

Fortran Traffic Systems Ltd. (Fortran) is a private Canadian corporation, with offices in Ontario and British Columbia, and is a member of the Guild Group of Companies. Since 1979, Fortran has been a leader in the North American traffic industry, providing integrated, turnkey solutions to meet an expanding array of customer needs. Fortran has forged a strong reputation in the fields of real-time traffic control, traffic management and transportation software development due to our extensive experience and knowledge of systems, software and equipment.

At Fortran, we provide an extensive lineup of products and services: Computerized Traffic Control Systems (CTCS), Advanced Traffic Management Systems (ATMS), Customized Transportation Software, Local Intersection Control Equipment, Traffic Management Support Services, Intelligent Transportation Systems (ITS), and Traffic Management Center (TMC) Operations.

Fastracs is an [Advanced Transportation Management System \(ATMS\)](#) that provides proven system management tools (GIS-based map and intersection displays, system log and alarms, reports, database entry, remote access, inventory and maintenance management). Fastracs has a Microsoft Windows based distributed client-server architecture, allowing efficient access to the system over existing corporate IT infrastructure, and includes an industry-standard relational database management system (RDBMS) for the reliable storage and management of the system database.

T2000C is a [real-time centralized traffic signal control system](#) that provides reliable coordinated traffic signal control - from simple 2-phase fixed-time operation to complex vehicle-actuated multi-ring, multi-phase operation. T2000C provides proven traffic management tools for time-of-day plan selection, Traffic Responsive Control, Traffic Adaptive Control (optional), Centralized Route Preemption, and Centralized Transit Signal Priority.

Recently, Fortran added TBC support to its Remote Control and Communication Unit (RCCU), allowing the RCCU to control the intersection independently of the central system using an internal database identical in structure to that of the central system. When isolated from the central system, the RCCU will remain in synch with the central system via the 60 Hertz line frequency.

Most recently, Fortran has added a new NTCIP-based real-time control algorithm for the LRT project in Minneapolis. This new control algorithm provides enhanced smoothing functions and intersection pre and post conditioning for trains, preempts and other priority events. The Fastracs Object Manager is used for database upload/download directly from/to NTCIP controllers under computer control.

T2000C/Fastracs systems are currently running in the City of Minneapolis, MN (850 intersections), the Region of Durham, ON (380 intersections), the City of Waterloo, ON (380 intersections), the City of Burlington, ON (180 intersections), the City of Mississauga, ON (650 intersections), and the City of Peterborough, ON (system currently being expanded to 75 intersections).

All of Fortran's T2000C customers have been upgraded to Fastracs.

SCOOT Fortran has delivered two large SCOOT traffic adaptive control deployment projects: the City of Toronto and the City of Minneapolis.

The City of Toronto was the first integration of the Siemens UTC/SCOOT with North American intersection controllers. Fortran provided a complete turnkey 75 intersection pilot system including project management, traffic analysis, central hardware, plus design engineering and manufacturing. The pilot system has subsequently been expanded to over 300 intersections and 1600 loops.

Based on the "conversion technology" developed for the City of Toronto (above), Fortran upgraded the City of Minneapolis's T2000C system to provide support for SCOOT adaptive control. Video detection was used to implement the SCOOT loops (the first such installation in the world). In this case, the existing T2000C system provides the interface between the SCOOT system and the field equipment providing both traffic responsive and traffic adaptive control. As the conversion/interface is provided by the central system, the project did not require changes to the field equipment.

Citilog: Fortran has recently become a distributor for Citilog's suite of [advanced video incident detection](#) products. Fortran has already deployed four Citilog systems.

Fortran sold and implemented the first Citilog system in the US - Highway 285, Louisville, KY. A MediaRoad installation, for traffic data collection, became operational in July 2003.

In the later part of 2002, Citilog sold a MediaTunnel system to MTO (Ministry of Transportation - Ontario) for the Thorold Tunnel in St. Catherine's Ontario. After Fortran obtained the distribution rights for the Citilog product in Canada, MTO contracted Fortran to provide configuration services and support. The system is currently providing incident detection within the tunnel. A system upgrade to the software and hardware is anticipated in late 2004.

In 2003, Fortran implemented a MediaRoad system as part of the Brock Road Video Traffic Management System in the Region of Durham, ON.

A Citilog system was also deployed at the University of Toronto as part of the University's on-going ITS research efforts.

Time Space Diagram for Windows (TSDWIN): Fortran's Time Space Diagram for Windows provides a flexible, easy-to-use traffic-engineering tool that greatly simplifies the cumbersome task of selecting signal-timing data that will provide an optimal "Green Band" for traffic flow along an arterial.

With the real-time option enabled, this software can be integrated with T2000C to display real-time time-space diagrams based on actual on-street operation, and to upload signal-timing data into the T2000C database.

SIMMS (Signal Inventory and Maintenance Management System): lets users maintain their inventory of traffic signal equipment and other infrastructure, manage their traffic signal maintenance activities, and keep track of maintenance costs.

SIMMS is currently in use at a number of cities and municipalities, and is an integral component of all T2000C/Fastracs systems currently in operation.

SIMMS was originally developed as a means of tracking the maintenance work, of keeping track of the inventory of equipment at each intersection, and of generating reports to justify operating budgets from year-to-year.

Based on the real-world feedback provided by the user group, SIMMS was redesigned to address the broader needs of the entire group. The following are some of the key features that were added:

- Expanded location, equipment, and maintenance log attributes.
- Support for custom equipment screens, allowing the user to create new kinds of equipment as the need arises.
- Support for notes, allowing the user to store, manage, and retrieve all electronic documentation relevant to inventory and maintenance activities (e.g., reports, letters, drawings, etc) at individual locations.
- An expanded set of standard reports using Crystal Reports.
- Full multi-user support.
- Improved Fastracs integration.

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