

Date: February 27, 2017

RTCA Paper No. 063-17/SC206-134

Summary of the 46th Meeting Special Committee 206 Aeronautical Information Services (AIS) and Meteorological (MET) Data Link Services

Aeronautical information Services (A15) and Meteorological (ME1) Data Link Services

Executive Summary

SG1 — Aircraft-based Observations (AbO) requirements for DO-181F and DO-260C

SG1 will establish requirements for crosslink and downlink of AbO meteorological parameters for the ADS-B MOPS and Transponder MOPS being updated by the Combined Surveillance Committee (CSC). Within the CSC a MET Subgroup is being stood up to investigate and define MET-related data elements in support of future applications.

SG4 — MOPS for Eddy Dissipation Rate (EDR) Reporting

Progress is going well with Section 2 (Algorithm Performance Requirements and Test Procedures), which is the meat of the MOPS. More challenging are Sections 3 (Manufacturer Considerations) and 4 (Operational Performance Considerations). The goal is to deliver the MOPS to SC-206 for comment by the end of the March plenary.

SG5 — DO-358A (MOPS for FIS-B via UAT)

Harris received an RFP from the FAA to add two additional products (Center Weather Advisories and Graphical AIRMETS). The FAA SBS program office would prefer DO-358A contain these. Also, an issue was found with encoding and decoding requirements for graphical TFRs as specified in DO-358. A correction for DO-358 needs to be issued and the FAA SBS Program Office needs to notify users.

SG7 — Guidance for Use of Data Linked Forecast and Current Wind Information in ATM Operations SC-206 approved the document for release for Final Review and Comment (FRAC). The resolution of the comments will be presented at the March SC-206 plenary.

WG-76 coordination

WG-76 is still considering how to supersede SPR ED-175 / DO-324, either with an updated document or address it in a MASPS, similar to what we did with our MASPS. WG-76's effort is focused on the use cases for 17 specific services that would be covered in a MASPS. One possible avenue of collaboration would be a joint MASPS for specific services with safety and performance requirements that supersede ED-175 / DO-324. WG-76 would prefer SC-206 join this approach based on their current plan. SC-206 would prefer WG-76 consider using our MASPS as a basis and add the 17 services. WG-76 will make a decision on the SPR sometime in 2017. SC-206 plans to make a decision on joining WG-76 at the next plenary.

Future SC-206 meetings:

SG	Focus	March 2017	June 2017	Sept 2017
7	Winds Guidance	FRAC Resolution		
4	New EDR MOPS		Release for FRAC	FRAC Resolution
5	Update FIS-B MOPS		Release for FRAC	FRAC Resolution
1	AbO requirements			

OPENING PLENARY

The 46th meeting of SC-206 was held Dec 12 – 16, 2016, at RTCA in Washington, DC.

Materials presented are posted at: http://workspace.rtca.org/apps/org/workgroup/sc-206/documents.php

Co-chairs Rocky Stone and Allan Hart welcomed the attendees to the meeting.

1. Opening Remarks

• Eldridge Frazier, Designated Federal Officer (DFO):

In accordance with the Federal Advisory Committee Act, this Advisory Committee meeting is open to the public. Notice of the meeting was published in the Federal Register on Nov. 18, 2016. Attendance is open to the interested public. With the approval of the Chairs, members of the public may present oral or written statements. Persons wishing to present or obtain information should coordinate with the RTCA Program Director Karan Hofmann and Chairs Allan Hart and Rocky Stone.

• Karan Hofmann, RTCA:

RTCA seeks to develop standards that do not require proprietary information for compliance. However, patented technology and copyrighted material required for compliance may be included if RTCA determines it provides significant benefit. If your company holds a patent or copyright relevant to an SC-206 document being developed, advise Karan Hofmann, Allan Hart, and Rocky Stone.

