

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|---|---|--|--------|
| 1 | Pagano | 1 | 698 | M | The document should contain, in the very first section preferably, the explanation that the requirements for ADS-B in this document are Version 2, updated from DO-242A which was Version 1. Additionally, it would be helpful to add that this ADS-B version is the basis for ADS-B Out rulemaking in the U.S. and how the initial applicatons use previous versions. | | WG6-Mtg#31 -Agrees and implemented a modification provided by Tom | Closed |
| 2 | Eric Vallauri | 1.1 | 700 | M | (700 to 705) This document is entitled "MASPS for ATSSA" but the introduction states "MASPS for ASA". The actual scope is not always clear in the text and the term ATSSA is only used a couple of times without being defined. The part of MASPS for ADS-B, TIS-B and ADS-R is not described in the introduction. | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 3 | Mittelman | 1.1 | 700 | H | (700 to 705) The title of the document on the cover page does not match the title named in this section. | Make the title consistent. | WG6-Mtg#31 -Agrees and implements | Closed |
| 4 | Brown | 1.1 | 700 | E | (700 to 705) 'Aircraft Surveillance Applications (ASA)' Seems to be inconsistent with the title of the document. Other instances e.g. line 718, 771, etc. | Change to match title including all examples of 'ASA', some of which may be 'Aircraft Separation Assurance' and others 'Aircraft Surveillance Applications'. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 5 | Eric Vallauri | 1.1 | 710 | M | There is the same text in the ASA MOPS. The difference / relationship between MASPS and MOPS is unclear, both seem to have the same purpose (means of compliance) but I thought that this was the main purpose of MOPS. | See Comment. | WG6-Mtg#31 -Agrees that we have incorporated a revised Figure 1-2 and the relationships should be clearer. | Closed |
| 6 | J. Steinleitner | 1.1 | 710 | H | From a European rulemaking perspective, it is very unlikely that the MASPS themselves will be used as a means of compliance reference. Rather, from a European perspective, the MASPS should be focussing on holding reference functional architecture material and high-level functional allocations per application (package), as well as Interoperability definitions (i.e. ADS-B data item definitions) and possibly aircraft integration related guidance (e.g. on air-ground state determination). The lower-level documents (SPR, MOPS) which are used as a means of compliance for European airspace and certification rulemakings, then refer to these MASPS provisions. | JS -In line with the discussion on this topic during the WG-6 Teleconference on 15 Feb, at this stage of the play, there is nothing I would like to propose for WG6 consideration. The main purpose of this comment, like others, was to raise awareness of a European position on the hopefully joint ATSSA MASPS we are going to have in the future. | Furr -This should be considered closed as there is no action to be taken against the current draft of the ATSSA MASPS WG6-Mtg#31 -Agrees and closes | Closed |
| 7 | Fisher | 1.1 | 710 | M | This paragraph is text for MOPS not MASPS | reword or delete as appropriate | WG6-Mtg#31 -Respectfully decline comment. | Closed |
| 8 | Eric Vallauri | 1.1 | 728 | M | The MOPS also contains the minimum performance requirements to support ASA. Is it relevant to duplicate the requirements in two separate documents? | See Comment. | WG6-Mtg#31 -Agrees that we have incorporated a revised Figure 1-2 and the relationships should be clearer. | Closed |
| 9 | Schueler | Throughout | 750 | M | References to RTCA DO-178B are made throughout the document. The current version is DO-178C. | Consider revising all of the references to DO-178C. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 10 | Johan Martensson | 1.2 | 753 | L | First sentence gives the wrong impression - VFR traffic may also be separated by ATC | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 11 | Johan Martensson | 1.2 | 755 | L | The statement gives the wrong impression - WAM and ADS-B is also used (today) for ATC separation services | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 12 | Eric Vallauri | 1.2 | 761 | L | This objective of the paragraph about "future separation assurance system" and the relationship with the ASA is not very clear | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 13 | J. Steinleitner | 1.2 | 761 | H | In light of what has been standardised so far or is under specification, the reference to "separation assurance" appears to be inappropriate. Overall, the document structure would benefit from describing applications as a function of a maturity, i.e. in terms of "completed standardisation", "on-going standardisation" and "for future standardisation". | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 14 | Joslin | 1.2 | 763 | H | The term "delegated separation" was removed from the lexicon by the ADS-B(In) ARC and replaced with "defined interval" in order to make it clear that ATC will still maintain oversight/monitoring. | Amend the sentence to read: ...expected to enable the delegation, <u>with ATC oversight/monitoring</u> , of certain spacing or separation tasks to the flight deck. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 15 | Eric Vallauri | 1.2.1 | 771 | M | The definition of ASA is not similar to that in the ASA MOPS. In particular, there is no reference to separation assurance capabilities in DO-317A. Besides, this section introduces Airborne Separation applications as part of ASA (conflict prevention, etc.) but such applications are not described in the emerging applications (or in future applications). The actual definition of what ASA comprises would benefit from clarification. | See Comment. | WG6-Mtg#31 -ASA has been replaced by ATSSA throughout the document, and this resolves the comment. | Closed |
| 16 | Joslin | 1.2.1 | 788 | E | There are different <u>types</u> of flight trajectories | Change " <u>kinds</u> " to " <u>types</u> " to read : Accommodating more types of flight trajectories... | WG6-Mtg#31 -Agrees and implements. | Closed |
| 17 | Joslin | 1.2.1 | 790 | M | Important to emphasize that the issue is flight crew and air traffic controller workload | Amend the sentence to read: ... to minimize the increase in <u>flight crew and air-traffic-controller</u> workload while ensuring safety. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 18 | J. Steinleitner | 1.2.1 | 790 | L | Minimising any increase in workload - to be clarified if this applies to the Flight Crew or the ATCo. | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 19 | Eric Vallauri | 1.2.1 | 799 | L | Is the last sentence of this paragraph (about ground surveillance application) relevant in the section definition Aircraft Surveillance Applications? From an ASA perspective, the ADS-B ground surveillance is also needed to support TIS-B and ADS-R | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 20 | Eric Vallauri | 1.2.2 | 806 | L | ASSUMP.1 is dealing with delegation of separation. Isn't it a bit too "strong" as the first assumption? | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 21 | Eric Vallauri | 1.2.2 | 812 | L | To "monitor" and retain separation responsibility: it is not clear what ATC is willing to monitor | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 22 | Brown | 1.2.2 | 817 | E | ASSUMP 6 'pilots may be willing to accept additional separation responsibility beyond what they have today that is currently provided by ATC' The clause 'that is currently provided by ATC' makes no sense in this sentence. I assume it means that ATC currently provides separation assurance, but I cannot make it mean that in this sentence. | Clarify | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 23 | Fisher | 1.2.3 | 828 | E | Boundary G in Figure 1-1 is not aligned with line that represents boundary G | Align the Letter G with the line it represents | WG6-Mtg#31 -Agrees and implements. | Closed |
| 24 | Eric Vallauri | 1.2.3 | 829 | L | In Figure 1-1 the receive participants, a box "Other inputs (TCAS, FMS, etc." should be added between A3 and B3. Besides, does ASSAP need the call sign of ownship? | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 25 | Brown | 1.2.3.1 | 842 | E | link unique' | link-unique | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 26 | Schueler | 1.2.3.1 | 845 | M | The text states that position and velocity information come, "either directly from a Global Navigation Satellite System (GNSS) receiver or a GNSS based navigation system." This document clearly defines data and metrics to be transmit, and should not imply assumptions about the source of that data. | Delete the statement that position and velocity information originate with a GNSS system. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 27 | Brown | 1.2.3.2 | 856 | E | ADS-B Message' | ADS-B Messages | WG6-Mtg#31 -Agrees and implements. | Closed |
| 28 | Joslin | 1.2.3.2.3 | 891 | L | The location of the CDTI in the pilot's field of view does not appear to be addressed | Add a Note: <u>The location of the CDTI in the pilot's field of view requires a human factors evaluation.</u> | WG6-Mtg#31 -Agrees and implements. | Closed |
| 29 | Schueler | 1.2.3.3.2 | 919 | L | The example assumes only two ADS-B links. VDL4 is another possible link. | Make this statement generic with regards to link. DO-317A includes a good alternative: "ADS-R provides traffic information to equipped aircraft based on ADS-B transmission from aircraft on independent data links (e.g. 1090ES, UAT and VDL4)." | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 30 | Eric Vallauri | 1.2.3.3.3 | 921 | L | There is no ADS-B ground receiver identified as such in Figure 1-1. Is it included in the box "Surveillance Sources"? In this case, shouldn't there be an arrow from the transmit participant to the ground subsystem? | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 31 | Brown | 1.2.3.3.3 | 924 | E | equivalent or better that' | equivalent to or better than | WG6-Mtg#31 -Agrees and implements. | Closed |
| 32 | Eric Vallauri | 1.2.4 | 942 | L | TCAS is independent from separation assurance. The sentence should end after "safety system" | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 33 | Brown | 1.2.4 | 942 | E | a backup safety system for separation assurance' The wording suggests that TCAS provides separation assurance, which it does not. It attempts to prevent collisions. ATC currently provides separation assurance, though if TCAS is needed to prevent a collision, it is not really 'assurance'. | a backup safety system to separation assurance. | WG6-Mtg#31 -Agrees and implements | Closed |
| 34 | Eric Vallauri | 1.2.4 | 951 | L | Some current ASA applications (e.g. AIRB are already expected to provide safety. Should AIRB and TCAS interaction be validated? | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 35 | Eric Vallauri | 1.2.4 | 956 | L | ADS-B has a better accuracy than TCAS but TCAS has a better integrity. It could maybe be mentioned. | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 36 | Joslin | 1.2.5 | 976 | M | Important to specify that the Obstacles associated with terrain alerts are the "off-airport" obstacles and not the ones covered by this application(point,line,cluster) | Specify: <u>"Off-Airport</u> Obstacles" | Withdrawn | Closed |
| 37 | J. Steinleitner | 1.2.5 | 978 | H | (Figure 1-2) Reference to SPR material is missing ! | See Comment. | WG6-Mtg#31 -After review of WP31-05, and some editing, WG6 accepted the first figure to replace Fig 1-2. | Closed |
| 38 | Fisher | 1.2.5 | 984 | L | "The UAT MOPS has recently been revised and issued as RTCA DO-282B" do we need the word recently or will this be dated text when it is no longer recent | remove the word recent, change DO-282B to DO-282() | WG6-Mtg#31 -Deleted "recently." | Closed |
| 39 | Walker | 1.2.5 | 992 | E | Since you are including all the other ED doc #'s, should probably include the Eurocae doc # for DO-317A | Include ED-194 | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|----------------------------------|-------------------|---------------------|--------------------------------|---|--|---|--------|
| 40 | Eric Vallauri J. Steinleitner | 1.3 | 1019 | M | The notion of Extended Situational Awareness is new (in particular regarding the PO-ASAS) and the list of applications included in this category could be discussed (e.g. CAVS is more a delegated separation application from my perspective). Is this new category really needed? Besides, the list of applications included in it can be discussed. | See Comment. | WG6-Mtg#31 -CAVS/CEDS will be removed from the document. | Closed |
| 41 | Brown | 1.3 | 1021 | M | ...to achieve and maintain spacing with designated aircraft' I think it important to specify that these applications relate to longitudinal spacing. To the best of my knowledge, no lateral or vertical spacing tasks are proposed. | ...to achieve and maintain longitudinal spacing with designated aircraft' | WG6-Mtg#31 -Agrees and implements | Closed |
| 42 | Joslin | 1.3 | 1025 | H | The term "delegated separation" was removed from the lexicon by the ADS-B(In) ARC and replaced with "defined interval" in order to make it clear that ATC will still maintain oversight. | Applies throughout the document: <u>replace delegated separation with defined interval</u> | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 43 | J. Steinleitner | 1.3 | 1025 | H | Is the term "delegation separation" still opportune ? This raises also the overall question of how much details should be in the MASPS for possible future standardisation activities for which there is still quite some Conops related work ahead. | See Comment. | WG6-Mtg#31 -Respectfully declines comment since the baseline was AIWP V2. | Closed |
| 44 | J. Steinleitner | 1.3.1 | 1036 | H | In terms of "detailed requirements", from a European perspective, the MASPS should be focussing on holding reference functional architecture material and high-level functional allocations per application (package), as well as Interoperability definitions (i.e. ADS-B data item definitions). In addition, high-level performance "ball-park" overviews are useful as well. However, the MASPS should not replicate requirements that have been documented in lower-level documents (SPR, MOPS). | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 45 | Brown | 1.3.1.1 | 1043 | E | there should be no comma in this line | Cast it out. Same in lines 1049, 1056, and 1066 | WG6-Mtg#31 -Agrees and implements. | Closed |
| 46 | Schueler | 1.3.1.1 | 1047 | M | A reference is made to DO-289 here and in a few other places in the document. This FRAC document was distributed with a statement "The ATSSA MASPS supersedes the content of three previous MASPS documents: the ADS-B MASPS (DO-242A, including Change 1), the ASA MASPS (DO-289, including Change 1) and the TIS-B MASPS (DO-286B). In addition, it provides MASPS level requirements for the ADS-R system." Given that this document supersedes DO-289, it is a little confusing to see references to that document. | Consider adding to paragraph 1.2.5 to more clearly state the applicability of the superseded documents. Additionally, narrow the reference in section 1.3.1.1 to state clearly where the EVAcq description occurs in DO-289. | WG6-Mtg#31 -Agreed | Closed |
| 47 | Miller | 1.3.1.1 | 1047 | M | There is a reference to DO-289 for a description of EVAcq. This document is intended to stand alone from the previous MASPS documents. | Replace with reference to DO-317A. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 48 | Eric Vallauri | 1.3.1.2 | 1048 | E | The full name of AIRB (like for other applications) is missing | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|---|--|--|--------|
| 49 | Brown | 1.3.1.2 | 1050 | E | by adding the Flight ID and ground speed of selected traffic that are added to the CDTI' Why would these traffic be added to the CDTI? Why are they not there already? Or perhaps this is meant to mean that Flight ID and groundspeed (one word) are added to the CDTI. That's not what the sentence says. | by adding the Flight ID and ground speed of selected traffic; these parameters are added to the CDTI' | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 50 | J. Steinleitner | 1.3.1.2 | 1053 | H | Reference should be made to the SPR material not only for the description of applications but also their requirements. (Comment applies to other applications as well). | See Comment. | WG6-Mtg#31 -Agrees to make addition to 1.3.1 level referencing SPR requirements | Closed |
| 51 | Eric Vallauri | 1.3.1.3 | 1057 | L | "current procedure for visual separation on approach" is more accurate than "visual approach procedure" | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 52 | Brown | 1.3.1.3 | 1061 | E | It may allow for the continuation of visual separation on approach when they would otherwise have to be suspended...' Too many pronouns | The application may allow for the continued use of visual separation on approach when the procedure would otherwise have to be suspended | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 53 | Brown | 1.3.1.4 | 1066 | M | (1066 to 1072) I do not believe that this document should be taking credit for the airport moving map application to which the traffic data are added. I do not believe that the traffic display reduces the possibility of runway incursions and collisions. It may mitigate the hazards that are runway incursions. | Describe only the traffic-related functions. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 54 | Brown | 1.3.1.5 | 1074 | E | Air Space All one word as in title of DO-312 | Airspace | WG6-Mtg#31 -Agrees and implements. | Closed |
