RTCA PROGRAM MANAGEMENT COMMITTEE
MEETING SUMMARY
March 16, 2016

The RTCA Program Management Committee (PMC) convened at 8:30 a.m. on March 17, 2016 at RTCA. The attendance list and action items are attached.

AGENDA ITEM 1
Welcome and Introductions

PMC Chairman Chris Hegarty welcomed the group, asked attendees to introduce themselves and to note their organization of affiliation. Lou Volchansky, the Designated Federal Official (DFO), read the Public Meeting Announcement that includes the date the Federal Register meeting notice was published, declares the meeting is "Open to the Public" and provides details for persons wishing to present or obtain information pertaining to the meeting.

Mr. Volchansky provided an FAA Report Out on the Bilateral Oversight Board (BOB) Agreement between USA and European Union on cooperation in the regulation of civil aviation safety. Specifically, FAA TSO can be taken to EASA as ETSO, and vice versa. Members asked if a copy of the agreement could be made available for full review. (Action)

AGENDA ITEM 2
Review / Approve

A. The summary of the December 15th meeting was approved with no changes (RTCA Paper No. 011-16/PMC-1443).

B. Administrative Special Committee Terms of Reference (TOR) Revision:

- SC-147 – Aircraft Collision Avoidance Systems – new Co-Chairman, Mr. Ruy Brandao (Honeywell). TOR approved (RTCA Paper No. 052-16/PMC-1461). The PMC also extended a special thank you to retiring Chairman Dan Tillotson (Rockwell Collins) for his dedication and support.

AGENDA ITEM 3
Publication Consideration/Approval

A. **Final Draft, Revised Document, DO-350 -** *Safety and Performance Requirements Standard for Baseline 2 ATS Data Communications (Baseline 2 SPR Standard), Vol 1 and Vol 2,* **prepared by SC-214**

- Captain Chuck Stewart, SC-214 Chairman, presented

Note: Agenda items 3A-3D were presented together on behalf of SC-214. Also, as part of the discussion to allow the ATC winds to be handled separately, PMC members requested a report back from Boeing on ARINC work on ATC Winds. (Action)

DO-350 provides the operational, safety, and performance requirements (SPR) for the implementation of data communication services that support air traffic services (ATS). It provides with provision of data communications in all operational environments e.g., continental, oceanic, and surface. It is intended to support the communication element of the implementation of communication, navigation, and surveillance / air traffic management (CNS/ATM) systems in worldwide application. Data link communications are expected to be used for routine or frequent types of transactions, as well as for communication functions in which the use of voice communication is considered inefficient or unnecessary, thereby reducing voice-channel use and, where resulting controller workload reduction allows increases in sector size, reduction in the number of required voice channels. This SPR standard is intended for use with interoperability requirements (INTEROP) standards, and the guidelines described in RTCA DO-264/EUROCAE ED-78A.

This revision includes, among other things, the addition of the Interval Management (IM) and Dynamic Required Navigation Performance (DRNP) data link services and the associated CPDLC messages, ADS-C reports, and the supporting operational, safety, and performance requirements to support IM and DRNP Operations.

The PMC approved the document. It is published as DO-350A, Vol I and Vol II.

B.   Final Draft, Revised Document, DO-351 - *Interoperability Requirements Standard For Baseline 2 ATS Data Communications (Baseline 2 Interop Standard), Vol 1 and Vol 2,* **prepared by SC-214**

- Captain Chuck Stewart, SC-214 Chairman, presented

DO-351 provides the interoperability requirements (INTEROP) standard for the implementation of the Air Traffic Service (ATS) applications supporting the Baseline 2 data link services as specified in the Baseline 2 Safety and Performance Requirements (SPR) document DO-350. This document addresses the interoperability of the ATS applications using the Aeronautical Telecommunication Network (ATN). It represents the minimum set of interoperability requirements and allocations necessary to provide adequate assurance that the elements of the communication, navigation, and surveillance / air traffic management (CNSATM) system are compatible with each other and when operating together will perform their intended function. These elements comprise the aircraft system, the Air Traffic Service Provider (ATSP) system, and the operators' provisions to use the air traffic services.

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The PMC approved the document. It is published as DO-351A, Vol I and Vol II.

C. **Final Draft, Revised Document, DO-352 -** *Interoperability Requirements Standard For Baseline 2 ATS Data Communications, FANS 1/A Accommodation (FANS 1/A – Baseline 2 Interop Standard)***, prepared by SC-214**

- Captain Chuck Stewart, SC-214 Chairman, presented

DO-352 provides the interoperability requirements for an aeronautical telecommunication network for Baseline 2 ATS data communication services (B2) ground system that provides B2 air traffic data link services to future air navigation system 1/A (FANS 1/A) aircraft in oceanic and continental airspaces. This document provides interoperability requirements for the B2 ATN ground system to provide FANS 1/A aircraft with B2 data link services, and interoperability requirements to ensure seamless transition of ATS communications for bilingual aircraft (i.e., aircraft equipped with FANS 1/A and ATN data link technologies transitions from a FANS 1/A ground system to a B2 ATN ground system and vice versa).

This revision modifies the accommodation rules for the CPDLC messages that have been added or modified in DO-351A/ED-229A.

The PMC approved the document. It is published as DO-352A.

