



## ATC IMPLEMENTATION

**EXECUTIVE SUMMARY**  
PREPARED FOR  
**ETHIOPIAN CIVIL AVIATION AUTHORITY**



## Total Commitment for the Satisfaction of **Ethiopian Civil Aviation Authority**



As a supplier to many countries in the region, Thales ATM is well aware of the varied operational ATC environments into which our systems are to be installed.

The Thales ATM solutions allow full coordination with present and future systems and meet the needs of ECAA in a safe and cost effective manner in accordance with international obligations.

Airsys ATM is one of the few companies over the world, which has products, knowledge and field experience covering all areas of the needed Ethiopian National Air Traffic Control system.

As a main supplier of ATC systems worldwide, and as ATM is our core business, our company commits to maintain systems throughout their operational life.



# MSSR Radar Proven Features and High Performance



The RSM 970 s MSSR has been designed for a long operational life with high reliability and service availability. Incorporated in the systems are effective maintenance tools to ensure continued high performance.

The **RSM 970 S** is the latest MSSR system from Thales ATM incorporating facilities for Mode-S. RSM 970 S is a derivative of the RSM 970 I which has a very long successful production life. The 970 S perpetuates many of the proven features but is enhanced to meet the latest requirements. The design is closely coupled to the Eurocontrol POEMS system design. RSM 970 S employs the AS 909 Large Vertical Aperture antenna which is designed to meet the FAA requirements.

RPM with full detection performance. The Thales ATM 970S MSSR proposed has inherent Mode S capability. Delivery will be with SSR parameters.

Thales ATM has been selected by Eurocontrol to participate in the POEMS programme. Under this contract Thales ATM will deliver a full MODE S (level 4) variant of the RSM 970S series Monopulse Secondary Surveillance Radar. As a result of more than 20 years experience in the field of MSSR/Mode S (including Mode S experimental stations in France and Germany) coupled with the POEMS programme, the RSM 970S offers a true upgrade path to full Mode S compliance against the evolving and demanding European standards.



The RSM 970 S in its standard configuration as offered for this programme employs dual channel electronics. The RSM 970 S can be instrumented for ranges up to 256 n.miles to suit approach and en-route requirements and the antenna rotation rate may be as high as 15

**LEVEL OF PERFORMANCE**

The RSM 970 S are the latest generation products from Thales ATM based upon an extensive pedigree of earlier systems which are in operational service in more than 200 places around the world. As such they are a low risk technology, aimed at long operational life and very low cost of ownership; requirements. The Radar systems offered have been developed from the outset to meet all appropriate European, Eurocontrol and ICAO specifications for this class of equipment.

**RSM 970 Radar Head Electronics**



# Financing **A Self Financed Modernisation Programme**

Thales ATM provides the know-how to help Ethiopian Civil Aviation Authority in its search for an adequate financing through a medium term buyer's credit granted by a pool of international commercial bank and guaranteed by the overflight fees.

Financing would take the form of a medium term buyer's credit requiring the approval of relevant governmental authorities and banking authorisation, and shall follow a financing and legal feasibility study.

This credit would be granted by a pool of international commercial

banks and would benefit from the insurance cover of the provider's governmental export credit agency.

This credit could have a duration of five years: it would be repaid in ten half yearly repayments substantially equal in principal, the first being due six month after the starting date of repayment as defined by the pro-

vider's governmental export credit agency, each subsequent maturity falling due at six month intervals.

It is anticipated that this credit be guaranteed by the overflight fees; the contractual structure could be designed as follows.