| 55 | Tom Graff | 1.3.1.5 | 1077 | L | the words: "maneuver between properly equipped aircraft" are overly restrictive | "maneuver referencing properly equipped aircraft", would be more flexible | WG6-Mtg#31 -Agrees and implements | Closed |
| 56 | Miller | 1.3.2 | 1083 | L | The text "initial set of applications" is in conflict with the section title "Emerging Applications" | Reword the sentence to "This section provides a brief description of several applications whose detailed requirements are under development at this time." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 57 | Eric Vallauri | 1.3.2.1 | 1086 | E | Basic Surface Situational Awareness is the name of the application | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 58 | Brown | 1.3.2.1 | 1086 | L | ...adds to the Airport Traffic Situation Awareness application...' Should this refer to 'Basic Surface Situational Awareness (SURF) application'? | Make consistent or describe Airport Traffic Situation Awareness application. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 59 | Brown | 1.3.2.1 | 1089 | E | ...attention getting...' | attention-getting | WG6-Mtg#31 -Agrees and implements. | Closed |
| 60 | Shafaat | | 1094 | M | Traffic Situational Awareness with Alerts (TSAA) will provide traffic advisories in the near term by using CDTI... TSAA does not require CDTI. | Change it to "Traffic Situational Awareness with Alerts (TSAA) will provide traffic advisories in the near term and alerts to assist the pilot or flight crew with visual acquisition and avoidance of traffic in both Visual Meteorological Conditions and... | WG6-Mtg#31 -Agrees and implements | Closed |
| 61 | Brown | 1.3.2.3 | 1102 | E | Flight-Deck Based Interval Management-Spacing (FIM-S) | Per DO-328, Airborne Spacing - Flight Deck Interval Management (ASPA-FIM) | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 62 | Brown | 1.3.2.3 | 1104 | E | ...maintain an interval or spacing...' | maintain a longitudinal interval or spacing... | WG6-Mtg#31 -Agrees and implements | Closed |
| 63 | Brown | 1.4 | 1115 | E | The list of.....are included... | The list of.....is included... | WG6-Mtg#31 -Agrees and implements. | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|---|---|--|--------|
| 64 | Eric Vallauri | 2 | 1134 | L | Most of the requirements are performance requirements and not operational requirements. Maybe "Requirements" would be sufficient to encompass all requirements. | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 65 | Miller | 2.1 | 1137 | E | Last phrase "and in the Appendices" is not correct. | Delete the phrase. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 66 | Mosher | 2.1 | 1142 | M | The text of the 2nd paragraph says that the ADS-B In and Out requirements are contained in Tables 2-3 and 2-7. However, there are no numbered requirement references to provide traceability. | Add at least one requirement number in reference to each of Table 2-3 and Table 2-7. If better traceability is desired, each row of the tables could have a requirement number added. | Withdrawn | Closed |
| 67 | Gilbert | 2.1.1.1 | 1176 | M | (1176 to 1183) If NACv needs to be compared to the resolution of the message elements, does that mean that traffic sending NACv = 3 and an Airport Velocity subtype of 2 or 4 should be deemed invalid? It is not clear what should be done if there is a "mismatch". | Clarify the implications of incompatible message data elements and quality metrics. | WG6-Mtg#31 -Agrees and implements | Closed |
| 68 | Harman | 2.1.1.3 | 1192 | E | The wording in the entire section of "2.1.1.3 Expandability" was originally adopted in DO-242 in 1998. At that time, a number of possible ADS-B techniques were under consideration. Since that time, the FAA has fully developed both 1090-ES and 978-UAT, with extensive analyses and airborne measurements. The FAA has also made a determination of the specific links to be used operationally in the United States. The original wording is less applicable at this time. | Add at the end of this section, "The material in this section was taken from DO-242, section 2.1.1.3." | WG6-Mtg#31 -Respectfully declines the comment. However, we changed the note to a paragraph and reworded some of the text to be more current group thinking. | Closed |
| 69 | Gilbert | 2.1.1.3 | 1201 | E | Awkward grammar: "These MASPS identifies..." | Change to: "These MASPS identify..." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 70 | Fisher | 2.1.1.3 | 1201 | E | These MASPS identifies | should this be identify | WG6-Mtg#31 -Agrees and implements. | Closed |
| 71 | Brown | 2.2.1 | 1213 | L | Application scenarios are grouped according to whether the user is operating an aircraft/vehicle (ADS-B In) or is an Air Traffic Services provider (ADS-B Out). The parenthetic abbreviations are not good ways of discriminating the two groups. Both groups require ADS-B Out and both require an ADS-B receiver (so effectively ADS-B In) | I think the sentence without the parentheses makes the right point. The abbreviations tend to confuse. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 72 | Miller | 2.2.1 | 1222 | M | The references to the tables on this page are not in numerical order. | Move the sentence for Table 2-2 starting on Line 1229 to after the sentence for Table 2-1 ending on Line 1222 | WG6-Mtg#31 -Agrees and implements | Closed |
| 73 | Miller | 2.2.1 | 1234 | E | Need a new paragraph starting at this line. | Insert paragraph break | WG6-Mtg#31 -Agrees and implements. | Closed |
| 74 | Barber | 2.2.1 | 1238 | H | Makes use of the term "Delegated Separation" twice in these lines. The ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications"; specifics are provided in the ARC report section 3.2. | Change throughout document to be consistent with ARC recommendations. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 75 | Eric Vallauri | Table 2-1 | 1245 | H | In CAVS, the controller is no more responsible for the provision of separation. As said before, I think this is a DS application. A description of the application would help to understand the application. | See Comment. | WG6-Mtg#31 -Will remove CAVS/CEDS from Table 2-1 in this version of the MASPS. | Closed |
| 76 | Eric Vallauri | Table 2-1 | 1245 | L | For AIRB, the operational conditions are VMC/IMC | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|---|--|--|--------|
| 77 | Eric Vallauri | Table 2-1 | 1245 | H | <p>This table includes many applications which have not been defined in section 1.3 (e.g. DSWRM?). Furthermore, TSAA which is defined in 1.3 is missing. Some other tables cover different lists of applications.</p> <p>This is a general comment of the document. It would really help if all the applications addressed in the MASPS are described in section 1.3. They could maybe be grouped into three categories: initial, emerging and future (there were two categories in DO-289: initial and future). Then all tables would include the same applications.</p> | See Comment. | WG6-Mtg#31 -CAVS/CEDS will be deleted from Table 2-1 & 2-3 and TSAA will be added. DSWRM is described in 2.2.1.1.6. | Closed |
| 78 | Johan Martensson | Table 2-1 | 1245 | M | Row 4 / Note 1 is not correct in European rules at least. VFR flights can be subject to ATC separation in certain airspace | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 79 | Johan Martensson | Table 2-1 | 1245 | M | <p>Last row and Note 2 use of term designate (for VSA and ITP) will cause discussions since designate per meaning in ASA MOPS is not applicable/required !</p> <p>Also designate may here be interpreted as information being provided to the other aircraft (in contrast to receive only), which is not the case - this could be clarified.</p> | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 80 | Johan Martensson | Table 2-1 | 1245 | L | The term "Extended SA" applications may not be an appropriate term for these applications. | Would suggest that CAVS/CEDS is more DS and ITP has its own separation standard while ATCo still being responsible for separation. SURF IA would maybe still fit under the "Extended SA" title - TSAA could also be introduced under "Extended SA". | WG6-Mtg#31 -CAVS/CEDS will be removed from the document. TSAA will be included. | Closed |
| 81 | Johan Martensson | Table 2-1 | 1245 | E | One application (under 3. spacing apps) is only called "advanced" - does that refer to an Advanced FIM-S ? | See Comment. | WG6-Mtg#31 -Yes | Closed |
| 82 | Johan Martensson | Table 2-1 | 1245 | M | The 100% Out and In rows are not really useful as used in the table. What is meant by 100%? 100% in the world, in the NAS or in the sector or what ? This issue can also be seen per application as there is only no or TBD indicated - which does not really give any information. Yet the dependency on ADS-B Out and In equipage is different between the applications, for good application functioning. | Not sure how to make better use of these two rows but a suggestion could be to refer to "requires participating aircraft to be equipped" and "requires surrounding non-participating aircraft to be equipped". And then answer for both ADS-B Out and In | WG6-Mtg#31 -Agrees and implements. | Closed |
| 83 | Johan Martensson | Table 2-1 | 1245 | M | <p>Why TBD on Evacq/AIRB ops conditions? It is earlier and later stated that it can be used in all conditions (i.e. should be VMC/IMC). SURF and SURF IA should also be VMC/IMC</p> <p>Change ops conditions to weather conditions as that is all it answers to.</p> | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 84 | Johan Martensson | Table 2-1 | 1245 | M | I guess FIM-S will require intent data. It is just a question of how to transfer the data. Does this row refer to that the data need to be transferred over the ADS-B link?? | Clarify what the row relates to (intent data over link or intent data in general) | WG6-Mtg#31 -Agrees and implements. | Closed |
| 85 | Johan Martensson | Table 2-1 | 1245 | M | VSA recommends (but does not require) that traffic category is used, which is an indication of wake vortex - this could be indicated in the table. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 86 | Johan Martensson | Table 2-1 | 1245 | M | The table states that SURF requires performance above rule compliance. This may not strictly be true as mitigations schemes are available. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|----|---------------------|-------------------|---------------------|--------------------------------|--|--|---|--------|
| 87 | Brown | Table 2-1 | 1245 | M | Why are 100% equipage lines (both OUT and IN), delegated separation application column cells 'TBD'? The applications can clearly be carried out with less than 100% equipage in the same way as spacing applications. However, like the spacing applications, the level of benefit will suffer and the difficulty of achieving any benefit will increase the lower the equipage fraction. | Should be 'No'. Or explain what question is being answered in the line. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 88 | Brown | Table 2-1 | 1245 | M | Operational Conditions cell under EVAcq/AIRB should be IMC/VMC. Although IMC may prevent visual acquisition, the crew should at least make the effort based on the information provided to them. | Enter 'VMC/IMC' (reflected in lines 1327-8) | WG6-Mtg#31 -Agrees and implements | Closed |
| 89 | Brown | Table 2-1 | 1245 | E | Heading cell at top of SURF column is not connected to any category. | Merge with SA Applications | WG6-Mtg#31 -Agrees and implements. | Closed |
| 90 | Brown | Table 2-1 | 1245 | E | Note 5; should all TBD cells not be highlighted in yellow? | Highlight | WG6-Mtg#31 -Agrees and implements. | Closed |
| 91 | Miller | Table 2-1 | 1245 | H | Ownship Interaction for VSA and ITP applications are incorrect. | Change "Designated" to "Selected". | WG6-Mtg#31 -Agrees and implements. | Closed |
| 92 | Shafaat | Table 2-1 | 1245 | H | "Designate" is used for interaction with the target aircraft - "Designate is not defined in the document | Add definition of "Designate" and "Designated" to the document | WG6-Mtg#31 -Agrees and implements from 2.3.2.4.2 | Closed |
| 93 | Shafaat | Table 2-1 | 1245 | H | CAVS/CEDS requirements are not defined in the industry standards. | Remove these applications from the table. | WG6-Mtg#31 -Agrees and will remove both CEDS and CAVS from the document. | Closed |
| 94 | Shafaat | Table 2-1 | 1245 | M | Operational Conditions for Airborne are TBD | Add VMC/IMC for these applications | WG6-Mtg#31 -Agrees and implements | Closed |
| 95 | Barber | 2.2.1 | 1245 | M | (Table 2-1) It isn't clear why the DS-C/P application column indicates 3D / 4D intent data is TBD. The scenario in 2.2.1.1.7 includes the statement "The pilots have available ... intent information for proximate traffic." | Adjust as appropriate. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 96 | Barber | 2.2.1 | 1245 | M | (Table 2-1) It is not clear why the SURF application column has a red "Yes" box. Is it because the Table 2-3 Airborne Platforms section NACv row has a red 2? If so, Table 2-3 indicates that there are mitigations available so it would seem that these are addressed in DO-317A, so it is still unclear why the box is red. | Adjust as appropriate. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 97 | Mosher | 2.2.1 | 1245 | E | (Tables 2-1 and 2-3) The column header terms "SA Applications" and "Extended SA Applications" are not defined. | Since there's no glossary in the document, the terms could be defined within Section 1.3, where the applications are summarized. Alternatively, a Note could be added. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 98 | Walker | 2.2.1 | 1245 | M | (Table 2-1) I don't support use of the term CEDS in this MASPS. The ADS-B In ARC used this term but also noted that the term "Delegated Separation" should not be used. My interpretation of this inconsistency is that the approved functionality corresponding to CEDS will be incorporated into FIM. There will be no need to discuss CEDS as a separate application once that takes place. | Any discussion of CEDS should be included in the FIM section as a subset of the FIM functionality. | WG6-Mtg#31 -Agree to delete both CEDS and CAVS from document. | Closed |
| 99 | Mittelman | 2.2.1 | 1245 | H | Table 2-1) Several applications listed across the top of the table appear for the first time in this document and therefore are undefined. Examples include CAVS/CEDS; DS-CP, ICSPA, DSWRM, FC, and Self Sep. These applications are not described in section 1.3 Are these applications in scope for this document? | Decide what is in scope for this document. For those applications not in scope, remove any references to them or clearly differentiate them as out of scope and future applications. | WG6-Mtg#31 -Many of the applications were defined in AIWP V2, and CAVS/CEDS will be deleted from the document. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|--|---|--------|
| 100 | Pagano | 2.2.1 | 1245 | M | (Table 2-1) There is a questionable TBD in the Operational Conditions column for Airborne SA applications. Depending on the meaning of Operational Conditions, it may be better to show that this application is allowed in both VMC/IMC conditions. | Discuss | WG6-Mtg#31-Agrees | Closed |
| 101 | Pagano | 2.2.1 | 1245 | E | (Table 2-1) CAVS and CEDS should be defined prior to use in Table | Introduce CDTI Assisted Visual Separation (CAVS) and CDTI-Enhanced Delegated Separation (CEDS) | WG6-Mtg#31-Agreement was to remove CEDS and CAVS from Table 2-1 and 2-3, therefore this specific comment is declined. | Closed |
| 102 | Eric Vallauri | Table 2-2 | 1254 | H | Flight ID and NACv are required information for AIRB. They are missing in the table. | See Comment. | WG6-Mtg#31-Bullets added, with Note (1). | Closed |
| 103 | Eric Vallauri | Table 2-2 | 1254 | H | The list of required information for VSA and SURF is defined and should be added to this table. | See Comment. | WG6-Mtg#31-Will add VSA to the table and SURF was clarified in the Table via different comment. | Closed |
| 104 | Johan Martensson | Table 2-2 | 1254 | H | 1. AIRB requires Aircraft ID 2. AIRB and EVacq require NACv (apart for EVacq and TIS-B targets) 3. AIRB and ITP does not require Emergency 4. ITP has indicated Capability codes and Operational Modes - which requirements does that relate to (don't think there are any apart from maybe increased update of quality indicators) ?? 5. Why are not all applications represented? | See Comment. | WG6-Mtg#31-(1) &(2) covered previously. (3) & (4) Incorporated by removing most dots. (5) Addressed previously. | Closed |
| 105 | Miller | Table 2-2 | 1254 | E | Note 1 on Flight ID row is incorrect | Remove 1 from Notes column in Flight ID row | WG6-Mtg#31-Agrees and implements. | Closed |