D. **Final Draft, Revised Document, DO-353 -** *Interoperability Requirements Standard For Baseline 2 ATS Data Communications, ATN Baseline 1 Accommodation (ATN Baseline 1 – Baseline 2***, prepared by SC-214**

- Captain Chuck Stewart, SC-214 Chairman, presented

DO-353 defines the backward compatibility interoperability requirements on air and ground systems compliant with the ATS Interoperability Standard in order to support the CDR, IER, ACM and AMC services when talking to Baseline 1 (B1) ground and air implementations. This document provides interoperability requirements for the Baseline 2 (B2) ground systems to interoperate with known B1 compliant airborne implementations and interoperability requirements for the B2 aircraft system to interoperate with known B1 compliant ground implementations. It provides also a separated set of requirements for each of these two capabilities, which can be implemented and qualified independently.

This revision modifies the B1 backward compatibility rules for the CPDLC messages that have been added or modified in DO-351A/ED-229A.

The PMC approved the document. It is published as DO-353A.

E. **Final Draft, Revised Document, DO-213 and DO-213 Change 1 -** *Minimum Operational Performance Standards for Nose-Mounted Radomes*, **prepared by SC-230**

- Jeff Finley and Dawn Gidner, SC-230 Co-Chairmen, presented

This document incorporates the many advances in the field of radome design and testing; as well as updates and corrections to the previous version. The document establishes radome performance requirements to ensure that the radome characteristics do not adversely interfere with the performance of weather radar systems, including those with predictive windshear functions. It also includes testing requirements to ensure that the radome continues to perform correctly after repair. The document was completed in conjunction with DO-220A.

The PMC approved the document. It is published as DO-213A.

F. **Final Draft, Revised Document, DO-220 and DO-220 Change 1 -** *Minimum Operational Performance Standard (MOPS) for Aircraft Weather Radar Equipment*, **prepared by SC-230**

- Jeff Finley and Dawn Gidner, SC-230 Co-Chairmen, presented

This document incorporates corrections to the previous version and technological advances in the field of airborne weather radar. In addition to modernizing the requirements and test procedures for the weather, ground mapping, and predictive windshear functions set out in its predecessors, specifications were added for radar detection of turbulence and atmospheric threat awareness. Any of these functions may be implemented individually or in combination with any others. This document is designed such that the requirements and test procedures for each function are grouped into distinct sections to facilitate testing and showing of compliance. The document supersedes DO-173 and DO-220, including Change 1.

- The PMC approved the document. It is published as DO-220A.

G. **Final Draft, Revised Document, DO-93 -** *Minimum Operational Performance Standard (MOPS) for Airborne Selective Calling Equipment*, **prepared by SC-232**

- Eric Kehoe and Victor Nagowski, SC-232 Co-Chairmen, presented

DO-93 contains Minimum Operational Performance Standards for Selective Calling (SELCAL) systems installed in all types of aircraft. The document provides information needed to

understand the rationale for equipment characteristics and performance for the expansion of the 16-tone system with 16 new tones for a total of 32-tones. The FAA intends to use the document to update Technical Standard Order – TSO-C59.

The SELCAL system is a signaling method used to alert individual aircraft that a ground station wishes to communicate with the aircraft. The system uses common HF and VHF radio communication paths. The document was developed in parallel with ARINC Characteristic 714A – Mark IV Airborne SELCAL and ICAO Annex 10 – International Standards and Recommended Practices – Aeronautical Telecommunications.

The PMC approved the document. It is published as DO-93A.

This completed the deliverable per the SC-232 TOR and with the Chairmen's recommendation, the PMC agreed to sunset the SC. Mr. Volchansky thanked the group for their dedication, especially since the FRAC Resolution Plenary was in DC during the severe snow storm in January.

AGENDA ITEM 4
Integration and Coordination Committee (ICC)

A. US and European Studies – Update

- Dr. George Ligler, PMC Member and PMC ICC Chairman, presented

At the June 2015 PMC meeting, the ICC was asked to provide updates on coordination of SC-227 and SC-186 activities with regard to the issue of Advanced Interval Management (A-IM) integration with Time of Arrival Control (ToAC).

A-IM work in SC-186 is no longer joint with EUROCAE, although Airbus and Thales continue to show interest. This is due to less ATC interaction in Europe compared to U.S. terminal metering and interleaving of aircraft to runways prior to having relative spacing using A-IM. Noteworthy is work done by NLR – Netherlands Aerospace Centre on Single European Sky ATM Research (SESAR)-funded use of IM Turns provided in IM Version 1 (DO-361). Also, both Embry-Riddle and MITRE are studying the use of the Required Time of Arrival (RTA) from a Flight Management System (FMS) with the A-IM control log. The preliminary conclusion is that both the FMS RTA logic and the A-IM control log will need to be changed in order for integration to be effected. These studies should be complete later this year.

SC-227 should therefore expect to consider new requirements for FMS RTA logic from SC-186 after completion of the Embry-Riddle and MITRE studies.

SC-186 interactions on A-IM with SC-214 are about done and coordination with SC-227 is good.

SC-186 coordination on A-IM with SC-206 need to be improved. A Technical Interchange Meeting is planned for the near future.

