The de Havilland DASH 8 *is Canada's latest transport plane.*

tion inertial navigation systems based on a ring laser gyroscope;
– Garrett Manufacturing's peripheral vision horizon device; and
– Canadair's continued development of the *CL-289* and *CL-227* unmanned airborne surveillance and target acquisition systems.

The Canadair Limited CL-227 *remotely piloted surveillance vehicle. The upper portion houses the power plant and the lower portion the command, control equipment and payload. The* CL-227 *is capable of taking off and landing vertically, horizontal flight and hovering.*

Seeing-eye computer

A University of British Columbia (UBC) team has set up a new laboratory centre for computational vision. It is designed to use computers to duplicate and extend the human brain's ability to interpret visual data.

The group, headed by Dr. Alan Mackworth, brings together experts from many disciplines, including computer science, forestry, astronomy and pathology.

Helped by a grant of $400 000 to start the project from the Natural Sciences and Engineering Research Council (NSERC), the group has already installed new hardware and is now working on software – the formal procedures computers follow to do their work.

One new program, MAPSEE, helps the computer system to recognize map features such as rivers, bridges, shorelines, and roads.

According to Dr. Mackworth, the best way for machines to do this often makes good human sense as well – showing how closely computers may approximate the way our own brains solve problems. Thus MAPSEE "knows" that although both roads and rivers appear as lines, roads pass over rivers at bridges; rivers must connect shorelines to lakes; and roads exist in networks connecting towns.

Laser used for artificial legs

A laser device that can scan a three-dimensional object and create a computer model of it is proving useful for making artificial legs and is drawing interest from companies that make engineering models and shoes.

The shape sensor was developed at Toronto's West Park Hospital to study shapes of casts for making prosthetic devices. A low-power helium laser beam scans a vertical line as the body part or object is rotated past it. Three-dimensional measurements of up to 17 280 points are taken with an accuracy of within one millimetre in any dimension. A computer collects the readings and displays a cross-section of the object anywhere along its length on the computer's terminal.

The information can be fed to a numerically controlled model-shaping machine to create a plaster mold. A process that once took days of careful carving and measuring can be completed in a few hours.