

ATRAK-BYPASS – Radar Fallback System



Field Computer Consultancy Limited (ICC), a LAIC group company have been system developers and service providers to the Air Traffic Control industry for over 20 years with technical specialists based in the UK and Europe.

ICC has developed a number of key ATC solutions, front end systems for Executive, Planning Control, Information Management, and Radar fallback and back-office solutions for accounts, human resources and billing and statistics.

ATRAK-BYPASS® is a standalone radar fall-back system providing back-up Air Situation Display functions as well as Flight Data presentation in case of fail-over of the main ATC Executive system. ATRAK-BYPASS is configured with totally independent radar feeds from the Executive system ensuring total system continuity in the event of a failure.

The ATRAK-BYPASS system in fallback mode can be used as:

- A fully functional ATC executive system or as a planning control and fall-back system alongside 3rd party executive systems.
- A fully functional ATC system for the duration of executive system unavailability.

ATRAK-BYPASS works in union with 3rd party ATC systems such as Thales Eurocat 2000, as well as the ATRAK-IMS Information Management System.

ATRAK-BYPASS comprises two core elements for operation:-

- Server
- BYPASS Workstation

The ATRAK-BYPASS server provides the core Information Data Processing system (IDP) and Flight Data Processing system (FDP) integration when in standby or fallback mode but takes its feeds from totally independent sources to those of the live Executive system.. Data is processed in background by the ATRAK-BYPASS server and is then delivered to the corresponding ATRAK-BYPASS workstation.

The system consists of 2 ATRAK servers with Quad processors. The systems are backed up to the main ATRAK-EC/PC Server environment but are configured as separate standalone systems on an independent network to the rest of the Operations user traffic.

The ATRAK-BYPASS workstation comprises of a dual processor ATRAK-BYPASS workstation supporting the ATRAK digital video interface and ATRAK digital ATC displays. The displays and video interfaces for ATRAK-BYPASS support the ATRAK-250/2500 30" display which is extended to operate remotely from the workstation via the ATRAK Deskender.



ATRAK

ICC's information display processing suite of ATC/ATM applications - delivering quality solutions as an integral part of air traffic control and management.

Technical Specification

Main Functionality

The ATRAK-BYPASS solution comprises a number of key components when running in fall-back mode:-

Planning controller display (installed on ACC and APP rooms), providing:-

- Radar track data from ARTAS/ EuroCat 2000/ MSSR
- Flight plan data from Flight data processing systems
- Radar weather information such as VAISALA/MIDAS 600
- EFDM™ full electronic “paperless strips” functional block environment encompassing:
 - electronic labels/tabular flight display

Radar and flight data processing

- Receives and processes track data from up to 3 radars, formats ASTERIX Cat.2, ASTERIX Cat.3, AIRCAT.
- Receives Flight Plan data from external FDP system
- Performs Track-flight data correlation
- Produces ASTERIX Cat.62 output for external users (ETFMS)

Aircraft position and traffic flow Display

- Radar tracks presentation and functions
- Selection of one of three radar data sources
- Provides Basic air situation display objects and functionalities
- Provides Flight Data presentation in the form of lists and windows
- Displays the radar weather data in three projections (views)
- Displays Airport Meteorological data

Weather processing

- Reception of radar weather data
- Reception of Airport Meteorological data

System Supervision

- Based on SNMP protocol
- Allows local and 3rd party Displays Radar tracks system supervision and control



System Specification

Server

ATRAK-BYPASS Enterprise server comprising: -

- AIX Operating System
- Multi (4/8) Processors
- Dual Ethernet Adapters, Dual Power supply units
- Rack mounted console, keyboard and mouse
- ATRAK Raid array subsystem with ULTRA3 SCSI disk drives

Workstation

ATRAK-BYPASS High Performance X-Display workstation comprising: -

- AIX Operating System
- Dual Processors
- Dual Ethernet Adapters, Dual Power supply units
- Rack mounted console, keyboard and mouse

ATRAK-BYPASS ATC display including: -

- 30-inch display (29.7-inch viewable)
- 2560 x 1600 optimal resolution
- 16.7 million colours
- DVI Display Connector

ATRAK-BYPASS Digital Video interface including: -

- 2560 x 1600 Resolution
- 8/16/24/32-Bits per pixel
- 64 MB Frame Buffer
- 32 Independent Overlays
- 2560 Dynamic Colours
- Single Slot PCI Card
- Transparency & Translucency
- 8+24 Bit Mode/ 8+8 Bit Mode

ATRAK-BYPASS Deskender digital extender including: -

- DVI (dual-link) supported to VESA standards
- Supports PS/2 or USB keyboard & mouse
- Extends up to 1000 meters over fibre

Software

Operating System software

- AIX UNIX
- HACMP – High Availability software

Application software

- ATRAK-BYPASS application software

Database software

- Oracle, MS-SQL

Options

ATRAK-LITE

- Linux (RedHat) based platform
- Same functionality as ATRAK-BYPASS
- Utilises MS-SQL database software
- Designed for lower numbers of air traffic movements

ICC have been delivering safe, reliable, mission critical ATC solutions and services for over 20 years. For more information please contact us.



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