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Discussion followed about asking on related topics in other RTCA forums. A specific example is the NextGen Advisory Committee Performance Based Navigation (PBN) study. PMC members requested further updates on this study. (Action)

B. Need for IP Standards – Update

- Dr. George Ligler, PMC Member and PMC ICC Chairman, presented

At the September 2015 PMC meeting, the ICC was asked to review the need for standardized Internet Protocol Suites (IPS) across all Special Committees, following on the PMC approval of a MOPS for Internet Protocol Suite in the SC-223 TOR (September 2015).

SC-223 Leadership (Aloke Roy and Brent Phillips) indicated that inputs on the IPS MOPS were needed from SC-222, the application needs of SC-214, and SC-206. The FAA had considered SC-214 performing the OPS work but preferred to initiate the activity in SC-223, with coordination with other SCs. The ICC had extended discussion about having such a broadly-based activity wholly within SC-223.

The ICC consensus, supported by SC leaders that participated in the March 3rd teleconference, is:

- The IPS MOPS work should remain in SC-223
- The name of SC-223 should be changed to "Internet Protocol Suite and AeroMACS" to reflect the SC's new scope
- ISRAs should be completed between SC-223 and SC-222 and SC-206 with regard to IPS requirements.
    - o Near-Term mechanism to ensure that IPS are taken into account should also be established (such as SC-214-related application needs)

PMC members agreed some specifically identified SC-214 members should participate in SC-223 activities on IPS related topic. (Action)

C. Other ICC Topics

Clay Barber brought up suggestions for RTCA's MOPS and MASPS Guide Documents. PMC members requested ICC review these suggestions and bring recommendation back to PMC. (Action)

AGENDA ITEM 5
Action Item Review.

A. Design Assurance Guidance for Airborne Electronic Hardware – Status – Possible New Special Committee to Update RTCA DO-254

- Lou Volchansky, PMC DFO, presented

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In April 2015, the FAA and EASA received three letters requesting harmonizing DO-254 items. Mr. Volchansky asked the PMC to allow the FAA to continue to work this matter as the FAA continues to streamline its processes. Mr. Turner and Mr. Hennig agreed as there were several bilateral discussions to look for the right venue to bring in others on this effort.

B.   Runway Overrun Alerting – possible new Special Committee (SC) – Discussion

- Lou Volchansky, PMC DFO, presented

Although a very important issue, the FAA does not currently see a need. The EUROCAE timeline is almost done, so it may be too late to support this effort.

Ms. Jenny asked what RTCA should do on future topics when interest from industry is received. Mr. Volchansky said to share all inputs, particularly in written form, so it can be shared internally within the FAA.

There was some discussion on possibly shortening the SC creation process, as it seems difficult to generate a request letter and the TOR in a reasonable time. Dr. Hegarty mentioned with the shortness of time for this particular subject, that an out of cycle SC approval could be accomplished electronically. Ms. von Groote said it seemed like this is almost administrative discussion on organizational effort. Many U.S. companies are already members of WG-101, so a June approval could work.

C.   Wireless Avionics Intra Communication (WAIC) – possible new (SC) – Discussion

- Lou Volchansky, PMC DFO, presented

Although different technology, the FAA views WAIC the same as Runway Overrun Alerting, not currently needed. Mr. Turner stated from Boeing's perspective, the cost benefit is not overwhelming. On the other hand, Mr. Durkin indicated Honeywell is very much behind the WAIC effort and would volunteer a chairman for such an SC. Mr. Heinrich said Rockwell Collins is participating in WG-96 and a strong advocate for a joint committee structure.

Mr. Volchansky said he would pursue, but not to expect a rule making effort – FAA looking at risk based vs. performance based recommendations. After much other discussion about RTCA and EUROCAE's efforts tying directly to FAA and EASA cooperation, the group determined an ad-hoc should be formed to address how RTCA does business with focus changing to this risk based vs. performance based approach. (Action)

D.   DO-262B Change 1 - Update

- Jennifer Iversen, RTCA Program Director, presented

All concerns expressed at the December PMC meeting were addressed to the interested parties' satisfaction and DO-262B Change 1 to Appendix D, *Minimum Operational Performance Standards for Avionics Supporting Next Generation Satellite Systems (NGSS)* has been published. Action closed.

E.   Letter to Mr. Chambers' Family referencing DO-230F Dedication - Update

- Karan Hofmann, PMC Secretary, presented

A handwritten letter was forwarded to Mr. Chambers' mother with a copy of DO-230F, *Standards for Airport Security Access Control Systems*, that included the dedication to her son. Action closed.

F.   Initial X$_u$ SC-147 Meeting - Update

- Stuart Searight (SC-147 Co-Chairman) and Charles Leeper (SC-147 Member) presented

A report on the progress of the SC-147 X$_u$ kick off meeting and coordination efforts with SC-228 was presented. The ACAS X$_u$ WG received about 150 comments on Concept of Use Document and are working through them. This will help the group finalize the scope for ACAS X$_u$ system and initial MOPS. WG-75 has inquired about working together as a joint committee on this MOPS. The two groups have worked well together in the past so goal would be a joint document. SC-147 would also recommend joint interoperability MASPS. Expect revised TOR at June PMC meeting. Update action closed.

AGENDA ITEM 6
Discussion.

