

Presentation to UAT MOPS WG

UAT Acquisition
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Aircraft Track Acquisition Assumptions

- Epoch message sequence as defined in DO-282
- 16-second transmission sequence
 - ◆ Four 4-message epochs
 - ◆ Rotation of start message
- Every other MS message contains Flight Plan ID
- Requirements for acquisition vary by aircraft type
 - ◆ A3 – reception of TSR, TCR0, TCR1, MS(ID)
 - ◆ A2 – reception of TSR, TCR0, MS(ID)
 - ◆ A1H – reception of TSR, MS(ID)
 - ◆ A1L/A0 – reception of SV

Acquisition Methodology

- Use probes in head-on scenario
- Starting ranges vary by aircraft type
 - ◆ A3 – 180 NM
 - ◆ A2/A1 – 80 NM
 - ◆ A0 – 50 NM
- Determine 99th percentile for range at acquisition

99% Acquisition Results in NM

	A3 xmt	A2 xmt	A1H xmt	A1L xmt	A0 xmt
A3 rcv	137 110	53 34	53 35	49	18
A2 rcv	145 133	54 36	53 36	52	17
A1 rcv	122 110	50 26	38 35	37	11

Results are 99th percentile for range at 99% track acquisition.

Upper numbers are previous results; lower numbers are for alternating MS