DATE:          October 26, 2017
PLACE:        Boeing
              Longacres Park, Bldg 25-01
              1301 SW 16th Street
              Renton, WA 98057

The attendees included:

**SC-209 Co-Chairs**
- Thomas Pagano  The Regulus Group
- Robert Saffell  Rockwell Collins

**SC-209 Designated Federal Official**
- Gregg Nesemeier  Federal Aviation Administration

**SC-209 Secretary**
- Timothy Steiner  Federal Aviation Administration
Participants during all, or part, of the meeting (both in person and on WebEx/Telecon):

Doug Arbuckle
Federal Aviation Administration (FAA)
Raymond Bayh
BAE Systems
Miles Bellman
Volpe
Gabriel Brewer
Boeing
Julien Damblencmont
Thales Group
Steve Darr
Dynamic Aerospace
Jim Davis
Sagetech
Aaron Dutle
NASA
Alex Engel
EUROCAE
Matthew Erickson
Rockwell Collins
Jack Field
MITRE
Stefano Fiorenzi
Leonardo
Martin Gray
Trig Avionics
Ed Hahn
Air Line Pilots Association
Matt Haskin
Advanced Core Concepts
Andy Hoag
Aireon
Eric Jauny
DSNA-DTI
Ed Johnson
Federal Aviation Administration (FAA)
Clark Lunsford
MITRE
André Marques
Airbus
Stuart McKay
NATS UK
Gregg Nesemeier
Federal Aviation Administration (FAA)
Lee Nguyen
Federal Aviation Administration (FAA)
Tom Pagano
Regulus Group
Eric Potier
EUROCONTROL
Bill Richards
Boeing
Bob Saffell
Rockwell Collins
Brian Sanderson
MITRE
Carsten Schwarz
Deutsche Zentrum für Luft- und Raumfahrt (DLR)
Al Secen
RTCA
John Seereiter
DoD International AIMS Program Office
Ashutosh Sharma
Boeing
Todd Skoog
Garmin
Milan Sopata
Honeywell International
Timothy Steiner
Federal Aviation Administration (FAA)
Jörg Steinleitner
EUROCONTROL
Rocky Stone
United Airlines
Christopher Tourigny
Federal Aviation Administration (FAA)
Jessie Turner
Boeing
Don Walker
Honeywell International
Kevin Wilson
Honeywell International
Wen Yang
Saab Sensis Corporation
The seventeenth meeting of RTCA Special Committee 209 was held in joint session with EUROCAE Working Group 49 on October 26th, 2017 at the Boeing Longacres facility just south of Seattle, Washington. This meeting convened towards the end of the week which saw the Combined Surveillance Committee (CSC) meet in support of their effort to update the Mode S Transponder and ADS-B 1090ES MOPS. The CSC is composed of four committees: RTCA SC-209 WG-1, EUROCAE WG-49, RTCA SC-186 WG-3, and EUROCAE WG-51 SG-1. The minutes detailing the discussion which transpired during those meeting days may be found on the RTCA Workspace for the Combined Surveillance Committee at the above mentioned link.

1. Introduction and Welcome for SC-209 / WG-49

The meeting was called to order by SC-209 Co-Chair Thomas Pagano of the Regulus Group at 9:00 AM (PDT) on October 26th, 2017. Mr. Pagano began the meeting with a welcome to all participants and introductions of committee Chairs. All those in attendance were then asked to sign-in, if present, and announce their name and the organization they were there to represent.

As the SC-209 Designated Federal Official (DFO), Gregg Nesemeier read the DFO Public Meeting Announcement.

Al Secen, the RTCA Program Director, welcomed all attendees to the Plenary and, following a formal recognition of the SC-209 Co-Chairs, provided background on the nature of the RTCA as well as the importance of the work which is performed within its committees. He then covered the membership policy and reviewed the policy regarding Intellectual Property Rights (IPR) and restrictions regarding its use within the standards produced by the RTCA. Eric Potier, Chair of EUROCAE WG-49, followed Mr. Secen with a corresponding statement regarding EUROCAE policy, specifically highlighting restrictions on the use of IPR within European standards documents.

