

GUIDELINES FOR SHARED USE OF RADAR DATA BETWEEN ADJACENT STATES

1. Background

1.1 At its various meetings, the Radar Task Force has discussed and established, beyond any doubt, the convenience for States to share the use of radar data in common areas of flight information regions (FIRs) boundaries where coverage is available.

1.2 The main objective is to meet current and future air traffic service demand by improving ATS capacity.

2. Planning

2.1 To this end, it is advisable that States make a prior evaluation of the technical and operational advantages to be obtained, considering their own needs. Likewise, plans should be developed based on the following guidelines:

- States should enter into cooperation arrangements which contemplate the standardization of radar surveillance system interfaces.
- Duplication of radar facilities should be avoided in FIR boundaries, in order to simplify investment costs.
- Installed and/or planned radar systems for the short, medium and long term should be kept compatible with a view to future connections with other surveillance systems, so as to ensure interoperability of systems among the States in the region.
- The specific elements of advanced technology required for visual display, such as automated systems with ATS interchange of data capability (AIDC), should be identified and established, keeping radar information separate from flight plan information.

3. Information on facilities

3.1 Agreements should contain provisions aimed at maintaining a dynamic interaction for the evaluation and interchange of detailed information on the coverage of each specific system, so that States may develop a common regional planning. Such information would include:

- facility location(s);
- type of radar facility (PSR, SSR, SSR Mode S, etc.);
- transmission media and protocols used for this purpose;
- certified coverage; and
- planned facilities and implementation dates.

4. Radar data transmission

4.1 A fundamental step for integrating the transmission and reception of radar data from one State to another is the standardization of interfaces for equipment/systems, telephone, etc.

- a) transmission media used, such as radio links, microwave, satellite, telephone, etc.;
- b) the place where the radar signal is processed to digital data, be it at the transmission or reception point, or both; and
- c) protocols used for data transmission.

4.2 It is advisable to use the protocols defined in the ATN SARPs already issued by ICAO. This would allow for the shared use and certification of the whole regional surveillance network with a view to the implementation of the CNS/ATM Plan developed by ICAO.

4.3 Likewise, it is advisable that each State foresee the planned use of high-speed means in the medium term, for their future use in the transmission of digital data.

5. Coverage and visual display

5.1 Once the information described in items 3 and 4 above is available, and based on the needs of user States, these should:

- a) identify the areas close to FIR boundaries where coverage at/above 10,000 feet is available, for use in the control of aircraft operating in TMAs and/or en route;
- b) identify the areas close to FIR boundaries where coverage below 10,000 feet is available, for use in the control of aircraft operating in TMAs of one or more bordering airports;
- c) in order to obtain a coverage display as referred to in a) and b) above, the following method may be applied:
 - determine, at the operation site, coverage display at 1000, 2000, 3000, 4000, 6000, 8000, 10000 and 15000 feet AGL; and

- determine, at the site of operation, coverage display every 5,000 feet; that is, at FL200, FL250, FL300, FL350, etc.

Note: States should consider the shared use of military radar facilities as a valid alternative for the benefit of civil air navigation.

Shared data may originate at a PSR/SSR (primary and secondary data) station or be SSR information only, according to the technical possibilities of the system and the arrangements established between civil aeronautics authorities and the corresponding military authorities. In said arrangements, it is important to take into account the suitability of radar data and service continuity as required by air traffic services.