A.   SC-216 – Aeronautical Systems Security – Discussion – Revised TOR

- Dr. Dan Johnson and Dr. David Pierce, SC-216 Co-Chairmen, presented

The Aviation Rulemaking Advisory Committee (ARAC) on Aeronautical Systems Information Security Protection (ASISP) was convened and is recommending utilizing the work of SC-216 in its recommendations. This will require harmonization of the concepts in DO-356 and ED-203 and additional changes to DO-355/ ED-204. The ARAC ASISP may also require some guidance on the use of performance standards for the security related issues such as PEDS, CPOTS, and related items.

There is also a change in leadership from retiring Chuck Royalty (Boeing) to Dave Pierce (Boeing) as Co-chair and new DFO Varun Khanna (FAA).

The PMC approved the revised TOR (RTCA Paper No. 077-16/PMC-1476). The PMC also extended a special thank you to Chuck Royalty for his many years of service and support.

B.   SC-225 – Rechargeable Lithium Batteries and Battery Systems – Discussion – Status Update on DO-311 Revision

- Richard Nguyen, SC-225 – Chairman, and Stephen Diehl, SC-225 Secretary, presented

The chairmen provided an update on working status. The group has held two Plenaries, realigned the document to proper template, and plans to meet with the PMC ad-hoc in April 2016. They appear to be on track for completion by September 2016.

C.   SC-229 – 406 MHz Emergency Locator Transmitters (ELTs) – Discussion – Revised TOR

SC-229 did not present a revised TOR request at this meeting. The details are still being worked.

D.   SC-234 – Portable Electronic Devices (PEDs) – Discussion – Status Update

- Brian Verna, SC-234 DFO, presented

This joint committee with WG-99 determined at its most recent Plenary that it would be best to ensure the two joint documents are more directly synchronized with delivery dates for completion and approval coordination. WG-99 delivery is October 2016 while SC-234 is July 2016.

The PMC approved the revised TOR (RTCA Paper No. 080-16/PMC-1479).

E.   SC-235 – Non-Rechargeable Lithium Batteries – Discussion – Revised TOR

- John Trela (SC-235 Chairman), Jeff Densmore (SC-235 Secretary), and Norman Pereira (SC-235 DFO), presented

The committee's initial work start was delayed and thus the time needed to complete the work needs to be extended. The group is recommending to change the delivery schedule for the document to April 2017 vice September 2016.

The PMC approved the revised TOR (RTCA Paper No. 081-16/PMC-1480).

F.   NextGen Advisory Committee (NAC) - Status Update

- Andy Cebula, RTCA Vice President, Strategy and Programs, presented

The most recent NAC meeting was held on February 25th, hosted by Delta Air Lines in Atlanta, GA.

Items discussed included NAC Work Projects:

- PBN Time, Speed, Spacing Task Group
  - Review plans for time, speed, spacing and related capabilities and develop a 15-year plan for deployment:
    - 5-year increments: near – 2020, mid-2015, far term – 2030
    - Identify and prioritize tools and technologies ground vs. aircraft
    - Appropriate in various operating conditions
  - Completion: October 2016
- NextGen Integration Working Group
  - Joint implementation plans to deliver capabilities – began 2014, CY15-19
  - NextGen Priorities: DataComm, Multiple Runway Operations, PBN, and Surface
  - Completion: On-going implementations CY17, 18-19 Plans by June 2016
- Joint Analysis Team
  - Evaluate the performance improvements attributable to the implementation of selected capabilities at specific locations
  - Completion: October 2016
- PBN Blueprint Community Outreach Task Group
  - Recommendations addressing community outreach in the implementation of PBN
  - Completion: June 2016

G.   Tactical Operations Committee (TOC) - Status Update

- Trin Mitra, RTCA Program Director, presented

The most recent TOC meeting was March 3rd at RTCA.

Items of discussion included:
- Approval of two recommendations
  - National Procedure Assessment
  - Airport Construction
- Responses from FAA on Previous Recommendations
  - Caribbean Operations
  - Class B Airspace
- Update Briefings
  - 20:1 Background, Policies and Action
  - One Engine Inoperative (OEI) Procedures
  - Update on the NAC
- New Tasks
  - PBN Route Structure Concept of Operations
  - Western Regional Task Group Task on NorCal
  - Graphical TFRs

The TOC meetings scheduled for the remainder of 2016 at RTCA: June 23rd and October 27th. The PMC members sends congratulatory praise to the TOC for all its accomplishments.

H.   Equip 2020 – Status Update

- Jens Hennig (GAMA) and Dr. George Ligler (PME), both PMC Members, presented

Equip 2020 was established by the NextGen Institute to lead efforts on the list of 32 tasks believed to be barriers to implementation of ADS-B from an FAA Call to Action in October 2014 lead by Deputy Administrator Michael Whitaker. Five working groups were established to address the tasks. The focus of these working groups have changed over time as issues are resolved and new issues surface.