- Chairmen's remarks activities this week:
 - o SG7 will present their document for approval to release for FRAC
 - o Discussion with EUROCAE WG-76 leadership on potential collaboration
 - o SC-206 will present some things to the PMC Thursday
 - The AIS/MET MASPS for approval to publish
 - Proposed TOR changes
 - Potential for future collaboration with WG-76

2. Introductions

1.	Allan Hart, Co-chair	Honeywell
2.	Rocky Stone, Co-chair	United Airlines
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Moin Abulhosn
 Louis Bailey (telecom)
 Mark Blevins

FAA Aircraft Certification
Boeing
SAIC

Mark Blevins
 Joe Bracken
 Bill Carson
 Geoff Chisholm

SAIC
AvMet
MITRE
FAA

9. Greg Comstock Aurora Sciences10. Stephen Darr Dynamic Aerospace

11. Ernie Dash AvMet

12. Michael Emanuel FAA Aviation Weather

13. Alexander Engel (telecom) EUROCAE14. Tom Evans NASA

15. Tammy Farrar FAA Aviation Weather

16. John Ferrara Consultant

17. Eldridge Frazier FAA Aviation Weather

18. Paul Freeman Harris

19. Yan Glina MIT Lincoln Labs

20. Brian Hint FAA AFS
21. Karan Hofmann RTCA
22. Jeremy Holman Garmin
23. Amanda Hoprich AvMet
24. Ed Johnson FAA
25. Polina Kurovskaya IANS
26. Marc Libant Nav Canad

26. Marc Libant Nav Canada27. Clark Lunsford MITRE

28. Gary Marsh (telecom) Panasonic Weather Solutions

29. Michael McPartland MIT Lincoln Labs

30. Greg Meymaris NCAR 31. Anaïs Mermet (telecom) Airbus

32. Jim Mills DoD NOTAM Office
33. Tim Miner ALPA, American Airlines

34. Andrew Mirza (telecom) UK MET Office

35. Chris Moody
36. Alfred Moosakhanian
37. Don Moldenhauer (telecom)
38. Lisa Mueller (telecom)

Honeywell
Honeywell

39. Dan Mulally (telecom) Panasonic Avionics

40. Mark Mutchler telecom) FAA Small Airplane Directorate

41. Madhu Niraula (telecom) Rockwell Collins

42. Shane O'Dell (telecom) Garmin

43. George Percivall Open Geospatial Consortium

44. Mark Phaneuf ALPA
45. Stephanie Priess (telecom) MITRE
46. Tim Rahmes (telecom) Boeing
47. Boris Resnick (telecom) IANS

48. Jason Rice
Delta Air Lines
49. Seth Troxel (telecom)
MIT Lincoln Labs
50. Joe Venuti (telecom)
MIT Lincoln Labs
51. Bill Watts
Delta Air Lines

3. Agenda for the week:

8					
Monday	Tuesday	Wednesday	Thursday	Friday	
Opening Plenary	Plenary (concluded) — SG meetings	SG meetings	Presentation to PMC — SG meetings	Closing Plenary	

4. The minutes of the previous meeting (Kansas City) were approved.

5. Action items were reviewed

6. Status of SG1 — Requirements for Aircraft-based Observations

Co-Chairs: Ed Johnson, Clark Lunsford, Steve Darr

• SG-1 is joining MOPS revision activities reflected in ISRAs from SC-206 to SC-186 (ADS-B MOPS) and SC-209 (Transponder MOPS)

- o Will establish requirements for crosslink and downlink of Aircraft-based Observation (AbO) meteorological parameters specified in the SC-206 MASPS
- o Publication of both MOPS is targeted for 2019
- Coordinating with the Combined Surveillance Committee (CSC), which is writing both MOPS.
 - o SC-186 WG-3 & EUROCAE WG-51 SG-1 are updating the ADS-B MOPS
 - o SC-209 WG-1 & EUROCAE WG-49 are updating the Transponder MOPS
 - They are working as a combined group for better understanding of tradeoffs, e.g., for some information high update rate broadcast is needed and for other information interrogation is sufficient.
 - Steve Darr will lead a working group defining AbO requirements for implementation in Mode S hardware; the group includes representatives from the wake community, SC-209 leadership, EUROCAE, and avionics and aircraft manufacturers. SG4's Tammy Farrar will also participate.
- AbO was presented at the EUROCAE-RTCA coordination meeting as a prime candidate for international collaboration.
- Other SG1 coordination includes FAA, NOAA/NWS, AMS, WMO, EUROCAE, and ICAO.
- SG1 will remain part of SC-206 and provide plenary updates on the two MOPS.
- SC-206 reviewed proposed minor editorial changes to the ISRAs submitted to SC-186 and SC-209. SC-209 requested the changes. No objections were expressed and SC-206 approved the ISRAs as modified.

