MINUTES OF JOINT RTCA SC-223 (PLENARY # 50) / EUROCAE WG-108 (MEETING #21) / JOINT MEETING #14
"Internet Protocol Suite (IPS)"

Date	**March 14 - 18, 2022**
Time	**10am – 3pm EDT, 16h-21h CEST, 7am-noon PDT** **Monday – Friday**
Hosted by	**Virtual Meeting**
Venue	For Webex, Contact Rebecca or Abinaya
Contact	**Rebecca Morrison**, Program Director, RTCA (202) 330-0654 or rmorrison@rtca.org **Abinaya Kannan**, Technical Programme Manager, EUROCAE +33 1 49 46 19 72 or abinaya.kannan@eurocae.net

Attendees:

Name	Role	Affiliation
Chen, David	Member	FEDERAL AVIATION ADMINISTRATION (FAA)
d'Humieres, Francois	Member	FREQUENTIS A.G.
Dlouhy, Ron	Member	COLLINS AEROSPACE
Drášil, Pavel	Member	HONEYWELL

Goodfellow, Michael	Guest	ICAO
Graefe, Jonathan	Member	COLLINS AEROSPACE
Gulam, Raza	Member	ICAO
Hawkins, Rich	Member	WIMAX FORUM
Henzl, Martin	Member	HONEYWELL
Haindl, Bernhard	Member	FREQUENTIS A.G.
Hammond, Marvin	Guest	TECHPROVIDERS
Huang, Pete	Guest	CONCEPTS BEYOND
Jain, Ravi	Member	FEDERAL AVIATION ADMINISTRATION (FAA)
Jaron, Zdenek	Member	HONEYWELL INTERNATIONAL, INC.
Kannan, Abinaya	Technical Programme Manager	EUROCAE
Kilbourne, Todd	Member	MOSAIC ATM
Kopman, Ashley	Guest	CONCEPTS BEYOND
Ladron, Daniel	Member	BOEING
Leonardon, Laurent	Guest	COLLINS AEROSPACE
Morrison, Rebecca	Program Director	RTCA, INC.
Neale, Michael	Guest	ACES INC.
Nepute, Brandon	Member	BOEING
Niraula, Madhu	Member	COLLINS AEROSPACE
Nisbet, David	Member	THALES GROUP
Olive, Mike	Member	HONEYWELL
Patterson, Patrick	Guest	CARILLON INFORMATION SECURITY
Pelleschi, Stephane	WG-108 Chair	COLLINS AEROSPACE
Phillips, Brent	Government Authorized Representative	FEDERAL AVIATION ADMINISTRATION (FAA)
Popescu, Liviu	Member	EUROCONTROL
Pruvot, Stephane	Member	SITA
Hawkins, Richard	Member	WIMAX FORUM
Roy, Aloke	SC-223 Chair	HONEYWELL
Saccone, Greg	Member	BOEING
Segers, Robert	Member	FEDERAL AVIATION ADMINISTRATION (FAA)
Simona, Pierattelli	Member	LEONARDO
Soléry, Michel	Member	DSNA
Tamalet, Stephane	Member	AIRBUS
Van Trees Stephen	Member	FEDERAL AVIATION ADMINISTRATION (FAA)
Varkonyi, Bela	Member	FREQUENTIS A.G.
Warns, Timo	Member	AIRBUS
Yu, Ming	Member	FEDERAL AVIATION ADMINISTRATION (FAA)
Zeng, Dongsong	SC-223 Secretary	THE MITRE CORPORATION

Agenda Items 1. Welcome address. Meeting Organizational Issues

Aloke Roy, Chair of SC-223, and Stephane Pelleschi, Chair of WG-108, welcomed the participants.

Agenda Item 2. Approval of the Agenda

The group reviewed and approved the meeting agenda.

Agenda Item 3. Administrative Remarks

Abinaya Kannan, Technical Programme Manager, EUROCAE, presented the RTCA / EUROCAE antitrust, proprietary and membership policy statements. All participants agreed on the statements and no issues were raised.

Agenda Item 4. Consider a motion to recognize and honor the life and work of Vaughn Maiolla on behalf of RTCA SC-223 and EUROCAE WG-108

Aloke Roy, Chair of SC-223, broke the news to the group that our long-time friend and colleague Vaugh Maiolla, ICAO, passed away this January in a ski accident. The committee observed a moment of silence in recognition and memorialization of the life and work of Vaughn Maiolla.

