INTELCAN


## SKYCONTROL AIR TRAFFIC MANAGEMENT SYSTEM (ATM)

SKYCONTROL ATM is Intelcan's modern, state-of-the-art digital ATM system, manufactured and integrated in accordance with ICAO, Eurocontrol, international aviation and ISO 9001:2008 Quality Management System standards.

SKYCONTROL ATM is a configurable LINUX based system with multi-radar tracking capabilities and a fully automated flight plan processing system, consisting of radar and flight plan servers running on COTS hardware. The servers are configured as hot/standby to ensure system redundancy and, as an option, a client-server can be installed in the bypass mode for increased redundancy. The SKYCONTROL ATM consists of a Radar Processor and Display System and a Flight Data Processing System.

Whether purchased as a stand alone product or integrated with Intelcan's SKY series CNS/ATM product suite, SKYCONTROL ATM is an unique solution that is flexible and scalable to meet any military or civilian ATM requirements.

## Radar Processor and Display System

### RDPS Capabilities

- Processes primary and secondary data from multiple sources: PSR, SR, PSR/SSR, ADS-B, synthetic tracks and manually entered positions
- Processes multiple data formats (Mode S, ASTERIX, ADS-B, AIRCAT 500, EV720, PR-800, CD2 and OARS)
- Accepts flight plan data and combines it with radar data
- Provides increased capacity-enhancing capability with Reduced Vertical Separation Minimum (RVSM)
- Displays data on multiple maps
- Correlates fused tracks to established CPDLC connections and ADS-B/C
- Short-Term Conflict Alert (STCA)
- Minimum Safe Altitude Warning (MSAW)
- Restricted/Intrusion Area Alarm (RIA)
- Danger Area Intrusion Alarm (DAIA)
- Provides on-line malfunction detection and alarm
- Synchronizes with a common time source clock
- Records data and playback

## Radar Display (RD)

RD is the display component (client) of the RDPS system. RD is designed for use by air traffic controllers when monitoring, tracking and controlling the aircraft within a specified control jurisdiction.

### RD Capabilities

- Shows radar targets associated (or not) with flight plans
- Works with multiple customized maps
- Tracks targets and represents them with different symbols
- Provides customization to filters for each operator
- Ensures dynamic map drawing for each operator
- Provides hand-off function for multiple sector systems

The radar display modules have the capability of track display, map data and various windows for entering data as well as information on display status and controlling capabilities of the information displayed. Each controller can customize the display settings and his settings are saved between login sessions. Track data consists of the track symbol, RVSM indicator, trail history, predict line and label. The track symbol indicates the type of track as secondary, primary, correlated, synthetic, ADS, coasting or coast.

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Easily configured to suit the ANSPs requirements, the labels can be modified to include: A/C ID SSR code, current and assigned altitude, ascending/descending, selectable flight data items, messages for emergencies, hand off state, coasting condition, MSAW, STCA...and much more.

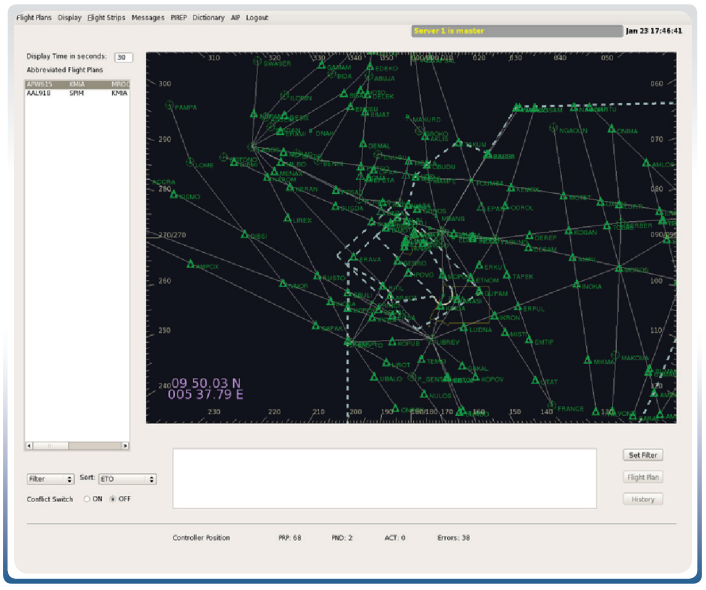
By selecting a track, the system provides options to:

- Enable/disable the display of label data
- Initiate a hand off, modify track data
- Enable/disable track prediction lines
- Generate a CPDLC message/response
- Select the display of Mode S data
- Drop track associations

## Flight Data Processing System (FDPS)

The FDPS collects, processes, stores and transfers air traffic operations and FDPS system status data. This is done for statistical, accounting and various other purposes.

The FDPS accurately and rapidly processes flight data required to support the current and anticipated ATM operations. It automatically performs Medium-Term Conflict Detection (MTCD) and Route-Time Conformance (RTC) verification.




**The FDPS often serves as a national, centralized facility:**

- Handles flight plans and associated messages
- Ensures co-ordination of messages
- Processes and distributes flight data and SSR codes
- Provides automatic coordination using ADEXP and in conformance with OLDI and AIDC definition

**FDPS receives data from the following sources:**

- Aeronautical Fix Telecommunication Network (AFTN)
- Operators FDPS/RDPS
- Radar Processing Systems
- Repetitive Flight Plan
- ADS-B

## FDPS Capabilities

- Assesses all fields within in-coming flight data messages for verification, reformatting and execution of appropriate action
- Processes data for the actual or intended movement of aircraft with regard to the airspace traversed, route, conflict monitoring, conformance, sectorisation, meteorological conditions, and aircraft performance
- Provides automatic and manual SSR code assignment
- Ensures timely distribution of appropriate flight data to select workstations and external interfaces for display or printing in the required format or mode
- Transfers processed flight data to other sub-systems (i.e., billing)
- Generates electronic and paper flight strips

The FDPS automatically generates and transmits flight plan messages, such as: Departure, Change, Boundary Estimate, Acceptance, Coordination, Delay, Cancel and Filed Flight Plan.

The FDPS allows both automatic and manual (dis) association between flight plans and aircraft tracks. The automatic algorithm provides correspondence between discrete codes and surveillance tracks, enabling area verification and track checks.

- The FDPS supports the Future Air Navigation System (FANS) data link including:
- Context Management (CM) and ATS Facility Notification
- Automatic Dependant Surveillance - Broadcast (ADS-B)
- Air Traffic Control Communications in support of Controller-Pilot Data Link Communication (CPDLC)

## About Intelcan Technosystems

Intelcan is the leading Canadian communications, navigation, surveillance and air traffic management (CNS/ATM) system and airport infrastructure solution provider. Integrating Intelcan's own products or utilizing products from a diverse supplier network, Intelcan has delivered complete turnkey solutions both cost-effective and flexible, to fulfill civil and military clients' requirements in over 60 countries, worldwide.



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