The three primary issues that emerged during early meetings were:
- Formalizing ADS-B equipage timelines for commercial aviation (transition)
- Cost of ADS-B equipage for General Aviation
- Need to improve and harmonize strategic communications

Additional issues identified and resolved:
- Need for easily accessible "library" of equipage options
- Need for regulatory clarification
- Need to test Operational Effectiveness of SAPT
- Major/Minor policy implementation

Additional issues identified and in progress:
- Tracking of equipage across aircraft types
- Setting up Regional Carrier for success
- Continue to work with Industry to develop acceptable privacy solution
- Developing education plan for ADS-B

Conclusions:
- Equip 2020 has become effective means to work ADS-B implementation issues across large spectrum of operators and manufacturers
- Participation has been consistent and effective
- Early establishment of SharePoint site helped to keep all informed

PMC members requested the URL for the Library of Equipage options (Action).

I.   FAA Actions Taken on Previously Published Documents – Report

- Lou Volchansky - PMC DFO presented (FAA Guidance based on RTCA Documents – RTCA Paper No. 028-16/PMC-1455)

FAA Published Documents that reference published RTCA Documents, FAA Pending Documents for RTCA Documents Published, and FAA plans for RTCA Documents pending PMC approval were reviewed.

FAA Published Guidance (Since Previous PMC)

RTCA Document	Developed By	FAA Guidance	Approval Date	Comment
DO-358 (DO-267A, 2004)	SC-206	AC 20-149B	December 2015	Supports use of Flight Information Services-Broadcast. Aligns to TSO-C157b
DO-260B; DO-282B	SC-186	AC 20-165B (based on TSO-C166b, TSO-C154c)	December 2015	Airworthiness Approval of Automatic Dependent Surveillance - Broadcast OUT Systems
Chg 4 to DO-210D	SC-222	TSO-C132a	December 2015	Change 4 makes adjustments to environmental test procedures.

RTCA Published Documents - FAA Pending Guidance (through Oct 2016)

RTCA Document	Developed By	FAA Guidance	Planned Release Date	Comment
DO-335 - Guidance for Installation of Automatic Flight Guidance and Control Systems (AFGCS) for Part 23 Airplanes	SC-220	Referenced in ASTM F3061 Standard Specification for Systems and Equipment in Small Aircraft	February 2016	This was a clean-up of the first published document
DO-200B – Standards for Processing Aeronautical Data	SC-217	AC 20-153B Order 8110.55B	March 2016	Show compliance for equipment with an installed database, not just for LOA. AC harmonized with upcoming EASA AMC/GM for implementing DAT

				provider certificates in lieu of LOAs. Honors previous DO-200A approvals.
DO-283B - MOPS for Required Navigation Performance for Area Navigation	SC-227	TSO-C115d	March 2016	TSO-C115d implements the new DO-283B minimum operational performance standards for required navigation performance for area navigation.
Change 2 to DO-300 - Minimum Operational Performance Standards (MOPS) for Traffic Alert and Collision Avoidance System II (TCAS II) Hybrid Surveillance	SC-147	No change	Note to manufacturers posted on RGL (rgl.faa.gov)	DO-300 Change 2 will be used by manufacturers in support of their justification package for a TSO deviation.
Change 1 to Document, DO-300A – MOPS for Traffic Alert and Collision Avoidance System II (TCAS II) Hybrid Surveillance	SC-147	TSO-C119e	June 2016	DO-300A Change 1 will be invoked by the FAA in a pending revision of TSO-C119d
DO-315A - Minimum Aviation System Performance Standards (MASPS) for Enhanced Vision Systems, Synthetic Vision	SC-213	AC 20-167A	2016	Plan to release AC 20-167A after EFVS rule is published

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RTCA Document	Developed By	Planned FAA Guidance	Planned Release Date	Comment
Systems, Combined Vision Systems and Enhanced Flight Vision Systems				
DO-262B - MOPS for Avionics Supporting Next Generation Satellite System (NGSS) Iridium Specific Apdx D	SC-222	TSO-C159c	July 2016	DO-262B Appendix D will be used by Iridium manufactures in support of their TSOA for Iridium Technique Specific Equipment.

RTCA Documents Pending PMC Approval

RTCA Document	Developed By	Planned FAA Guidance	Planned Release Date	Comment
DO-93 - Minimum Performance Standards - Airborne Selective Calling Equipment	SC-232	TSO-C59b	June 2016	Expands number of SelCal frequencies
DO-350 (SPR ATNB2); DO-351 (Interop Std for ATNB2); DO-352 (Interop Std ATNB2, FANS 1/A); DO-353 (Interop Std for ATNB2, FANS 1/A)	SC-214	AC 20-140C	July 2016	ATN B1 Interop Standards improvements for CPDLC at Oceanic/Continental boundaries. Plan to invoke with the B2 standards in AC 20-140C

DO-213 and DO-213 Chg 1	SC-230	AC 43-16 revision (Maint of Aircraft Radome); Job Aid	TBD	MOPS for Nose-Mounted Radomes
DO-220 and DO-220 Chg 1	SC-230	TSO-C63e	Oct 2016	Aircraft weather radar design approval
DO-230E – Standards for Airport Security Access Control Systems	SC-224	Airport Construction Guidance	Provide systems and operational guidance for the deployment of security access control systems at airports.	Provide basis for FAA, TSA, and user community planning, investment analysis, and architectural decision making.