7. Status of SG4 — MOPS for EDR Reporting

Co-Chairs: Tammy Farrar and Bill Watts

- Bi-weekly telecons continue
- Iterating with FAA EDR Algorithm Standards Recommendation Team on test plan
- Deep dive on the purpose of the MOPS with Don Walker, AVS AIR-132, on Sept 30
- Coordination with Lou Volchansky, PMC DFO
 - o Agreement that appropriate invocation of EDR MOPS is AC, not TSO
- Have buy-in from A4A and Delta Air Lines on the methodology behind the recommendations
- New SG4 member Tim Miner, American Airlines pilot
- The FAA EDR Standards Team is now drafting their final report. These recommendations will be incorporated into the MOPS.
- Goals this week: review the test plan and write, write, write

8. Status of SG5 – Update to DO-358 FIS-B UAT MOPS

Co-Chairs: John Ferrara and Paul Freeman

- The original plan was to update the MOPS with five new products that Harris was put under contract for. But Harris is not going to implement one of them, 1-minute AWOS. This change has not yet been reflected in the contract. The other four products are Lightning, Cloud Tops, Turbulence, and Icing. See presentation below.
- Harris received an RFP from the FAA to add Center Weather Advisories and Graphical AIRMETS. These are not under contract yet. Once that happens the FAA SBS program office would prefer DO-358A contain these.
- FAA AVS has had meetings with regard to FIS-B products, reportedly they desire some things to be reflected in the FIS-B MOPS. No direct input has been provided to SG5.
- Harris's current schedule for Lightning, Cloud Tops, Turbulence, and Icing:
 - o Software development completed in May 2017.
 - o Testing completed in September 2017.
 - o Deployment across the NAS in October 2017.

• For reference, SG5's current schedule for MOPS FRAC release is June 2017.

Discussion:

Is this churn over new products affecting the work schedule and ability to proceed?

>> Not so much. They are not working yet on Center Weather Advisories and Graphical AIRMETS.

The TOR say that SG5 will define the minimum operational performance standards for the display of FIS-B data for new products. That would seem to cover adding Center Weather Advisories and Graphical AIRMETS.

What is it going to take from a standard's process as new products come along? Will SG5 need to be an ongoing group?

>> Keeping SG5 alive would ensure new product encoding is properly specified, but SC-206 expects SG5 to complete this MOPS update as per the TOR and not get distracted. The PMC could decide to keep this effort ongoing at a low level or sunset the group and reconstitute it when new products come along.

John said that there is a lot of heartburn with the new products. They could have benefited from the expertise of SG5 members. He advocated input from SG5 members be fed into the development of new products before they are dropped into SG5's lap.

It was acknowledged that input from SG5 members is greatly needed. How to do this properly merits some thought before they're handed to SG5. But we need to follow SC-206's TOR, which don't cover SG5 providing that input. We may want think about modifying the TOR to allow feedback on product design from the user community to the FAA, but we cannot affect the contract between the SBS office and Harris. Ideally, input should be provided early, before contracts are signed.

Without modification of the TORs any input on new FIS-B product design needs to come from individuals, not SG5.

