

ERICSSON/MÖ

LM Ericsson/MÖ K, S and V dept

LM Ericsson/MI (military) division

Ericsson Radio Systems AB, ERA

Ericsson Radar Electronics AB, ERE

Ericsson Microwave Systems AB, EMW

Defence & Space Electronics

Products

Airborne Radar

Ericsson has supplied the Swedish Air Force with advanced radar systems for three generations of combat aircraft—32 “Lansen”, 35 “Draken” and 37 “Viggen”. For the 37 “Viggen” Ericsson has produced three different radar systems—one for the attack, one for the reconnaissance and one for the fighter version.

PS-46/A, the radar for the fighter version of “Viggen” is the first airborne pulse doppler radar produced in Europe. It belongs to a class of radars where most of the functions are controlled or mechanized in the software of a special purpose computer. This makes the radar very flexible and exceedingly resistant to electronic jamming. For semi-active radar missile guidance a microwave transmitter, which utilizes the radar antenna, is provided.

Ericsson has supplied the Swedish Air Force with large quantities of IFF (Identification Friend or Foe) systems for all the above mentioned aircraft. For the time being Ericsson produces an advanced combined interrogator and transponder for the fighter version of “Viggen”.

Ericsson has also developed ECM (Electronic Counter-Measures) training equipment for the Swedish Air Force.



The next generation of combat aircraft in Sweden will be the JAS for which Ericsson develops a multipurpose radar system. This very advanced pulse doppler radar will be the first in Europe with complete functions for fighter missions as well as for attack and reconnaissance.

In addition to the multi-role radar subsystem, several other software controlled subsystems will be based on use of a standardized computing system, SDS 80, which employs a high level language. This unified approach is jointly under development by Ericsson and its subsidiaries, SRA Communications AB and Ericsson Information Systems AB.



Ericsson also produces a Side-Looking Airborne Radar, SLAR, a mapping radar for maritime surveillance, fishery protection, search and rescue, oil spill detection and sea ice forecast.



Erieye > GlobalEye

The **Erieye** radar system is an vital part of the Airborne Early Warning and Control System (AEW&C)



Ground Radar

Groundbased anti-aircraft defence radars make up a main defence product area within Ericsson. The main efforts are concentrated to various pulse doppler systems—the most effective allweather sensor to use against low-flying aircraft and missiles. Upgrading of old pulse radars by integration of MTI (Moving Target Indicator) is also included in this product area as well as integration of fully automatic IFF—both very important factors to achieve the short reaction times required in modern air defence systems.

The well-known GIRAFFE C-band Pulse Doppler Radar Family is finding world-wide acceptance as the standard radar system for search and acquisition as well as for central control in air defence systems.

The GIRAFFE features superior low altitude air detection capabilities combined with high mobility and fast deployment. The groundbased members of the GIRAFFE Radar Family are the Basic GIRAFFE for use with short range SAM or gun systems, the Super GIRAFFE for use with medium range SAM systems, the Low Surveillance (LS) GIRAFFE for air surveillance and early warning systems, and the Coastal GIRAFFE for detection and supervision of coastlines both for surface and air targets.





For Contraves in Switzerland Ericsson has developed and produced the search and fire control radar for the Skyguard system. The two-antenna radar features simultaneous target search and track. Skyguard is widely used over the world together with anti-aircraft missile and/or gun systems.



HARD (Helicopter and Aircraft Radar Detection) is a new development project in the 3-D-radar area. It is a small local search and acquisition radar for anti-aircraft systems. The radar uses a phased array antenna for elevation scan and a fully solid state transmitter.

