

AC 20-140B FIELD REVIEW AND RESPONSE LOG

1. Document No.: AC 20-140B		2. Project Lead: Moin Abulhosn - AIR-130		3. Reviewing Office: ACE-110 / Atlanta ACO / Chicago ACO		4. Date of Review: June 20, 2012		5. Response:	
6. #	7. Page and Paragraph No.:	8. Comment:	9. Reason For Comment:	10. Suggested Change:	11. [reserved]				
1.	Entire Document	There appears to be a growing movement for the FAA to insist on “approving” advisory systems which are a normal part of the pilot’s decision making process. These systems are used safely today and have been for a long time without approval. Thus, extreme caution should be taken to ensure data link infrastructure requirements stay at a low level to continue providing GA with an affordable means of receiving necessary and decision-supporting data. Data link service requirements should be levied on a “tiered” approach, with Part 91 operators having the lowest level of requirements, (i.e. very limited to no requirements at all) to Part 121 operators having the highest degree of requirements for redundancy, accuracy, etc. on the aircraft. Requirements on the data link infrastructure should not be driven by the worst-case-scenario. Rather, in lieu of a single, ‘highly dependent’ data link service based on worst-case-scenarios, redundant services required per operational level, should be the means for compliance. Any movement continuing down the path of single data link service with high reliability will ultimately lead to an infrastructure with high costs, complexities, and reliabilities that nobody will be able to afford.	To state a concern for what appears to be a growing movement for the FAA to insist on “approving” advisory level systems.	Ensure AC 20-140B does not lead to greater and more restrictive requirements on existing data link systems which would ultimately lead to a decrease in usage due to affordability and complexity.	<p>Comment noted. This AC tries to provide the least acceptable common denominator to Data Communication airworthiness. The Flight Standards ACs will address operational aspects.</p> <p>Comment noted and this AC will not lead to greater and more restrictive requirements on existing data link systems, which would ultimately lead to a decrease in usage due to affordability and complexity.</p>				

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2.	Page 1, para 1.a.	The use of the word “aircrafts” could be used without the “s” at the end.	Commonality within this and other documents referenced.		Change “aircrafts” to “aircraft”		No, “aircrafts” is the proper description here.		
3.	Page 1, para 1.a & 1.b.	<p>If a data link is required for operations or you are taking operational credit than this AC applies. This does not and should not cover optional or supplemental data link systems such as FIS-B or XM weather. It should be clearly stated that AC 20-140B is only for required data link (CPDLC). Also, RTCA SC-206 has completed and received PMC approval to publish a document titled “CONCEPT OF USE (CONUSE) FOR AERONAUTICAL INFORMATION SERVICES (AIS) AND METEOROLOGICAL (MET) DATA LINK SERVICES”.</p> <p>Within this document, two categories of data link services are defined. It may be useful to reference this document and describe that AC 20-140B applies to data link systems supporting Category 1 Data Link Services.</p>	<p>Add a statement in the “Purpose” section stating that this AC does not apply to systems used for <u>supplemental information in part 91 operations</u>. That way it would not be misinterpreted.</p> <p>Note: If referencing RTCA SC-206 ConUse document, instead of “supplemental information in Part 91 operations”, insert “Category 2 Data Link Services”.</p>		<p>Add new paragraph: “3. Who Does this AC Not Affect? This AC does not apply to aircraft data link systems (installed or portable) used for supplemental information in Part 91 operations.”</p> <p><u>If referencing RTCA SC-206 ConUse:</u></p> <p>Add new paragraph: “3. Who Does this AC Not Affect? This AC does not apply to aircraft data link systems (installed or portable) used for Category 2 Data Link Services as defined in RTCA document titled ‘CONCEPT OF USE (CONUSE) FOR AERONAUTICAL INFORMATION SERVICES (AIS) AND METEOROLOGICAL (MET) DATA LINK SERVICES’.</p> <p>Note: As of the publication of AC 20-140B, this referenced RTCA document had been approved for publication but had not been assigned a specific document number.”</p>		<p>Acknowledged. The SC206 CONUSE will be presented to the PMC on September 26, 2012 for approval. We cannot reference a draft document in this AC until it is accepted and approved. Regardless, we acknowledge that this AC is for CPDLC applications and that AC 20-149 should be utilized for FIS-B applications.</p> <p>Change paragraph 2 to read:</p> <p>“This AC provides guidelines for applicants seeking design approval of aircraft data link systems used for communication supporting air traffic services (ATS). ATS communication includes Flight Information Service (FIS) messages. This AC addresses FIS communication for ACARS and D-ATIS application only. Flight Information Service – Broadcast (FIS-B) installation guidelines are contained in AC 20-149 or latest approved revision.”</p>		