| 106 | Miller | Table 2-2 | 1254 | M | Some required information elements are missing | Add "dots" to the following intersections: Category row/Spacing column; Ground Speed row/ADS-B Out column; Emergency/Priority Status row/FIM-DS, DS & Self Sep columns | WG6-Mtg#31-Agrees and implements | Closed |
| 107 | Shafaat | Table 2-2 | 1254 | M | VSA, SURF and SURF-IA applications are not included in the table | Add these applications to the table | WG6-Mtg#31-SURF was already there, but needed to be more clearly identified. VSA and SURF-IA will not be added. | Closed |
| 108 | Shafaat | Table 2-2 | 1254 | M | Dot is missing for Flight ID and NACv for AIRB/EVAcq | | WG6-Mtg#31-Agrees and implements | Closed |
| 109 | Barber | 2.2.1 | 1254 | L | (Table 2-2) It isn't clear why SURF and other DO-317A applications are not included in this table. | Adjust as appropriate. | WG6-Mtg#31-Agrees and implements. | Closed |
| 110 | Eric Vallauri | Table 2-3 | 1259 | H | Flight ID is required information for AIRB. It is missing in the table. | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |
| 111 | Johan Martensson | Table 2-3 | 1259 | H | Note 5 - The SURF requirement has changed in the ASA MOPS (317A) compared to the SPR. | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |
| 112 | Johan Martensson | Table 2-3 | 1259 | M | SURF vel accuracy is different on gnd and in air | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |
| 113 | Johan Martensson | Table 2-3 | 1259 | H | The SURF SDA and Note 3. SDA 2 only applies for own system, still SDA 1 traffic needs to be displayed on the SURF display. | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |
| 114 | Johan Martensson | Table 2-3 | 1259 | M | What does the second column indicate? | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |
| 115 | Johan Martensson | Table 2-3 | 1259 | H | AIRB and SURF require Aircraft ID | See Comment. | WG6-Mtg#31-Respectfully declines comment and no changes were made. | Closed |
| 116 | Johan Martensson | Table 2-3 | 1259 | M | NACv 1 is not required for airborne TIS-B traffic for EVacq | See Comment. | WG6-Mtg#31-Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|---|--------|
| 117 | Johan Martensson | Table 2-3 | 1259 | M | Would suggest a full verification of this table or maybe this document should not repeat the MOPS requirements (risk of discrepancies between documents) | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 118 | Miller | Table 2-3 | 1259 | L | Accuracy requirements for SURF application are not current | Change values in Table from "7/9" to "5/6/7/9" (3 places). Change last part of Note 5 to read "SURF airborne targets require NACp = 5, 6, or 7 depending on ownship and target's position" | WG6-Mtg#31 -Agrees and implements. | Closed |
| 119 | Brown | Table 2-3 | 1259 | E | Second column should have a heading | Add | WG6-Mtg#31 -Agrees and implements. | Closed |
| 120 | Shafaat | Table 2-3 Row 1 | 1259 | E | SA applications does not cover Surface | Extend SA Applications column to include Surface | WG6-Mtg#31 -Agrees and implements. | Closed |
| 121 | Mosher | 2.2.1 | 1259 | L | (Table 2-3) The second column of the table is not labeled, so it isn't clear whether the information entered in that column is a requirement. | Label the column as necessary. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 122 | Mittelman | 2.2.1 | 1259 | H | (Table 2-3) Several applications listed across the top of the table appear for the first time in this document and therefore are undefined. Examples include CAVS/CEDS; DS-CP, ICSPA, DSWRM, FC, and Self Sep. These applications are not described in section 1.3 Are these applications in scope for this document? | Decide what is in scope for this document. For those applications not in scope, remove any references to them or clearly differentiate them as out of scope and future applications. | WG6-Mtg#31 -Many of the applications were defined in AIWP V2, and CAVS/CEDS will be deleted from the document. | Closed |
| 123 | Pagano | 2.2.1 | 1259 | M | (Table 2-3) The unlabeled 2nd column needs more detail | It would be better to label the second column under each category to show that airborne values are the minimums required by the ADS-B Out rule, and that ADS-R and TIS-B values denote performance provided by the Ground system | WG6-Mtg#31 -Agrees and implements. | Closed |
| 124 | Pagano | 2.2.1 | 1259 | H | (Table 2-3) The table gives the impression that the ADS-R function limits performance but it is really dependent on source data from transmitting A/V except for limits on NIC/NAC. Also, it does not make clear that ADS-R's ability to meet the upcoming new applications is limited due to potential latency constraints. | Add Notes to clarify how to interpret ADS-R table entries. | WG6-Mtg#31 - Agrees and implements. | Closed |
| 125 | Mosher | 2.2.1 | 1279 | L | (Table 2-4) Notes 6 and 8 are referenced, but are missing. | Correct the references. | WG6-Mtg#31 -Agreed | Closed |
| 126 | Brown | Table 2-4 | 1282 | E | (1282 to 1296) These notes do not seem to be related to the references to notes in the table itself. | Coordinate notes with note references. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 127 | Brown | Table 2-4 | 1283 | M | (1283 to 1285) Note 1: System must support all traffic in line of sight that have operational significance for the associated applications (i.e., within operationally relevant ranges and altitudes for these applications). How is operational significance determined? Is there to be a standard, or is the function left to the designer? | Discuss | WG6-Mtg#31 -Engineering judgement | Closed |
| 128 | Miller | Table 2-4 | 1286 | M | Note 1 for Table 2-4 contains reference to Table TBD. | Replace TBD with Table number or delete reference. | WG6-Mtg#31 -Agrees and implements | Closed |
| 129 | Brown | 2.2.1.1 | 1298 | M | Given the concerns about -DS from the ADS-B In ARC, it is hard to understand why this document is being submitted without some consideration of -DI applications. In addition, CAVS and CEDS are mentioned in 2.2.1.1.3, but do not seem to be addressed elsewhere. | Consider addition of FIM-DI | WG6-Mtg#31 -CEDS/CAVS will be deleted from the document. No ADS-B In ARC recommendations will be included in this version of the MASPS | Closed |
| 130 | Mittelman | 2.2.1.1.1 | 1330 | L | Does "partial" mean the applications will be operating in a mixed equipage environment? | If yes, then suggest adding language like "and will therefore be operating in a mixed equipage environment" to the end of the sentence. | WG6-Mtg#31 -Agrees and implements | Closed |
| 131 | J. Steinleitner | 2.2.1.1.1 | 1331 | L | Proposed to change "will be partial" to "can be partial" | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|----------------------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 132 | Brown | 2.2.1.1.1 | 1334 | M | This assumption seems to limit use of AIRB to surveillance environments. | Clarify; I believe that the assumption should be rewritten to include all surveillance and non-surveillance environments. | WG6-Mtg#31 -Agrees and implements | Closed |
| 133 | Brown | 2.2.1.1.1 | 1339 | M | (1339 to 1358) These paragraphs should make it clear that the system requirements do not allow for use of the CDTI alone to determine whether a maneuver is required. | Clarify | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 134 | J. Steinleitner | 2.2.1.1.1 | 1356 | M | The "avoid" aspect of AIRB should be carefully described to avoid the impression that the "avoid" aspect is nominal functional feature of AIRB (where is rather a last resort action as applicable today without AIRB) | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. Section from DO-319. | Closed |
| 135 | Brown | 2.2.1.1.2 | 1374 | L | How are dependent parallel runways not closely spaced parallel runways? | Delete 'and closely-spaced parallel runways' | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 136 | Walker | 2.2.1.1.2 | 1382 | M | Where did the 3 NM minimum requirement come from? Is this in the VSA SPR? It does not seem like a reasonable equipment constraint. I cannot see imposing a requirement that VSA information be dropped should the range to traffic fall below 3 miles. Furthermore, this seems to imply that VSA could not be engaged in the closed traffic pattern. | Suggest deleting this assumption. | WG6-Mtg#31 -Text was taken from the VSA SPR, which shows 3NM. | Closed |
| 137 | Mittelman | 2.2.1.1.2 | 1386 | L | Does "partial" mean the applications will be operating in a mixed equipage environment? | If yes, then suggest adding language like "and will therefore be operating in a mixed equipage environment" to the end of the sentence. | WG6-Mtg#31 -Agrees and implements | Closed |
| 138 | Fisher | 2.2.1.1.2 | 1389 | E | Operational scenarios noted in line 1390, 1391, 1392, 1393 should be the same as what is in 1394, 1412, 1420 and 1433 | make titles the same. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 139 | J. Steinleitner | 2.2.1.1.2 | 1408 | M | The VSA Advanced Procedure has not been assessed from OPA/OSA perspective - and hence no requirements have been established. This should be clarified. | See Comment. | WG6-Mtg#31 -DO-317A did not distinguish between the two procedures and the MASPS will not either. | Closed |
| 140 | Eric Vallauri J. Steinleitner | 2.2.1.1.3 | 1441 | H | As said in a previous comment, it is arguable whether CAVS/CEDS are Extended SA applications. As they are only referred to in the first paragraph of this section, which then only deals with ITP, CAVS and CEDS could be removed for the section heading and the paragraph deleted. | See Comment. | WG6-Mtg#31 -CAVS/CEDS will be deleted from Table 2-1 & 2-3. | Closed |
| 141 | Johan Martensson | 2.2.1.1.3 | 1441 | L | This section does not address CEDS or CAVS at all despite the title. | See Comment. | WG6-Mtg#31 -CAVS/CEDS will be removed from the document. | Closed |
| 142 | Brown | 2.2.1.1.3 | 1443 | L | I do not believe that it is accurate to state that CAVS and CEDS (CEDS in particular) 'have been developed'. No requirements have been developed in the way that they have for the earlier applications in this document. At best, these are potential future applications. | Move this paragraph to below the following paragraph and reword to make it clear that these applications are in early stages of their development. Might be appropriate to add CAVS and CEDS to para 2.2.1.1.8. | WG6-Mtg#31 -CAVS/CEDS will be deleted from the document | Closed |
| 143 | Walker | 2.2.1.1.3 | 1443 | M | This opening paragraph and title refer to CEDS and CAVS but the remainder of the section focuses only on ITP | Delete CEDS and CAVS references. | WG6-Mtg#31 -Agree to delete both CEDS and CAVS from document. | Closed |
| 144 | Mittelman | 2.2.1.1.3 | 1443 | H | Is CAVS/CEDS in scope for this document? | If no, then delete this paragraph and rename the section title. If yes, then add text to describe CAVS/CEDS like ITP is described in the subsequent paragraphs. | WG6-Mtg#31 -Many of the applications were defined in AIWP V2, and CAVS/CEDS will be deleted from the document. | Closed |
| 145 | Miller | 2.2.1.1.3 | 1447 | E | The term "enhanced category" is OBE | Replace "enhanced category" with "extended category". | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|---|---|--------|
| 146 | Brown | 2.2.1.1.3 | 1453 | M | during each phase of the flight' I do not see how this phrase is applicable here. The paragraph is about ITP which can only be performed in the cruise phase of flight in airspace in which procedural separation is provided. | Delete 'during each phase of the flight' | WG6-Mtg#31-Agrees and implements | Closed |
| 147 | Brown | 2.2.1.1.3 | 1500 | E | The ITP is an Airborne Traffic Situational Awareness application...' According to 2.2.1.1.3 title, ITP is an Extended Situational Awareness application | Make consistent. Needs to be differentiated from a simple traffic situational awareness application. | WG6-Mtg#31-Agrees and implements. | Closed |
| 148 | Johan Martensson | 2.2.1.1.3 | 1521 | H | No need to state an upper limit (it was an artefact of the SPR definition of the application) which was removed in the ASA MOPS and has been removed in the SPR amendment | replace "to 4000" with "or more" | WG6-Mtg#31-Agrees and implements. | Closed |
| 149 | Brown | 2.2.1.1.3 | 1524 | H | where this blocking aircraft is at a same-direction Flight Level (from 1000 to 3000 feet higher or lower) The supplement to DO-312, SPR for ITP, proposed that the maximum altitude differential between ITP aircraft and reference aircraft be 2000 feet in line with the ICAO SASP Circular. | Change 3000 feet to 2000 feet. | WG6-Mtg#30-Agrees and implements | Closed |
| 150 | Johan Martensson | 2.2.1.1.3 | 1525 | H | The maximum altitude difference to ref aircraft is now 2000 feet (as per ASA MOPS and SPR amendment) | change 3000 to 2000 | WG6-Mtg#30-Agrees and implements | Closed |
| 151 | J. Steinleitner | 2.2.1.1.4 | 1544 | M | Section 2.2.1.1.4 appears to be misplaced - overall, it is suggested to have each a section for applications that have been standardised, for those that are currently being standardised and those that are considered for future standardisation. | See Comment. | WG6-Mtg#31-Respectfully declines the comment. We cannot reorganize the document at this time. | Closed |
| 152 | Walker | 2.2.1.1.4 | 1577 | H | (1577 - 1590) I really don't think this sort of speculation should be in the MASPS. A lot of water will flow under the bridge before this could happen. The likelihood that active validation will be needed as a safety net for more advanced applications is high. Without a totally independent position source from GNSS with different failure modes, I cannot see this coming to pass. Furthermore this language is likely to antagonize some legacy TCAS supporters. | Suggest removing the discussion of passive CAS or softening the language to possible research directions. | WG6-Mtg#30-After discussion it was agreed that Dean Miller and Don Walker would review this section and propose revised text at Mtg#31 at RTCA. WG6-Mtg#31-Revised text offered, reviewed, approved and implemented. | Closed |
| 153 | J. Steinleitner | 2.2.1.1.5 | 1608 | M | Interfacing with the FMS is not considered to be a minimum requirement. This should be clarified. | See Comment. | WG6-Mtg#31-Respectfully declines the comment. | Closed |
| 154 | Brown | 2.2.1.1.5 | 1640 | L | Not really a good idea to use the term 'separation' in this context. | Replace 'separation' with 'spacing' | WG6-Mtg#31-Agrees and implements. | Closed |
| 155 | Shafaat | 2.2.1.1.5 | 1640 | L | Aircraft don't have to be in-trail | | WG6-Mtg#31-Respectfully declines comment | Closed |
| 156 | Brown | 2.2.1.1.5 | 1641 | L | Is this correct use of the term CDTI per the MOPS DO-317A)? Shouldn't this be 'traffic display'? | Replace CDTI with 'traffic display' throughout document (though not all instances of 'CDTI') | WG6-Mtg#31-Respectfully declines comment | Closed |
| 157 | Brown | 2.2.1.1.5 | 1642 | H | (1642 to 1649) What has this paragraph to do with FIM-S? In particular, the assertion that the trailing aircraft 'will maintain minimum separation standards' is particularly out of place in a description of a spacing application. Also the suggestion that a non-FMS aircraft can fly the same approach as an FMS 4D equipped aircraft just by following it seems very far-fetched at this point. Let's learn to walk before we invent a Star Trek transporter! | Remove this paragraph. | WG6-Mtg#30-After discussion it was agreed that Dean Miller would review this section and propose revised text at Mtg#31 at RTCA. WG6-Mtg#31-Revised text provided, reviewed, approved and inserted | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 158 | Brown | 2.2.1.1.6 | 1660 | M | The word 'sequencing' appears in the title. What does this have to do with sequencing, which is a planning and management function carried out by ATC? The word does not appear in the paragraph. | Remove 'sequencing' from the title. | WG6-Mtg#31 -Agrees and implements | Closed |
| 159 | Barber | 2.2.1.1.6 | 1660 | H | <p>(1660 to 1725) ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications". Per the ARC report section 3.2:</p> <p>"... Working Group 1 deemed it unacceptable for pilots to accept sole responsibility for separation of aircraft as defined in the FIM-DS CONOPS. However, working group 1 found a DI management task delegates a spacing task to the pilot, and the pilot must perform within defined boundaries while the air traffic controller maintains the responsibility for separation. ...</p> <p>Under a DI management task, air traffic controllers maintain separation responsibility while assigning pilots a DI task. This reduces air traffic controller workload and enables the air traffic controller to undertake other tasking while increasing airspace capacity. The ARC finds that air traffic controllers and pilots are willing to accept the DI concept because it maintains traditional pilot and air traffic controller roles, and holds pilots accountable for compliance with a DI clearance and air traffic controllers accountable for separation."</p> <p>Consequently, the ARC did not agree with the concept of transferring responsibility for separation assurance from ground based ATC to aircraft / pilots.</p> | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 160 | Brown | 2.2.1.1.6 | 1660 | NC | (1660 to 1725) Except in general terms, these paragraphs seem to have very little to do with the FIM applications named in the title. Perhaps the text was intended to be a lead-in to DS applications in general, but situated where it is, it is confusing and misleading. Even if that assumption is made, the description seems more relevant to self-separation than to DS. | Rewrite these paragraphs to be relevant to FIM-DS and DSWRM (whatever that is -- needs to be defined somewhere). Consider elevating a general description of DS to a superior paragraph. Ensure the result is relevant to DS rather than to SS. | WG6-Mtg#30 -A draft proposed revision to the text of this section was offered by John Brown, which was posted as Working Paper WG6-WP30-06 for review. If implemented and agreed to during Mtg#31 at RTCA, the NC will be removed. WG6-Mtg#31 -Revised text reviewed, approved and implemented. WG6-Mtg#31 -Revised text agreed to and implemented. | Closed |