Arthur

An counter-battery radar system originally developed jointly for and in close co-operation with the Norwegian and Swedish armed forces



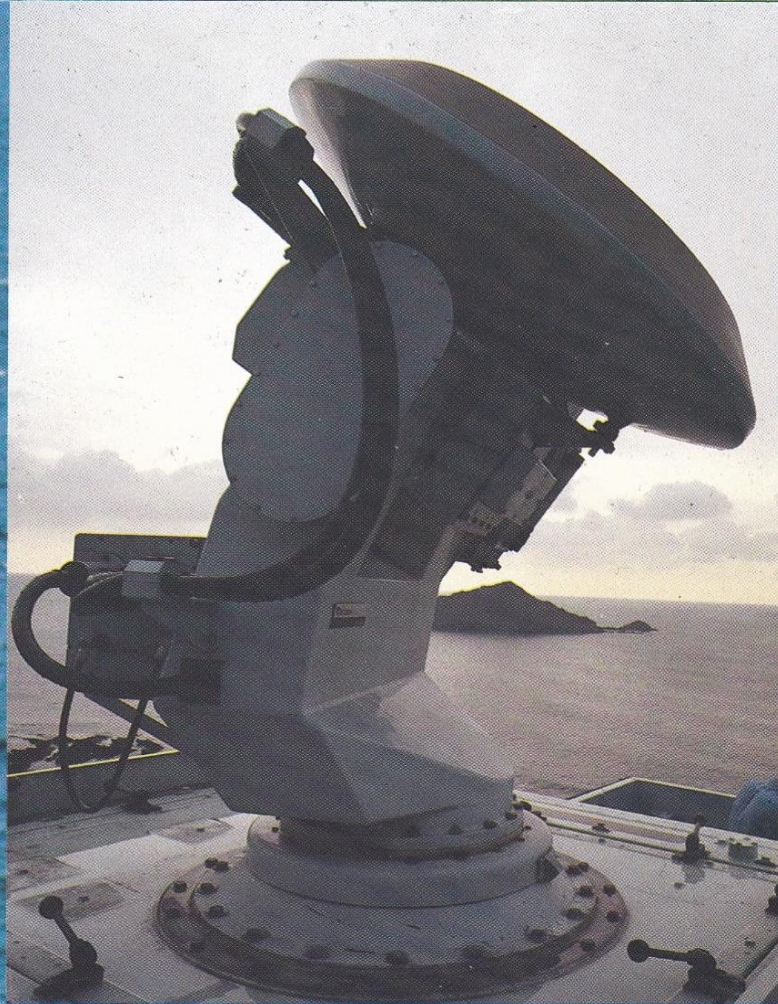
Naval Radar



The Ericsson pulse doppler radar program also comprises special systems for naval applications. The increasing demand for detection and combat of small targets at low altitudes, e.g. sea-skimming missiles, against a dense clutter background, calls for the use of pulse doppler radar systems.

The GIRAFFE Radar Family also includes the Sea GIRAFFE, especially adapted to naval defence and off-shore patrol for use on board fast patrol boats and ships up to frigate size. The Sea GIRAFFE systems provide a new generation of naval radars with three functions in one radar: air search, surface search and surface fire control. Three versions for naval defence and two for off-shore patrol are available depending on requirements and size of ship.

In co-operation with Marconi Radar Systems Ltd, UK, Ericsson has developed a family of X-band naval doppler radars known as the Marconi 800 Series. This 800 Series contains both surveillance and tracking radars for various types of ships.




