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RTCA SC-186  
Work Group 6

Proposed TSR Update Rate Requirements

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Reference: Tony Warren email (Jan. 17, 2002) and draft paper on intent update rate requirements

## **Discussion**

Subsequent to the series of telecons held by a subset of the WG6 members during the weeks of 7 January and 14 January a draft working paper was produced by Tony Warren that included proposed requirements for TSR and TCR. I have reviewed this paper and I am provided this input to WG6 for their consideration as a proposed alternative for expressing the TSR update rate requirements in DO-242A. I contend that the proposed alternative will meet the same system level requirements as Mr. Warren's approach, but will allow for more flexibility in how the individual ADS-B links will meet the operational objectives. I contend this is a more appropriate approach for specifying the requirements in the MASPS.

### **Proposed Requirement for TSR Acquisition and Update**

The TSR acquisition and update requirements are specified for the following enroute scenario. Own aircraft and the target aircraft are approaching head-on, each with a ground speed of 600 knots. The target aircraft is equipped for and is broadcasting TSR information. Acquisition of the target aircraft's TSR shall be achieved at an air-to-air range of 40 nmi. at 95% probability (50 nmi. desired). Furthermore, acquisition shall be achieved with 99% probability at or before an air-to-air range of 35 nmi. Any changes in the aircraft state information being reported by the target aircraft shall be received within 12 seconds at 95% probability when the air-to-air range is within 40 nmi.