

## Products: **Canadian Automated Air Traffic System (CAATS)**

CAATS is a complete Air Traffic Management (ATM) system providing controllers gate-to-gate management services, and has been designed as a product to be easily adapted to any ATM environment. It implements the latest technology and can provide the controller with a paper-free environment. CAATS is the advanced air traffic automation system scheduled to replace NAV CANADA's present systems and equipment with advanced software, hardware and communications technologies. It will be installed in the seven area control centers across Canada.

CAATS offers a complete system solution containing all the functions for Air Traffic Management and support, including the roles of air traffic controller, system manager, data manager, supervisor and operations support. CAATS handles both ICAO and domestic IFR flight plans and supports VFR profile management and many other features, such as late arrival warnings. Interfaces are integrated to support flight information exchange and both atmospheric and aeronautical data acquisition and application.

CAATS provides a rich toolset for controlling IFR aircraft both in and out of radar coverage. Controllers can quickly enter and modify detailed IFR flight clearances. This distinctive feature, in turn, supports system functions of automatic flight data posting, conformance monitoring, hand-off warnings, adapted automatic hand-off and acceptance and flight data distribution. The four-dimensional profile is highly accurate and is built from clearance and wind data using adapted aircraft performance models and adapted route information. CAATS includes a conflict prediction capability that evaluates IFR clearances against separation rules. Conflict probe allows a controller to "what-if" a clearance before committing that clearance. The controller can convert planned clearances to current clearances and forward them to flight service stations or towers as required.

With CAATS, master sectors can be consolidated or deconsolidated as traffic levels vary. Sectors can be dynamically configured to use multiple adjacent workstation display screens for one or more controllers. User and sector preferences combine to facilitate easy setup of the many adaptable display objects. The controller workstation can display any combination of situation and tabular data. The situation display comprises an integration of surveillance, weather and flight data (clearance details, position of non-radar flights, etc.) over an adaptable multi-layer color map. The display is highly interactive, allowing the controller to immediately access and modify flight data, obtain current status data on map objects such as airports, airways, NAVAIDs, restricted areas and special use airspace.

With an eye to maintaining its competitive edge by staying at the forefront of ATM system providers, Raytheon also directs its resources toward researching new technologies that take advantage of the capability to exchange data directly between aircraft and ground-based systems. -