-D animation requirements of campus faculty, staff and students. Today's tape presentation is a portrait of completed work and projects-in-progress of the last twelve months and contains excerpts taken from several scholarly topics which use animation to explain difficult concepts.

The opening segment of the program has an exciting electron chase around a circuit board. Although entertaining, this work was not undertaken solely for this purpose. Guelph has many computers which utilise the new parallel processing technologies and this sequence is part of a visual approach to understanding the theory underlying fine and course grain parallelism.

When mastering the rudiments of animation, students study techniques on how to present lighting, full colour shading, texture mapping, dynamics of motion, rendering and so on. The tape contains a lively montage of shorts designed and created by students at both Guelph and at neighbouring Sheridan College of Applied Arts and Technology.

Carrot infestation is one of the problems facing the nation's farmers. Since recognition of the condition is a prerequisite to its eradication, students of agriculture find the segment on the life cycle of the carrot fly and weevil useful in assisting them to spot and deal with pests.

The schooling behaviour of fish and their reactions when threatened by predators is difficult to observe in nature because the live situation is too confusing with little control over circumstances. However, with an animated simulation, the principal behavioural features may be more easily demonstrated.

Meteorology and weather forecasting are subjects of concern to those involved in agriculture. Teaching aids for these topics tend to centre on two dimensional textbook drawings, supplemented by films of mixed vintage. The University Department of Land Resource Science has embarked on a major project to produce a series of short animation videotapes which model various weather conditions studied in several meteorology and agrometeorology courses at Guelph. Today's tape includes one of these modules.

The blood circulatory system in a fetal pig is the subject of study in a zoology course. By simulating the circulation, heart-lung function and amoeboid movement, understanding can move from the conceptual to the real.

As some SUGI attendees may be unfamiliar with modelling and animation technologies, the tape contains a short tutorial on transferring a design from the screen/disk of a workstation to three quarter inch videotape, for presentation.

Some students have begun to recognise that the freedom of expression spawned by animation has conceived a new art-form where keyboard and mouse replace palette and paint brush. This was never better demonstrated than in the beautiful kaleidoscope of colours based on the human form in the pixel point pirouette segment.

A local building supply company wanted to extract gravel from a parcel of land belonging to the University. This was approved with the proviso that the land be returned to its original condition after removal of the aggregates. For public hearings, a before and after 3-D fly around of the site was prepared by the School of Landscape Architecture.

The presentation concludes with a montage of visual study exercises from the students at Sheridan College.

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:

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