NavWorX®

Surveillance and Broadcast Services

Traffic Information Service - Broadcast (TIS-B)

TIS-B broadcasts surveillance data to equipment in the aircraft and provides ADS-B equipped aircraft with position reports from secondary surveillance sources for non-ADS-B equipped aircraft.

Flight Information Service - Broadcast (FIS-B)

FIS-B Transmits graphical National Weather Service products, Temporary Flight Restrictions (TFRs) and special use airspace information.

Automatic Dependent Surveillance - Broadcast (ADS-B)

Automatic - Periodically transmits information with no pilot or operator input required

Surveillance - A method of determining position of aircraft, vehicles, or other asset

Dependent - Position and velocity vector are derived from the Global Positioning System (GPS) or a Flight Management System (FMS)

Broadcast - Transmitted information available to anyone with the appropriate receiving equipment

The ADS-B system is a crucial component of the Next Generation Air Transportation System (NGATS). It provides surveillance and situational awareness simultaneously to pilots and air traffic control facilities. ADS-B is designed to improve the safety, capacity and efficiency of the National Airspace System while providing a flexible expandable platform to accommodate future air traffic growth. ADS-B provides improved situational awareness with the following information in the cockpit:
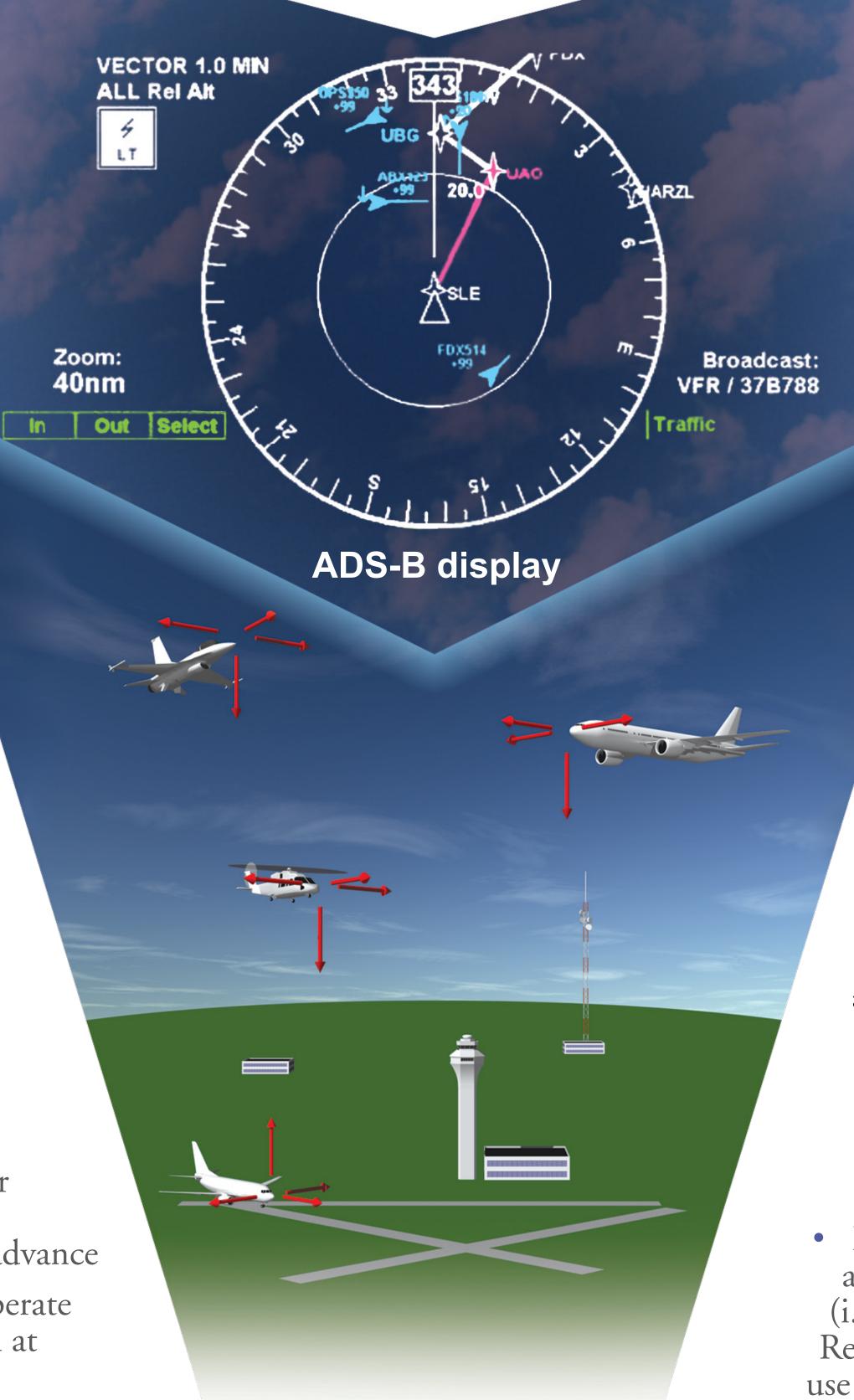
- Heading
- Altitude
- Speed
- Aircraft category
- Call sign
- Distance

FIS-B display

TIS-B display

ADS-B display

Capacity and Efficiency

Airspace can be better utilized by providing the capability for both reduced separation as well as greater predictability in departure and arrival times. Benefits include:

- Radar-like separation procedures in remote or non-radar areas, possibly decreasing travel time

- Support for common separation standards (horizontal and vertical) in all classes of airspace

- Improved ability to manage traffic and aircraft fleets

- Improved air traffic controller ability to plan arrivals and departures for aircraft far in advance

- Infrastructure necessary to operate the National Airspace System at reduced cost

Benefits and Safety

ADS-B/TIS-B/FIS-B services provide several new or greatly improved operational capabilities. Service providers will use the new surveillance capability to enable enhanced Air Traffic Control (ATC) services. Users employ the surveillance and broadcast services capability to support flight operations. These services help to prevent accidents by providing increased situational awareness to air traffic controllers and pilots by providing:

- Air-to-air surveillance capability

- Surveillance to areas that do not currently have surveillance coverage

- Real-time, in-the-cockpit, traffic and aeronautical information (i.e. weather, Temporary Flight Restrictions (TFRs), and special use airspace information)