

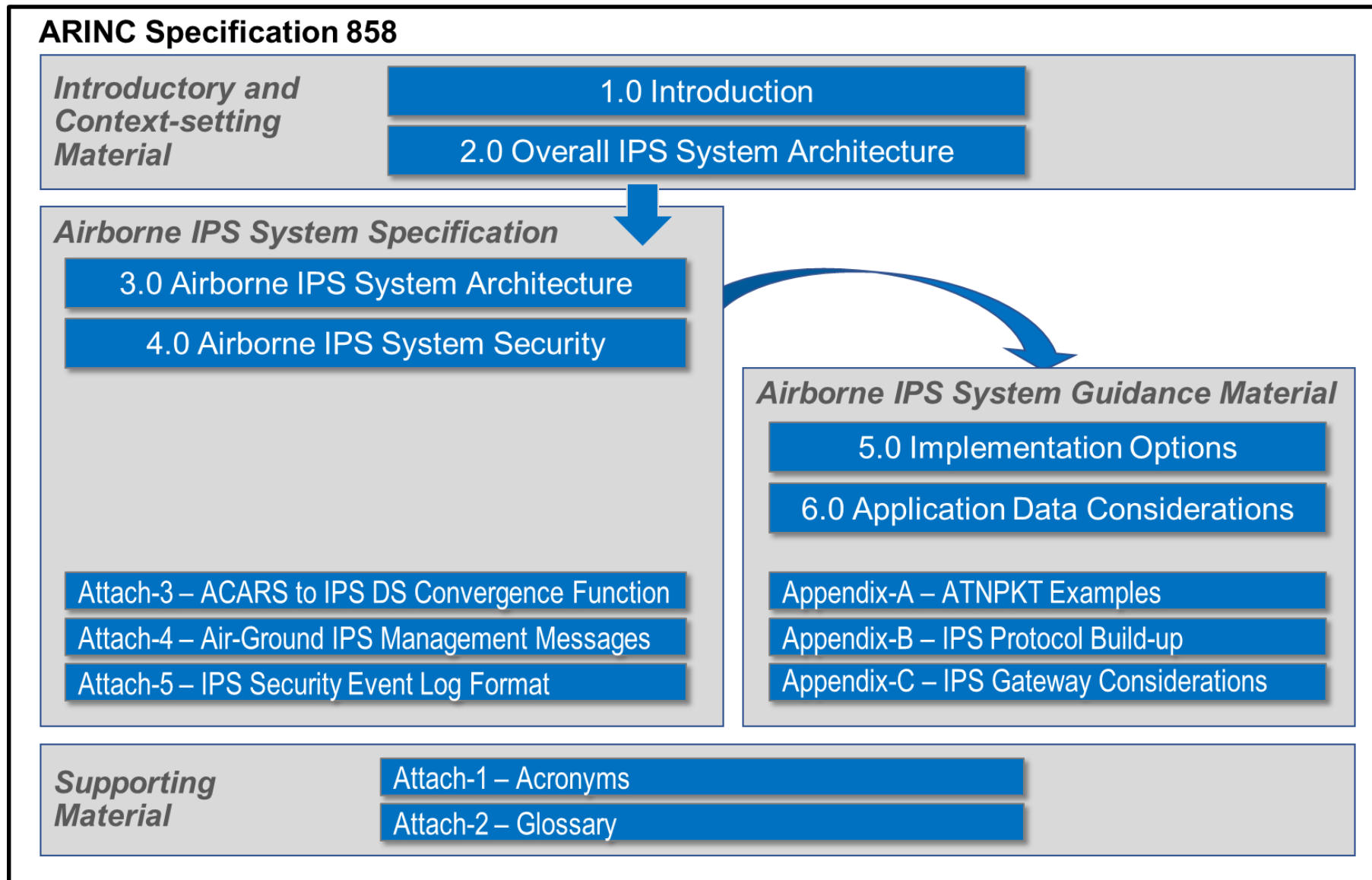
19-21 January 2021

AEEC IPS – Meeting 16 PP858 Document Status and Plan

MICHAEL OLIVE

Honeywell

PP858 Document Structure



Very stable top-level document structure between Meeting 15 and Meeting 16. (6 draft versions)