Electro-Optics

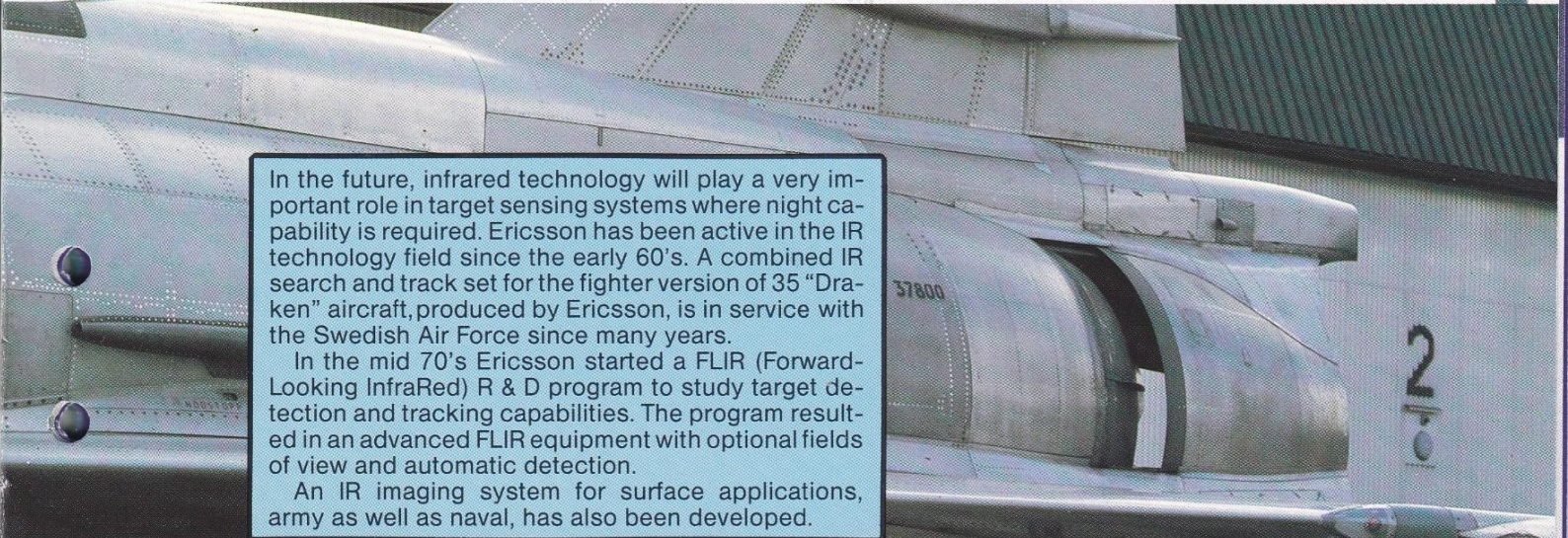


A major supplier of laser rangefinders for defence purposes, Ericsson's production program includes lasers for airborne and surface applications. The surface applications comprise field and coast artillery fire control, anti-aircraft fire control, battle tank sighting, and naval fire control. Neodymium-YAG laser technology is adopted as standard in all these laser units. The airborne applications comprise laser proximity fuzes for air-to-air missiles and air-to-ground ranging lasers for attack aircraft.






The latest Ericsson laser development is a 3-D-laser tracker for automatic target tracking and prediction. This laser can be integrated into a wide variety of anti-aircraft fire control systems, from relatively simple optical systems to more complex radar systems. The laser tracker is a further development of the well-known Ericsson anti-aircraft laser rangefinder, now in operation in many army and naval systems throughout the world.



In the future, infrared technology will play a very important role in target sensing systems where night capability is required. Ericsson has been active in the IR technology field since the early 60's. A combined IR search and track set for the fighter version of 35 "Draken" aircraft, produced by Ericsson, is in service with the Swedish Air Force since many years.

