

RTCA Paper No. 264-17/SC209-036  
October 26, 2017

**SEVENTEENTH MEETING**  
**RTCA SC-209 & EUROCAE WG-49**  
**ATCRBS / MODE-S TRANSPONDER**

**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

**WG-49 Chair**

Eric Potier      EUROCONTROL

**SC-209 Designated Federal Official**

Gregg Neseimeier      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 Damblemont	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 Neseemeier	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

**\*\* Note: All files named herein can be downloaded from the RTCA workspace. \*\***

**SC-209 Plenary Files:**

<http://workspace.rtca.org/apps/org/workgroup/sc-209/>

**Combined Surveillance Committee Files:**

<http://workspace.rtca.org/apps/org/workgroup/combsurvcomm/>

The seventeenth meeting of RTCA Special Committee 209 was held in joint session with EUROCAE Working Group 49 on October 26<sup>th</sup>, 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 26<sup>th</sup>, 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 Neseimeier 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.

*(RTCA Plenary Kickoff Slides.pdf*

*EUROCAE Proprietary Policy.pdf)*

## **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.

*(Meeting Agenda October 26, 2017.pdf)*

### **3. Review of Minutes from the 15<sup>th</sup> Meeting of SC-209**

The Minutes from the 16<sup>th</sup> Meeting, held on the 21<sup>st</sup> 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.

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Thomas Pagano  
Co-Chair, SC-209

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Robert Saffell  
Co-Chair, SC-209