9. Four FIS-B Products for the DO-358 Update — Paul Freeman

Harris is under contract for four new graphical products (all CONUS only)

- 1. Lightning observations
 - a. Locations of recent cloud to ground lightning
 - b. 5-minute update interval
- 2. Cloud tops forecast
 - a. Altitude of cloud tops
 - b. Data from NWS High Resolution Rapid Refresh (HRRR) model
 - c. 15-minute update interval
- 3. Icing forecast
 - a. Icing severity and Supercooled Large Droplet (SLD) presence at 12 altitudes
 - b. Data from NWS Forecast Icing Potential (FIP) products
 - c. 15-minute update interval
- 4. Turbulence forecast
 - a. Maximum intensity of turbulence
 - b. Data from NWS Graphical Turbulence Guidance (GTG) product
 - c. 15-minute update interval

10. WG-76 and SC-206 Coordination — Boris Resnick (IANS) & Alex Engle (EUROCAE)

- WG-76 seeks to supersede SPR ED-175 (Dec 2017), which was developed jointly with SC-206 and published by RTCA as DO-324.
- WG-76 also seeks to develop a MASPS for 17 services (Mar 2019). WG-76 is refining the service descriptions based on feedback from European and U.S. stakeholders. The service descriptions will be consolidated at the next meeting (Feb 2017).
- To ensure global harmonization WG-76 proposes that its service descriptions and SC-206's AIS/MET MASPS be combined into a new joint SPR that would supersede ED-175/DO-324.
- After that, a joint RTCA/EUROCAE AIS/MET MASPS would be developed.
- WG-76's Real-time Aircraft Derived Data Service may be coordinated with ISRAs to SC-209 and SC-186
- The following timeline for 2017 was proposed by WG-76 to develop a joint SPR to supersede ED-175/DO-324:
 - 1. Feb: WG-76 starts OSA and OPA covering the 17 services
 - 2. Mar: SC-206's SG6 joins the effort
 - 3. Apr: WG-76 + SG6 face-to-face
 - 4. Jul: WG-76 + SG6 face-to-face
 - 5. Oct: WG-76 + SG6 face-to-face
 - 6. Dec: Joint plenary, release of joint SPR for FRAC

Comments / Discussion:

Based on the current separate schedules, there is a year and a half gap between Sept 2017 when SC-206 finishes (unless new work is assigned) and Mar 2019 when WG-76 completes its MASPS.

The rationale in the past for publishing SPRs before MASPs was that SPRs introduce concepts that will drive changes in the system that the community needs to be aware of. The trend now within RTCA is to not produce a separate SPR but to include that information in the MASPS. Would WG-76 be open to not redoing the DO-324/ED-175 SPR, but incorporating the safety and performance standards in a MASPS, and just producing one document?

>> That is possible, but WG-76 thinking has been around separate documents.

If we incorporate the SPR requirements into a MASPS we should clearly state that it supersedes DO-324/ED-175.

It was said that the MET services in DO-324/ED-175 were based on when the information would be used (immediately, near term, later). WG-76's services are completely different. The whole MET section of DO-324/ED-175 would have to be re-engineered. Rather than reopen the DO-324/ED-175 SPR and re-engineer it, it would be easier to just develop a new MASPS that incorporates the safety and performance requirements.

SC-206's next plenary meeting March 13 - 17, but the next PMC meeting is March 21. June is the earliest SC-206 could be tasked to work with WG-76 on new deliverables under a revised TOR.

Regarding coordination of WG-76's Real-time Aircraft Derived Data Service via ISRAs to SC-209 and SC-186 — these activities are aimed at producing MOPS. There is risk that the joint MASPS that WG-76 envisions (2019) could come out after the MOPS have been published. We need to keep in mind that MOPS are already moving forward for one or two of the 17 services. We don't want anything in a joint MASPS to drive changes in the MOPS or invalidate them. SG1 needs

information from WG-76 on these downlink/crosslink services and needs to be vigilant about coordination.

On the other hand, there is opportunity here to gain international cooperation on what we're trying to do and the benefits enabled by this work. We need to balance the risk and the benefits.

If the groups rejoin, from WG-76's point of view, these 17 services are well-defined, near ready for implementation, useful, and make sense to their stakeholders. And now they need standards development. This does not mean others could not be added if there is sufficient advocacy.

There are issues with WG-76's proposed face-to-face schedule based on government travel funding already being committed at least through September. Realistically, SC-206 cannot participate in face-to-face meetings until at least October.