| 161 | Brown | 2.2.1.1.6 | 1663 | NC | <p>'have the freedom to select their path and speed in real time'</p> <p>Path selection (whatever is meant by 'path' in this context) does not seem to fit an FIM description. In essence, FIM-DS is very similar in concept to FIM-S except that in -DS the crew becomes responsible for separation from the preceding (or maybe the succeeding) aircraft. Path selection will continue to be by procedure if any measure of predictability of target aircraft behavior is to be achieved.</p> | Remove 'path' | WG6-Mtg#30 -A draft proposed revision to the text of this section was offered by John Brown, which will be posted as a new Working Paper WG6-WP30-06 for review. If implemented and agreed to during Mtg#31 at RTCA, the NC will be removed. WG6-Mtg#31 -Revised text agreed to and implemented. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|---|---|--------|
| 162 | Brown | 2.2.1.1.6 | 1667 | NC | Aircraft operators can thus proceed with due regard to other aircraft.....' This sounds like a sentence which might belong in a self-separation description. It does not belong here. | Remove this entire sentence. | WG6-Mtg#30 -A draft proposed revision to the text of this section was offered by John Brown, which will be posted as a new Working Paper WG6-WP30-06 for review. If implemented and agreed to during Mtg#31 at RTCA, the NC will be removed. WG6-Mtg#31 -Revised text agreed to and implemented. | Closed |
| 163 | Brown | 2.2.1.1.6 | 1679 | L | conflict prediction' A conflict is already a prediction -- a predicted loss of separation. | Change to 'conflict detection'. | WG6-Mtg#31 -OBE as the rewrite removed the problem wording. | Closed |
| 164 | Barber | 2.2.1.1.6 | 1684 | M | Refers to "intent information" as being required for the application. | The MASPS should provide more information about what constitutes "intent information" and the minimum characteristics of the data link that might be necessary to provide it (e.g., assumed message rates, etc.). | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 165 | Barber | 2.2.1.1.7 | 1726 | H | (1726 to 1747) ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications"; specifics are provided in the ARC report section 3.2. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 166 | Brown | 2.2.1.1.7 | 1746 | H | (1746 to 1747) These paragraphs do not seem to be reflective of the likely operations in procedural airspace nor of the operating environment. | Rewrite last sentence to "Scenarios include provision of separation assurance during in trail climb and descent, passing and closely spaced routes" | WG6-Mtg#30 -Agrees and implements | Closed |
| 167 | Barber | 2.2.1.1.7 | 1739 | H | It is unclear what distinguishes "intent information" from "full intent information". | The MASPS should provide more information about what constitutes "intent information" and the minimum characteristics of the data link that might be necessary to provide it (e.g., assumed message rates, etc.). | WG6-Mtg#31 -Agrees to remove the word "full". | Closed |
| 168 | Barber | 2.2.1.1.8 | 1748 | H | (1748 to 1783) ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications"; specifics are provided in the ARC report section 3.2. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 169 | Brown | 2.2.1.1.8 | 1748 | M | (1748 to 1783) The industry is moving away from the blunder scenarios that are emphasized here. Demonstrated performance of ILS, MLS, GLS and RNP-AR approaches offers a less conservative scenario which should be considered. | Include future thinking on closely-space parallel operations and de-emphasize the blunder scenario. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 170 | Barber | 2.2.1.1.8 | 1782 | M | (1748 to 1783) It is unclear what is meant by the term "Plant noise". | Provide a clearer definition. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 171 | Brown | 2.2.1.1.9 | 1784 | M | The description that follows this title far exceeds the intent of the two listed applications. | Develop a separate section for situational awareness surface applications (SURF and SURF IA). Hypothesize on separation and guided taxi elsewhere. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 172 | Barber | 2.2.1.1.9 | 1809 | M | (1809 to 1822) The title of this section includes "SURF" but the operational scenarios do not appear to be relevant to the SURF application as both of them include alerts. | Add a SURF operational scenario. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 173 | Brown | 2.2.1.1.9 | 1819 | M | (1819 to 1822) Do these assumptions/variables come from DO-323 SPR for SURFIA? I have not been able to spot them in the document. | Confirm consistency with DO-323. | WG6-Mtg#31-Respectfully declines comment | Closed |
| 174 | Barber | 2.2.1.1.10 | 1825 | H | This paragraph begins "The long term roadmap for ADS-B In ... applications". The ADS-B In ARC report recommended that the FAA consider the following applications remain in the far-term (long-term) research phase (see Executive Summary pages viii-ix): <ul style="list-style-type: none"> · Self-separation, · Flow corridors, · DS crossing and passing, · Independent closely spaced routes, and · Independent closely spaced parallel approaches. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31-Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 175 | Eric Vallauri | 2.2.1.2 | 1843 | M | This section addresses ground surveillance applications. Its relationship with ASA is not clear (e.g. Figure 1-1). | See Comment. | WG6-Mtg#31-The new Figure 1-2 will show the relationship between ground surveillance applications and this MASPS. | Closed |
| 176 | J. Steinleitner | Table 2-5 | 1869 | H | There are a number of questionable entries in Table 2-5 which appear to neither agree with respective SPR material nor European requirements. This is one example for future refinement when and if joint MASPS will be produced. | See Comment. | WG6-Mtg#31-Respectfully declines the comment and will take note for any future revisions of this MASPS | Closed |
| 177 | Walker | 2.2.1.2 | 1872 | H | (Table 2-6) These velocity accuracies seem tight and do not correspond to the system we are building. Where did they come from? | Suggest validating velocity accuracy metrics with SBS Critical services spec. | WG6-Mtg#30-Agreed to have Tom review the SBS Critical Spec for possible revision of the numbers in Table 2-6. WG6-Mtg#31-Agreed to delete Table 2-6 and all references | Closed |
| 178 | Johan Martensson | Table 2-7 | 1924 | M | The vertical accuracy 125ft 95% only includes the data transfer accuracy requirement and should not be stated as a vertical data accuracy (since it does not include measurement accuracy) | See Comment. | WG6-Mtg#31-Respectfully declines the comment. | Closed |
| 179 | Joslin | 2.2.1.2.2 | 1941 | M | An early stage benefit is stated as "Operation in zero-visibility conditions..." however the first step would be for Low Visibility Operations (LVO) at perhaps airports which do not have LVO SMGCS capability | change the sentence to read : Operation in <u>low-visibility</u> conditions..... | WG6-Mtg#31-Agrees and implements. | Closed |
| 180 | Joslin | 2.2.1.2.2 | 1971 | M | Rotorcraft may be routinely cleared to land in areas that are not designated as taxiways or runways (e.g. grass infield, landing pads, etc) and could generate nuisance alerts | Add a note: Rotorcraft cleared to land in areas that are not on a runway or taxiway should not generate nuisance alerts | WG6-Mtg#31-Agrees and implements. | Closed |
| 181 | Joslin | 2.2.1.2.2 | 1974 | M | The term "airport level" is not clearly defined | replace "airport level" with "airport field" elevation" so the sentence reads: Operational environment includes airport movement area up to 1500 feet above <u>airport field elevation</u> | WG6-Mtg#31-Agrees and implements. | Closed |
| 182 | Joslin | 2.2.1.2.2 | 1988 | M | SURF-IA is referenced from the runway threshold and not the touchdown point | change the sentence to read : ...information on aircraft 5 nm from the " <u>runway threshold</u> " for each runway..... | WG6-Mtg#31-Agrees and implements. | Closed |
| 183 | Mittelman | 2.2.2.1 | 2009 | L | PRM can be radar-based or ASDE-X based (PRM-A) | reword to "At that time, ground surveillance-based PRM system (i.e., radar and ASDE-X) would . . ." | WG6-Mtg#31-Agrees and implements | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|--|--------|
| 184 | Mittelman | 2.2.2.1 | 2009 | L | Can ADS-B in a high density spectrum interference environment meet the same requirements of the high update rate of PRM? What is the current requirement for the reception of ADS-B in a terminal environment? 3 seconds? If this is correct, then that won't meet the PRM requirements. | If unsure, then change the "is" to "may be" on line 2001. | WG6-Mtg#31 -Agrees and implements | Closed |
| 185 | Schueler | 3.1.1.1.1 | 2074 | L | Mode-Status reports are described as containing 'information on supported applications'. The current link MOPS do not contain such data in the transmit protocols. Only link receive capability is broadcast. | Correct the statement as necessary. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 186 | Schueler | 3.1.1.1.2 | 2120 | L | (Figure 3-2) The 'Crew Entry and Flight Status Data' entity to 'ADS-B Subsystem (Aircraft/Vehicle Broadcast Only Participant)' data flow should include an OCO component. | Add the OCO data flow. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 187 | Walker | 3.1.1.1.2 | 2120 | M | (Figure 3-2) This figure is atrocious. | Suggest delete and point to fig 1-1 | WG6-Mtg#31 -Loves this Figure and will not part with it. | Closed |
| 188 | Walker | 3.1.1.1.2 | 2126 | M | (Figure 3-3) This figure is worse. | Suggest pointing to Fig 1-1 If you must have a block diagram to represent a physical architecture, then ask a manufacturer to provide you one. This diagram is detailed on the RF and totally simplistic on the digital design and mixes physical and functional concepts. Get a new figure or delete this one. | WG6-Mtg#31 -Loves this Figure and will not part with it. | Closed |
| 189 | Walker | 3.1.1.2 | 2143 | M | (Figure 3-4) This figure should use the blocks from Figure 1-1 as opposed to the previously discredited figures. | Redraw using Figure 1-1 as a model | WG6-Mtg#30 -After discussion, it was agreed that John Fisher would be tasked to make revisions to the Figures 3-4, 3-5 & 3-6 and Dean Miller would take Table 2-1 from the published DO-317A and propose to insert it into the draft MASPS. WG6-Mtg#31 -Figure revisions reviewed and approved and new Table inserted | Closed |
| 190 | Fisher | 3.1.1.3 | 2164 | L | "As illustrated above" | change text to ref where above | WG6-Mtg#31 -Agrees and implements. | Closed |
| 191 | Schueler | 3.1.1.3 | 2170 | M | It appears there should be more 'levels'. Should SURF be included? | Correct as necessary. | WG6-Mtg#31 - Accepts and implements proposed changes made by Tom Pagano to 3.1.1 to explain equipage class concept. | Closed |
| 192 | Fisher | 3.1.1.3 | 2171 | M | Figure 3-5 is missing arrows under Aircraft A | | WG6-Mtg#30 -After discussion, it was agreed that John Fisher would be tasked to make revisions to the Figures 3-4, 3-5 & 3-6 and Dean Miller would take Table 2-1 from the published DO-317A and propose to insert it into the draft MASPS. WG6-Mtg#31 -Figure revisions reviewed and approved and new Table inserted | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|--|--------|
| 193 | Walker | 3.1.1.3 | 2172 | M | (Figure 3-5) This figure should use the blocks from Figure 1-1 as opposed to the previously discredited figures. | Redraw using Figure 1-1 as a model | WG6-Mtg#30 -After discussion, it was agreed that John Fisher would be tasked to make revisions to the Figures 3-4, 3-5 & 3-6 and Dean Miller would take Table 2-1 from the published DO-317A and propose to insert it into the draft MASPS. WG6-Mtg#31 -Figure revisions reviewed and approved and new Table inserted | Closed |
| 194 | Walker | 3.1.1.3.1 | 2189 | H | This section needs to be clear that the class discussion applies to the link portion of the ASA System only and does not apply to the ASSAP or CDTI subsystems. Without that knowledge, the class system in DO-317A becomes very confusing. | Add language to clarify the system boundary for the class system described. | WG6-Mtg#30 -After discussion, it was agreed that John Fisher would be tasked to make revisions to the Figures 3-4, 3-5 & 3-6 and Dean Miller would take Table 2-1 from the published DO-317A and propose to insert it into the draft MASPS. WG6-Mtg#31 -Figure revisions reviewed and approved and new Table inserted | Closed |
| 195 | Walker | 3.1.1.3.1 | 2189 | H | It is inappropriate to associate applications with link equipment classes prior to those associations being validated by the application core teams. When those requirements are validated, they will be captured in SPR and MOPS material. After that it would be appropriate to document associations, although the usefulness in this context is still debatable. | Remove all application references from the class definitions. Class definitions should restrict their associations to Power/Sensitivity/Supported Messages | Pagano -See proposed changes made to 3.1.1 to reflect comment. Ref: ACTION 30-8. WG6-Mtg#31 -After review of revised text, it will be incorporated in draft. | Closed |
| 196 | Schueler | 3.1.1.3.1 | 2203 | E | Incomplete sentence. 'additionally supports' what? | Complete the sentence. | WG6-Mtg#31 -Agrees and will implement the proposed changes from Tom Pagano made to 3.1.1.3.1 to reflect comment. | Closed |
| 197 | Miller | 3.1.1.3.1 | 2204 | E | The term "airborne conflict management" is OBE. | Replace "airborne conflict management" with TSAA. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 198 | Walker | 3.1.1.3.2 | 2256 | H | (Table 3-1) Remove the few references to applications in this table. Looks like a preliminary scrub was made, but a few remain. | Remove remaining application references from description section of A0, B2 and B3 in this table. | WG6-Mtg#30 -It was agreed that Tom and Gary would take a deeper look at Table 3-1 and suggest revisions to resolve the comment. WG6-Mtg#31 -Table revised. | Closed |
| 199 | Schueler | 3.1.3 | 2320 | L | Sentence states that ownship position data is received by CDTI from ASSAP. Later in the document, it is noted that the position data can be provided independently to the CDTI. | State that ownship position data can come to the CDTI from sources other than the ASSAP subsystem. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 200 | Walker | 3.1.3 | 2329 | L | Although it is technically true that CDTI has been implemented on an EFB, Aircraft Cert and Flight Standards do not promote this concept. | Prefer that EFB be removed as a display example. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 201 | Joslin | 3.1.3 | 2333 | M | The location of the CDTI in the pilot's field of view does not appear to be addressed | Add a Note: <u>The location of the CDTI in the pilot's field of view requires a human factors evaluation.</u> | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|---|---|--------|
| 202 | Pagano | 3.1.4 | 2340 | E | Tense should no longer be future since NRA is realized in some areas | Change "The ADS-B-NRA application will provide enhanced Air Traffic Services in areas where" to "The ADS-B-NRA application provides enhanced Air Traffic Services in areas where". Change "The ADS-B-NRA application will be most beneficial in areas where" to "The ADS-B-NRA application provides the most benefit in areas where" | WG6-Mtg#31 -Agrees and implements. | Closed |
| 203 | Pagano | 3.1.4 | 2358 | E | (2358 to 2360) Tense should no longer be future since NRA is realized in some areas | Change "ADS-B-NRA will provide benefits to capacity and enhancements to these services," to "ADS-B-NRA provides benefits to capacity and enhancements to these services,". Change "It is expected that this application will provide, efficiency and safety in a similar way" to "This application provides efficiency and safety in a similar way" | WG6-Mtg#31 -Agrees and implements. | Closed |
