

# The MITRE Corporation

## License Opportunities



MITRE technology transfer office

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## Universal Access Transceiver

**M**ITRE has developed a miniaturized version of the Universal Access Transceiver (UAT) technology, which is now known as the UAT Beacon Radio (UBR) technology. Developed in the mid-1990s, UAT is a digital radio system that significantly increases situational awareness for small aircraft and for aircraft operating in the lower altitudes of the national airspace which is not covered by surveillance radar. The technology supports multiple broadcast data services crucial to flight safety, including the Automatic Dependent Surveillance Broadcast (ADS-B) capability. ADS-B technology communicates an aircraft's position data nominally once per second to other aircraft and to airport vehicles on the ground—making it possible for aircraft to virtually “see” nearby aircraft and ground vehicles. UBR also supports the transmission of aircraft position data as determined by radar (Traffic Information Service-Broadcast) and the transmission of graphical weather data and other flight information (Flight Information Service-Broadcast). Combining these three key services provides aircraft operators with a comprehensive set of aviation data and reduces the amount and cost of the avionics equipment needed for such services.

MITRE is offering intellectual property licenses for the UBR technology to interested U.S.-based companies on a non-exclusive basis.

## Applications

The UBR technology has the potential to improve visual acquisition of small unmanned aircraft systems, general aviation aircraft without engine-generated electrical systems, hang gliders, and balloons operating in visual meteorological conditions in low-altitude airspace.

## Benefits

Due to its very small size, UBR can be used on a variety of small aircraft with space constraints for devices. UBR maintains the standards and capabilities that allow it to communicate in the same manner as UAT with considerably less expensive production costs.

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## Additional Information and Links

Hartford, R., June 2008, “UAT Puts UAVs on the Radar,” The MITRE Digest, [www.mitre.org/news/digest/aviation/06\\_08/av\\_uat.html](http://www.mitre.org/news/digest/aviation/06_08/av_uat.html).

Shearman, J., May 2007, “MITRE Develops Portable ADS-B Radio for Small Unmanned Aircraft,” The MITRE Corporation, [www.mitre.org/news/releases/07/adsb\\_05\\_08\\_2007.html](http://www.mitre.org/news/releases/07/adsb_05_08_2007.html).