Also, some SG6 members are supporting other SGs now.

The DO-324/ED-175 SPR can be superseded two ways:

- 1. Reengineer the DO-324/ED-175 SPR itself, or
- 2. Put that energy into a joint MASPS that would contain the SPR requirements

There was no SC-206 consensus for option 1.

Option 2 raises the question of whether the joint MASPS would supersede the SC-206 AIS/MET MASPS that was just completed. General support was expressed for that, and also that it would supersede the DO-324/ED-175 SPR. This approach envisions using the SC-206 AIS/MET MASPS as the basis for the joint MASPS and adding the 17 specific services. It will also require revised TORs for SC-206 and WG-76.

Coordination is in the early stages now. If there is agreement that the groups should join forces on a joint MASPS, timelines and details can be sorted out in future discussions. There is some flexibility on WG-76's side.

Does WG-76 have to update the SPR by the end of 2017?

>> That's how it's written in WG-76's current TOR, but TOR's are not chiseled in stone. They can be updated if a better way forward is identified.

WG-76's next face-to-face will be in early February. WG-76 should discuss today's feedback that SC-206 is not in favor of re-opening the DO-324/ED-175 SPR, but supports superseding it with a MASPS, and let SC-206 know the outcome of this discussion. SC-206 would also like a copy of the consolidated service descriptions after the February meeting, especially for the ones for which MOPS efforts are going forward.

11. EDR Algorithm Standards Final Update – Mike Emanuel (FAA)

- Three EDR algorithm developers participated: NCAR, Panasonic, and AeroTech Research. The algorithms offer operational comparability based on identification of how EDR is used.
- The FAA EDR team is basically done. They have defined performance recommendations for two metrics: 1-minute mean EDR and peak EDR. All three algorithms can pass the mean and peak recommendations.

- There is buy-in from the broader community and stakeholders on the approach the team took, and the resultant recommendations should be of value to SC-206.
- Recommendations for future work:
 - o Further define/validate EDR user requirements
 - o Research non-in situ algorithms (another way to calculate EDR)

12. FAA NextGen Weather Systems – Alfred Moosakhanian (FAA) and Joe Venuti (MIT)

- Alfred is the NextGen Weather Program Manager. He described three coming FAA weather systems:
 - o Common Support Services Weather (CSS-Wx)
 - Will provide weather data products within the NAS
 - Initial operational capability 2019
 - o NextGen Weather Processor (NWP)
 - Will produce advanced aviation weather products from combined data sources
 - Initial operational capability 2020
 - o Aviation Weather Display (AWD)
 - Web browser interface via desktop, tablet, or phone
- NextGen weather programs (1) modernize the weather communications architecture within FAA, (2) consolidate FAA legacy weather systems, and (3) provide a common weather picture to all stakeholders
- The NextGen Weather Systems program is available to SC-206 for technical collaboration (e.g. FIS-B data transition)
 - o Provide samples of new NextGen Weather products
 - o Share Aviation Weather Display concepts
 - o Participate in latency analyses, testing of products to cockpit
 - o Help define MOPS for avionics display of new products
 - o Ensure operational readiness to use NextGen weather products

13. SG7 — Review of Winds Guidance Document for FRAC Release

Co-chairs: Ernie Dash and Michael McPartland

- The document provides recommendations for the use of data linked current and forecast winds and is driven by three applications: Wake Vortex Mitigation, Required Time of Arrival (RTA), and Interval Management (IM).
- Findings are specific to these applications and based on published and/or simulation results. Recommendations for Wake are based on published research; no new research was done. For RTA and IM, simulations and new research were conducted for this document, building on previously published research.
- Wind info quality recommendations are focused on publicly available weather forecast models and their ability to support operations.
- Recommended methodology of reporting is detailed for Wake.
- The document is organized as follows:
 - Introduction
 - o Roll-up of findings and recommendations
 - o Current sources of wind information
 - o Wake
 - o RTA
 - o IM
 - o Supporting appendices for Wake, RTA, and IM

- o Appendix for AOC/FPSP survey results on the provision of winds and temps to fleets/clients
- Greg Comstock presented the IM section and recommendations and associated appendix. Stephanie Priess presented results from IM winds simulations conducted for the document.
- Clark Lunsford presented the Wake section and recommendations and associated appendix.
- Michael McPartland presented the RTA section and recommendations and associated appendix.
- Ernie Dash presented the other sections.
- SC-206 offered substantial constructive feedback and suggestions on the document.
- SC-206 will decide in closing plenary whether to release the document for FRAC.

