

# SC-186 Standards Hierarchy & Future WG6 Efforts

## Proposal from WG6 Ad- Hoc Group



## Key Recommendations

- **ASA MASPS should be continued and should lead, not follow, MOPS**
- **ASA (DO-289) and ADS-B MASPS (DO-242) should be combined**
- **Bottom-up revision cycle needed to:**
  - Incorporate changes/Issue Papers from recent updates to both link MOPS;
  - Address considerations levied by ATC use of ADS-B-out;
  - Replace ASA applications with references to published SPRs;
  - Update mid-long term expected uses of ADS-B; and
  - Combine two MASPS.



## MASPS Should lead, not follow MOPS

- Multiple sub-systems (link, platform MOPS, ground systems) require system level requirements
- ASA MASPS are needed to amalgamate application requirements into logical groupings based on stringency of requirements and operational behaviors
- MASPS need to partition requirements in a systematic manner to avoid chaos at MOPS level
- One example:
  - IM application has detailed ground segment requirements as well as those for airborne – these must be documented somewhere
  - Some versions of IM may impose new link requirements



## Derivation of ASAS and Link MOPS Requirements

- **Application Requirements will be directly traceable from MASPS**
  - Data elements
  - Data Quality
  - Display performance
  - Timing requirements
- **MOPS will derive specific Link, ASSAP and CDTI requirements based on above MASPS requirements**

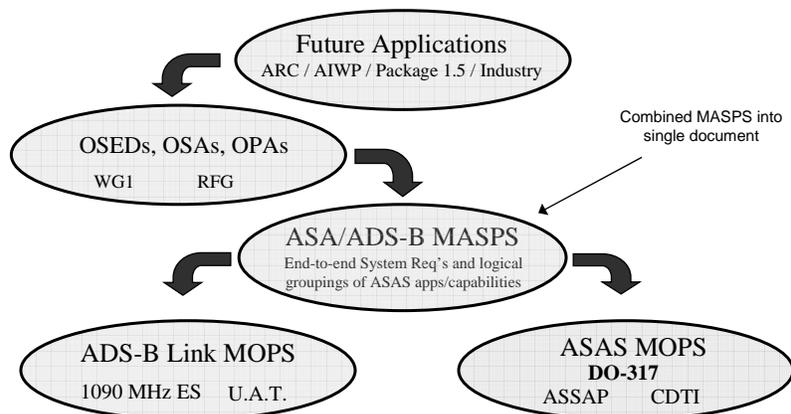


## Use of OSED/SPR/Interop docs

- **Fully developed OSED**
  - Based on vetted operational concepts
    - ARC, AIWP, Industry, etc.
- **Focus process/final product on generating requirements which can be quickly translated into MOPS-level requirements**
  - (The OPA and OSA are “homework” for the MOPS)
- **SPR material to be fed into MASPS**
  - *MASPS will partition requirements to the various subsystems*
  - *MASPS will amalgamate similar requirements for multiple applications*



## Proposed Flow of ADS-B Standards



## Proposal Part 2: Update & Combine MASPS (DO-242 & DO-289)

- **ASA MASPS has already incorporated almost all other ADS-B MASPS material**
  - Definitions of parameters
  - Definitions of Reports
- **Combining documents removes redundancy and simplifies document flow and maintenance.**
  - Much of DO-242 material developed to define (then) likely uses of ADS-B on which informational, functional, and performance requirements are derived.
- **Combined MASPS would use published SPR/Interop Standards to determine such requirements**
  - Directly reference published documents to ensure consistency and minimize effort.
  - Should retain/update an appendix on likely future apps to facilitate design that accommodates future growth.
- **Final Requirements for new apps would be traced down into ASAS MOPS (DO-317)**
  - Lower level and more specific ASSAP and CDTI req's derived.
  - Interoperability between applications
  - Test procedures



## Benefits of revised/combined MASPS

- **Update necessary due to**
  - definitive plans for ADS-B use by ground (i.e. Rulemaking/RAD)
    - End-to-end requirements
  - recent revisions of link MOPS
    - Documented Issue Papers
  - harmonized applications with EUROCAE
  - publication of DO-317
- **Once completed, integration of future apps into this document needs to be quick & straight forward**
  - Add column of new app's req's to master table.
  - Perform check on need for any new ADS-B parameters.
  - Assess into which grouping level new application belongs.



## Scope of MASPS revision effort

- **Implement all Issue Papers from MOPS update activities**
  - **Fully incorporate all ADS-B parameter and report definitions into ASA MASPS**
  - **Reflect all work being done in DO-317 revision**
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- **Finalize concept of ACL**
    - Grouping of applications (operational/data quality/SDA, etc.)
    - Integrate “enablers” concepts from AIWP
  - **Update appendix on potential future applications**
    - Delegated Separation
    - Wake Vortex
  - **Determine need for Transmit Quality Level**
    - Means to categorize transmitted data quality elements not specifically broadcast such as latency.



# Discussion



# Extra Slides



## Current Flow of ADS-B Standards

