Imagine your flight instructors and students being able to see nearby aircraft and real-time weather on a moving map cockpit display. At the same time, your dispatcher on the ground can monitor the progress of all your aircraft. A new technology called Automatic Dependent Surveillance-Broadcast (ADS-B) now provides that capability in your area. This capability can certainly improve the safety and efficiency of your flight training operations.

To improve aviation safety, the FAA plans to deliver ADS-B services to key sites. Figure 1 identifies the expected coverage available in April 2005 which

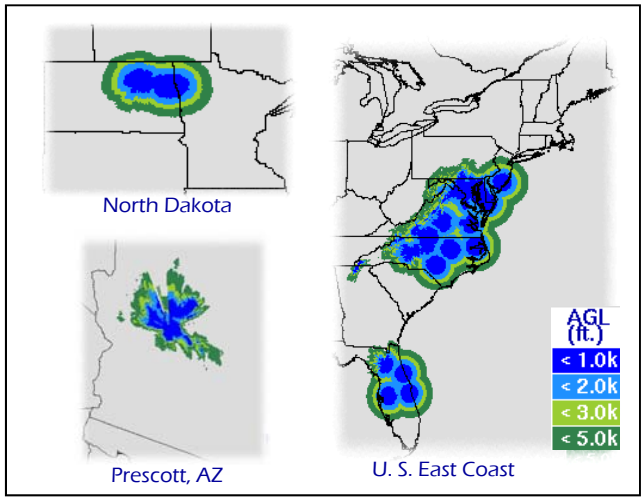

Figure 1

includes areas along the east coast as well as Prescott Arizona and northeast North Dakota. The infrastructure to provide ADS-B services is already in place and providing services to equipped aircraft. Availability of services will depend on the proximity of equipped aircraft to these ADS-B ground stations. As the infrastructure matures, additional ground stations will be deployed. The goal is to provide services at lower altitudes typically used by general aviation (GA) aircraft. These services are intended to reduce accidents and to be provided without subscription fee.

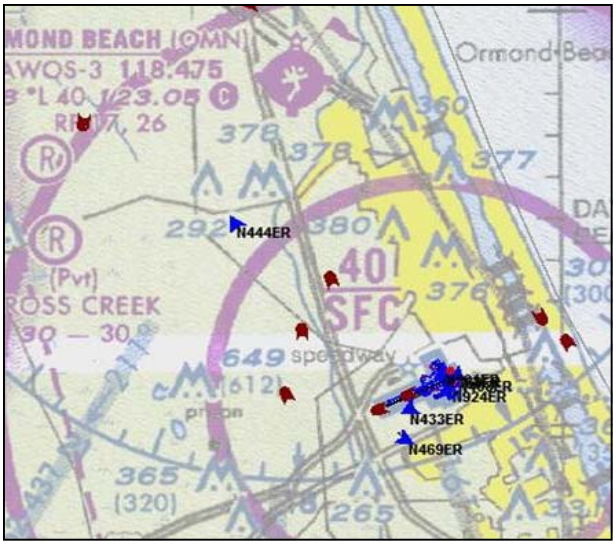

Figure 2

ADS-B technology broadcasts traffic and weather information on an internationally protected aviation frequency that is designated only for ADS-B. FAA's National Airspace System (NAS) Architecture, currently version 5.0, calls for over 550 ADS-B ground transceivers to be deployed nationwide by 2012. The current status of this infrastructure can be found at www.flyadsb.com.

ADVANTAGES OF ADS-B TO FLIGHT SCHOOLS

In addition to improved situational awareness and enhanced safety for the pilot in flight, ADS-B provides an accurate, real-time, flight monitoring capability to support flight dispatch and other operation functions. ADS-B flight monitoring applications, illustrated in Figure 2, may be shown on any display interfaced to a personal computer with appropriate access to the internet. Fleet operators can monitor their aircraft real-time, throughout the available ground station coverage area with these operational benefits:

- Mitigating risk of mid-air and near-mid-air collisions
- Mitigating risk of operations in declining weather conditions
- Recording of all flight operations within ground station coverage
- Conformance monitoring of aircraft to intended flight path or destination
- Locating overdue aircraft returning late to home station
- Instructor review and debriefing of student pilots
- Aid to search-and-rescue operations
- Introducing student pilots to advanced (glass) technology

HOW ADS-B WORKS

Key ADS-B components, including aircraft and ADS-B ground stations, are shown in Figure 3. Using an ADS-B data link radio, equipped aircraft broadcast their own GPS-derived position

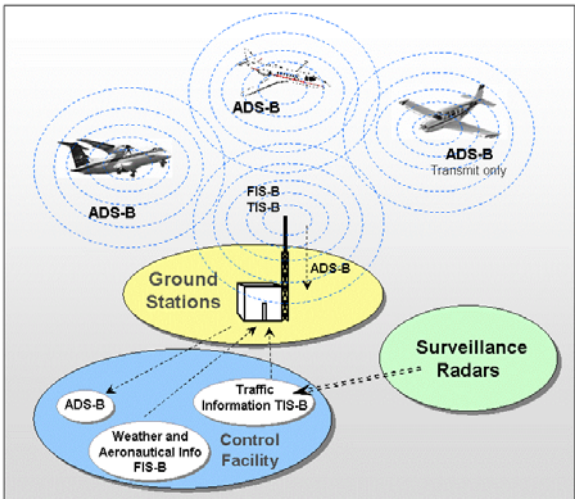

Figure 3

once per second. This information is received by other ADS-B equipped aircraft within reception range and presented on a multi-function Cockpit Display of Traffic Information (CDTI). To augment this air-to-air traffic display, ADS-B ground stations broadcast FAA Secondary Surveillance Radar (SSR) position information of aircraft not equipped with ADS-B. These aircraft are also displayed on the CDTI. To supplement the pilot's situational awareness, text and graphical weather products are broadcast on the same data link frequency and can be up-linked to the pilot on the ADS-B cockpit display.

ADS-B IN THE COCKPIT

A typical ADS-B CDTI is represented in Figure 4. Own-ship position is depicted as a triangle at the bottom center of the display. Advisory information on the traffic shown includes aircraft call sign or ID for ADS-B equipped aircraft, position and altitude relative to own-ship, altitude trend information, airspeed, direction of travel, and distance

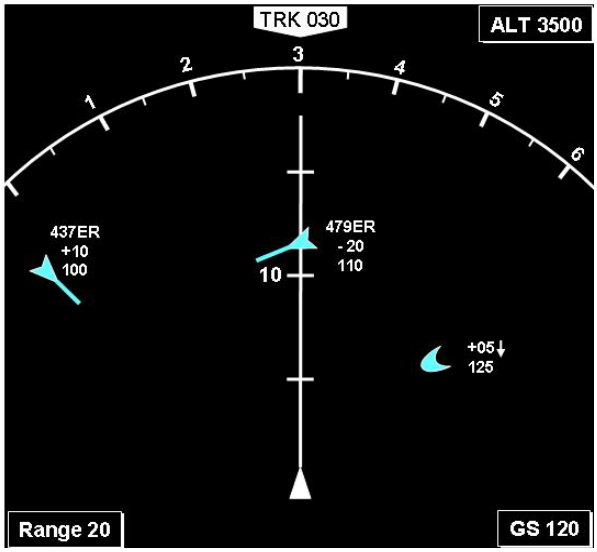

Figure 4

from own-ship. As the traffic data is up-linked to the multi-function display, the pilot has a great deal of flexibility in personalizing how information is presented.

For further information about ADS-B, its related services, and how this technology can enhance your flight training operations, contact:

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