J.   Special Committees – Chairmen's Reports and Active Inter-Special Committee Requirements Agreements (ISRA) - Review

- Jennifer Iversen, RTCA Program Director, reported

Highlights from the Chair Reports for several selected Special Committees were reviewed. Reports were received from SCs 186, 206, 209, 217, 224, 231, and 233. Other information was included in other presentations during this PMC. The complete matrix is posted on Workspace (RTCA Paper No. 029-16/PMC-1456).

K.   European/EUROCAE Coordination – Status Update

- Anna von Groote, EUROCAE Technical Programme Manager, reported

The PMC received an overview of EUROCAE activities and cooperation efforts with RTCA:

EUROCAE Activities:
- EUROCAE Technical Work Programme
    - Strategic vision of the activities in the context of the current environment (e.g. ICAO, EASA, SES and SESAR, FAA and NextGen, Industry…)
- Work Programme
    - Published EDs – 198
    - EDs Under Development – 78
    - Active WG – 36
- About 50% carried out jointly with RTCA, 10% with SAE

EUROCAE Working Groups:
- Available in presentation deck (RTCA Paper No. 030-16/PMC-1457)

Possible Topics for Coordination:
- RPAS
- WG-78
    o To be dormant
- WG-62
    o Collaboration with SC-159

Coordination:
- Regular Coordination
    o Annual PMC / TAC coordination meeting
- Further Process Improvements to Facilitate Coordination
    o Membership Policy Cross Check Mechanism
    o Common Joint TOR
    o Common FRAC/OC Template
    o Common Joint Launch Secretariat slides
    o Common ED/DO Template
    o Joint Guidance Document for Committee Members & Leadership – Roles and Process

Key dates for future coordination: EUROCAE will hold their Symposium on April 29-30, 2016 in Vienna. The Next TAC Meeting is set for 7-8 June 2016 (Location TBD).

The RTCA staff will continue to keep the PMC apprised of developments.

L.   RTCA Award Nominations – Consideration / Approval of Nominations

- Karan Hofmann, RTCA Program Director, presented slate of candidates

PMC approved all nominations for Outstanding Leader Awards and Significant Contributor Awards with an additional Significant Contributor to the DO-361 effort. Presentations will occur at the RTCA 2016 Global Aviation Symposium, June 1, 2016.

AGENDA ITEM 7
Other Business.

A.   SC-223 – Internet Protocol Suite and AeroMACS - Discussion – Revised TOR

- Brent Phillips, SC-223 DFO, presented

A summary of recommendations to change the name of the committee in alignment with ICC recommendation and to bump the Profile deliverable by 6 months to align with first meeting vs. PMC approval were presented.

The PMC approved the revised TOR (RTCA Paper No. 082-16/PMC-1481).

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B.   Forward Planning Summary

- Karan Hofmann, PMC Secretary, presented

A summary of recommendations by major category from the Forward Planning Session that was conducted on December 16, 2015 after the last PMC meeting was presented.

PMC Considerations:
- Cross-Cutting Committee Approach

Special Committee Considerations:
- Consider re-categorization of SCs
- Ensuring Chairs are prepared – Trained on Process and Guidelines – Online training and in-person Chair Club
- Special Committee Tool Box

Document Related:
- Re-look at FRAC categories
- Template Design to capture non-concurs, change rationale, etc.
- Templates for each document type
- Consider sending PMC Membership FRAC Documents
- PMC Approval Process (more electronic)

International Items:
- Approach for Joint Committees when FAA not intending TSO
- Joint TORS
- Consider RTCA Involvement at Panels at ICAO
- RTCA/EUROCAE Joint Work Program
- Translate DO's to ICAO Official Languages
- Possibility of Joint TAC/PMC Meetings or liaison to attend
- RTCA to work with FAA on SC/ICAO strategies to help drive work program
- Possibility of clearing house for standards for regulatory roadmap

Further action on these items will be addressed over the coming months.

C.   Cross Cutting Committee (CCC) Discussion

- Karan Hofmann, PMC Secretary, presented

During the Forward Planning session in December, the group discussed the following points with respect to the CCC:

- Standing or ad hoc style
- Standing to call in additional as needed
- Maybe ICC
- Core – ICC and call in as needed

After a review of the CCC recommended flowchart, further discussion by PMC members indicated a possible need for feedback prior to a tasking letter. Earlier discussion under agenda items 5A, 5B, and 5C also indicate possible need for an ad-hoc for each topic – each time might be a different approach due to subject matter. Members noted we may not need a formal structure. Yet ad-hocs are reactive, whereas a small standing body might be quicker to engage. Members don't really want to add another layer – prefer a group to be called on as needed, possibly similar to ICC with all PMC members as *ex officio*. One individual suggested ICC is more of a staff role to PMC while the CCC would be staff role to RTCA.

PMC members tasked the ICC to review the CCC concept and provide a recommendation on how the PMC should proceed. (Action)

D.   SC-224 – Standards for Airport Security Access Control Systems - Discussion – Revised TOR

- Jonathan Branker, SC-224 Member, presented

A recommendation was presented to add a revision to DO-230 to update the Credentialing, Access Control Systems, and Communications Sections.

The PMC approved the revised TOR (RTCA Paper No. 078-16/PMC-1477).