PP858d2-06 (M16)

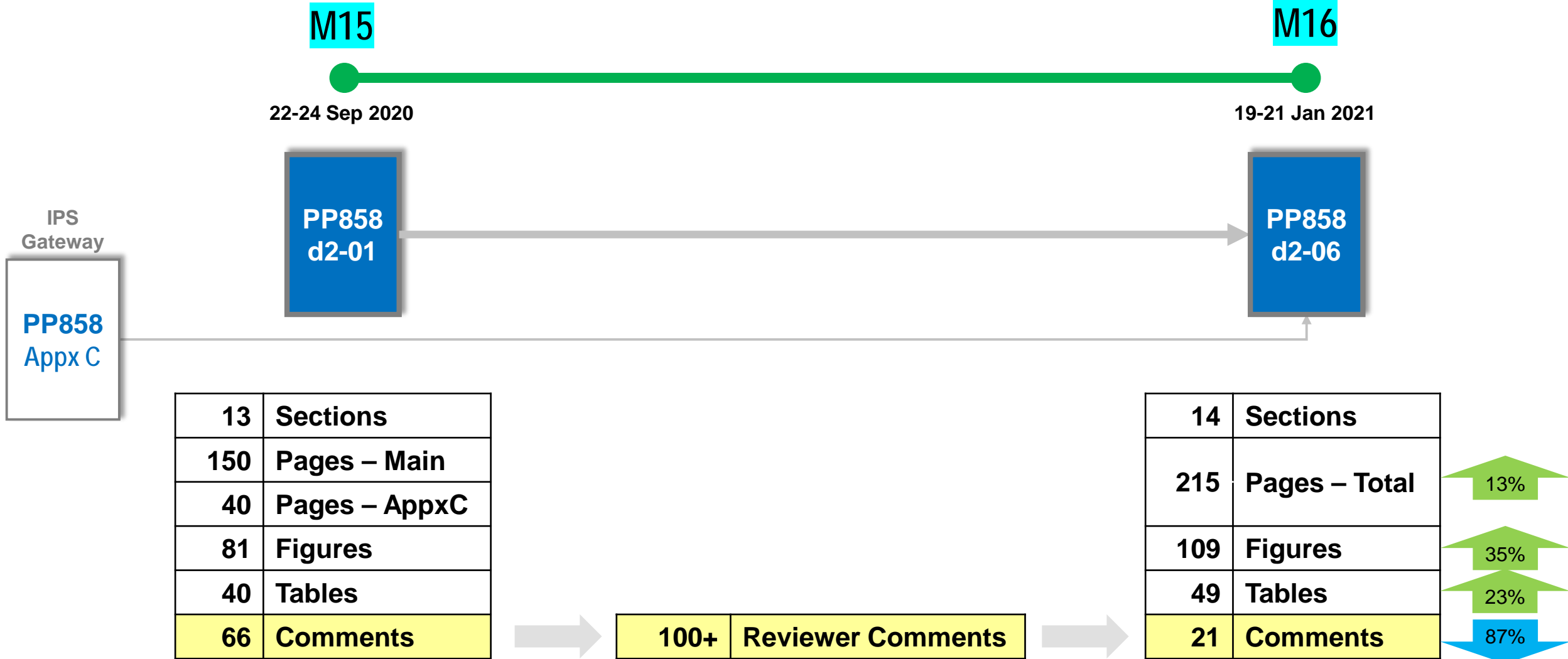
Primary changes in this version

- **Section 3.6 – IPS Management App**
 - Updates for consistency with Att4
- **Section 4.3.1.3 – Crypto Services**
 - Updates as recommended during last telecon
- **Section 5.x – Implementation Options**
 - Added references to Section 3.2 regarding alternatives for AOC adaptation
- **Attachment 1 – Acronyms updated**
- **Attachment 4 – IPS Management App**
 - Reorganized structure
 - Added protocol operation
 - Added PICS table
 - Updates for specific messages
- **Appendix C – IPS Gateway Considerations**
 - Integrated revised appendix into main document
 - Includes revised structure, text, figures, examples