| 204 | Pagano | 3.1.4 | 2363 | E | (2363 to 2368) Tense should no longer be future since NRA is realized in some areas | Change "ADS-B-NRA will enhance the Air Traffic Control Service by providing controllers with improved situational awareness of aircraft positions and the possibility of applying separation minima much smaller than what is presently used with current procedures. The Alerting Service will be enhanced by more accurate information on the latest position of aircraft. Furthermore, the broadcast of ADS-B emergency status information will be displayed to the controller independently from any radio communications." to "ADS-B-NRA enhances the Air Traffic Control Service by providing controllers with improved situational awareness of aircraft positions and the possibility of applying separation minima much smaller than what is presently used with current procedures. The Alerting Service can be enhanced by more accurate information on the latest position of aircraft. Furthermore, the broadcast of ADS-B provides the capability to display emergency status information to the controller independently from any radio communications." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 205 | Pagano | 3.1.4.1.2 | 2382 | E | (2382 to 2385) Tense should no longer be future since ADS-B-RAD is realized in some areas | Change "The ADS-B-RAD application (see Table 2-7) will support, and in some cases enhance, Air Traffic Services through the addition of ADS-B surveillance in areas where radar surveillance exists. It will apply to the En Route and terminal airspace in classes A to D." to "The ADS-B-RAD application (see Table 2-7) supports, and in some cases enhance, Air Traffic Services through the addition of ADS-B surveillance in areas where radar surveillance exists. It can apply to En Route and terminal airspace in classes A to D." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 206 | Pagano | 3.1.4.1.3 | 2408 | E | Appears to be typo with ADS-B-NRA used instead of ADS-B-APT. | Change "ADS-B-NRA surveillance data is intended" to "ADS-B-APT surveillance data is intended" | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|--|--------|
| 207 | Joslin | 3.1.4.1.3 | 2441 | M | Conflicts can be caused by aircraft, surface vehicles or pedestrians the latter of which will not be detected, whether authorized or intruding. | Amend the sentence to read : ...is not designed to assist in the detection of Intruders <u>or pedestrians</u> | WG6-Mtg#31 -Declines the use of the word pedestrian, but will add the definition of "Intruder" into Appendix A. | Closed |
| 208 | Schueler | 3.1.4.2 | 2446 | M | (2446 to 2460) Although the content of this section seems to be consistent with the Surveillance and Broadcast Services Description Doc SRT 047 Rev 01, the section contains unnecessary detail that could become inaccurate if the ground station functionality changes even slightly in a way that would not necessarily affect receive or application processing. | Provide advice that details were current at the time of publication, and where current details of SBS Ground System operation can be found. | WG6-Mtg#31 -Agreed | Closed |
| 209 | Schueler | 3.1.4.2 | 2446 | E | (2446 to 2460) Multiple instances of the acronym 'SV' are used in this section to refer to 'Service Volume'. Elsewhere in the document, 'SV' means 'State Vector'. | Write out 'Service Volume' instead of using the acronym SV. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 210 | Walker | 3.1.4.2.1 | 2461 | L | (2461 to 2529) This entire section is a slippery slope. Should the SBS Description Document change between now and the completed rollout, the MASPS has a risk to become out of date. Referencing the Description Document would be safer. | I understand the desire to document this. I leave this to WG6 judgment. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 211 | Mittelman | 3.1.4.2.1 | 2469 | M | Should the document state what is in progress ("currently supports") or what the system will support in the near future? | Reword as follows: It is anticipated that the ADS-R Service, when fully deployed, will support all ADS-B In applications in the same manner that ADS-B air-to-air transmissions do. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 212 | Pagano | 3.1.4.2.1 | 2470 | L | The statement "The ADS-R Service currently supports only advisory level surveillance applications." is not clear to potential implementors as to what ADS-R provides or may provide in the future. | Identify applications in DO-317A that ADS-R is currently designed to support. It may also be beneficial to indicate that ADS-R may not be able to support some future applications depending on performance requirements since ADS-R potentially impacts latency, accuracies and the limits of the volume of airspace serviced to clients may be limiting factors. | Withdrawn | Closed |
| 213 | Pagano | 3.1.4.2.1.4 | 2508 | E | Spell out SV since this has already been used to denote State Vector. | Change "clients, i.e., airborne clients within the Enroute or Terminal SVs." to "clients, i.e., airborne clients within the Enroute or Terminal Service Volumes." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 214 | Pagano | 3.1.4.2.1.5 | 2514 | E | Replace SV with "Service Volume" since this has already been used to denote State Vector. | Replace SV with "Service Volume" since this has already been used as State Vector. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 215 | Walker | 3.1.4.2.2 | 2530 | L | (2530 to 2603) This entire section is a slippery slope. Should the SBS Description Document change between now and the completed rollout, the MASPS has a risk to become out of date. Referencing the Description Document would be safer. | I understand the desire to document this. I leave this to WG6 judgment. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 216 | Schueler | 3.1.4.2.2.2 | 2545 | M | The document states, "The TIS-B Service Status message is provided to UAT clients to indicate TIS-B service availability; this is considered to be a key safety benefit." It is puzzling that the same safety benefit would not be available on the 1090ES link. Luckily, according to the SBS Description Doc SRT 047 Rev 01, "This service status notification will also be available for 1090ES link version 2 clients through the TIS-B/ADS-R Service Status message." | Update the sentence to reflect the current SBS Description. | WG6-Mtg#31 -Agreed | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|--|--|--------|
| 217 | Mittelman | 3.1.4.2.2.3 | 2554 | L | TIS-B is only derived from secondary surveillance sources. | For clarity, reword the first sentence to " The SBS - Ground System monitors FAA secondary surveillance sources (primary radar derived targets are not used to generate potential TIS-B targets)" | WG6-Mtg#31 -Agrees and implements | Closed |
| 218 | Pagano | 3.1.4.2.2.5 | 2590 | E | Replace SV with "Service Volume" since this has already been used to denote State Vector. | Replace SV with "Service Volume" since this has already been used as State Vector. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 219 | Walker | 3.1.4.3 | 2604 | E | Good catch. This is an excellent point to document in the MASPS. | There are some strange brackets throughout this section. | WG6-Mtg#31 -As indicated in the distribution email, these braces point to where the information/requirement was taken from and they will be removed prior to publication. | Closed |
| 220 | Pagano | 3.1.4.3 | 2605 | L | Section is incomplete | Update | WG6-Mtg#31 -Section will be removed with publication | Closed |
| 221 | Schueler | 3.1.4.3.1.1 | 2623 | H | R3.003 states, "The TIS-B/ADS-R Service Status message shall (R3.003) {new reqmt} only be provided to clients that are eligible for both TIS-B and ADS-R service." This would imply that a dual link receiver is not eligible for the TIS-B/ADS-R Service Status message because, according to 3.1.4.2.1.2, a dual link receiver is not eligible for ADS-R service. | Revise the requirement to say that the TIS-B/ADS-R Service Status message shall only be provided to clients that are eligible for either TIS-B or ADS-R service or both. | WG6-Mtg#31 -Agrees and edits the last sentence to change to "either TIS-B and/or ADS-R service." | Closed |
| 222 | Johan Martensson | 3.1.4.3.1.1.1 | 2633 | H | R3.004: DAL 2 (Major) requires/corresponds to 10-5 per hour, not per message. Also DAL is encoded in the SDA not the SIL (as it seems to imply in the paragraph below). Same comment for ADS-R | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 223 | Johan Martensson | 3.1.4.3.1.1.1 | 2644 | M | R3.007 SIL supp = 1 (i.e. encoded per message) will not support VSA | See Comment. | WG6-Mtg#31 -This requires a change in DO-317A, and therefore cannot be changed in these MASPS | Closed |
| 224 | Pagano | 3.1.4.3.1.1.1 | 2664 | E | Wording using enroute and terminal environments is inconsistent with previous nomenclature | Change "In En Route and Terminal environments the track accuracy shall" to "In En Route and Terminal domains the track accuracy shall." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 225 | Miller | Table 3-2 | 2666 | E | Title needs clarification | Change title to "Requirements for TIS-B Track Accuracy" | WG6-Mtg#31 -Agrees and implements. | Closed |
| 226 | Pagano | 3.1.4.3.1.1.2 | 2682 | L | Make clear why throttling is used. | Change "Graceful Degradation algorithms are implemented which will throttle transmissions..." to "Due to spectrum limitations, graceful degradation algorithms are implemented which will throttle transmissions..." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 227 | Pagano | 3.1.4.3.1.1.2 | 2686 | E | Editorial | Change "The maximum message transmission rate for a TIS-B Target to a 1090 and UAT clients" to "The maximum message transmission rate for a TIS-B Target to 1090 and UAT clients". | WG6-Mtg#31 -Agrees and implements. | Closed |
| 228 | Pagano | 3.1.4.3.1.1.4 | 2699 | E | Replace SV with "Service Volume" since this has already been used to denote State Vector. | Replace SV with "Service Volume" since this has already been used as State Vector. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 229 | Pagano | 3.1.4.3.1.1.4 | 2700 | E | Replace SV with "Service Volume" since this has already been used to denote State Vector. | Replace SV with "Service Volume" since this has already been used as State Vector. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 230 | Pagano | 3.1.4.3.1.1.4 | 2702 | E | Replace SV with "Service Volume" since this has already been used to denote State Vector. | Replace SV with "Service Volume" since this has already been used as State Vector. | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-----------------------|---------------------|--------------------------------|--|---|---|--------|
| 231 | Brown | 3.1.4.3.2.1.2 | 2739 | M | (2739 to 2750) These application names are inconsistent with those used earlier in the document. In addition, I am not convinced that the requirements are fully reflective of those in associated SPR's (e.g. VSA update interval is aircraft-to-aircraft range-dependent). Not quite sure why SBS ConOps is used here in place of published standards. | Make consistent. | WG6-Mtg#31 -Agrees and implements | Closed |
| 232 | Miller | 3.1.4.3.2.1.2 | 2744 | E | SBS ConOps is used without a Reference number | Add reference number | WG6-Mtg#31 -Agrees and implements. | Closed |
| 233 | Mosher | 3.1.4.3.2.1.2 | 2761 | H | Requirement R3.024 cannot be validated, because the concept of "Graceful Degradation" is not defined in sufficient detail. | Provide requirements for the Graceful Degradation algorithm. | WG6-Mtg#31 -Agrees that there is no action/change necessary. | Closed |
| 234 | Mittelman | 3.1.5 | 2790 | L | The most likely vehicles to be in the movement area and involved in a runway incident are airport maintenance vehicles (i.e., snow plows) | Add "airport maintenance vehicles (i.e., snow plows)" to the list | WG6-Mtg#31 -Agrees and implements | Closed |
| 235 | Pagano | 3.1.5 | 2812 | E | Sentence has redundant information. | Change "Position accuracy requirements for surface vehicles will typically be more demanding on surface vehicle transmitters..." to "Position accuracy requirements will typically be more demanding on surface vehicle transmitters...". | WG6-Mtg#31 -Agrees and implements. | Closed |
| 236 | Brown | 3.2.1 | 2823 | L | Section 3.2 is entitled Broadcast Information Elements Requirements, yet this paragraph seems to deal with time of applicability of a report, which I take to be on the receive side. Or perhaps I am over-interpreting use of 'report' here? In addition, I do not see reference to TOA in 3.4.3.3.1.1. | Maybe change title of 3.2. Confirm that reference is valid. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 237 | Brown | 3.2.2.2 | 2843 | L | The first requirement in this section also appears not to be a broadcast data requirement. | Change title of 3.2? | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 238 | Brown | 3.2.2.2 and sub-paras | 2852 | L | Does this mean all systems must be this way, or only those systems in which anonymity is likely to be an operational requirement (e.g. military, drug runners)? | Clarify. As written, it could be interpreted that all systems must have this capability. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 239 | Schueler | 3.2.2.2.1 | 2880 | H | Requirement R3.039 requires that the ADS-B receiver flag all data that cannot be correlated with a particular duplicate address as 'invalid'. DO-260B only requires that the ICAO address be flagged as 'duplicate' so that application processing can decide whether the uncorrelated data can be used or not. | Revise the requirement to be consistent with the current link MOPS. | WG6-Mtg#31 - Basically agrees with the suggested resolution and modifies the sentence. | Closed |
| 240 | Fisher | 3.2.2.2.1 | 2880 | H | (2880 to 2882) This paragraph needs a rewrite. UAT does not drop duplicate tracks. Automation systems on the 1090 link drop some but not all data | rewrite para. | WG6-Mtg#31 -Agrees and closed by action on other comment. | Closed |
| 241 | Joslin | 3.2.2.3 | 2896 | L | Missing the category of "powered lift" which will be applicable with the introduction of the civil tilt-rotor | Add an emitter category for powered lift | WG6-Mtg#31 -Declines the comment because it is out of the scope of the MASPS. | Closed |
| 242 | Brown | 3.2.2.3 | 2906 | L | I must assume that >5g acceleration refers to normal acceleration? | Add 'normal' | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 243 | Joslin | 3.2.2.3 | 2908 | L | Rotorcraft can exceed 15,500 lbs MGW and will have significantly greater wake turbulence than a lighter rotorcraft | Provide an emitter category to distinguish between <i>light</i> and <i>small</i> rotorcraft | WG6-Mtg#31 -Declines the comment because it is out of the scope of the MASPS. | Closed |
| 244 | Joslin | 3.2.2.3 | 2918 | L | Missing definitions of line/cluster/point obstacle | Provide definitions of line/cluster/point obstacles in Appendix A | WG6-Mtg#31 -Agrees and implements. | Closed |
| 245 | Johan Martensson | 3.2.3 | 2942 | M | Length and width is required by European SPIIR. Suggest not to describe application related requirements in this document but keep it to parameter definition. | See Comment. | Withdrawn | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|---|--------|
| 246 | Gilbert | 3.2.4.1 | 2992 | L | I know what they are trying to say, but obviously there are different ways for the rectangle to be "parallel" to the aircraft heading. | Specify that the parallel sides should be the ones associated with length. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 247 | Joslin | 3.2.4.1 | 3016 | H | Rotorcraft position rectangle depends on the main rotor blade diameter as well as the fuselage length and tail rotor diameter | Add a Note: <i>The length and width of a rotorcraft shall consider the main rotor diameter, tail rotor diameter and fuselage length</i> | WG6-Mtg#31 -Agrees that the Note should be added as clarification for rotorcraft. Will include language for tilt-rotor. | Closed |
| 248 | Gilbert | 3.2.4.2 | 3041 | L | Not a very likely condition, but the Dead Sea is below -1000 feet, so it could be possible to have an altitude below the lower limit of the range. | Change lower limit of altitude range to -2000 feet. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 249 | Walker | 3.2.6 | 3095 | H | Priority 3 and 4 do not match AC 20-165 guidance. Please explain the rationale for this choice. The MASPS and AC should agree for the sake of the community. | Change to match AC 20-165 or convince me to modify this priority in AC 20-165a. | Pagano -AC 20-165 has barometric source as next priority after hybrid source. See proposed modified text in 3.2.6. Ref: ACTION 30-10. WG6-Mtg#31 -After review of proposed change, it is accepted. | Closed |
| 250 | Joslin | 3.2.7 | 3101 | L | A rotorcraft in a hover taxi over the airport surface may have a heading that is significantly different from its track when operating in high winds | Add a Note: A rotorcraft in a hover taxi over the airport surface may have a heading that is significantly different from its track when operating in high winds | WG6-Mtg#31 -Agrees and implements. | Closed |
| 251 | Fisher | 3.2.9.2 | 3179 | M | SPI should be 18 sec + or - 1. why do we have 20 + or - 3 | verify this is correct | Furr - History of the field: DO-242A => 20 +/-3 DO-181E/ED-73E => 18 +/-1 DO-260B+ => 18 +/-1 Doc 9871E2 => 18 +/-1 DO-282B+ => 20 +/-4 Doc 9861E2 => 20 +/-4 WG6-Mtg#31 -No change. | Closed |