Agenda Item 5. Review and Approval of Previous Meeting Notes

Dongsong Zeng, MITRE, went through the report of last meeting. The group reviewed and approved it.

Agenda Item 6. Current State of Standards

6a. ICAO WG-I (ICAO Annex 10, DOC 9896 ed 3, DOC 10090, DOC 10094, DOC 10095, DOC 10145)

Liviu Popescu, EUROCONTROL, briefed the group on the schedule of ICAO IPS standards development, which is shown in Figure 1.

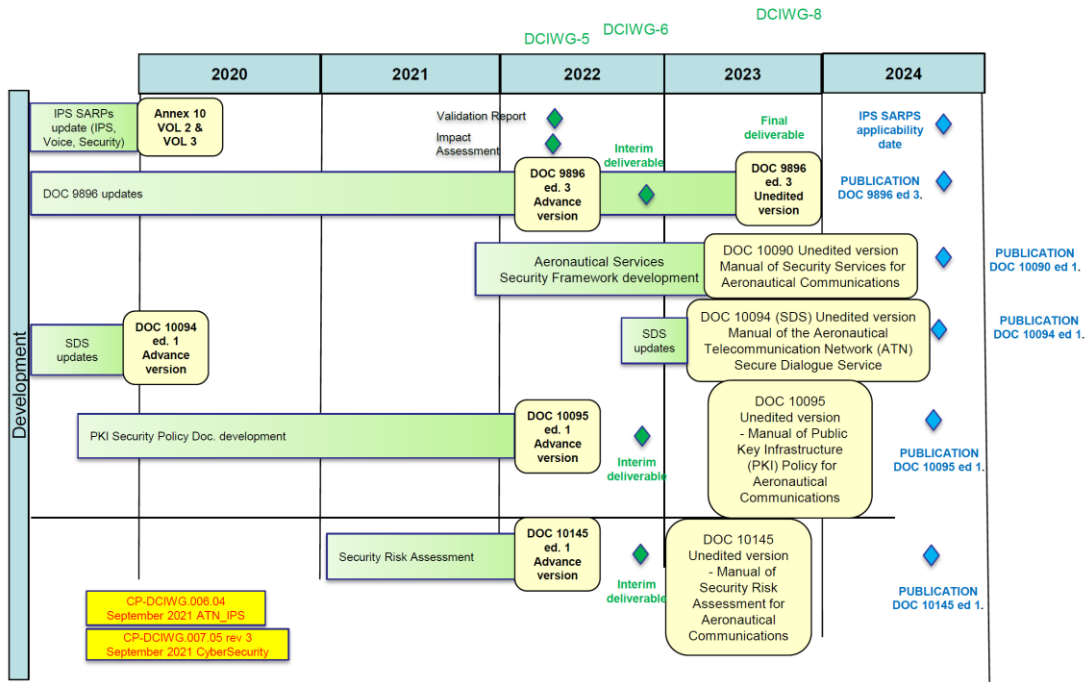**All documents combined timeline (Job cards 006.04 and 007.05 rev. 09/2021)**

Figure 1. ICAO IPS SARPs and Docs Timeline

6b. ARINC IPS Subcommittee

Greg Saccone, Boeing, and Mike Olive, Honeywell, reported that the ARINC858 development is progressing on schedule. The next AEEC IPS subcommittee meeting is scheduled for April 26 – 28, 2022, Boeing Field Building 2-22, Seattle.

6c. ICAO TFSG

Robert Segers, FAA, briefed the group on the latest progress made by ICAO Trust Framework Study Group (TFSG). The Certificate Policy document is expected to be completed in March 2022 timeframe. The GRAIN work group is developing a new ICAO Information Security Manual.

6d. Other Relevant Standards

No other IPS relevant standards were brought up during the meeting.

Agenda Item 7. Current State of Industry Activities

7a. SESAR

Bela Varkonyi, Frequentis, reported that SESAR is validating AGMI with Inmarsat, iridium, VDL2 and AeroMACS networks under FCI Solution 77. Validation results are expected to come out in September time frame.

7b. ESA IRIS

No update on ESA IRIS was received during the meeting.

7c. RTCA SC-228, UAS C2

Aloke Roy, Honeywell, and Ravi Jain, FAA, provided an update on the SC-228 activities.

