

UAT-WP22-08
23 March 2009

RTCA Special Committee 186, Working Group 5

UAT MOPS Maintenance

Meeting #22

Held as a Teleconference and WebEx Session
23 March 2009, 1:00pm – 3:00pm EDT

Potential Updates to the UAT MOPS

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Summary
This Working Paper addresses some of the potential updates to the UAT MOPS that I have gathered over the years and should be considered while we have the MOPS open.

Potential Updates to UAT MOPS

1. Update Table 2-7 Frame Types to match what ITT is broadcasting for TIS-B service status.
2. Rescale Table 2-23 Groundspeed for more LSB resolution (1/8 kt) for improved support for surface alerting and to match what 1090 does. Currently LSB is 1 knot.
3. Use reserved fields of ADDRESS QUALIFIER to also distinguish ADS-R from ADS-B and TIS-B.
4. Need notes for 2.2.11.1 that antenna switching time must be faster for a combined transponder/UAT implementation.
5. Need to make clear that geometric altitude is HAE.
6. Need more guidance on vertical rate source logic. And if vertical rate derived from barometric is a requirement for a minimum installation, some guidance on the filtering expected would be nice. Otherwise the response will vary from mfg to mfg.
7. Do we need more frequent update of NAC_P and Mode A code on change? Hopefully not, but this requirement from ADS-B RAD has caused the 1090ES to make changes.
8. Do we need some means for receiver to determine equipment class or at least if using antenna diversity? Hopefully we don't but difficult to infer currently from payload
9. We may need guidance for receiver to prioritize uplinks to ensure the interface can provide all from at least the most proximate GBT first.
10. Need to somehow make clear that ADS-B must monitor the alarm discrete output from the GPS sensor and force NIC to zero when this is set regardless of the HPL.
11. **Possible New Functionality:** Some simple feedback mechanism for avionics to periodically indicate the total number of Uplink or TIS-B receptions from a randomly selected GBT using existing spare payload. This will enable the ground system—over time—to make inferences about the health of the GBT transmitters/antennas. This is one aspect lacking in the current monitor concept.