CSS	Distributed Radio	DLK	GAIN	IPS	KSAT
<input type="checkbox"/>	Type	Name			
		_History (_pre-Draft1)			
		_History (Draft1)			
		_AEEC PP858 RAIL (d2)			
		_Section3_HighLevelArch Figures_20191023			
		01 PP858d1-08_20200812 (ARINC)			
		IPS Core interfaces			
		IPS terminology Q2 2020 (03-06-2020)			
		PP858d2_20200813			
		PP858d2-01_20200915 (Pre-M15)			
		PP858d2-02_20201005 (Post-M15)			
		PP858d2-03_20201022			
		PP858d2-04_20201112			
		PP858d2-05_20201214 (CLEAN)			
		PP858d2-05_20201214 (REDLINE)			
		PP858d2-06_20210112 (M16 - CLEAN)			
		PP858d2-06_20210112 (M16 - REDLINE)			
		PP858d2-06_20210112 (M16 vs M15)			

**AEEC
SharePoint**

PP858 – M15 to M16 Accomplishments



Outstanding progress over the past 4 months – Thank YOU!

PP858d2-06 – Document Assessment @ M16

Overall

M15 (d2-01) **66** M16 (d2-06) **21**

Section	Title	Status	Comments (BLUE = change / RED = gap)
GENERAL	--	--	Editorial updates for text/figure consistency
1	Introduction	A	Minor updates to address comments
2	ATN/IPS Overall Architecture	A	Minor updates to address comments
3	Airborne IPS System Architecture	C	Minor updates to address comments Address Acquisition section still TBD pending ICAO WG-I Mobility discussions
4	Airborne IPS System Security	B	Updated crypto services (4.3.1.3) per last telecon
5	ATN/IPS Airborne Implementation Options	B	Minor updates to address comments
6	Airborne Application Data Considerations	A	
Attachment 1	Acronyms	B	Keeping up-to-date with text
Attachment 2	Glossary	B	Aligned with ICAO WG-I terms (version 3-June-2020)
Attachment 3	ACARS to IPSDS Convergence Function	A	
Attachment 4	Air-Ground IPS Management Messages	C	Added protocol description and PICS table Remaining comments about specific messages
Attachment 5	IPS Security Event Log Format	B	
Appendix A	ATNPKT Message Format Examples	A	
Appendix B	IPS Protocol Build-up	A	
Appendix C	Ground IPS Gateway Considerations	C	Revised structure, text and figures A few open comments; plan to continue AppxC-specific telecons