7d. RTCA SC-214 / WG-78 / WG-92

Dongsong Zeng, MITRE, reported that SC-214 VDLSG/WG-92/DLK reached a consensus on selection of Orange V2 as the final VDL2 solution for IPS support at the joint Telecon on March 7, 2022. The committee plans to complete the VDL2 IPS support standardization by the end of 2022.

7e. Any Other Relevant Activities

No other relevant activities were reported.

Agenda Item 8. IPS MASPS Development

8a. MASPS Development Progress Overview

Stephane Pelleschi, Collins Aerospace, provided a status update of the MASPS development progress.

8b. Review Progress on MASPS actions items

Stephane Pelleschi, Collins Aerospace, updated the status of the outstanding MASPS action items.

Jonathan Graefe, Collins Aerospace, and Pavel Drasil and Martin Henzl, Honeywell, presented slides titled "ROHC Status - Joint Presentation Collins and Honeywell," which provides a quick ROHC refresher, resolved discussions between Collins and Honeywell, accepted points, and open issues for discussion.

8c. MASPS Security Team Discussion

Timo Warns, Airbus, presented an information paper titled "Status Update on EST and PKI availability." The group discussed the proposal and would like to give it more thought.

Decision 1. The group agreed that the common RFCs for EST, i.e., RFC 4210, 5272 and 5785, need to be profiled.

Timo Warns, Airbus, presented an update to MASPS Security Section. The group discussed and provided comments on the section. The updated MASPS security section is documented in "MASPS Security Section 20220318.docx."

Mike Olive, Honeywell, went through the draft Section 3.5.8 Cryptographic Key Management of the IPS MASPS. The group reviewed and commented on the section. The updated Section 3.5.8 is documented in "DRAFT IPS MASPS_20220316 - Section 3.5.8.docx."

Ashley Kopman, Concepts Beyond, and Robert Segers, FAA, re-presented the conceptual paper titled "Server-based Certificate Validation Protocol (SCVP) Stapling," which proposes to extend TLS/DTLS 1.2 and 1.3 to include SCVP stapling for IPS certificate validation in a cross-certified international aviation domain. Ashley Kopman, Robert Segers and their team plan to draft a new RFC of the proposed TLS/DTLS extension with SCVP stapling and submit it to IETF for approval in the near future.

Timo - Fully consider the security vulnerabilities of this approach

- Consider the case where an attacker sends a HelloClient with an SCVP Responder – how can this effect the DTLS Server? Is there a potential Denial of Service? A potential for cache poising? ASN.1 injection?

Patrick - Suggested that the SCVP server certificate itself be short lived, the SCVP server is a trust oracle, so to mitigate rogue attacks, make short lived and use EST to auto-update

- This is likely not an RFC requirement but rather an aviation requirement

Jonathan – Have you considered situations where countries cannot reach other untrusted county's SCVP URIs?

- Potentially make inclusion of the IATF SCVP mandatory in the list as a neutral fallback

Mahdu – Who is responsible for maintenance of the SCVP Server?

- Maintained by the CA provider, the SCVP is a trust oracle so it must be maintained at the same level as the CA itself
- Provide a notional architecture, need a way to handle "cross over"

Patrick – Make the RFC have option to either provide a list of URIs or a trust anchor

- If using URIs, the ground system will make SCVP request to SCVP indicated by aircraft and return a SCVP response signed by that trusted SCVP responder
- If using trust anchor, ground system will make SCVP request to the SCVP responder in it's own domain with the trust anchor included in the request.
  - o The response will be signed by the Ground System's SCVP responder, where/how should this response be validated?

Which performance budget does the SCVP response time fall into? RCP budget? 6 minutes?

- Aloke – 6 minute startup (initialization) budget may not be only budget to considered, may be other points after initialization that require certificate validation.

Timo – Not convinced that SCVP Stapling should be only option. Could be one option but not preclude other options as long as the solution verifies that the certificate is fit for purpose and meets profile requirements.

- Aloke – what would be the alternative? Or do we just state that alternative approaches could be proposed that require adequate justification for meeting validation requirements
- Patrick – one thing to consider is that there will easily be over 100 CAs with staggered validity periods. The certificates will likely have approximately 1 year expiration, so you could be required to update aircraft trust list every week.

Should this be made optional for aircraft to support but required for ground to support?