E.   SC-159 – Navigation Equipment Using the Global Navigation Satellite System (GNSS) - Discussion – Revised TOR

- Dr. George Ligler and Dr. Chris Hegarty, SC-159 Co-Chairmen, presented

A recommendation was presented for an extension of delivery dates on three documents based in part on schedule slippage in ICAO's validation of Cat II/III GBAS requirements. Additionally, a new product was added to address a time-critical need for SBAS avionics to be able to function correctly with more than 19 operational SBAS geostationary satellites.

The PMC approved the revised TOR (RTCA Paper No. 083-16/PMC-1482).

F.   SC-228 – Minimum Performance Standards for Unmanned Aircraft Systems - Discussion

- Richard Heinrich, SC-228 Co-Chairmen, presented

There was discussion concerning a DoD L-Band study that surfaced in December 2015. This information is a little late for the September/December 2016 deliverables now tasked under current TOR. Possibly have as part of phase II deliverables for incremental work. There currently is no guidance, as the group is awaiting roadmap. Further investigation should bring a more formal proposal to June PMC meeting.

G.   ICC Roster Revision

- Dr. George Ligler, PMC Member and PMC ICC Chairman, presented

The last approval of the ICC roster was at the September 2016 PMC meeting with a note that positions are name specific and not position related. As previously stated, all PMC members are *ex officio*. Thus, Rich Jennings is still a member although not in PMC DFO role. However, recommend Karan Hofmann replace retiring Hal Moses as ICC member.

The PMC approved the membership change.

AGENDA ITEM 8
Schedule for Committee Deliverables and Next Meeting Date

Document expected for the June 2016 meeting:

- SC-224 Standards for Airport Security Access Control Systems
  - Revision to DO-230F – *Standards for Airport Security Access Control Systems*

The dates for the next three PMC meetings were confirmed: Tuesday, June 21, 2016; Thursday, September 22, 2016; and Thursday, December 15, 2016.

AGENDA ITEM 9
New Action Item Summary

See PMC Action Item Table.

/Signed/
Karan Hofmann, Secretary
RTCA Program Management Committee

CERTIFIED to be a true and accurate report of the meeting.

/Signed/
Christopher Hegarty, Chair
RTCA Program Management Committee

Program Management Committee – March 17, 2016 ATTENDANCE LIST		
PMC MEMBERS:		
Christopher	Hegarty	The MITRE Corporation Chairman
Doug	Arbuckle	Federal Aviation Administration
Clay	Barber	Garmin Ltd.
Steve	Brown	National Business Aviation Association
Chris	Durkin	Honeywell International, Inc
Richard	Heinrich	Rockwell Collins, Inc.
Jens	Hennig	General Aviation Manufacturers Association
Margaret	Jenny	RTCA, Inc.
Randy	Kenagy	Air Line Pilots Association
Michele	Merkle	Federal Aviation Administration
Jessie	Turner	The Boeing Company
Lou	Volchansky	Federal Aviation Administration (Designated Federal Representative)

OTHER ATTENDEES:		
Moin	Abulhoan	Federal Aviation Administration
Ruy	Brandao	Honeywell International, Inc
Jonathan	Branker	Federal Aviation Administration
Andy	Cebula	RTCA, Inc.
Jerome	Condis	Airbus
Jeff	Desmore	Radiant Power Corp
Stephen	Diehl	The Boeing Company
Jeff	Finley	Rockwell Collins
Eldridge	Frazier	Federal Aviation Administration
Dawn	Gidner	Honeywell International, Inc
Karan	Hofmann	RTCA, Inc.
Jennifer	Iversen	RTCA, Inc.
Daniel	Johnson	Honeywell International, Inc
Eric	Kehoe	AvTech
Nazih	Khaouly	Federal Aviation Administration
Charles	Leeper	The John Hopkins University
Trin	Mitra	RTCA, Inc.
Thomas	Mustach	Federal Aviation Administration
Victor	Nagowski	Aviation Spectrum Resources, Inc
Richard	Nguyen	The Boeing Company
Adam	Panken	MIT-LL

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Andrew	Paszter	Wall Street Journal
Norman	Pereira	Federal Aviation Administration
Brent	Phillips	Federal Aviation Administration
Andrew	Roy	ASRI
Al	Secen	RTCA, Inc.
Stuart	Searight	Federal Aviation Administration
Chuck	Stewart	United Airlines
John	Trela	The Boeing Company
Brian	Verna	Federal Aviation Administration
Anna	Von Groote	EUROCAE