No. of Comments

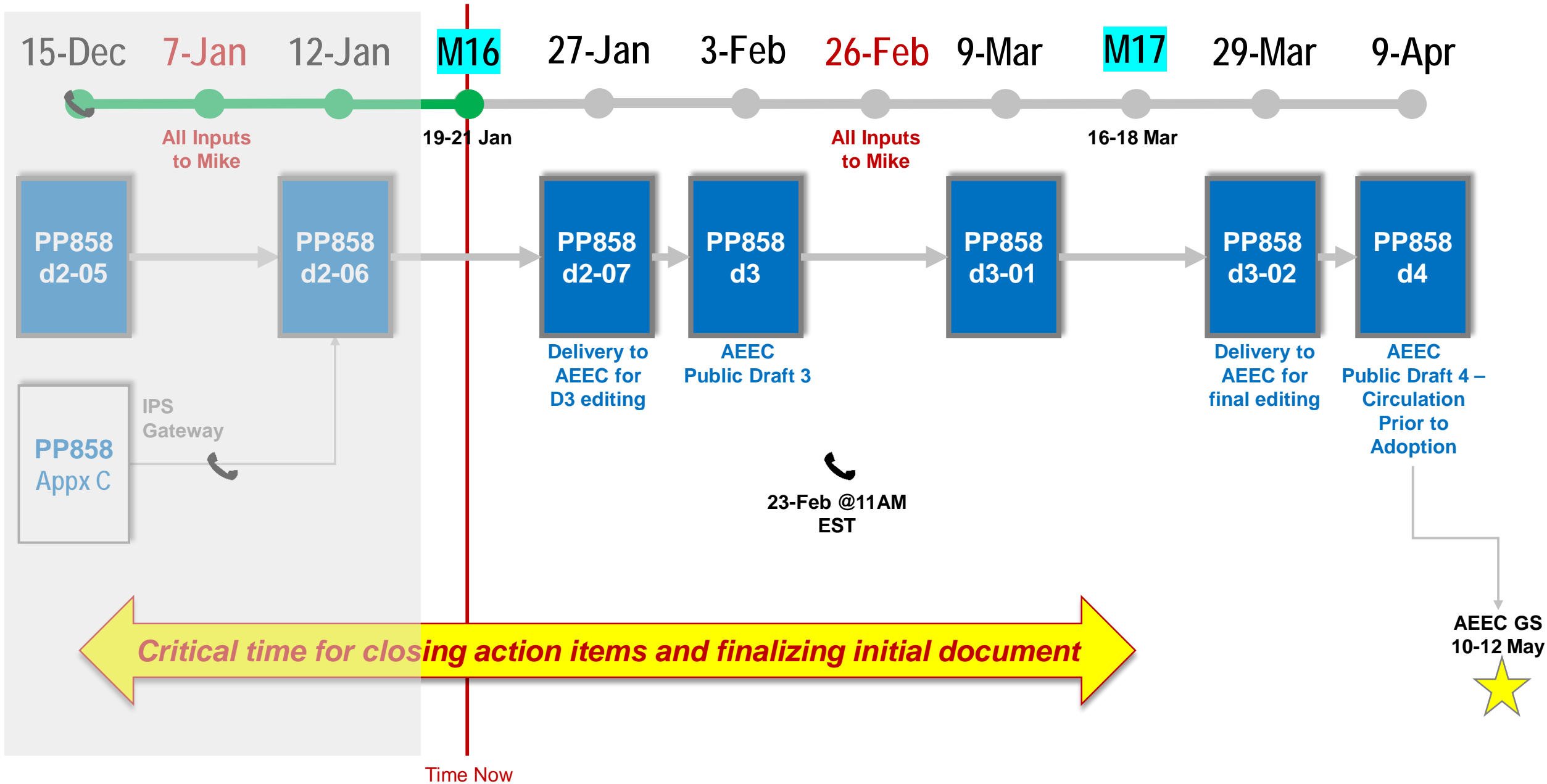
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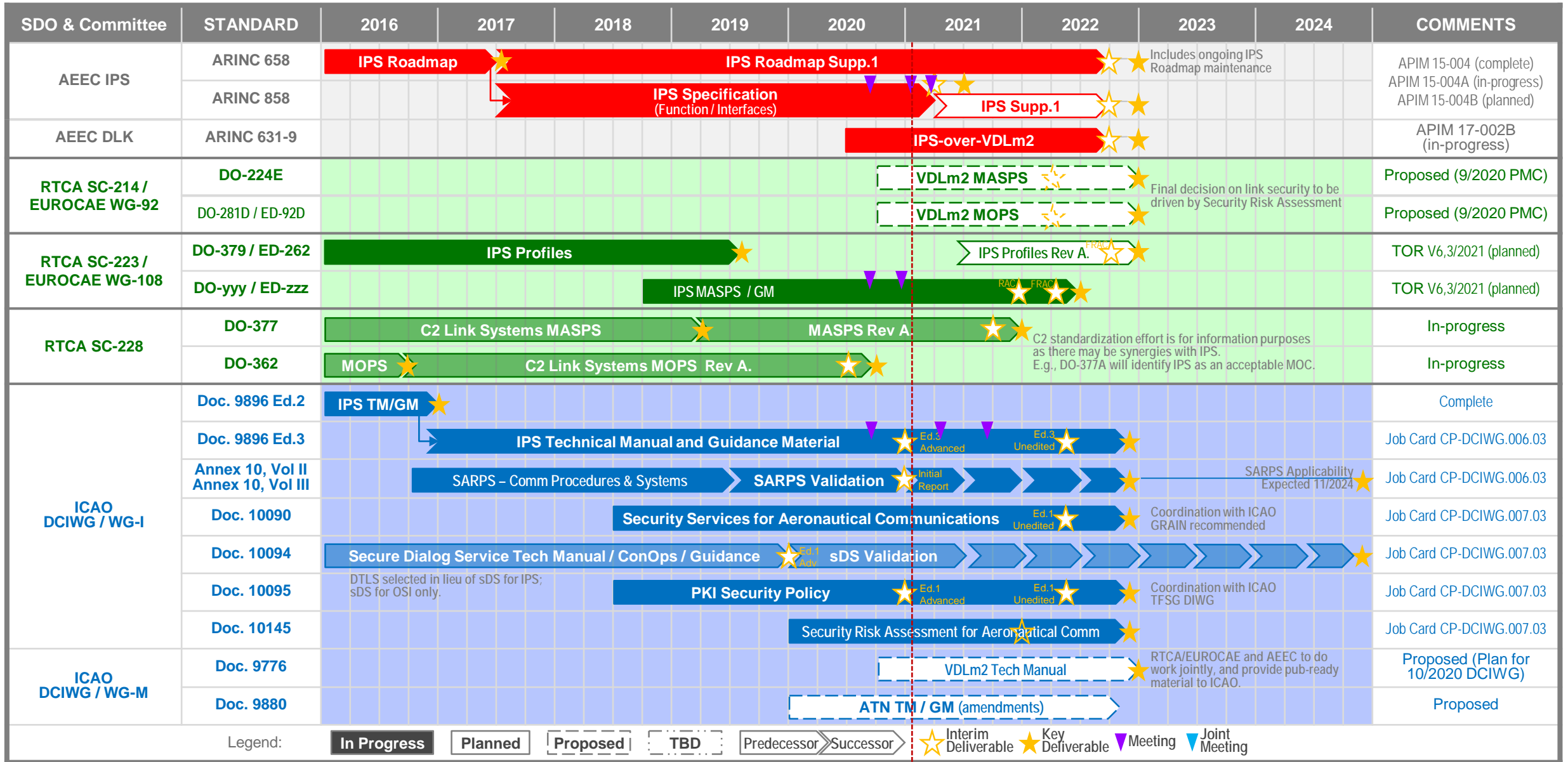
PP858 – Proposed Document Review Strategy