Need to get the RFC drafted and into pipeline, then it can be implemented against.

Patrick – offered access to University of Montreal for acceleration of prototype.

- Need to consider whether this is a good idea for the FAA

Lots of discussion around which aviation documents are effected: 10095, 9896, MASPS, A858 due by end of the year

- RFC process will take some time, at least 1 year after initial draft submission but some take as long as 20 years. Patrick has some contacts that can be used to move things along but will still take minimum of 1 year.
- 9896 may be able to remain implementation agnostic – remove some time pressure, or may require support for extension because defines the aircraft & ANSP interface
- Late draft of RFC may be sufficient to provide reference implementation, may not be necessary to wait for final RFC approval

Defer further discussion of documents to WG-I meeting at the end of March.

Action 1. Aloke Roy to find out who (e.g., ANSP, AOC) is accountable for the end-to-end security of the ATS and AOC data links from the SLA perspective. Coordination with Doc 10090 for guidance.

Action 2. Madhu Niraula has an action to provide material for WG-I discussion to address:

- MASPS identifies the need for various PKI CA services (e.g., trust anchor provisioning, certificate provisioning, certificate renewal/rekeying, etc.) to be performed in a "timely manner." Further discussion in WG-I SSG needed to define what that means from a PKI performance perspective.
- WG-I to consider whether off-system key generation is permissible (per IATF CP).
- WG-I to define requirements for certificate validation (i.e., what items need to be checked), and any additional validation steps that may be necessary during certificate provisioning (e.g., pair-wise consistency check).

Action 3. Aloke Roy to draft a general guidance on security operation (e.g., loss of security) and coordinate with ICAO OPDLWG and DCIWG.

Action 4. Robert Segers and team to fully consider and document the security vulnerabilities of this SCVP approach.

Action 5. Robert Segers and team to provide a notional architecture.

Action 6. Patrick Patterson to provide deployment considerations and guidance for SCVP. Should be high level but beyond the what include how and some examples – Assigned to Patrick.

Action 7. Robert Segers and team to make the RFC have option to either provide a list of URIs or a trust anchor – need to think through validation of response.

Action 8. Robert Segers and team to bring a working paper to next WG-I meeting at end of March, can be a draft but need something.

Action 9. Robert Segers, Patrick Patterson and team to begin work on SCVP RFC.

Action 10. Robert Segers and team to bring discussion to next WG-I meeting: Which documents (Doc 9896, Doc10095, MASPS, Profiles) should include SCVP requirements?

8d. Performance Requirements Team

Michel Soléry, DSNA, presented an information paper titled "ANSP allocation system performance issue."

Action 11. Stephane Pelleschi to contact DCIT/DSG to set up a focus group for performance verification.

Action 12. All presenters to update their proposed contributions and provide them to Stephane Pelleschi for incorporation into the draft MASPS.

Action 13. The group to review and comment on the draft MASPS and Profiles.

Action 14. Michel Soléry to provide real values of performance for both CPDLC and ADS-C.

8e. OSED & OPA

Aloke Roy, Honeywell, presented an input paper to IPS MASPS Annex A IPS OSED. The group discussed the paper and provided comments.

8f. Verification Methods

Bela Varkonyi, Frequentis, presented his slides on "IPS Network Performance Measurements." The presentation consists of the following 10 parts:

- Operational Performance Assessment,
- Performance Data Collection,
- Latency Measurement Optimization,
- Performance Targets for Multi-Link,
- DiffServ Impacts,
- Latency Measurement Challenges,
- Availability Verification,
- Continuity Verification,
- Integrity Verification, and

- OPA Reporting and Compliance Evidence.

The group reviewed the slides and would like to give them more thought.

8g. Operation and Safety Requirements

Aloke Roy, Honeywell, presented his input paper to IPS MASPS Section 3.2 Operational Requirements. The group discussed the paper and provided comments. The updated paper with comments is documented in "IPS_Operational-Requirements-draft_v1-AR-March-2022.docx."

Aloke Roy, Honeywell, presented his input paper on IPS safety requirements. The updated paper with comments is documented in "IPS Safety Requirements_V2-After-Comment-Consolidation-Feb2022.docx."

Agenda Item 9. Profiles Update

Madhu Niraula, Collins Aerospace, presented draft detailed profiles of RFC 7030 and RFC 9148. The group reviewed and commented on them.