CLOSING PLENARY

14. Feedback from Thursday's PMC meeting

- The PMC approved the MASPS for publication as DO-364, with a comment: SC-206 did not follow the latest RTCA guidelines on the key words section (should, shall, etc.). The guidelines were changed just as the document was going to FRAC. SC-206 was not asked to revise that section.
- TOR changes proposed by SC-206 were approved with little discussion.
- There was no PMC feedback on SC-206 future work or collaboration with WG-76.

15. SG7 report — Guidance for Use of Data Linked Forecast and Current Wind Info

- It was a productive week, with a lot of good inputs now reflected in the doc
- Ernie walked the group through the changes made this week
- Some editorial work remains to be done
- Having an internal "pre-FRAC" was discussed this week but decided against

Comments:

It was noted that SG7 has done a lot of excellent work. This is a very good document and leads us in the right direction.

Without objection, SC-206 approved the document for release for FRAC. The resolution of FRAC will be presented at the next SC-206 plenary.

16. SG5 report – Update to DO-358 FIS-B UAT MOPS

- A lot was accomplished this week. SG5 will try to keep up the momentum.
- An issue was found with encoding and decoding requirements for graphical TFRs as specified in DO-358. A correction for DO-358 needs to be issued to inform the avionics world. Clarifying the wording would be easy and straightforward. Also, The FAA SBS Program Office needs to notify the world so manufacturers and users will have information on what Harris is going to change.

Comments:

SG5 should discuss this with Moin. He is the owner of the TSO written against DO-358. TSOs don't have to be implemented to every letter of a DO-doc.

There is a standard RTCA process for updating documents. Updates are typically addressed in the TORs.

To do this really quick, perhaps DO-358A could just involve this change, and all the current work would go into DO-358B. No support for this idea was expressed.

17. SG4 report — MOPS for EDR Reporting

- This is hard because
 - o There is no real world truth data
 - o Turbulence is random and estimated in different ways, no algorithm is best
 - Verification must be statistical
 - o Simulations must be used & over a wide variety of operating conditions
 - o An EDR algorithm must be tested, but it's not a system or black box
 - o This does not fit well into the standard MOPS template
- The scope of the MOPS is the EDR algorithm in the testing environment, including test data inputs and outputs. The physical EDR system on the aircraft is out of scope.
- SG4 is doing well with Section 2 (Algorithm Performance Requirements and Test Procedures), which is the meat of the MOPS.
- Struggling with Sections 3 (Manufacturer Considerations) and 4 (Operational Performance Considerations). These will be mostly recommendations, not requirements. It's possible these sections could be expanded in the future.
- The goal is for the MOPS to be delivered to SC-206 for comment by the end of the March plenary. This is aggressive, but doable. FRAC release will be in June.

Comment:

Two big stakeholders in this document are the airlines and the wake community.

18. SG1 report — Requirements for Aircraft-based Observations

- A Combined Surveillance Committee (CSC) team headed by Steve Darr will prepare working papers to support the SC-206 ISRAs with SC-186 and SC-209. The team will
 - o Determine broadcast vs. interrogation parameters
 - o Work within CSC to define requirements in ADS-B and Transponder MOPS
- The CSC is updating the two MOPS. Members are largely drawn from SC-186 and SC-209.
- Within the CSC a MET Subgroup is being stood up. The MET Subgroup will investigate and
 define MET-related data elements in support of future applications and determine what is
 currently available, what is desired/needed, and an implementation path forward. SC-206
 members are invited to participate. For more information contact Steve Darr or Ed Johnson.