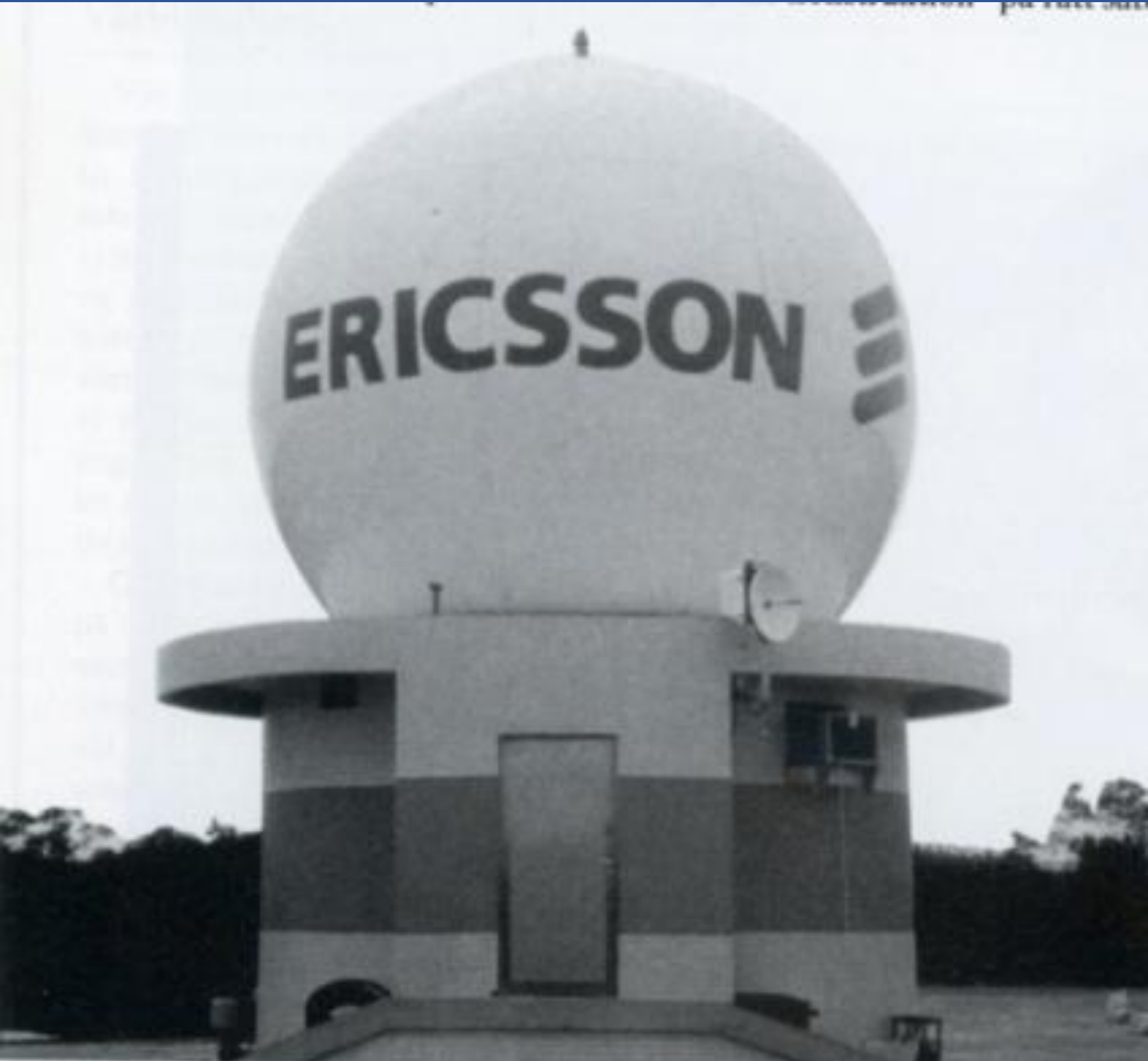
In the mid 70's Ericsson started a FLIR (Forward-Looking InfraRed) R & D program to study target detection and tracking capabilities. The program resulted in an advanced FLIR equipment with optional fields of view and automatic detection.

An IR imaging system for surface applications, army as well as naval, has also been developed.



Weather Radar

A doppler weather radar developed in cooperation with SMHI, within their PROMIS project



ERICON

A direct responding radar beacon



Communication

Communication is also a significant field of activity of the division. One example is the MINI-LINK system—a family of microwave radio links for transmission of voice, data and video.