Agenda Item 10. Future Meetings

SC-223 P51 / WG-108, June 13 - 17, 2022, EUROCAE (face to face, room reserved).

SC-223 P52 / WG-108 / AEEC IPS, September 26 - 30, 2022, RTCA (face to face, room reserved)

SC-223 P53 / WG-108, December 5 - 9, 2022, EUROCAE (face to face, room reserved)

Monthly telecons

10:00 am – 12:00 pm EST, third Wednesday every month through the end of this year.

Agenda Item 11. Any Other Business

Aloke Roy, Honeywell, made an announcement that he plans to retire from Honeywell around this April. However, he will continue to work as a contractor until the IPS standardization completes if funding is available.

Agenda Item 12. Review of Meeting Decisions and Actions

The group reviewed the decisions made and actions created during the meeting.

Agenda Item 13. Adjourn

The meeting was adjourned around 3:00pm EST, March 18, 2022.

List of Action Items

Action Item #	Action Content	Responsible	Due Date	Status
P37-6	Evaluate the impacts of splitting data flows among multiple links with performance-based multilink on ROHC performance. Assess whether ROHC at DAL C is reasonably achievable.	Collins Aerospace (Jon, Madhu and Stephane)	Sept. 28, 2020	9/28/2020 – keep open 12/7/2020 – keep open 3/1/2021 – keep open. 6/14/2021 – keep open 9/27/2021 – keep open 11/24/2021 – keep open. Stephane will provide an update in the next meeting. 01/18/2022 – keep open. 03/14/2022 – keep open.
P38-1	Maintain a MASPS action item list.	Stephane Pelleschi	Nov. 16, 2020	12/7/2020 – Closed.
P38-2	Stephane Pelleschi to reach out to Airbus and Aloke Roy to reach out to Boeing for co-task-leads of the security task group.	Stephane Pelleschi, Aloke Roy	Nov. 16, 2020	12/7/2020 – Closed.
P38-3	Update the IP address paper according to comments received in this meeting	Aloke Roy	Nov. 16, 2020	12/7/2020 – Closed. Done.
P41-1	Coordinate with Ravi Jain on Security Management and identity assurance.	Aloke Roy	Feb. 22, 2021	3/1/2021 – keep open. 9/27/2021 – Closed.
P41-2	Write a standard flow-down chart for MASPS.	Liviu Popescu and Aloke Roy	Feb. 22, 2021	3/1/2021 – Closed.
P41-3	Review Stephane Tamalet's input papers on safety requirements and provide feedback on what should be covered in MASPS.	All members	Feb. 22, 2021	3/1/2021 – Closed.
P41-4	Provide FAA generic papers related to aircraft level security assessment.	Madhu Niraula and Lee Nguyen	Feb. 22, 2021	3/1/2021 – Closed. Inputs provided.
P41-5	Provide draft latency allocations for RCTPcsp based on the discussion in the meeting.	Stephane Pelleschi and Madhu Niraula	Feb. 22, 2021	3/1/2021 – Closed. Inputs are subject to group review.
P41-6	Provide a draft outline of security section in MASPS.	Timo Warns	Feb. 22, 2021	3/1/2021 – Closed.
P41-7	Follow up with OPLINK people on PBCS status.	Brent Phillips	Feb. 22, 2021	3/1/2021 – Closed. Coordination is ongoing. Multiple meetings with action plan.
P41-8	Make sure RCTP requirements are adequate for existing/future data services and what RCTP and SLA requirements are used for CSPs.	Brent Phillips, Dongsong Zeng, Pete Muraca, Aloke Roy	Feb. 22, 2021	3/1/2021 – keep open. Still need to address operational issues such as security and multilink. 6/14/2021 – keep open. Will be resolved in ISRA. 9/27/2021 – keep open. 11/24/2021 – Closed. RCTP discussion is ongoing in SC-214/WG-78/OPDLWG. Additional materials will be provided in MASPS Chapter 5.
P41-9	Review ITU-T Y.1542 for performance allocation.	All members	Feb. 22, 2021	3/1/2021 – Closed.

