Notes from 10-11-02 WG4 Telecon

Participants - check list with Jonathan

Jonathan Hammer (CAASD)
Jim Maynard (UPS-AT)
Joel Wichgers (Collins)
Tom Foster (Self for FAA)
Steve Koczo (Collins)
Mike Faulkinbury (Raytheon)– interest in data fusion)
Bill Morris (Raytheon)
Michael Petri (FAA)
Rose Ashford (NASA Ames)

Action Items in RED.

Introductory Material

Next Telecon will be Oct. 17 from 1-4 PM Eastern Time.

1) Soliciting comments for the EVAcquisition Analysis Report for MIT LL.

- Joel Wichgers had some comments / observations on the Requirements Table in Section 4.0 (p.15). Concerning the determination of when horizontal position data is viewed as degraded, one must consider other factors, such as 'age of data' in making the determination of being 'degraded'.
- Concerning the horizontal and vertical velocity requirements, the use of velocity information is expected to be beneficial in providing a consistent target update to a common time reference. This is to eliminate "caterpillar effects" and 'Twinkling of targets' that move independent of each other needs to be avoided. This is also the case when traffic is displayed on a combined display from ADS-B and for example from TCAS, where processing. All targets displayed need to be updated to a common time of applicability to avoid display update effects, which needs to be taken care of via extrapolation using velocity, or when not available (as for TCAS) using target tracker updates to a common time of applicability.
- Time to alert comment: Navigation systems typically have a minimum 10 sec time to alert. The 6 second time to indicate an integrity change seems overly stringent and could be relaxed considerably – item for discussion.
- Report time accuracy will likely need a requirement in dealing with latency compensation issues.
- P. 17: Workload requirement comment. Need to add the words 'do not' distract crews …
- Comment on 600 kts closure rate. Is that high enough?
- A question was raised if the MASPS will be addressing 'Processing requirements'. No they will not since this is too detailed for a MASPS level document.
- Aircraft density requirements need to be considered

- Integrity requirements will be needed for each of the supporting subsystems that support the applications, e.g., not only do we need target and own ship data integrity, but also integrity of the processing function display function, TIS-B surveillance system, etc.
- Discussion about how the operational concept impacts / affects how information is displayed, and how to represent / display degraded data. Discussion about if 'degraded' depiction is even allowed. This needs to be discussed further with WG1 which does not currently embrace the concept of displaying degraded data.

  For EVAcquisition, which is a background application, this application is supported by see-and-avoid and is backed-up by ATC. These factors impact on how data quality needs to be viewed and addressed and how they should be presented on the display. Action: WG1 to further address this with WG4 in how to deal with the issue of Degraded data.

  This should also be viewed in context with multiple applications running at the same time.

2) Jonathan overview of Chapter 2 and Chapter 3 Strawman for ASA MASPS

Jonathan provided an overview of the draft document.

The following comments were noted:

Ground side is not included. Ground side is referenced in Chapter 1, but document focus is on airborne side.

Discussion about whether ADS-B transmit and receive should be treated as separate subsystems. Service levels may be different for transmit and receive subsystems. The group agreed that transmit and receive subsystems should be addressed as separate sections in Chapter 3.

A general statement of being able to see traffic from all directions should be included. This will be addressed in more detail in subsequent documents in whether antenna diversity is needed.

We need to assess whether service levels are a "static" or "dynamic" concept.

What are some common performance characteristic groupings; having some groupings of available equipment; need to be developed to develop the Service Level Boundaries.

Tom referenced the PO ASAS document, where applications are grouped by operational use / characteristics. This points to one dimension of a possible grouping into service levels.

- Jonathan reviewed the Figure 2-1
- Table 2-2 Service Levels discussion. Tom suggested to keep this table more generic, as an overview of general characteristics associated with each service level. For example, page 20 on PO ASAS document talks about equipment categories (low, med, high, very high); application scope (verbiage on application characteristics), we should fold some of this into the ASA MASPS. Jonathan took the action to address Tom's comments and suggestions in further development of the service levels. Tom will assist Jonathan on this action. There is group consensus on this approach. Action: Jonathan and Tom Foster to develop Service Levels based on the above discussion.
- Section 2.3.1 – Definitions of Background Application and Coupled Applications.
- Section 2.4 ASA Interface Requirements

- On Table 2-2, if Surface versus Airborne columns are vastly different, consider developing two separate tables.
- On Table 2-3; consider writing text describing each of the individual table entries with the table serving as an overall summary.

Rose Ashford will solicit WG4 members who have not yet indicated they will be attending the WG4 meeting at NASA Ames. Rose will also provide gate and building information.

3) Next Week's Telecon

Oct 17 from 1-4 PM Eastern Time. Topics will be EVAcquisition and continuation of discussion of Chapter 2 and 3 draft document.

End of Notes from 10/11/02 Telecon