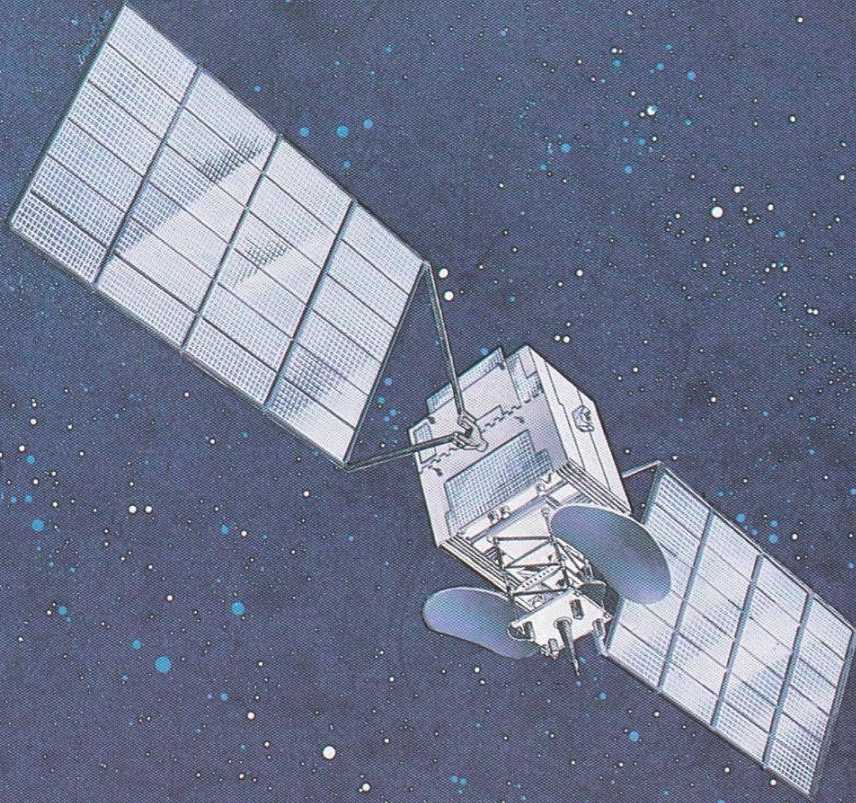
The low weight and volume of the MINI-LINKs as well as the combined mounting of electronics and antenna provides for simple installation and cost savings (no requirement for towers, pressurized feeders, separate buildings for electronics, etc.).

MINI-LINKs are well suited for operation in PTT public networks as well as in private networks in urban areas. The links can be used as cable replacement and to relay signals for remote control, supervision, etc. Military versions for tactical communications are also available.

Currently under development is a secure communication link within the microwave band for e.g. missile guidance, RPV communication and navigation.



Satellite Communication



The division has been active in satellite communication since the mid 60's. A prominent field of activity today is design and optimization of total satellite communication systems, also employing resources and expertise from other parts of the Ericsson Group. One example is the Nordic Tele-X satellite program in which Ericsson as system responsible is prime contractor for the earth segment and for the communication payload of the satellite.

Development and production of hardware include different types of earth stations and satellite electronics such as antennas and various transponder equipment.



ATC Balise

A balise is an electronic beacon or transponder placed between the rails of a railway as part of an automatic train control (ATC) system.