| 252 | Walker | 3.2.9.3 | 3185 | L | Add note: Doesn't ATC know they are providing services? | Suggest that Reserved is a polite term for this field. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 253 | Joslin | 3.2.10 | 3212 | H | (Table 3-7) Missing NIC for Rc , 0.5 nm (926m) | Add NIC for Rc , 0.5 nm (926m) | WG6-Mtg#31 -Rc=0.5 is not a common NIC value for ADS-B links. Therefore it is not included in this MASPS. | Closed |
| 254 | Miller | Table 3-9 | 3313 | L | Note 4 is not complete | Add "(VPL) and vertical accuracy (VFOM)" after Vertical Protection Limit in Note 4. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 255 | Walker | 3.2.14 | 3343 | M | This paragraph needs a little more text. NICbaro also means that the air data source is not Gillham and therefore requires no cross check. | Suggest pulling text from DO-260B. 260B says cross checked or gillham | WG6-Mtg#31 -Agrees and takes text from DO-260B | Closed |
| 256 | Miller | Table 3-12 | 3364 | L | Note 2 is not complete | Add "(VPL) and vertical accuracy (VFOM)" after Vertical Protection Limit in Note 2. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 257 | Joslin | 3.2.18 | 3376 | L | Missing information for RTCA DO 260, 260A, 282, 282A | Add a statement clarifying the "versions" associated with the legacy systems for 260 and 282 | WG6-Mtg#31 -Declines the comment because it is out of the scope of the MASPS. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|--|--------|
| 258 | Pagano | 3.2.31 | 3551 | L | A reference to Transponder Based and Stand Alone ADS-B Transmitting Subsystems is unique to 1090ES and should not be in MASPS. | Change "The following conventions shall (R3.126) {from 242AR3.112-B} apply both to Transponder-Based and Stand Alone ADS-B Transmitting Subsystems:" to "The following conventions shall (R3.126) {from 242AR3.112-B} apply:" | WG6-Mtg#31-Agrees and implements. | Closed |
| 259 | Joslin | 3.2.33 | 3605 | L | The reference for lateral axis GPS antenna off-set values is stated as "towards the wing tip" which is not applicable to rotorcraft | amend the note to read : toward the left/right wing tip <u>or the corresponding arc of the main rotor blade....</u> | WG6-Mtg#31-Agrees and implements. | Closed |
| 260 | Joslin | 3.2.33 | 3626 | L | (Table 3-28) The reference for the longitudinal axis is given as the aircraft nose, which is not applicable to rotorcraft | Change the table to read :...aft from the nose <u>or most forward position of the main rotorblade..</u> | WG6-Mtg#31-Agrees and implements. | Closed |
| 261 | Miller | Figure 3-12 | 3695 | M | Interface A5 (Ownship TOA) is not defined in Figure 1-1 or in Figure 3-11. | Add Interface A5 to Figure 1-1. | WG6-Mtg#31-Respectfully declines comment | Closed |
| 262 | Miller | 3.3.1.2.1 | 3698 | E | Add description at start of section title | Insert "Traffic Time of Measurement -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 263 | Miller | 3.3.1.2.2 | 3708 | E | Add description at start of section title | Insert "TIS-B Time of Measurement/ADS-R Time of Reception -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 264 | Miller | 3.3.1.2.3 | 3713 | E | Add description at start of section title | Insert "Ownship Time of Measurement -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 265 | Miller | 3.3.1.2.4 | 3716 | E | Add description at start of section title | Insert "Traffic Time of Applicability -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 266 | Miller | 3.3.1.2.5 | 3730 | E | Add description at start of section title | Insert "Ownship Time of Applicability -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 267 | Miller | 3.3.1.2.6 | 3736 | E | Add description at start of section title | Insert "Transmit Subsystem Input -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 268 | Miller | 3.3.1.2.7 | 3746 | E | Add description at start of section title | Insert "TIS-B / ADS-R Input -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 269 | Miller | 3.3.1.2.8 | 3749 | E | Add description at start of section title | Insert "ASSAP Ownship Input -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 270 | Miller | 3.3.1.2.9 | 3752 | E | Add description at start of section title | Insert "ADS-B Transmit Subsystem Time of Transmission / Reception -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 271 | Miller | 3.3.1.2.10 | 3762 | E | Add description at start of section title | Insert "ASSAP Report Input -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 272 | Miller | 3.3.1.2.11 | 3771 | E | Add description at start of section title | Insert "CDTI Input -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 273 | Miller | 3.3.1.2.12 | 3777 | E | Add description at start of section title | Insert "CDTI Time of Display -" | WG6-Mtg#31-Agrees and implements. | Closed |
| 274 | Pagano | 3.3.1.3 | 3808 | L | (3808 tp 3810) The following paragraph: "The Total Latency for State data in ADS-B and ADS-R shall (R3.140) {new reqmt} be no greater than 5.5 seconds from A1 to G to support the applications included in §2.2.1.1for ADS-B and §2.1.1 for ADS-R. {This requirement is consistent with the ASA MOPS, DO-317A FRAC draft, September 2011, but is less stringent than the FAA final Program Requirements (fPR) for SBS, version 3.0, 23 July 2010, which requires 5 seconds.}", sites DO-317A and SBS fPR. Question the need for the sentence in braces. | Delete sentence "{This requirement is consistent with the ASA MOPS, DO-317A FRAC draft, September 2011, but is less stringent than the FAA final Program Requirements (fPR) for SBS, version 3.0, 23 July 2010, which requires 5 seconds.}". | WG6-Mtg#31-Section will be removed with publication | Closed |
| 275 | Miller | 3.3.1.3 | 3819 | L | The D to E requirement (R3.144) should be located earlier in this section since it covers only the receiver. | Move the sentence starting at line 3819 to just after ASSUMP #11. Add the word "messages" after TIS-B in this sentence. Renumber requirements in this section. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 276 | Miller | 3.4.1 | 3909 | L | Application Processing section needs another function | Add "Performs any application unique processing such as algorithms" to bulleted list | WG6-Mtg#31-Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|--|--------|
| 277 | Fisher | 3.4.1 | 3922 | L | Figure 3-13 has an extra line in it | remove line | WG6-Mtg#31 -Agrees and implements. | Closed |
| 278 | Johan Martensson | Table 3-29 | 3960 | M | 1. Why is Emergency / priority status indicated as required 2. NIC not minimum for EvAcq and AIRB (see also ownship) 3. SIL not minimum for AIRB (see also ownship) 4. Designated is not minimum 5. Map status for all applications? | See Comment. Email responses from Johan to Gary: "Yes I did indeed miss Note 7. Now being informed about it - I would probably have added in the disposition a suggestion not to use or at least differentiate such conditional bullets e.g. by using brackets or another bullet shape or in fact not to have a bullet at all, since the same would apply to other empty slots. I mean despite not being a minimum, there is nothing preventing an EVAcq system to display Aircraft ID or Emitter category but those cells are empty rather than a dot with a note. Anyway with the given clarification the comment becomes and editorial anyway..." | 1. WG6-Mtg#31 -Declines: Emergency / Priority Status (2019), note 7 states "when used to display emergency priority status" 2 & 3. WG6-Mtg#31 -Accepts and implements 4. WG6-Mtg#31 -Suggested resolution: adding a note for Designated (3017) that says "If flight crew has the ability to designate traffic". This is consistent with other conditional requirement notes. 5. WG6-Mtg#31 -Accepted: Map status, for SURF only | Closed |
| 279 | Miller | Table 3-29 | 3960 | M | Table has "dots" (= required element) for non-required elements | Delete the dots from the following row/column intersections: NIC row / EVAcq & SURF columns; SIL row / SURF column; True/Magnetic Heading Ref row / EVAcq & AIRB columns | WG6-Mtg#31 -Agrees and implements, with the replacement of Table 3-29 and Notes, after a fresh review of DO-317A. | Closed |
| 280 | Shafaat | Table 3-29 | 3960 | H | Under ADS-B/ADS-R...for Aircraft State Data, there is a dot for Ground Speed while on Ground for ITP, and VSA. Is that correct? | Remove these dots. | WG6-Mtg#30 -Respectfully declines the comment, but after review, we added a dot to EVAcq | Closed |
| 281 | Shafaat | Table 3-29 | 3960 | H | Under Navigation, for Ownship state data, Groundspeed (on surface) for ITP - what does that mean? | Clarify/correct | WG6-Mtg#31 -Agrees and implements | Closed |
| 282 | Schueler | 3.4.1.3 | 3960 | M | (Table 3-29) Emergency/Priority Status is not a required ID/Status data element for any application in DO-317A. In DO-317A, this input data element is optional for all applications. | Remove the Emergency/Priority Status data element as an input requirement. | WG6-Mtg#31 -Respectfully declines comment. No change required | Closed |
| 283 | Schueler | 3.4.1.3 | 3960 | L | (Table 3-29) In DO-317A, time of receipt is an acceptable form of Ownship state data Time of Applicability | Add a note to indicate that time of receipt is acceptable as TOA for unsynchronized installations. | WG6-Mtg#31 -Agrees and implements | Closed |
| 284 | Schueler | 3.4.1.3 | 3960 | M | (Table 3-29) Airport Map Status is not a CDTI required data element for any application other than SURF. | Remove the Airport Map Status data element as an input requirement for all applications other than SURF. | WG6-Mtg#31 -Agrees and implements | Closed |
| 285 | Johan Martensson | 3.4.1.4.1 | 3982 | M | These are ASA MOPS requirements why copied into this document? | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 286 | Schueler | 3.4.1.5 | 4036 | H | R3.170 conflicts with R3.169. R3.169 states that all tracks delivered to CDTI must be of sufficient quality for EQAcq or AIRB. R3.170 requires an indication if a track's quality is insufficient for EVAcq or AIRB. | Correct one or both requirements to resolve the conflict. | WG6-Mtg#31 -Propose to Accept: Delete R3.170. Reword R3.169 as "ASSAP shall only deliver track reports to the CDTI for aircraft with sufficient quality parameters for EVAcq or AIRB." | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|---|--------|
| 287 | Miller | 3.4.1.4.2 | 4037 | L | Application Processing Requirements section needs another function | Insert "ASSAP shall (R3.xxx) perform any application unique processing such as algorithms" at end of section. | WG6-Mtg#31-Agrees and implements. | Closed |
| 288 | Johan Martensson | 3.4.1.6 | 4054 | M | Note: 60 tracks is not sufficient if prioritisation is performed by CDTI. | See Comment. | WG6-Mtg#31-Respectfully declines the comment. | Closed |
| 289 | Mittelman | 3.4.1.6 | 4056 | M | The term "sufficient" is not measureable. In this case the notes above and below appear to define sufficient. | Take the content of the notes above and below and merge them in to one shall statement and then delete the notes. | WG6-Mtg#31-Respectfully declines comment | Closed |
| 290 | Walker | 3.4.2.1 | 4063 | L | Although it is technically true that CDTI has been implemented on an EFB, Aircraft Cert and Flight Standards do not promote this concept. | Prefer that EFB be removed as a display example. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 291 | Joslin | 3.4.2.12 | 4162 | M | Alerts (Warning/Cautions) require stimulation of at least two senses (visual, aural, tactile) | Add a sentence that states that <i>"Alerts will be both visual and aural"</i> | WG6-Mtg#31-Agrees and inserts a modified version of the suggested sentence. | Closed |
| 292 | Schueler | 3.4.2.12 | 4163 | L | (4163 to 4172) None of the applications in this MASPS include warning or alerting (except TCAS, but those requirements are defined in the TCAS MOPS). | Consider removing this section. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 293 | Mittelman | 3.4.2.12 | 4163 | M | The term "sufficient" is not measureable. | Define the criteria for sufficient | WG6-Mtg#31-Respectfully declines comment | Closed |
| 294 | Schueler | 3.4.2.13 | 4175 | H | R3.197 requires that control be provided such that all available applications can be disabled. DO-317A does not allow EVAcq or AIRB to be disabled. | Make the requirement consistent with DO-317A. | WG6-Mtg#31-Agrees and modifies the sentence. | Closed |
| 295 | Mittelman | 3.4.2.13 | 4175 | M | The term "sufficient" is not measureable. | Define the criteria for sufficient or delete the word sufficient | WG6-Mtg#31-Respectfully declines comment | Closed |
| 296 | Walker | 3.4.3.2 | 4209 | L | The more I think about it, the more I wonder if even the supported message sets make sense for these classes anymore. The US and European rule set the required message sets regardless of power or sensitivity. Many of these original concepts from DO-242 have been overcome by events. | Consider removing the message set association from the link layer class structure. The supported message sets could be added to the A, B, C classes as subscripts when supporting message sets above minimum rule requirements. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 297 | Miller | 3.4.3 | 4225 | H | Sentence starting on this line refers to Appendices in DO-242A. | Plan was that this MASPS should stand alone without references to previous MASPS. Replace with reference to new or existing Appendix in this MASPS. | WG6-Mtg#30-Respectfully declines the comment. | Closed |
| 298 | Pagano | 3.4.3.1 | 4265 | E | Incorrect Appendix reference | Change "Appendix E discusses the impact of this directional antenna on alert time and shows that a directional aircraft receive antenna gain increase..." to "Appendix D discusses the impact of this directional antenna on alert time and shows that a directional aircraft receive antenna gain increase..." | WG6-Mtg#31-Agrees and implements. | Closed |
| 299 | Gilbert | 3.4.3.1 | 4282 | M | I know this is from another standard, but why is the aft direction range for Class A3 receivers is only 40NM when this aft range is just as important for ITP as forward range? Also, our suppliers indicate that there is not much difference in forward and aft performance. | I suppose this needs to stay consistent with the other standards, but it seems like the aft range should be closer to the forward range. | WG6-Mtg#31-Min requirement will stay the same. Added a Note for desired performance levels. | Closed |
| 300 | Pagano | 3.4.3.1 | 4284 | E | Incorrect Appendix reference | Change "d. 90 degrees to port and starboard of own aircraft's heading, 45 NM (see Appendix E);" to "d. 90 degrees to port and starboard of own aircraft's heading, 45 NM (see Appendix D);" | WG6-Mtg#31-Agrees and implements. | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|--|--------|
| 301 | Walker | 3.4.3.1 | 4285 | M | (Table 3-30 and Note) The desired range aft is probably larger for oceanic ADS-B applications. It may not operate as well as the forward direction due to tail masking, so the firm requirements should address that. However at the MASPS level, the desired operation in oceanic applications should be optimistic. | Suggest modifying the desired range aft to address oceanic applications. Consult Ken Jones or other oceanic SMEs. | Pagano -See proposed changes in Comment 299. WG6-Mtg#31 -Reviewed and accepted proposed changes. | Closed |
| 302 | Miller | 3.4.3.3.1.1 | 4344 | H | The two sentences starting on these lines refer to Appendix J in DO-242A. | Plan was that this MASPS should stand alone without references to previous MASPS. Replace with references to new or existing Appendix in this MASPS. | WG6-Mtg#30 -Respectfully declines the comment. | Closed |
| 303 | Miller | 3.4.3.3.1.1 | 4374 | M | (4374 to 4395) The content in these paragraphs which references Table 3-34 is no longer true. | Delete the paragraphs. Replace with a reference to Table 2-3? | WG6-Mtg#31 -Agrees with proposed changes from Tom Pagano. | Closed |
| 304 | Pagano | 3.4.3.3.1.1 | 4385 | E | Incorrect Appendix reference | Change "The relationship between the quantization error and the number of bits required in the ADS-B Message are described in Appendix D." to "The relationship between the quantization error and the number of bits required in the ADS-B Message are described in RTCA DO-242A, Appendix G." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 305 | Pagano | 3.4.3.3.1.1 | 4390 | E | Incorrect Appendix reference | Change "The ADS-B system design may include a smoothing filter or tracker as described in Appendix D." to "The ADS-B system design may include a smoothing filter or tracker as described in RTCA DO-242A, Appendix G." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 306 | Walker | 3.4.3.3.1.1 | 4396 | NC | (Table 3-34) This table institutes new transmitter receiver requirements for existing documented applications. These requirements would require modification of DO-317 and possibly existing manufacturer equipment. I'm not saying these requirements are wrong or right, but they deserve their day in court and I'm not convinced this MASPS has enough attention to say this FRAC is that day. | Suggest vetting this information at Plenary level before this document be approved. | WG6-Mtg#30 -There was discussion and agreement that this NC would be removed if a Note could be added to the row of "Example Applications" explaining that they are not requirements. WG6-Mtg#31 -Walker provided proposed Notes, which was copied to Table 3-34. | Closed |
