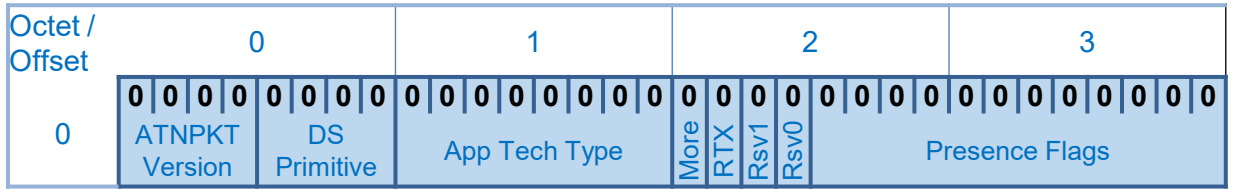
P1-M22-01 – A858P1 Appendix A Example Changes

Background: New AppTechType values and expanded ATNPKT fixed field format



- **ATNPKT changes are driven by Doc. 9896 port number consolidation, which has been approved by IANA.**
- In new format, the "RTX" bit is still under discussion in WG-I MSG. If the decision is not to include that functionality in ATNPKT, then that bit will be changed to "Rsv2" which does not impact content of any other fields.
- In the updated examples, for all primitives except D-DATA (which includes examples for ATN, FANS, AOC), the AppTechType is set to 0xA1=FANS CPDLC since referencing an ACARS-based application seems more germane to the A858 document (since it specifies the AICF).
- **Next step: E**xample descriptions in Appendix A will be modified to reflect the changes.

Port		AppTechType (8 bits)			Application	Where specified
No.	Service Name	Binary (8 bits)		HEX		
5910	ats-atn	000 (ATN ATS/ IPS DS)	00000	0x00	CM	Doc. 9896
			00001	0x01	CPDLC	
			00010	0x02	ADS-C	
			00011 thru 11111	0x03 thru 0x1F	Reserved	
Future	Future	001 (Reserved)	00000 thru 11111	0x20 thru 0x3F	Reserved	TBD
Future	Future	010 (Reserved)	00000 thru 11111	0x40 thru 0x5F	Reserved	TBD
Future	Future	011 (Reserved)	00000 thru 11111	0x60 thru 0x7F	Reserved	TBD
Future	Future	100 (Reserved)	00000 thru 11111	0x80 thru 0x9F	Reserved	TBD
5911	ats-acars	101 (ACARS ATS/ IPS DS	00000	0xA0	AFN	A858P1
			00001	0xA1	CPDLC	
			00010	0xA2	ADS-C	
			00011	0xA3	ATS WIND	
			00100	0xA4	A623	
			00101 thru 11111	0xA5 thru 0xBF	Reserved	
5913	aoc-acars	110 (ACARS AOC/ IPS DS	00000	0xC0	ACARS AOC	A858P1
			00101 thru 11111	0xC1 thru 0xDF	Reserved	
Future	Future	101 (Reserved)	00000 thru 11111	0xE0 thru 0xFF	Reserved	TBD

D-START

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 0 0 0 0 1 (1) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More, 0 RTX, 0 Rsv1, 0 Rsv0 1 0 1 0 Presence Flags	0 0 0 0 0 0 0 1	**Source** Source ID	
6	0 0 0 0 N(S) = 0 0 0 0 0 N(R) = 0 Sequence Numbers	0 0 0 0 0 0 0 0 Data Length = 18	0 0 0 1 0 0 1 0	**Data** User Data		
12	**Data** User Data (continued)					
18	**Data** User Data (continued)					
24	**Data** User Data (continued)					

D-STARTCNF

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 0 0 1 0 (2) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More, 0 RTX, 0 Rsv1, 0 Rsv0 1 1 1 0 Presence Flags	0 0 0 0 0 1 0 1	**Source** Source ID	
6	**Destination** Destination ID	0 0 0 0 N(S) = 0 0 0 0 1 N(R) = 1 Sequence Numbers	0 0 0 0 0 0 0 0 (0) Result	0 0 0 0 0 0 0 0 0 0 1 0 1 0 0 1 Data Length = 41		
12	**Data** User Data (continued)					
.....	**Data** User Data (continued)					
48	**Data** User Data (continued)					

D-DATA – ATN CPDLC

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version	0 1 0 1 (5) DS Primitive	0 0 0 0 0 0 0 1 (0x01 = ATN CPDLC) Application Technology Type	1 0 0 0 0 1 1 0 More RTX Rsv1 Rsv0 Presence Flags	0 0 0 0 0 0 0 1 **Destination** Destination ID	
6	0 0 0 1 N(S) = 1 0 0 0 1 N(R) = 1 Sequence Numbers		0 0 0 0 0 1 0 0 Data Length = 1024	0 0 0 0 0 0 0 0 **Data** User Data		
12	**Data** User Data (continued)					
……	**Data** User Data (continued)					
1026	**Data** User Data (continued)					
1032	**Data** User Data (continued)					

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version	0 1 0 1 (5) DS Primitive	0 0 0 0 0 0 0 1 (0x01 = ATN CPDLC) Application Technology Type	0 0 0 0 0 1 1 0 More RTX Rsv1 Rsv0 Presence Flags	0 0 0 0 0 0 0 1 **Destination** Destination ID	
6	0 0 1 0 N(S) = 2 0 0 0 1 N(R) = 1 Sequence Numbers		0 0 0 0 0 0 0 0 1 0 1 1 1 1 1 0 Data Length = 190	**Data** User Data		
12	**Data** User Data (continued)					
……	**Data** User Data (continued)					
192	**Data** User Data (continued)					
198	**Data** User Data (continued)					