P41-10	Update the CONOPS and bring in C2Link requirements for group consideration.	Aloke Roy	Feb. 22, 2021	3/1/2021 – keep open. 6/14/2021 – Closed. Subject to group discussion.
P41-11	Identify MASPS topics for next telecon and remind action owners of their actions.	Stephane Pelleschi	Feb. 22, 2021	3/1/2021 – Closed.
P42-1	Review FCI report and extract additional IPS requirements if necessary.	Stephane Pelleschi	June 7, 2021	6/14/2021 – Closed.
P42-2	Find out potential DO-379 changes including previous FRAC comments.	Madhu Niraula	June 7, 2021	6/14/2021 – keep open. 9/27/2021 – Closed. On-going activity.
P42-3	Find out the operational possibility of encryption of ATC messages.	Dongsong Zeng, Aloke Roy	June 7, 2021	6/14/2021 – keep open. DTLS AEAD uses both authentication and encryption in the data flow. How would encryption impact the ANSP current operation (e.g., 30-day data recording, etc.)? 9/27/2021 – Closed. Paper submitted to DCIWG. The action is moved to WG-I.
P42-4	Craft a whitepaper on RCTP measurement options and potential issues on intermediate nodes.	Bela Varkonyi	June 7, 2021	6/14/2021 – keep open. 9/27/2021 – keep open. 11/24/2021 – Closed. Bela will provide a whitepaper for inclusion into MASPS Chapter 5.
P42-5	Explore possibilities for performance measurement.	All members	June 7, 2021	6/14/2021 – keep open. 9/27/2021 – Closed. Merged with P42-4.
P42-6	Maintain progress sheet, update MASPS and track actions within MASPS.	Stephane Pelleschi	June 7, 2021	6/14/2021 – Closed. But the action stands until the publication of the MASPS.
P44-1	Provide rosters of SC-223 and WG-108, to be updated for MASPS publication.	Rebecca Morrison and Abinaya Kannan	Sept. 20, 2021	9/27/2021 – Closed.
P44-2	Work with ICAO and AEEC regarding the copyright of the glossary.	Rebecca Morrison and Abinaya Kannan	Sept. 20, 2021	9/27/2021 – Closed
P44-3	Prepare an update on TFSG and PKI CP	Stephane Pelleschi and Jonathan Graefe	Sept. 20, 2021	9/27/2021 – keep open. 11/24/2021 – keep open. 01/18/2022 – closed. Rob will provide input.
P44-4	Analyze the RCP/availability req w.r.t. DO-350A derivation to determine the PKI/CA requirements (availability, certificate/CRL lifetime, etc.) to be added in MASPS and their corresponding validation methods.	SC-223/WG-108	Sept. 20, 2021	9/27/2021 – keep open 11/24/2021 – keep open. PKI and CA requirement discussion on going. 01/18/2022 – keep open. Timo will provide inputs. 03/14/2022 – keep open.
P44-5	Evaluate req for CA availability of 99% as specified by TFSG CP and decide if stringent req. need for Doc 10095.	WG-I/SSG	Sept. 20, 2021	9/27/2021 – Closed. Coordination is ongoing.

