■ SENSOR PERFORMANCE EVALUATION & MONITORING

RASS®

■ RASS® & SMS SOLUTION

The RASS® Performance Evaluation & Sensor Monitoring System solutions are used worldwide as reference analysis and evaluation tools.

Civil and Military Air Navigation Service Providers (ANSP), flight calibration companies, radar manufacturers and engineers commonly use the real-time data collection, replaying, monitoring, displaying and analysis functionality.

RASS is designed to operate in versatile surveillance Air Traffic Management (ATM) environments like Air Traffic Control Centers (ATCC) and at the radar site, providing flexibility, scalability and transparency.

The solutions are manufacturer and surveillance systems independent.

It supports the users in their daily tasks and provides a high efficiency rate to solve unexpected system behavior and performance issues in difficult circumstances.

System engineers, technicians, maintenance personnel and validation officers responsible for testing, validation, certification, performance check and fault finding get a complete toolset that is applicable on all their sensor surveillance systems.

■ HIGHLIGHTS

EUROCONTROL and ICAO compliment

Essential solution for the ATM environment, manufacturer and verification/validation authorities

Scalable

Single independent and versatile toolset for all manufacturers and sensor types, both civil & military

Integration with other RASS and third party measurement solutions

Improved daily quality monitoring, maintenance cycles, fault finding and validation testing

Real-time sensor monitoring and analysis

Experienced support engineers at disposal with years of experience

■ GLOBAL PRESENCE

INTERSOFT
E L E C T R O N I C S

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INTERSOFT
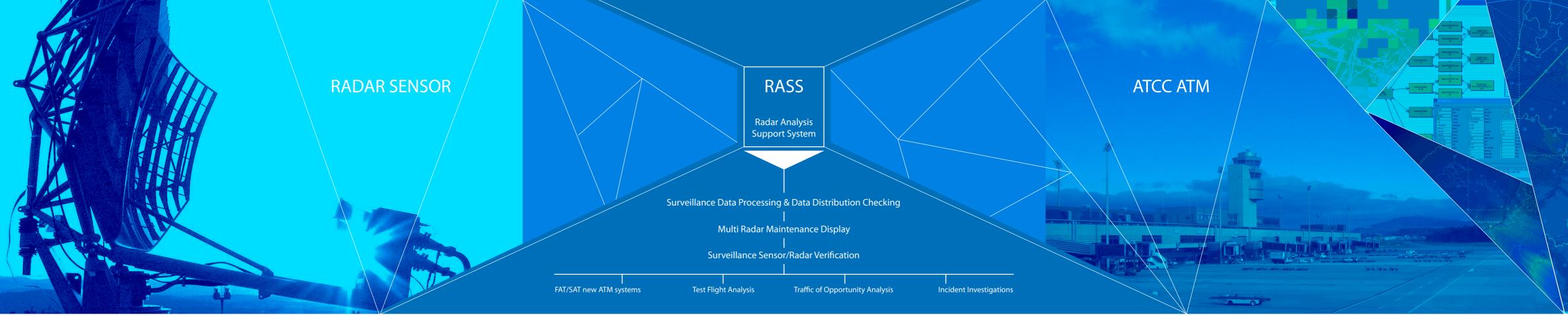E L E C T R O N I C S   U S A

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IE-CD-01074-04 RASS Software solutions leaflet

RADAR SENSOR

RASS
Radar Analysis Support System

ATCC ATM

Surveillance Data Processing & Data Distribution Checking

Multi Radar Maintenance Display

Surveillance Sensor/Radar Verification

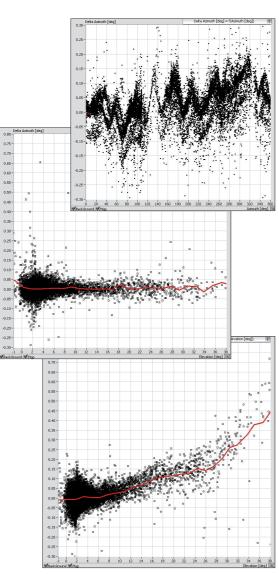| FAT/SAT new ATM systems	Test Flight Analysis	Traffic of Opportunity Analysis	Incident Investigations

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KEY FEATURES

Analysis

The Radar Comparator (RC) is an essential tool for radar performance analysis based on operational data from one or several sensor sources according the proper EUROCONTROL and ICAO standards.

- EUROCONTROL Standard Document for Radar Sensor Performance Analysis SUR.ET1.ST03.1000-STD-01-01
- EUROCONTROL Standard Document for European
- Mode S Station Functional Specification SUR/MODES/EMS/SPE-01
- EUROCONTROL Standard Document for Radar Surveillance in En-route airspace and Major Terminal Areas SUR.NET.ET1.ST01.1000-STD-01-01
- EUROCONTROL Standard Document for ATM Surveillance System Performance
- ICAO ANNEX 10 (Recommendations):
- ICAO Document 8071 "Manual on the Performance Testing of ATC Radar Systems"
- ICAO Document 9684 "Manual of the SSR Systems"

The RC uses opportunity traffic data for the calculation of probability of detection (Pd), processing delay, false plot rate and codes probabilities and accuracy measurements (range, range gain, azimuth and timestamp random errors).

Results are graphically presented in tables and on the displays supplied with cross-referencing functions, which is handy for further investigation and detecting radar problems and errors.

Coverage Map Calculator (CMC) uses accurate digital geographic data (SRTM-files) The tool produces high resolution coverage maps for more accurate calculation of the radar performance.

Data handling

Data Handling Module (DHM) is an independent data input/output system, it can run as RMCDE, large scaled in an ATCC or smaller setup on the radar site. The DHM is compatible with the Eurocontrol ASTERIX and other legacy data protocols, its core functionality is:

Data recording and replay through various interfaces (for example Ethernet, serial port, FDDI)

Manipulation of the data (changes in framing, for example a serial data input in U-HDLC and output in UDP)

Real-time protocol conversion

Real-time data correction (range, azimuth based on gyroscope eccentricity file, altitude, ...)

Real-time filtering of data on all available data fields (for example filter on S-addresses, filter on presence of MB data)

24 / 7 operability

Real-time ADS-B video to plot extraction, output as ASTERIX Category 21 (Intersoft Electronics hardware required: UVR892 or RIM782 with optionally ARF800).

Display

Multi Radar Display (MRD) is a powerful maintenance display solution. The purpose is a PPI display for various sensor formats. Besides sensor data, it is also able to display weather data, analogue video data (by means of the Intersoft Electronics RIM782) and status messages. It is suitable to be installed in the radar shelter as well as in the ATCC

Features

Suitable for in the sensor site and ATCC solutions.

Quick switching between radar data sources (6 out of N selection)

Advanced map editor and ATC controller features

SMS

Intersoft Electronics' Surveillance Monitoring System (SMS), is a scalable surveillance monitoring system that provides real-time analysis on multiple surveillance sensors.

There is an increasing demand for early notification of sensor degradation in order to assure a Quality of Service (QoS) on the track output to the Controller Work Positions.

The SMS greatly improves safety through the early provision of a warning of sensor degradation. Intersoft Electronics' SMS is the most cost-effective solution to ensure that all sensors remain operationally compliant against the ICAO and EUROCONTROL mandated standards.

Features

Improves safety

Early warning of sensor degradation

Automated performance charts

Audible and visual alarms

Performance reporting

Advanced detailed analysis

Quality of Service (QoS) monitoring according ICAO and EUROCONTROL mandated standards

Integration with other RASS solutions