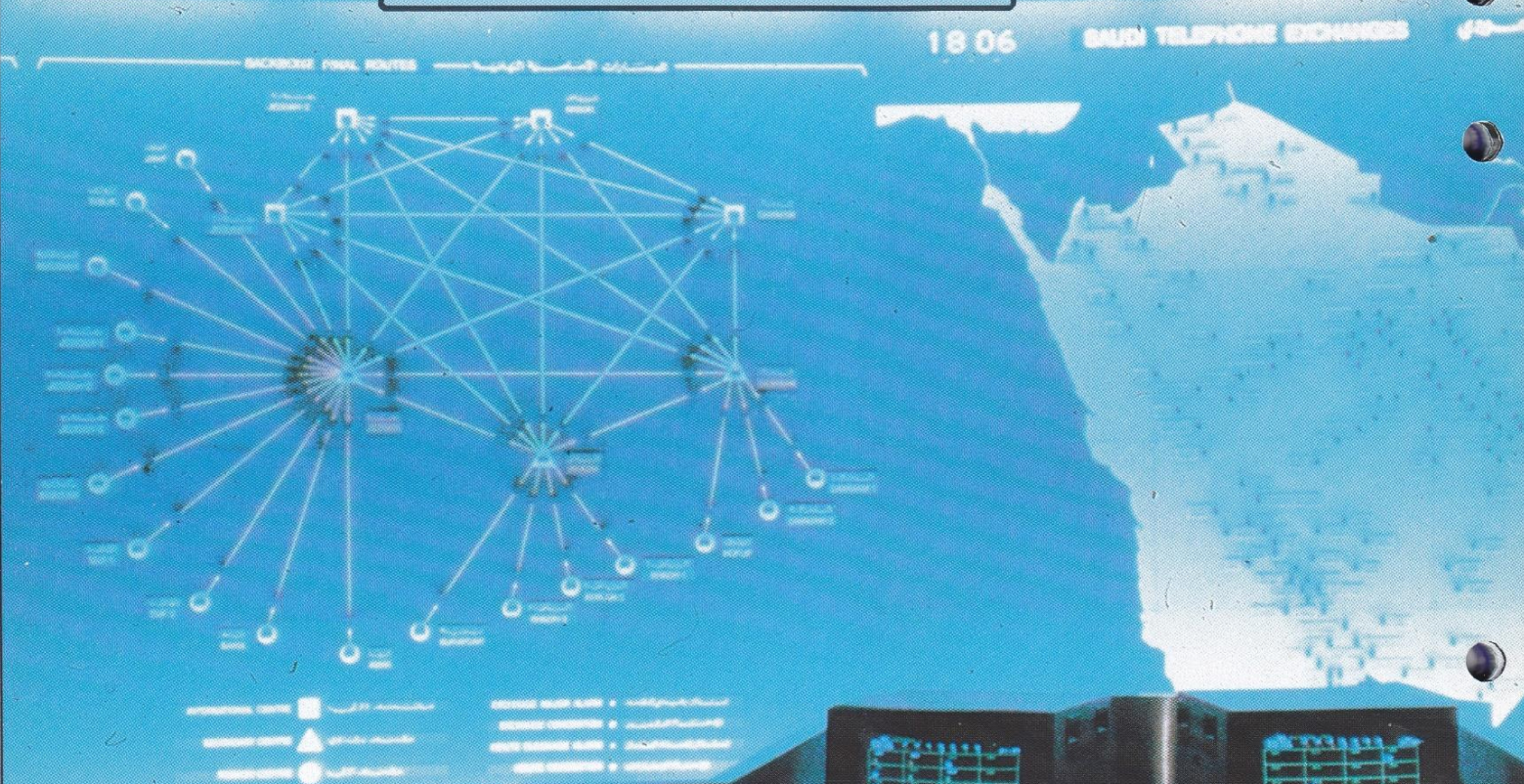


Network Supervision

The main thrust of the Ericsson Group is within the area of public telecommunications. Ericsson's flagship, the all-electronic AXE switching system, has met unprecedented acceptance from qualified tele-administrations throughout the world.

Among the factors contributing to this unique success is the capability for remote operation and maintenance from network centres connected to Ericsson's O&M system, AOM 101, which was developed by this division.

Utilizing proven computer technology of Ericsson design, the AOM 101 system provides real-time access to all parts of the network, including the conventional electromechanical and analogue equipments. Modularly expandable in both size and function, AOM 101 can be adapted precisely to current command and control needs while ensuring a growth path for future needs.



AOM 101 systems, structured on a hierarchical basis, provide essential on-hand computer support to all levels of the organisation—from local alarm printouts at manned exchanges, all the way up to national control centres, as shown here.

In short, the AOM 101 provides total coverage. Coverage of all parts of the network for all parts of a telecommunication administration.

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in the mid 1980th