P44-6	Assess the impact of security failures in airspace operation w.r.t. ICAO req for servicing all aircraft in airspace and provide guidance for remedial operations.	WG-I	Sept. 20, 2021	9/27/2021 – Closed. Coordination is ongoing.
P44-7	Address security risks and mitigation and provide guidance for ANSP.	SC-223/WG-108	Sept. 20, 2021	9/27/2021 – Closed. On-going activity.
P44-8	Refine the device class definitions and fix Figure 1-1 and Table 1-2 in the Profiles document.	Madhu Niraula, Bela Varkonyi, and Stephane Pelleschi	Sept. 20, 2021	9/27/2021 – Closed. Proposal is subject to review.
P44-9	Coordinate with Thomas Mustach on the performance issues and report back at the next meeting.	Madhu Niraula	Sept. 20, 2021	9/27/2021 – Closed. Coordination is ongoing.
P44-10	Discuss with FAA management about US-EU strategy for large scale IPS demonstration and validation.	Aloke Roy and Brent Phillips	Sept. 20, 2021	9/27/2021 – Closed.
P47-1	Connect Stephane Pelleschi with EUROCAE WG-105 UAS cellular C2Link MOPS subgroup.	Abinaya Kannan	Jan. 11, 2022	11/24/2021 – Closed.
P47-2	Coordinate with Luc and Greg on whether to include ARINC658 in MASPS.	Stephane Pelleschi	Jan. 11, 2022	11/24/2021 – keep open. AEEC IPS may not want to maintain ARINC 658. 01/18/2022 – closed. Stephane and Greg will provide inputs.
P47-3	Discuss and coordinate with Solution 77 OSA team on IPS safety/security assessment (Bela to check with Solution 77 and find out who from Solution 77 side should attend this meeting, 10am – 12pm EST, Oct. 22)	IPS safety focus group	Oct. 22, 2021	11/24/2021 – Closed. A new POC of Solution 77 will be identified.
P49-1	Coordinate with RTCA, EUROCAE and AEEC to ensure smooth flow down of WG-I decisions.	Liviu Popescu	March 7, 2022	03/14/2022 – Closed. On going part of chair coordination.
P49-2	Develop typical SCVP operation scenarios and collect/estimate the SCVP performances for those scenarios.	Robert Segers and his team	March 7, 2022	03/14/2022 – keep open.
P49-3	Provide information on SCVP client	Laurent Leonardon,	March 7, 2022	03/14/2022 – keep open. Rob to check the FAA's Java implementation availability for industry, Madhu to provide COTS information. Liviu to check EUROCONTROL C# implementation
P49-4	Identify the planned submittal date of the draft RFC with SCVP stapling extension.	Robert Segers and Patrick Patterson	March 7, 2022	03/14/2022 – keep open.
P49-5	Review IPS CA performance requirements proposed by Timo Warns and check whether the proposed requirements are sufficient to meet the RCPs.	Performance focus group	March 7, 2022	03/14/2022 – keep open.

P49-6	Investigate EST over COAP.	Madhu Niraula and Stephane Pelleschi	March 7, 2022	03/14/2022 – keep open.
P50-1	Find out who (e.g., ANSP, AOC) is accountable for the end-to-end security of the ATS and AOC data links from the SLA perspective. Coordination with Doc 10090 for guidance	Aloke Roy	June 6, 2022	
P50-2	Provide material for WG-I discussion to address: ▪ MASPS identifies the need for various PKI CA services (e.g., trust anchor provisioning, certificate provisioning, certificate renewal/rekeying, etc.) to be performed in a "timely manner." Further discussion in WG-I SSG needed to define what that means from a PKI performance perspective. ▪ WG-I to consider whether off-system key generation is permissible (per IATF CP). ▪ WG-I to define requirements for certificate validation (i.e., what items need to be checked), and any additional validation steps that may be necessary during certificate provisioning (e.g., pair-wise consistency check).	Madhu Niraula	June 6, 2022	
P50-3	draft a general guidance on security operation (e.g., loss of security) and coordinate with ICAO OPDLWG and DCIWG.	Aloke Roy	June 6, 2022	
P50-4	Consider and document the security vulnerabilities of this SCVP approach.	Robert Segers and team	June 6, 2022	
P50-5	Provide a notional architecture	Robert Segers and team	June 6, 2022	
P50-6	Provide deployment considerations and guidance for SCVP. Should be high level but beyond the what include how and some examples	Patrick Patterson	June 6, 2022	
P50-7	Make the RFC have option to either provide a list of URIs or a trust anchor – need to think through validation of response	Robert Segers and team	June 6, 2022	

P50-8	Bring a working paper to next WG-I meeting at end of March, can be a draft but need something.	Robert Segers and team	June 6, 2022	
P50-9	Begin work on SCVP RFC	Robert Segers, Patrick Patterson and team	June 6, 2022	
P50-10	Bring discussion to next WG-I meeting: Which documents (Doc 9896, Doc10095, MASPS, Profiles) should include SCVP requirements?	Robert Segers and team	June 6, 2022	
P50-11	Contact DCIT/DSG to set up a focus group for performance verification.	Stephane Pelleschi	June 6, 2022	
P50-12	All presenters to update their proposed contributions and provide them to Stephane for incorporation into the draft MASPS	All presenters	June 6, 2022	
P50-13	The group to review and comment on the draft MASPS and Profiles.	The group	June 6, 2022	
P50-14	Provide real values of performance for both CPDLC and ADS-C.	Michel Soléry	June 6, 2022	

-S-
Dongsong Zeng
Secretary

CERTIFIED as a true and accurate summary of the meeting.

- S-
Aloke Roy
SC-223 Chairman

- S-
Stephane Pelleschi
WG-108 Chairman