2. Review of Agenda

The Plenary agenda was reviewed by SC-209 Co-Chair Tom Pagano. Mr. Pagano indicated that he would like to add to the agenda a verbal update on the current status of Phase Modulation development.
3. **Review of Minutes from the 15th Meeting of SC-209**

The Minutes from the 16th Meeting, held on the 21st of October 2016, were approved without comment. *(Minutes – SC-209 Plenary Meeting #16 - 20161021.pdf)*

4. **RTCA SC-209 WG-1 & EUROCAE WG-49 Activity**

The committee was reminded that RTCA SC-209 WG-1 and EUROCAE WG-49 were meeting jointly in the effort to update the Mode S Transponder MOPS (DO-181/ED-73). In addition, the effort to update the transponder MOPS was proceeding jointly with that for the ADS-B 1090ES MOPS. The completion date for this development cycle was noted to be in late 2019 and the Committee was reminded that draft versions of the MOPS would be available on the RTCA workspace throughout. Mr. Pagano then provided a brief summary of the Working Group activity since the last Plenary.

Eric Potier concurred with Mr. Pagano’s summary and added that the joint development effort was important to maintain and improve consistency. He further explained that, in regards to the transponder MOPS, the structures of DO-181 and ED-73 are not the same and, therefore, differences will remain. However, both MOPS are moving in the same direction. Mr. Potier seconded the remarks on the Working Group status which was previously provided by Mr. Pagano.

5. **SC-209 Terms of Reference Update**

An update to the Terms of Reference (ToR) was presented for review by the Committee. The primary change of interest was to the “Due Date” which was refined from “2019” to “December 2019”. This change would bring the SC-209 ToR in line with the SC-186 ToR which was updated with the same change in September of this year. SC-209 WG-1 and SC-186 WG-3 are currently meeting jointly in the development of updates to both the Mode S Transponder and ADS-B 1090ES MOPS. The remainder of the changes to the ToR were largely editorial in nature. Changes included: SC Leadership Affiliation corrections, Specific Guidance section updates and corrections, and revisions to the Acronyms section. Al Secen confirmed that, due to the “Due Date” change, this ToR would need to be approved and presented to the PMC. Gregg Nesemeier provided a summary of changes which took place recently to reorganize the aircraft certification division within the FAA. With no further input or changes the Committee approved the revision to the Terms of Reference.

6. **Other Business**

Tom Pagano addressed the current status of work on Phase Modulation. Phase Modulation was proposed as a way to increase bandwidth on 1090 ES and, perhaps Mode S. It was known that ACSS had patents on this technology. A draft Commitment to License (CtL) was provided to RTCA for review during the July 2017 Program Management Committee (PMC) meeting. The PMC assessment was that the CtL was not in line with the proprietary policies of RTCA and, therefore, the PMC directed the SC-209 and SC-186 WG-3 to suspend their work on Phase Modulation development. Since that time, the goal has been to resolve these licensing issues. Al Secen confirmed that RTCA is working with ACSS on this matter. Mr. Secen informed the Committee that a meeting was scheduled between RTCA President and ACSS executives. The EUROCAE Program Manager for WG-49, Alex Engel, confirmed that EUROCAE is, at the level of Secretariat, coordinating and in alignment with RTCA. Mr. Engel further highlighted that the EUROCAE Council will also need approve a CtL but would likely follow RTCA
guidance. The Council was scheduled to meet during the week following this Plenary, at which time Mr. Engel offered to provide to them an update on the Phase Modulation status as discussed here. Mr. Pagano concluded the discussion with the hope that the issues can be resolved so that the Committee can move forward.

7. Future Meetings

Future meetings details were agreed to be delayed until such a time as the Committee has more clarity on the full 2018 meeting schedule of the Combined Surveillance Committee. Therefore, date and time of the next SC-209 Plenary discussed at a future meeting of the CSC, with corresponding announcements to be made at that time.

8. Adjournment

Al Secen thanked everyone who participated in the Plenary and wished the Working Group success in the remainder of their meeting week. With no outstanding actions or other business before the committee, Tom Pagano and Bob Saffell thanked everyone for their participation and adjourned the Plenary.

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Timothy Steiner  
Secretary, SC-209

CERTIFIED as a true and accurate summary of the meeting.

- S -  - S -
Thomas Pagano  Robert Saffell  
Co-Chair, SC-209  Co-Chair, SC-209