19. Review of WG-76's 17 services – Allan Hart

- Downlink/crosslink services
 - o Real-time Aircraft Derived Data
 - o Special AIREP/AUTOMET
- Uplink MET services
 - o Winds & Temps Aloft
 - o Wind/Temperature Data for Flight Management
 - Aerodrome Weather
 - o Hazardous Weather
 - o Environmental Conditions in Critical Flight Phases
 - o Atmospheric Information
 - Weather Imagery
 - o Runway Visual Range

- Winter Conditions
- Uplink AIS/MET services
 - o Digital ATIS
 - o Runway/Taxiway Information
 - o Emergency Diversion
- Uplink AIM services
 - o Digital NOTAM
 - o Airspace Restrictions
 - Obstacle Information

Comments:

WG-76's Real-time Aircraft Derived Data service doesn't address AbO in the same manner the CSC will be trying to. More discussion and coordination will be needed.

There isn't a service to update the database, such as the baseline synchronization service in DO-324. Apparently that wasn't considered.

How does this play into updating ED-175/DO-324?

>> WG-76 will discuss in February that SC-206 is not in favor of updating DO-324. SC-206 has moved on from ED-175/DO-324 and does not want to go backwards. At the March Plenary SC-206 will find out which direction WG-76 wants to go and will decide whether to rejoin with WG-76. This will depend a lot on what WG-76 wants to do with ED-175/DO-324. It also depends on agreeing on the list of services. WG-76 could perhaps support adding services, but likely not deleting any, as they have been fairly well vetted by European industry.

20. Future meetings

Date	Location	Current plan		
March 13 – 17, 2017	Hampton, VA (NIA)	FRAC resolution for Winds Guidance		
June 19 – 23, 2017	Seattle	FRAC release for EDR MOPS		
(PMC meets June 22)	(Boeing)	FRAC release for FIS-B MOPS		
Sept 11 – 15, 2017	Washington, DC	FRAC resolution for EDR MOPS FRAC		
	(RTCA)	resolution for FIS-B MOPS		
Dec 4- 8, 2017	TBD	If needed		

SC-206 needs to think about the duration of the June and September meetings. Based on current plans, they will only involve FRAC processing.

21. ICAO Information Management Panel update — Allan Hart

- Allan is an advisor to the IMP. The panel was established to develop a global approach to effective management of information. This includes further development of SWIM and the new exchange formats (xxXMs).
- The initial meeting was in Jan 2015. 15 States are represented on the panel, along with EUROCONTROL, FAA, IATA, and other organizations. The goal is Nov 2018 delivery of the final Standards and Recommended Practices (SARPs), Information Management Manual, and ATM Information Reference Model (AIRM) v1.0.
- Data quality characteristics were discussed for four data domains
 - o Aeronautical information (DO-200B, Annex 15)
 - o MET (Annex 3)
 - o Flight & Flow (Doc 9971)

- o Surveillance (DO-260B, ED-102A)
- Security is important, but not usually addressed as a data quality characteristic
- Also discussed were quality requirements for Data vs Information vs Services

Comment:

It will be interesting to see if the focus of WG-76 is at the level of the data, the information, or the service/product.

22. Action items review

#	To	Action	Assigned	Status
269	Rocky, Steve	ADING do son't recent to be ild a standard centil recollenger		Open
282	Moin	Clarify what type of AIS/MET data link MOPS would be needed (as follow on to the AIS/MET MASPS), if one or multiple MOPS are needed, or one with different sections for different systems.	March 2014	Open
299	Eldridge	Advise SC-206 what the FAA would like to see as follow on to the AIS/MET MASPS (outside of what's already covered by the MOPS ISRAs with SC-186 and SC-209).	Sept 2016	Open

Thanks were expressed to everyone. This concluded the 46th meeting of SC-206.

CERTIFIED as a true and accurate summary of the meeting.

Tom Evans, Secretary

Tom Evans

Rocky Stone, Co-chair

allan R. Hart