| 307 | Fisher | 3.4.3.3.1.1 | 4396 | E | (Table 3-34) This table has several arrows in some of the cells but not all either put in all cells or remove | | WG6-Mtg#31 -Agrees and implements. | Closed |
| 308 | Miller | Table 3-34 | 4409 | L | Note 3 refers to ACM in 3 places - OBE. | Replace ACM with TSAA. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 309 | Walker | 3.4.3.3.1.2 | 4441 | NC | (Table 3-35) This table institutes new transmitter receiver requirements for existing documented applications. These requirements would require modification of DO-317 and possibly existing manufacturer equipment. I'm not saying these requirements are wrong or right, but they deserve their day in court and I'm not convinced this MASPS has enough attention to say this FRAC is that day. | Suggest vetting this information at Plenary level before this document be approved. | WG6-Mtg#30 -There was discussion and agreement that this NC would be removed if a Note could be added to the row of "Example Applications" explaining that they are not requirements. WG6-Mtg#31 -Walker provided proposed Notes, which was copied to Table 3-35. | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|--|---|--------|
| 310 | Fisher | 3.4.3.3.1.2 | 4441 | NC | (Table 3-35) This table has several arrows in some of the cells but not all either put in all cells or remove | | Withdrawn | Closed |
| 311 | Miller | Table 3-35 | 4446 | H | (4446, 4448, & 4458) The three sentences starting on these lines refer to DO-242A. | Plan was that this MASPS should stand alone without references to previous MASPS. Replace with references to new or existing content in this MASPS. | WG6-Mtg#30 -Respectfully declines the comment. | Closed |
| 312 | J. Steinleitner | 3.4.3.4 | 4462 | M | Proposed to move this detailed material into an Appendix. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 313 | Pagano | 3.4.3.4 | 4531 | E | Wording change recommended so that it is clear that the growth estimates are expectations. | Change "The general aviation fraction of the population will experience a slight decline from the current level of 12% to 11.3% in 2030. The military percentages over this period will drop from the current 6% to 3.6% in 2030." to "The general aviation fraction of the population is expected to experience a slight decline from the current level of 12% to 11.3% in 2030. The military percentages over this period are expected to drop from the current 6% to 3.6% in 2030." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 314 | Pagano | 3.4.3.5 | 4541 | E | Incorrect Appendix reference | Change "Appendix E summarizes certain antenna and multipath considerations that relate to the selection of a frequency band..." to "Appendix D summarizes certain antenna and multipath considerations that relate to the selection of a frequency band..." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 315 | J. Steinleitner | 3.4.3.6.1 | 4547 | M | As there is yet no mature definition of RSP, its applicability to this document is unclear. | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 316 | Brown | 3.4.3.6.1 | 4562 | M | 'conform to appropriate RSP specifications...' | It would be good to have a reference here, or indicate that the section is conjecture. | WG6-Mtg#31 -Reference paragraph was deleted | Closed |
| 317 | Brown | 3.4.3.6.2 | 4587 | L | 'ADS-B is not expected to be used as a sole means of ATS surveillance for the near future in US domestic airspace.' And yet the first use of ADS-B alone for surveillance in US airspace was in domestic airspace...Capstone. | Qualify this statement or eliminate it. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 318 | Brown | 3.4.3.6.2 | 4591 | L | (4591 and 4594) What is the source of the availability requirements/expectations? | Provide a reference. | WG6-Mtg#31 -Agrees and implements | Closed |
| 319 | Brown | 3.4.3.7.1 | 4674 | M | (4674, 4677 & 4683) These paragraphs mandate that the receive system shall receive.....yet it is surely accepted that there is a probability of reception that is less than 100%. Perhaps the requirement is that the systems be capable of receiving the messages as would seem appropriate to a functional requirements section. | Consider. | WG6-Mtg#31 -Agrees and implements | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|--|--|--------|
| 320 | Barber/Schueler | 3.4.3.8.3 | 4728 | H | <p>(Table 3-36) The integrity value of 10⁻⁵ listed in this table is not supported by the SPR's for any of the EVAcq, AIRB, SURF or VSA application. The EVAcq, AIRB, SURF and VSA applications were assigned a criticality level of 'Minor' in their respective SPRs (DO-289 for EVAcq, DO-319 for AIRB, DO-322 for SURF, and DO-314 for VSA). The Minor criticality would imply a subsystem integrity risk of 10⁻³. Additionally, no SPR recognized a speed threshold at which the criticality of the application increased.</p> <p>The table also does not address continuity or integrity for the ITP application. The ITP Application's SPR (DO-312) gives an integrity requirement of 10⁻⁵.</p> | <p>Make the following changes to the table:</p> <p>Second Column: Add VSA to the applications, delete '(less than 80 knots)'. Third Column: Replace this column with a column that addresses ITP.</p> | WG6-Mtg#31-Partly agrees and modifies the table. | Closed |
| 321 | Barber/Schueler | 3.4.3.8.4 | 4738 | H | As noted in the comment regarding Table 3-36, the Information Integrity requirement of 10 ⁻⁵ for the ADS-B subsystem is not consistent with the criticality determined in the SPR for each application. Garmin is also unaware of a noted 'FAA Critical Services Spec' that states the required integrity of an airborne ADS-B receive subsystem. | Revise requirement R3.240 to specify integrity that meets the criticality of the supported applications in the installation. | WG6-Mtg#31-Respectfully declines the comment and provides no action. | Closed |
| 322 | Brown | 3.4.3.8.4 | 4740 | M | Should this requirement not be a variable based on the applications implemented in the complete system? The more basic applications have no integrity requirements and the only mandated application for the CDTI is AIRB, which is an example of an application for which no integrity requirement exists (Table 2-3) | Clarify | WG6-Mtg#31-Respectfully declines comment | Closed |
| 323 | Fisher | 3.5.1.3.1.1 | 4874 | L | IF you are a ground vehicle and you cannot determine ground state? All ground vehicles are on-the-ground. | Drop the IF from this para | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 324 | Joslin | 3.5.1.3.1.1 | 4885 | M | It is stated that Rotorcraft will always reports "uncertain" air/ground state unless specifically declared. Consequently they will transmit all airborne SV report elements even when on the surface/hover taxi, which may be confusing. Safety would be enhanced by requiring a distinct symbol for rotorcraft, just as is done for surface vehicles | Require a distinct symbol for rotorcraft | WG6-Mtg#31-Declines the comment because it is out of the scope of the MASPS. | Closed |
| 325 | Walker | 3.5.1.3.1.1 | 4890 | H | (4890 to 4898 - Bullet 4) This section is no longer supported by FAA Aircraft Cert. Rule compliant aircraft are required to determine air/ground automatically and in a robust manner specific to the airframe installation using more than a single measurement (AC 20-165). | Suggest deleting bullet 4 as this configuration is not rule compliant in the US or Europe. | WG6-Mtg#31-Agrees with basic comment and add a Note after bullet 4. | Closed |
| 326 | Walker | 3.5.1.3.1.1 | 4904 | H | (4904 to 4908 - Bullet 6) This section is no longer supported by FAA Aircraft Cert. Rule compliant aircraft are required to determine air/ground automatically and in a robust manner specific to the airframe installation using more than a single measurement (AC 20-165). | Suggest rewording bullet 6 as follows: " If a transmitting ADS-B participant is equipped with a means, such as a weight-on wheels switch, to determine automatically whether it is airborne or on the surface, and that automatic means indicates that the participant is on the surface, the participant shall (R3.254) set its Air/Ground state to "known to be on the surface". | WG6-Mtg#31-Directs FAA to take this issue to ICAO as a start of making a change to this entire air/ground determination section in SARPS and MOPS. | Closed |
| 327 | Miller | 3.5.1.3.4 | 4998 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34 - replace with a reference to Table 2-3? | WG6-Mtg#31-Agrees and implements | Closed |
| 328 | Gilbert | 3.5.1.3.6 | 5007 | L | Not a very likely condition, but the Dead Sea is below -1000 feet, so it could be possible to have an altitude below the lower limit of the range. | Change lower limit of altitude range to -2000 feet. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|--|--------|
| 329 | Miller | 3.5.1.3.6 | 5010 | M | The phrase "the vertical accuracy reported in the NACp field" is no longer correct. | Delete "NACp" and replace with "GVA".. | WG6-Mtg#31-Agrees and implements | Closed |
| 330 | Miller | 3.5.1.3.6 | 5013 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34 - replace with a reference to Table 2-3? | WG6-Mtg#31-Agrees and implements | Closed |
| 331 | Miller | 3.5.1.3.6 | 5017 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34 - replace with a reference to Table 2-3? | WG6-Mtg#31-Agrees and implements | Closed |
| 332 | Miller | 3.5.1.3.8 | 5035 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34 - replace with a reference to Table 2-3? | WG6-Mtg#31-Agrees and implements | Closed |
| 333 | Miller | 3.5.1.3.8 | 5044 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34 - replace with a reference to Table 2-3? | WG6-Mtg#31-Agrees and implements | Closed |
| 334 | Joslin | 3.5.1.3.12 | 5068 | L | A rotorcraft in a hover taxi over the airport surface may have a heading that is significantly different from its track when operating in high winds | Add a Note: A rotorcraft in a hover taxi over the airport surface may have a heading that is significantly different from its track when operating in high winds | WG6-Mtg#31-Agrees and implements. | Closed |
| 335 | Gilbert | 3.5.1.3.14 | 5095 | L | Not a very likely condition, but the Dead Sea is below -1000 feet, so it could be possible to have an altitude below the lower limit of the range. | Change lower limit of altitude range to -2000 feet. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 336 | Miller | 3.5.1.3.16 | 5119 | M | The reference to Table 3-34 is no longer true. | Delete reference to Table 3-34. I am not aware of a Table in this MASPS that contains vertical rate requirements. | WG6-Mtg#31-Agrees and implements | Closed |
| 337 | Walker | 3.5.1.4.4 | 5197 | L | Call Sign and Flight ID are not necessarily the same thing. For instance AWE213 is the Flight ID corresponding to "Cactus 213" Call Sign. | Suggest using Flight ID terminology. | WG6-Mtg#31-Agrees and will add "Flight ID" to all occurrences of "call sign" in the document. | Closed |
| 338 | Joslin | 3.5.1.4.6 | 5219 | M | The space a rotorcraft occupies is a function of rotor diameter and fuselage length and not wingspan. | Amend the sentence to read : ..length and width codes for which its overall length and wingspan, or rotor diameter , qualify it. | WG6-Mtg#31-Agrees that the Note should be added as clarification for rotorcraft. Will include language for tilt-rotor. | Closed |
| 339 | Miller | 3.5.1.4.18 | 5332 | M | The last phrase "and the Selected Target Heading reported in the TS Report" is not correct. | Delete this phrase. | WG6-Mtg#31-Agrees and implements | Closed |
| 340 | Joslin | 3.5.1.4.21 | 5347 | M | The reference for the longitudinal axis is given as the aircraft nose, which is not applicable to rotorcraft | Change the sentence to read : ..distancet from the nose or most forward position of the main rotorblade .. | WG6-Mtg#31-Agrees that the Note should be added as clarification for rotorcraft. Will include language for tilt-rotor. | Closed |
| 341 | Walker | 3.5.1.7.1 | 5451 | L | Consider decoupling messages from receiver/transmitter classes | Consider removing the message set association from the link layer class structure. The supported message sets could be added to the A, B, C classes as subscripts when supporting message sets above minimum rule requirements. | WG6-Mtg#31-Respectfully declines comment. No change required | Closed |
| 342 | Miller | Table 3-44 | 5502 | M | Some of the required items in this Table are not consistent with Table 3-9 of the FAA SBS Description Document SRT-047 Rev 01 | Delete the dots from the following row / column intersections: Call Sign / airborne & surface; Target Category / airborne & surface; Emergency/Priority Status / airborne & surface; IDENT / airborne | WG6-Mtg#31-Respectfully declines comment | Closed |
| 343 | Miller | Table 3-44 | 5502 | M | The "Reserved for Receiving ATC Services" field is now reserved. | No doubt the RfRAS Fan Club will be disappointed but this item has been OBE. Delete this item from the Table. | WG6-Mtg#31-Respectfully declines comment | Closed |
| 344 | Miller | Table 3-44 | 5502 | M | Table needs a note on Surface Movement field in the State Vector row.. | Add Note 4 to the State Vector row: " The TIS-B Surface Movement field will always have a ZERO value." | WG6-Mtg#31-Respectfully declines comment | Closed |
| 345 | Gilbert | 3.6.5.1 | 5639 | E | Grammar: "All airport features...is based on..." | Change to: "All airport features...are based on..." | WG6-Mtg#31-Agrees and implements. | Closed |
| 346 | Joslin | 3.6.5.1 | 5644 | M | Rotorcraft routinely operate to/from landing pads in the maneuvering area of the airport which may or may not be on a designated runway or taxiway | add helicopter landing pads to the list of other desirable airport features | WG6-Mtg#31-Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|---|--|--------|
| 347 | Gilbert | 3.6.5.2 | 5659 | L | (5659, 5661 & 5671) Resolution is no longer a database quality measurement in DO-272C. | Remove "resolution" from these sentences. | WG6-Mtg#31 -OBE as a change has been made to this section by earlier comment. | Closed |
| 348 | Schueler | 3.6.5.2 | 5660 | H | (5660 to 5671) Garmin has shown that DO-272C 'Medium' quality is both impractical and unnecessary for the SURF application. SC-186 Working Group 4 accepted this analysis, along with a recommendation that 5.0 meter accuracy and 1.0 meter resolution of displayed data elements is sufficient for the SURF application. | Replace lines 5660-5671 with: The map database is assumed to meet 5.0 meter accuracy and 1.0 meter resolution for displayed data elements. | WG6-Mtg#31 -Agreed to after the meeting was to insert a new bullet #4 as: "Databases used to support moving maps integrated with the SURF application meet at least 5 meter accuracy and 1 meter resolution for displayed data elements. Databases used to support moving maps integrated with the SURF application meet RTCA DO-200A Data Process Assurance Level 2 for state-provided data with Essential Integrity as defined in RTCA DO-272C." | Closed |
| 349 | Brown | 3.6.5.2 | 5662 | M | The two named electronic map requirements include the term 'or subsequent revision'. Why would SURF/SURF-IA map-related requirements change because requirements on the map change for other reasons? The requirements at the time of publication of this document satisfied ADS-B In application related needs and requirements on the map should not change unless some inadequacy in the map is demonstrated as a result of use of the ADS-B In application. | Remove 'or subsequent revision' in both cases. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 350 | Gilbert | 3.6.5.2 | 5673 | L | This note is not necessarily true of a DO-272C airport map database, which includes temporal attributes that allow feature lifespans that shorter than or span AIRAC cycles. | Prefix this sentence with a qualifier such as, "Generally..." or "Typically..." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 351 | Eric Vallauri | Table 3-46 | 5714 | E | In ASSUMP.9, there is AIRB instead of VSA | See Comment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 352 | Barber | 3.7.1 | 5714 | H | (Table 3-46) ASSUMP 1 does not seem consistent with the ARC report recommendation to change delegated separation to defined interval because the ARC did not agree with the concept of transferring responsibility for separation assurance from ground based ATC to aircraft / pilots. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 353 | Barber | 3.7.1 | 5714 | H | (Table 3-46) ASSUMP 3 also does not seem consistent with the ARC report recommendation to change delegated separation to defined interval because the ARC did not agree with the concept of transferring responsibility for separation assurance from ground based ATC to aircraft / pilots. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 354 | Barber | 3.7.1 | 5714 | H | (Table 3-46) ASSUMP 5 does not seem to be consistent with the ARC report conclusions. Per the ARC report, neither air transport nor GA could make a business case for the DO-317A ASA applications. Air transport's business case depended on more advanced applications but GA isn't likely to need advanced applications. Consequently, it is unclear whether "most aircraft will eventually be equipped with avionics to perform ASA applications". | Adjust the assumption to be consistent with the ARC report conclusions. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|--------------------|---------------------|--------------------------------|--|--|---|--------|
