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ASSAP Notes on CDTI Rule Sets
Captured During January 2007 Meeting

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Summary

This paper captures the consensus of the ASSAP Working Group during discussion of the CDTI proposed Rule Sets.

ASSAP Rule Set Proposal

It is unclear how degraded symbology, as a function of reported accuracy or integrity, will improve the pilot's situational awareness. Using a degraded symbol to represent a coasted target may have more tactical value, but should be an option. Removing degraded symbology significantly reduces the number of symbols thus simplifying the presentation.

ASSAP will send target information to CDTI. ASSAP will indicate that target information is good/degraded/invalid using EVAcq limits.

If implemented, ASSAP will indicate that target information is good/degraded/invalid using ASSA/FAROA limits. CDTI will use these limits to depict traffic on the surface map if available. If a surface map is not available, CDTI may choose to depict traffic using the EVAcq limits as a fall back.

If implemented, ASSAP will indicate that target information is good/invalid for CD. If implemented, ASSAP will indicate that target information is good/invalid for EVApp. This deviates from DO-289 in that it does not define a degraded mode for EVApp or CD.

ASSAP will send target altitude relative to own ship. ASSAP will calculate this using pressure altitude. If pressure altitude for own ship or target is invalid, relative altitude may be calculated using Height Above the Ellipsoid for both ships. The implication is that CDTI may use this to filter the ASSA/FAROA display.

A selected/highlighted target will have additional information sent to CDTI by ASSAP. The additional information consists of Flight ID, Emitter Category, Ground Speed, Range, Closure Rate. CDTI will send the selected/highlighted target to ASSAP.

A coupled target will have application specific information sent to CDTI by ASSAP. Coupled targets' data is sent to CDTI even when they are not selected/highlighted. CDTI will send a list of targets coupled to applications to ASSAP. The status of the application depends on the validity of the source data and operational parameters. CDTI may need to send operational parameters for an application to ASSAP. For example, CDTI may send a time in trail target for a Merging and Spacing application. A target whose operational parameters are all met is considered an Engaged target. Engaged is a proposed concept from ARINC-735B.

What do you do with the application limits if you don't implement degraded status? Our proposal is for ASSAP to tell CDTI that a target is either valid or invalid for a particular application. This determination would be based on the invalid threshold, not the degraded threshold. For Enhanced Visual Approach, this means that a target with a NACp = 6 would be valid as opposed to degraded. The applications that we currently view as not needing a degraded status are EVApp and CD. We are planning on sending degraded information for EVAcq and ASSA/FAROA.