

Use of Transponder-Derived Data

BACKGROUND

The air transport industry is under constant pressure to increase airspace capacity and reduce separation minima without decreasing safety. One method to augment data derived by surveillance radar is Automatic Dependent Surveillance (ADS).

The airborne part of the system is sending additional information on the aircraft status, e.g. position data derived by GNSS and internal aircraft systems. This information is used to improve radar position accuracy and therefore facilitate specific reduced separation, enabling additional safety nets and reducing controller workload. ICAO DOC 4444 Chapter 8.5 specifies the use of SSR transponders and ADS-B transmitters.

MISUSE OF TRANSPONDER-DERIVED DATA

IFALPA is extremely concerned about the hearing summons recently sent to several pilots by a National Air Navigation Services Agency, in which the Agency argues that the pilots have committed so-called "administrative offenses." These "offenses," allegedly identified through sources like radar and ADS-derived data, include non-compliance with given speed restrictions or departure routes, and loss of communication.

IFALPA POSITION

The use of transponder derived data can be a great enhancement to aviation safety. However, it should be highlighted that data sets have certain limitations by design and should therefore only be used within the scope of operation described in ICAO Documents.

Data transmissions are neither encrypted nor checked for their integrity and can easily be manipulated, creating both safety and security concerns like the creation of phantom targets or the modification of transmissions.

ADS transmissions were originally designed for a specific set of applications, as stated in Chapter 1 of ICAO DOC 4444 (ATS surveillance systems capabilities). They should not be used for other purposes without the relevant risk analysis and due consideration of their limitations.

IFALPA believes that the following principles should apply for the usage of transponder derived data:

- The use and storage of data sets should follow valid national and internal data protection laws;
- The sole purpose of this data should be the increase of flight safety;
- The data should be protected in accordance with International Standards and Regulations such as ICAO Annex 19 and EU Regulation 376/2014;
- Due to the vulnerable nature of the data sets, the data should never be used for any legal proceedings.