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PMC ACTION ITEM TABLE

TRACKING NUMBER (Meeting Date and agenda item from which original action resulted)	ACTION	ACTION ASSIGNED TO	DUE DATE	STATUS
06/18/2015 Agenda Item 4	06/18/2015 – Report on US and EUROCAE studies 12/15/2015 (Item 4) – Moved to Mar as Mr. Ligler was not able to attend Dec PMC 03/17/2016 (Item 4A) – Summary provided	ICC George Ligler	Dec 2015 Mar 2016	Closed
09/23/2014 Agenda Item 6B	09/23/2014 – Further TOR review pending new FAA security activities. 12/16/2014 (Item 6F) – Further coordination / review necessary pending WG-72 schedule 03/24/2015 (Item 6C) – PMC recommended TOR update to address development of joint content and additional deliverables 09/22/2015 note – Awaiting final report from ASISP ARAC (due in Aug 2016) 03/17/2016 (Item 6A) – Revised TOR for SC-216 presented and approved based on ARAC ASISP recommendations	SC-216	Dec 2014 Mar 2015 Dec 2015 Dec 2016	Closed
09/23/2014 Agenda Item 6I	09/23/2014 – Further discussion planned for Dec. meeting 12/16/2014 (Item 6K)– Workshop planned to consolidate the desires of industry – revise DO-254 or not 3/24/2015(Item 6K) – Workshop update provided; recommendations being reviewed 06/18/2015 (Item 6F) - FAA and EASA will hold a harmonization meeting; possible TOR for new joint committee 09/22/2015 (Item 6I) – Meeting with FAA Chief Scientist scheduled for 10/22 for discussion on course of action 12/15/2015 (Item 6G) – FAA still working with EASA for harmonization 03/17/2016 (Item 5A) - Ad-hoc recommended to address how RTCA does business w/focus on changing to risk base vs. performance base (combine with others to new action)	PMC Member Jessie Turner Rich Jennings	Dec 2014 Jun 2015 Sep 2015 Dec 2015 Mar 2016	Closed
06/18/2015 Agenda Item 6K	06/18/2015 – Investigate possible new SC for runway overrun alert 09/22/2015 (Item 5F) – Further investigation for industry support 12/15/2015 (Item 5F)– FAA is meeting with EASA this month to discuss. 03/17/2016 (Item 5B) – Ad-hoc recommended to address how RTCA does business w/focus on changing to risk base vs. performance base (combine with others to new action)	PMC Rich Jennings Rick Heinrich Jens Hennig	Sep 2015 Dec 2015 Mar 2016	Closed

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09/22/2015 Agenda Item 6C	09/22/2015 – Investigate need for IP considerations to be included in all SC's 03/17/2016 (Item 4B) – Discussion on inclusion of SC-214 SME's at SC-223 meetings (separate action – this closed)	ICC George Ligler	Mar 2016	Closed
09/22/2015 Agenda Item 7A	09/22/2015 – Approach Rob Duffer on potential support for joint RTCA/EUROCAE activity on WAIC 12/15/2015 (Item 5F) – Potential interest; follow up with draft TOR 03/17/2016 (Item 5C) - Ad-hoc recommended to address how RTCA does business w/focus on changing to risk base vs. performance base (combine with others to new action)	PMC Rich Jennings Karan Hofmann	Dec 2015 Mar 2016	Closed
12/15/2015 Agenda Item 3C	12/15/2015 – Correct references and add normative reference prior to publish Change 1 to DO-262 03/17/2016 (Item 5D) – All corrections made and wording was adjusted to meet needs	SC-222 Chuck LaBerge PMC Robert Grove RTCA Jennifer Iversen	Mar 2016	Closed
12/15/2015 Agenda Item 3D	12/15/2015 – Letter to Mr. Chambers family notifying them of dedication of DO-230F. 03/17/2016 (Item 5E) – Reported letter and copy of document had been sent to Mr. Chambers' mother	PMC Karan Hofmann	Mar 2016	Closed
12/15/2015 Agenda Item 6A	12/15/2015 – Provide assistance to SC-206 on getting industry support for DO-358 revision 3/17/2016 Note: working through SC-206 and FAA	PMC All	Mar 2016	Closed
12/15/2015 Agenda Item 7B	12/15/2015 – Schedule an Equip 2020 update to the PMC 03/17/2016 (Item 6H) – Presentation provided	PMC Karan Hofmann	Mar 2016	Closed
12/15/2015 Agenda Item 7C	12/15/2015 – Report back on initial X_u January 12th meeting. 03/17/2016 (Item 5F) – Presentation provided	SC-147 Dan Tillotson Stuart Searight	Mar 2016	Closed
03/17/2016 Agenda Item 1	03/17/2016 – Post FAA provided copy of BOB Agreement on Workspace	PMC Karan Hofmann	Jun 2016	Open
03/17/2016 Agenda Items 3A-D	03/17/2016 – Report back on Boeing/ARINC ATC Winds work and results	PMC Jesse Turner	Jun 2016	Open
03/17/2016 Agenda Item 4A	03/17/2016 – Provide feedback on PBN study from NAC	PMC Rick Heinrich	Jun 2016	Open
03/17/2016 Agenda Item 4B	03/17/2017 – Determine SC-214 participation with SC-223 IPS activity	PMC George Ligler SC-214 Chuck Stewart	Jun 2016	Open
03/17/2016 Agenda Item 4C	03/17/2016 – ICC review input of RTCA's MOPS and MASPS Guide Documents	ICC George Ligler	June 2016	Open
03/17/2016 Agenda Item 5C	03/17/2016 – Ad-hoc recommended to address how RTCA does business w/focus on changing to risk base vs. performance base wrt ROAAS, WAIC, and GADDS (include L Volchansky, C Durkin, Garmin, J Hennig, R Heinrich, J Turner)	PMC Al Secen	Jun 2016	Open
03/17/2016 Agenda Item 6H	03/17/2016 – Provide URL for Library Equipment Options	PMC George Ligler Jens Hennig	Jun 2016	Open
03/17/2016 Agenda Item 7C	03/17/2016 – ICC Look at CCC concept with recommendations for implementation	ICC George Ligler	Jun 2016	Open

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