PP858	During Meeting 16	After the Meeting
<p>Sections 1-6 Attachments 1-5 Appendix A, B</p>	<ul style="list-style-type: none"> • Review REDLINES and adjust in real-time • Review/Discuss open comments <ul style="list-style-type: none"> • Address in real-time, where possible • Assign action owners, as necessary 	<ul style="list-style-type: none"> • Review entire document <ul style="list-style-type: none"> • <u>Option 1</u> – Propose changes in CLEAN version of document using Track Changes • <u>Option 2</u> – Comment spreadsheet • Please offer a suggested solution for any issues that you identify • All inputs NLT 26-Feb (sooner better) • Appendix C-specific telecons to continue to resolve open comments.
<p>Appendix C</p>	<ul style="list-style-type: none"> • Review restructuring and rationale • Review/Discuss open comments 	
<p>Supplement 1</p>	<ul style="list-style-type: none"> • Discuss and agree on the scope of Supplement 1 <ul style="list-style-type: none"> • E.g., for remaining comments, identify which are appropriate for Supp1 consideration • Revisit Gap Analysis and dependencies with other standards to be addressed in Supp1 	

PP858 – Road to Adoption (Initial Document)



ATN/IPS A/G Standardization Roadmap (rev. 2020-10-01b)



Legend:

In Progress

Planned

Proposed

TBD

Predecessor

Successor

Interim Deliverable

Key Deliverable

Meeting

Joint Meeting

Time Now

Actions from Meeting 16

- **Provide updated document to AEEC by 27-Jan**
 - Accept redlines discussed and agreed during the meeting
 - Keep redlines generated during the meeting as-is
 - Extract Attachment 4 for transition to ICAO WG-I
 - Update text/figures in PP858 that refer to Attachment 4
 - Change Appendix C to Attachment 4
- **Create Supplement 1 Action Item list**
 - From comments in PP858 document
 - From Gap Analysis discussion

Attachment 4 and Appendix C Re-structuring

PP858 Attachment 4 – IPS Management App

Appendix C Team:

Airbus – Timo
Collins – Ron, Madhu
Jonathan
Honeywell – Mike

ORIGINAL STRUCTURE

REVISED STRUCTURE

NOTES

A4.0 Introduction



A4.0 Introduction

A4.1 Message Format Definition



A4.1 Message Format Definition

A4.2 Messages Overview



A4.2 Protocol Specification

A4.3 PICS

A4.3 Reserved for Future Use



A4.4 General Support Messages

A4.4 Post Authentication Message

A4.5 Reserved for Future Use

A4.6 Simple Name Lookup Message

A4.7 Reserved for Future Use

A4.8 Reserved for Future Use

A4.9 Reserved for Future Use



A4.5 Reserved for Future Use

A4.10 Flight Management Messages



A4.6 Flight Management Messages

A4.11 Key Management Messages



A4.7 Key Management Messages

A4.12 Reserved for Future Use



A4.8 Reserved for Future Use

- Same (with edits)
- Same (with edits)
- New (some material moved from 3.6)
- New
- Better organization of detailed message definitions to facilitate document management in the future

PP858 Appendix C – IPS Gateway

Appendix C Team:

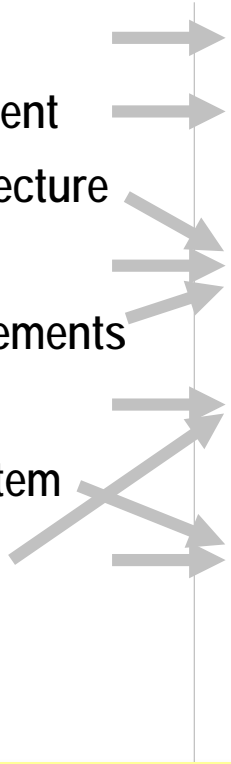
Airtel – Fryderyk
Boeing – Greg
Collins – Ron, Madhu
Honeywell – Mike

ORIGINAL STRUCTURE

C-1 Introduction
C-2 Current Datalink Environment
C-3 Ground IPS System Architecture
C-4 IPS Gateway Overview
C-5 IPS GW Functional Requirements
C-6 IPS Aircraft – ACARS Host
C-7 IPS Aircraft – OSI End System
C-8 Legacy Aircraft – IPS Host
C-9 IPS Aircraft – IPS Host

REVISED STRUCTURE

C-1 Introduction
C-2 Datalink Comm Overview
C-3 IPS Gateway Overview
C-4 IPS Gateway for ACARS
C-5 IPS Gateway for OSI



Primary rationale for the restructuring → Tightly focus the scope of the appendix on the primary functions of an IPS Gateway in a transition environment when aircraft and ground systems use heterogeneous network protocols (i.e., combinations of IPS, OSI, and ACARS).

NOTES

- Same
- Same
- Merged and expanded text, with tight focus on the IPS Gateway function
- New C-4 and C-5 focus on operating principles, message mapping, state tables, and MSC examples for the two transition cases supported by a gateway → IPS-ACARS and IPS-OSI
 - Examples in original text were presented from the perspective of ATNPKT primitives with respect to applications
 - Examples in revised text are from the perspective of applications (e.g., AFN, CM, CPDLC, etc.) and include all applicable ATNPKT primitives. This approach minimizes some duplication.