D-DATA – FANS CPDLC

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version | 0 1 0 1 (5) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	1 More | 0 RTX | 0 Rsv1 | 0 Rsv0 | 0 1 1 0 1 1 0 0 Presence Flags		**Destination** Destination ID	
6	0 0 0 1 N(S) = 1 | 0 0 0 1 N(R) = 1 Sequence Numbers	0 0 0 0 0 1 0 0 Called Peer ID Length = 4	**Center Name** Called Peer ID			
12	0 0 0 0 0 1 1 0 Calling Peer ID Length = 6	**Flight ID** Calling Peer ID				
18	**Flight ID** Calling Peer ID (continued)	0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 Data Length = 1024	**Data** User Data			
……	**Data** User Data (continued)					
1032	**Data** User Data (continued)					
1038	**Data** User Data (continued)					
1044	**Data** User Data (continued)					

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version | 0 1 0 1 (5) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More | 0 RTX | 0 Rsv1 | 0 Rsv0 | 0 1 1 0 0 0 0 0 Presence Flags		**Destination** Destination ID	
6	0 0 1 0 N(S) = 2 | 0 0 0 1 N(R) = 1 Sequence Numbers	0 0 0 0 0 0 0 0 1 0 1 0 1 0 0 0 Data Length = 166	**Data** User Data			
12	**Data** User Data (continued)					
……	**Data** User Data (continued)					
168	**Data** User Data (continued)					
174	**Data** User Data (continued)					

D-DATA – AOC

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 0 1 0 1 (1) ATNPKT Version	0 1 0 1 (5) DS Primitive	1 1 0 0 0 0 0 0 (0xC0 = ACARS AOC) Application Technology Type	1 0 0 0 0 1 1 0 More RTX Rsv1 Rsv0 Presence Flags	0 0 0 0 0 0 0 1 **Destination** Destination ID	
6	0 0 0 1 0 0 0 1 N(S) = 1 N(R) = 1 Sequence Numbers	0 0 0 0 0 1 1 0 Calling Peer ID Length = 6	**Flight ID** Calling Peer ID			
12	**Flight ID** Calling Peer ID (continued)		0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 Data Length = 1024		**Data** User Data	
……	**Data** User Data (continued)					
1032	**Data** User Data (continued)					
1038	**Data** User Data (continued)					

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 0 1 0 1 (1) ATNPKT Version	0 1 0 1 (5) DS Primitive	1 1 0 0 0 0 0 0 (0xC0 = ACARS AOC) Application Technology Type	0 0 0 0 0 1 1 0 More RTX Rsv1 Rsv0 Presence Flags	0 0 0 0 0 0 0 1 **Destination** Destination ID	
6	0 0 1 0 0 0 0 1 N(S) = 2 N(R) = 1 Sequence Numbers	0 0 0 0 0 0 1 1 1 1 1 0 0 1 0 0 Data Length = 996		**Data** User Data		
12	**Data** User Data (continued)					
……	**Data** User Data (continued)					
996	**Data** User Data (continued)					
1002	**Data** User Data (continued)					

D-END

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 0 0 1 1 (3) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More 0 RTX 0 Rsv1 0 Rsv0	0 1 1 0 0 0 0 0 Presence Flags	0 0 0 0 0 0 0 1 **Destination** Destination ID	
6	0 1 0 1 N(S) = 5 0 0 1 0 N(R) = 2 Sequence Numbers	0 0 0 0 0 0 0 0 Data Length = 28	0 0 0 1 1 1 0 0 **Data** User Data			
12	**Data** User Data (continued)					
.....	**Data** User Data (continued)					
30	**Data** User Data (continued)					
36	**Data** User Data (continued)					

D-ENDCNF

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 0 1 0 0 (4) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More 0 RTX 0 Rsv1 0 Rsv0	0 1 1 0 0 0 0 0 Presence Flags	0 0 0 0 0 1 0 1 **Destination** Destination ID	
6	0 0 1 0 N(S) = 2 0 1 1 0 N(R) = 6 Sequence Numbers	0 0 0 0 0 0 0 0 (0) Result	0 0 0 0 0 0 0 0 Data Length = 14	0 0 0 0 0 1 1 0 **Data** User Data		
12	**Data** User Data (continued)					
18	**Data** User Data (continued)					

D-ACK

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 1 0 0 0 (8) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More 0 RTX 0 Rsv1 0 Rsv0	0 1 1 0 0 0 0 0 0 0 0 0 Presence Flags	**Destination** Destination ID	
6	0 0 0 0 N(S) = 0 0 0 1 1 N(R) = 3 Sequence Numbers					

D-ABORT

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 0 1 1 0 (6) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More 0 RTX 0 Rsv1 0 Rsv0	0 1 1 0 0 0 0 0 0 0 0 0 Presence Flags	**Destination** Destination ID	
6	1 0 0 0 N(S) = 8 0 1 0 0 N(R) = 4 Sequence Numbers					

D-KEEPALIVE

Octet / Offset	0	1	2	3	4	5
0	0 0 0 1 (1) ATNPKT Version 1 0 0 1 (9) DS Primitive	1 0 1 0 0 0 0 1 (0xA1 = FANS CPDLC) Application Technology Type	0 More 0 RTX 0 Rsv1 0 Rsv0	0 1 1 0 0 0 0 0 0 0 0 0 Presence Flags	**Destination** Destination ID	
6	0 0 0 0 N(S) = 0 0 1 0 0 N(R) = 4 Sequence Numbers					