

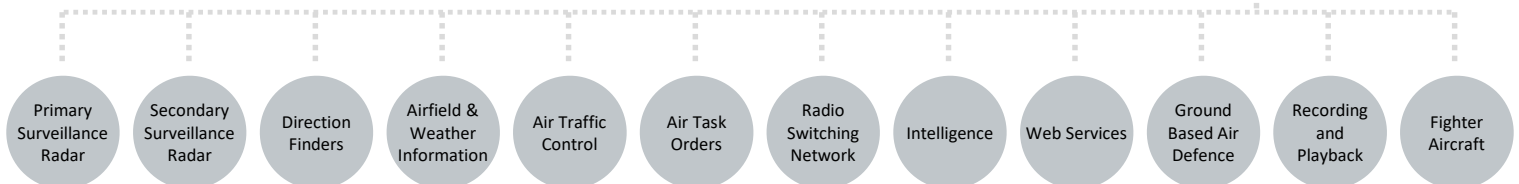
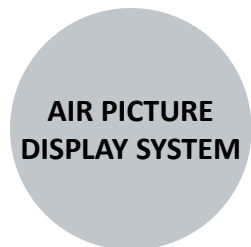
AIR PICTURE DISPLAY SYSTEM

KNOW YOUR AIRSPACE (APDS)



KNOW YOUR AIRSPACE

The Air Picture Display system (APDS) forms the backbone of the surveillance, control and air Defence (SCAD) system. It makes extensive use of commercial off the shelf (COTS) computer hardware and software, providing a flexible, cost effective alternative to expensive, custom built display and processing systems.



The operational role of the APDS is to integrate all available resources into a single, efficient in-flight command and control capability by:

- Creating a current, complete and accurate Air Situation Picture and distribute it to the different command and control users.
- Supporting positive control of all aircraft and weapon systems, mainly on operational combat missions;
- Providing effective Air Defence of sovereign territory in general and vital areas and possible conflict zones in particular.



This centralized command and control system enables optimum utilization of the available aircraft and weapon systems, as well as continuous command and control during all phases of the mission cycle (e.g. Before take-off, In flight and After landing).

The APDS is designed to operate at the various kinds of command and control sites that form part of a Surveillance, Control and Air Defence System, such as:

- Command Posts
- Sector Control Centers, mobile or static
- Deployable Control and Reporting Posts.

THE AIR SITUATION PICTURE

The main function of the APDS as part of the Surveillance, Control and Air Defence System is to control in-flight activities. It is of the utmost importance that a current, complete and accurate Air Situation Picture always is available to all decision-makers.

The Air Situation Picture is a visual presentation of real-time information regarding airborne entities within a specified airspace.

Each entity is given a unique, common reference which is displayed on the background map together with related information such as:

- Position
- Altitude
- Velocity (direction and speed)
- Formation strength
- Identification

MULTI-SENSOR FUSION

Radar sensors, primary radar as well as secondary surveillance radar report plot data directly to a particular APDS site. This is the primary source for the creation of the Air Situation Picture. In addition, direction finders (DF) can be connected to a site to provide bearing (strobe) data.

RECORDING AND PLAYBACK

The APDS includes a complete recording and playback system (RPS), which records up to five radar channels, all LAN traffic and up to 512 audio channels simultaneously. This function is of particular value for debriefing, training and incident investigation purposes.

It allows the operator to play back a particular section of a recording to one or several operational workstations, impound recordings electronically to prevent tampering, and keep record of operations for future use. The system is ICAO certified and in use at several international airports.