along a busy highway through the city of Toronto by diverting the flow into different lanes as needed. The route will be monitored by cameras and data collecting detectors placed under the highway and, according to the information gathered, signals will be automatically activated to direct traffic.

The Ontario government has chosen fibre optics for the system because it has the required transmission capacity, is not sensitive to electromagnetic interference and can easily stand the environmental stress.

Special Applications

Opto-Electronics Ltd. of Oakville, Ontario and Canadian Instrumentation and Research Ltd. of Mississauga, Ontario, manufacture high performance instruments and devices for optical communications. These range from high-speed laser pulsers for testing purposes to sophisticated couplers for local area networks and optical-fibre sensor applications.

Fibre optics systems may also be extremely useful in marine applications. One reason for this is that fibre is not sensitive to electromagnetic disturbances, which can be considerable aboard ships. A company in Nova Scotia, Focal Marine Ltd. is studying, among other things, the conversion of ship communications systems from copper wire to fibre optics.

Export Sales

Canadian expertise in fibre optics manufacture has enabled Canadian companies to secure significant export agreements. For example, MCI Telecommunications Corporation, the largest specialized common carrier in the United States, will use 100 000 kilometres of fibre optic cable manufactured by Northern Telecom Ltd. in a system being installed between New York and Washington.

Canstar Communications is serving the export market with a number of its products, in particular, fibre optics couplers. Photo detectors used in optical communications systems are produced by RCA Inc. of Ste. Anne de Bellevue, Quebec, and exported to many countries.

In addition, several small Canadian high-technology firms are successfully marketing their specialized opto-electronics products abroad.

The network control centre keeps an eye on telecommunications traffic to minimize congestion on the international routes.