

Participants:

Michael Petri (FAA TC)  
Lee Etnyre (UPSAT)  
Steve Koczo (Rockwell Collins)  
Tim Rand (Collins)  
Bill Lee (Boeing)  
Mike Ulrey (Boeing)  
Ganghuai Wang (CAASD)  
Dave Spencer (MITLL)  
Andy Zeitlin (CAASD)  
Rose Ashford (NASA)

Notes: WG4 telecon 3-20-02

**A) Appendix Outline Proposal; the following outline was agreed to:**

1. process and phase diagrams, with textual description
2. Hazard and Safety Analysis
  - 2.1 Operational Hazard Analysis (OHA) (safety tables)
  - 2.2 FMEA analysis
  - 2.3 Fault and Event Tree Analysis
3. Normal Operations Analysis - addresses requirements needed to support operation.
4. Requirements Summary
  - 4.1 Data Requirements
  - 4.2 Processing requirements
  - 4.3 Interface requirements
  - 4.4 Display requirements

Right now ASA MASPS has appendix 9 (E) as the application appendices. Example of how the outline above will be fit:

E/9.3 is the 3<sup>rd</sup> application , e.g., ASIA  
E/9.3.1 ASIA Apps description/OSED

## E/9.3.2 Analysis work

### B) Conflict Detection

Lee Etnyre presented his analysis and results for the conflict detection “application.” Comment summary:

- Mike Ulrey, Dave Spencer -- consistency of fault-tree to methodology: operational Hazards should be at the left end of the event tree – i.e., initiator event
- should avoid fine-grained initiating events such as DL failure, etc. This will result in fewer event trees i.e., operational hazards should be at the top of the fault tree, which are the initiating events in the event tree.
- Dave suggested combining ATC with See and Avoid into one mitigation – receive credit for one entity not both. Combine, or there are two different environments?
- Should cd be a mitigation for see and avoid, rather than the other way around? After much discussion, this was agreed.
- Mike Petri – definitions of PAZ / CAZ are not fully correct. Penetrating the CAZ will likely result in a collision. PAZ – if not penetrated then assumed safe.
- NMAC – no longer use this term as an ops consequences. Use collision (this was discussed at the Brussels meeting).
- Andy – He always felt that for purpose of analysis the CD application should be split up by Users and Environment. Several sub-versions that are f(user, environment). There seemed to be agreement that if this makes the analysis easier, we should split up the analysis by environment.
- Also regarding consequences on page 5 – “significant reduction in ATC capability”. Andy recommended to use “slight reduction of separation” which may be more appropriate.
- Bill Lee / Mike Alert –On Safety table – false alert and incorrect alert should be reconsidered as possible increase crew workload; seems more appropriate.
- Question on workload – should be addressed in a later discussion – what is def’n of workload increase and associated criticality.

### C) Schedule

Teleconference next week is cancelled due to unavailability of a quorum.

Will have next teleconference Thursday 4/4/02 at 1:30 to 3:30 pm.

Meeting at NBAA 4/8,4/9; then continuing at Rockwell-Collins Rosslyn Office on 4/10,4/11.