| 355 | Barber | 3.7.1 | 5714 | M | (Table 3-46) ASSUMP 6 may not be consistent with the ARC report given the resistance to the concept of transferring responsibility for separation assurance from ground based ATC to aircraft / pilots. | If found necessary, adjust the assumption to be consistent with the ARC report recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 356 | Barber | 3.7.1 | 5714 | E | (Table 3-46) ASSUMP 9 | The first sentence should use "VSA" not "AIRB". | WG6-Mtg#31 -Agrees and implements. | Closed |
| 357 | Barber | 3.7.1 | 5714 | H | (Table 3-46) ASSUMP 18: Most air data systems do not provide the barometric pressure setting as this requires pilot input. Air data systems are typically remotely mounted units that only output standard (29.92) altitude and then the PFD or MFD adjusts the standard altitude outputs for barometric pressure setting. Additionally, ADS-B Out requires standard altitude not baro corrected altitude. | Modify the assumption to be consistent with typical air data system capabilities. | WG6-Mtg#31 -Respectfully declines comment because baro pressure is required for register 62 (1090ES). | Closed |
| 358 | Barber | 3.7.1 | 5714 | H | (Table 3-46) ASSUMP 20: DO-317A does not require taxiways to be included in the electronic database for SURF. | Modify the assumption to be consistent with DO-317A requirements. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 359 | J. Steinleitner | 3.7.2 | 5716 | M | Proposed to move this detailed material into an Appendix. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 360 | Barber | 3.7.2 | 5720 | E | "UE" | Should define "UE", which appears to stand for "user equipment", before it is used. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 361 | Miller | 3.7.2.1 | 5757 | L | The sentence starting on this line refers to a past event. | Change to "These tables are expected to be included in an Appendix in FAA AC20-165A." | WG6-Mtg#31 -OBE as a change has been made to this section by earlier comment. | Closed |
| 362 | Barber | 3.7.2.2 | 5774 | E | "HPLSBAS" and "HPLFD" should be "HPL" followed by subscripted "SBAS" and "HPL" followed by subscripted "FD", respectively. | Adjust all instances throughout document. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 363 | Barber | 3.7.2.2 | 5786 | H | Includes the phrase "the ADS-B equipment assumes that the SBAS UE has multiplied HPL by 1.03". It is unclear why the ADS-B equipment can assume the SBAS UE has multiplied HPL by 1.03 unless the SBAS UE installation guidance indicates this is the case. | Revise to indicate that the ADS-B equipment may make this assumption only if the SBAS UE installation guidance indicates it makes this adjustment. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 364 | Miller | 3.7.2.2 | 5792 | L | The footnote at bottom of page contains an editorial question which was answered by the previous comment on Line 5757. | Delete the editorial question. | WG6-Mtg#31 -OBE as a change has been made to this section by earlier comment. | Closed |
| 365 | Barber | 3.7.2.2 Footnote 1 | 5792.5 | E | Highlighted text. | Last understanding from SC-159 telecons was that FAA intends to publish these in a planned update to AC 20-165. Test procedures for ADS-B velocity and HFOM will be in an updated AC 20-138. Should confirm with FAA (likely Kevin Bridges or Don Walker). The matrices were reviewed by the SC-159 plenary in Nov 2011 and accepted pending final discussion of the submitted comments and the creation of an introductory section. Both of these actions were completed in Dec 2011. | WG6-Mtg#31 -Agrees and implements. | Closed |
| 366 | Miller | 3.7.2.2 | 5794 | M | The sentence is not correct- ADS-B equipment does not compensate for the GNSS 200 msec LCE. | Change to "This contribution to Latency Compensation Error (LCE) is included in the overall ADS-B Out LCE budget. | WG6-Mtg#31 -Agrees and implements | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|--|---|--|--------|
| 367 | Foley | 3.7.2.2 | 5795 | H | Text states that "The latency (delay) in HPL reflecting a fault condition for en route through LNAV flight can be as much as 8 seconds". When using HPLFD, HPL does not adjust to reflect fault conditions. A separate indication must be provided. This sentence contradicts lines 5774-5779 and also does not match DO-229D appendix U. | Revise text to read: "The latency (delay) of the indication of a fault condition for en route through LNAV can be as much as 8 seconds." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 368 | Foley | 3.7.2.2 | 5797 | H | (5797 to 5803) The text suggests that the application of SBAS ionospheric corrections is sufficient to allow the HPL output by DO-229D equipment to be used below 0.1 NM. AC 20-165 Appendix 2, section 4.c. lists other error source besides the GPS iono model that are problematic below 01.NM. Additionally, the ADS-B output position source gap matrices to be published by SC-159 specify that all of the requirements for LNAV/VNAV and LPV modes must be met in order to support NIC = 9 (HPL < 0.1NM). | Revise text to remove the implication that the application of SBAS iono-corrections is all that needed to trust HPL below 0.1NM. Suggest the following: "When RAIM FD is used to assure integrity, DO-229D and DO-316 UE might output an HPL that is less than 0.1 nautical miles (NM). HPL values applicable to en route through LNAV operations (DO-316 UE supports only these operations) have only been validated down to ~0.1NM. Outside of LP, LNAV/VNAV, and LPV operations, HPL is not assured to bound HPE with a probability of 1 - 10 ⁻⁷ ." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 369 | Barber | 3.7.2.3 | 5873 | E | Uses the term "set to zero" which implies this specific method is known to have been used by DOD to remove SA; this may or may not be how SA was actually removed. | Suggest changing to "discontinued" as this term is consistent with the presidential statement (see http://clinton3.nara.gov/WH/EOP/OSTP/html/0053_2.html). | WG6-Mtg#31 -Declines the comment because it is the terminology standarily used in the industry. | Closed |
| 370 | Barber | 3.7.2.3 | 5907 | E | Uses the term "set to zero" which implies this specific method is known to have been used by DOD to remove SA; this may or may not be how SA was actually removed. | Suggest changing to "discontinued" as this term is consistent with the presidential statement (see http://clinton3.nara.gov/WH/EOP/OSTP/html/0053_2.html). | WG6-Mtg#31 -Declines the comment because it is the terminology standarily used in the industry. | Closed |
| 371 | Barber | 3.7.2.3 | 5911 | E | Includes the phrase "estimated availability be between" | Change "be" to "will be" in the quoted phrase. | WG6-Mtg#31 -Agrees and implements. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|----------------------------------|-------------------|---------------------|--------------------------------|--|--|---|--------|
| 372 | Foley | 3.7.2.3 | 5915 | M | <p>(5915, 5938 & Figure 3-18) There are several references in this section to an availability plot based on an assumption that UE has a mask angle of 2 degrees. The choice of a 2 degree mask angle is inconsistent for studying availability as this is not an FAA minimum performance requirement for any class of GNSS receiver.</p> <p>The atmospheric models used by UE have been validated down to 2 degrees, and in many instances UE can track satellites down to two degrees. However, the antenna standards (TSO-C144 and TSO-C190) only specify the minimum antenna gain at 5 degrees. The receiver standards (DO-229D and DO-316) base the receiver sensitivity requirements upon the minimum antenna gain at 5 degrees. It is likely that installed antennas will provide even less gain for satellites at 2 degrees elevation. As a result, assuming that a receiver using a 2 degree mask angle actually will be able to track all satellites above 2 degrees elevation may result in better availability than would be seen in an actual installation.</p> <p>Some UE may have demonstrated that they can meet the receiver sensitivity requirements at elevations below 5 degrees, but this is not part of any FAA minimum performance standard.</p> | Recommend adding plots showing a 5 degree mask angle, which is consistent with the receiver sensitivity requirements in DO-229D and DO-316. | WG6-Mtg#31 -Requests that John Foley create and provide any proposed plots. Plots were provided afterw Mgt#31 and inserted | Closed |
| 373 | Eric Vallauri J. Steinleitner | 4 | 6071 | L | The objective of this section is unclear. There is no requirement (contrarily to the section heading) and the description of the applications is mostly a repetition of section 1.3. But there are not fully consistent. SURF-IA is classified as "future application" whereas is an "emerging application" in 1.3, like FIM which is presented differently (relevance of GIM-S in ADS-B IN system application?). Both sections could be merged in 1.3. | See Comment. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 374 | Barber | 4.2 | 6093 | E | Includes the phrase "when they otherwise" | Change "they" to "it" in the quoted phrase | WG6-Mtg#31 -Agrees and implements. | Closed |
| WG6 | Tom Graff | 4.4 | 6106 | L | the words: "maneuver between properly equipped aircraft" are overly restrictive | "maneuver referencing properly equipped aircraft", would be more flexible | WG6-Mtg#31 -Agrees and implements | Closed |
| 376 | Barber | 4.4 | 6106 | E | Includes the phrase "includes a new distance-based longitudinal separation minimum". Not sure what "new" means in this sentence. | Suggest removing "new" from the quoted phrase | WG6-Mtg#31 -Changed "new" to "reduced" and implemented. | Closed |
| 377 | Brown | 4.5.2 | 6140 | M | (6140 to 6165) Why is there a paragraph on ground-based interval management in a section entitled 'ADS-B IN System 6071 Applications Requirements'? | A sentence or two in the paragraph describing FIM-S would more than suffice. Other preconditioning functions like Required Time of Arrival could also be captured. | WG6-Mtg#31 -Respectfully declines comment | Closed |
| 378 | Barber | 4.5.2 | 6151 | H | ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications"; specifics are provided in the ARC report section 3.2. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|---|--|--------|
| 379 | Barber | 4.5.2 | 6155 | H | (Figure 4-1) ADS-B In ARC report recommended "delegated separation applications" be changed to "defined interval applications"; specifics are provided in the ARC report section 3.2. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 380 | Barber | 4.6 | 6166 | H | This section is titled "Future Applications". The ADS-B In ARC report recommended that the FAA consider the following applications remain in the far-term research phase (see Executive Summary pages viii-ix): <ul style="list-style-type: none"> · Self-separation, · Flow corridors, · DS crossing and passing, · Independent closely spaced routes, and · Independent closely spaced parallel approaches. | The MASPS should be changed to be consistent with the ARC recommendation. | WG6-Mtg#31 -Respectfully declines comment as it was stated in the distribution letter that the baseline for the document was the AIWP V2 document. | Closed |
| 381 | Shafaat | General | All | H | Couple/coupled applications are still being used in the document | Remove all references to Couple/Coupled applications | WG6-Mtg#31 -Agrees and implements | Closed |
| 382 | Shafaat | General | All | H | There is mention of conflict management in few places - none of the applications mentioned in the document provide conflict management | Remove conflict management reference from the document | WG6-Mtg#31 -Agrees and implements | Closed |
| 383 | Joslin | | Appendix A | E | Incorrect acronym for AC(FAA) | Change to Advisory Circular | WG6-Mtg#31 -Agrees and implements. | Closed |
| 384 | Joslin | | Appendix A | E | Incorrect acronym for ASRS | Change to Aviation Safety Reporting System | WG6-Mtg#31 -Agrees and implements. | Closed |
| 385 | Joslin | | Appendix A | E | Acronyms for units of measure should be lower case | Change NM to "nm" | WG6-Mtg#31 -Disagrees. The RTCA/EUROCAE/ICAO standard is "NM" | Closed |
| 386 | Joslin | | Appendix A | M | Missing definitions of line/cluster/point obstacle | Provide definitions of line/cluster/point obstacles | WG6-Mtg#31 -Agrees and will add to Appendix A | Closed |
| 387 | Miller | Appen A | Appendix A | L | This document's title is not included! | add ATSSA | WG6-Mtg#31 -Agrees and implements. | Closed |
| 388 | Shafaat | Appendix A | Appendix A | H | Obsolete applications and parameter are discussed | Remove all references to obsolete applications/parameters | WG6-Mtg#31 -Note that earlier versions of the ADS-B MASPS documents used the term "Station-Keeping" to describe a category of ADS-B In applications. Those applications are now categorized as "Spacing Applications" in this version. Also previous versions used the term "Cooperative Separation" to describe an advanced category of ADS-B In applications. That category is now designated as "Delegated Separation" applications in this document. Similarly, the "Flight Path Deconfliction Planning" function is now assumed to be part of the "Delegated Separation and Self Separation" applications. | Closed |

Review of FRAC Draft Version 7.0 of the New Combined MASPS

| # | Commentor Last Name | Paragraph/Section | Line Table / Figure | Comment Level (NC, H, M, L, E) | Comment | Suggested Resolution | Working Group Disposition | Action |
|-----|---------------------|-------------------|---------------------|--------------------------------|---|--|---|--------|
| 389 | Shafaat | Appen A | Appendix A | E | There is no Appendix I as mentioned in Appendix A | Correct | WG6-Mtg#31 -Agrees and implements. | Closed |
| 390 | Walker | Appendix A | Appendix A | E | (Appendix A, Line 910, Page A-25) I don't mind this material in an appendix but it looks weird at the end of the definitions. Should probably get its own appendix. | Suggest creating new appendix for application name table. | WG6-Mtg#31 -Respectfully declines comment. | Closed |
| 391 | Rodriguez | Appendix A | Appendix A | E | There is no acronym defined for CAVS | Suggest adding definition of the acronym for CAVS | WG6-Mtg#31 -Agrees and implements. | Closed |
| 392 | Rodriguez | Appendix A | Appendix A | E | There is no acronym defined for CEDS | Suggest adding definition of the acronym CEDS | WG6-Mtg#31 -Agrees and implements. | Closed |
| 393 | Rodriguez | Appendix A | Appendix A | E | There is no definition for CAVS | Add a brief definition describing CAVS | WG6-Mtg#31 -CAVS and CEDS will be deleted from the document. | Closed |
| 394 | Rodriguez | Appendix A | Appendix A | E | There is no definition for CEDS | Add a brief definition describing CEDS | WG6-Mtg#31 -CAVS and CEDS will be deleted from the document. | Closed |
| 395 | Joslin | | Appendix B | M | Missing reference for FAA AC for ADS-B(In) | Add FAA AC for ADS-B(In) | WG6-Mtg#31 -Agrees and will add AC20-172 to references | Closed |
| 396 | Pagano | E.1 | Appendix E | M | (Line 43) Target State Reporting references sections no longer applicable. References should be deleted. | Change sentence "Tighter requirements (smaller required update periods) are desired on these reports for a time period equal to two update periods immediately following any major change in the information previously broadcast as specified in §3.4.7.2 and §3.4.8.2." to "Tighter requirements (smaller required update periods) are desired on these reports for a time period equal to two update periods immediately following any major change in the information previously broadcast." | WG6-Mtg#31 -Agrees and implements. | Closed |
| 397 | Pagano | E.1 | Appendix E | M | (Line 78) Note 3 is no longer applicable since requirements no longer contain state change case. | Delete Note 3 | WG6-Mtg#31 -Agrees and implements. | Closed |
| 398 | Johan Martensson | Figure 1-1 | General | M | Suggest to Change call sign to Aircraft ID (or possibly Flight ID) but call sign is not the same as Aircraft ID (nor Flight ID) | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 399 | Johan Martensson | General | General | M | There are several requirements copied from MOPS documents, this will increase the risk of requirement discrepancy, e.g. many requirements for ASSAP, Latency, application specific requirements etc.. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |
| 400 | Johan Martensson | General | General | M | There is no clear view over the applications, some applications are listed in some tables but the same applications are not listed in all tables. Also some applications are described in section 1.3 but not all.. A more clear and harmonised view and description of the applications would be useful. | See Comment. | WG6-Mtg#31 -Respectfully declines the comment. | Closed |