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4.	Page 3 Figure 1	Figure 1 attempt to communicate a lot of information that could be confusing to the reader. For Fans 1A designation the AC states that it does not provide design approval.	Clarification	Change the statement to be applicable to all data link application designators since this AC does not provide design approval for any of the configurations.	The description is properly described in the Figure, as this AC does NOT provide an acceptable means of compliance for FANS-1/A. We don't want to encourage FANS 1/A in the future. FANS 1/A+ is the desired Designator. This is a means of compliance not design approval.				
	Page 3 Figure 1	Note 1 for FANS 1/A+ discusses message latency capability but the definition is not provided.	Clarification	Define what is meant by message latency capability and restrict interoperability if the capability is needed.	Table 5-1 gives a definition for FANS 1/A+ and it should be followed. No change to the figure is required.				
6.	Page 3 Figure 1	Note 2 for ATN B1 indicates the flight crew will lose their service requiring the flight crew to manually perform a logon to reestablish ATS data link service if the ground station does not incorporate IR-213	Clarification	Discuss the interoperability issues that involve ATSU implementation separate from the Interoperability designators to eliminate any confusion for the aircraft installation.	This is a Note in the figure to add clarification to the context of operation, and it does indicate ground system implicitly. The description is meaningful and in the right place. No change is required.				
	Page 5, paragraph 4.c.2	What does SESAR stand for?	Not sure what SESAR stands for.	Spell out acronym.	SESAR stands for: Single European Sky ATM Research. The acronym list now includes the spelling.				
7.									

1. Document No.:		3. Project Lead:		3. Reviewing Office:		4. Date of Review:		5. [reserved]	
AC 20-140B		Moin Abulhosn - AIR-130		ANE-150		June 15, 2012			

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6. #	7. Page and Paragraph No.:	8. Comment:	9. Reason For Comment:		10. Suggested Change:		11. [reserved]		
8.	Page 3 Figure 1 Caption Mdr 6/15/2012	Font size quite small	Hard to read,		Increase font size.		Acknowledged. Font size increased as much as possible to make the Figure fit.		
9.	Throughout Noticed specifically on page 6. Mdr 6/15/2012	The language used seems to make the AC.. If the sections are optional, list them as best practices or "optional" so that it is clear they are not required. The use of shall and should seem to contradict paragraph 1.b on page 1	Please follow the agency's plain language initiative		Change the shoulds and shalls to must,		Acknowledged. Plain language is used and the "shalls" are to show "less emphasis" here for emphasis.		

1. Document No.: AC 20-140B: Guidelines For Design Approval of Aircraft Data Communication System		4. Project Lead: Moin Abulhosn, AIR-130		3. Reviewing Office: AIR-500		4. Date of Review: 6/5/12		5. [reserved]	
6. #	7. Page and Paragraph No.:	8. Comment:	9. Reason For Comment:		10. Suggested Change:		11. [reserved]		
10.	Global Change	Incorrect spacing.			There should be two spaces between sentences.		Accepted.		

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11.	Global Change	Define all acronyms at first usage.							Accepted.
12.	Global Change	The term "air traffic service provider" has already been defined.			Use the acronym "ATSP".				Accepted.
13.	Global Change	Improper capitalization.			Remove the capitalization from the term "table" in all the references.				Disagree, the term "Table" needs to be with a Capital "T" in reference.
14.	Global Change	Incorrect format.			Remove the italic from the "Note" section and text.				Disagree, we need the Note in Italic.
15.	Global Change	Inconsistent format.			Why mix format in Tables. For examples, bullets, outline with numbers and letters. Be consistent with the format.				We are trying to be consistent., but all the bullets and outlines and numbers means different emphasis.

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16.	Global Change	Incorrect format.			Use the format in paragraph 6f on page 12 when referencing another document.			Accepted.	
17.	Global Change with Appendices A & B	Delete the text "Draft" in the header.			Replace with the "Date".			Accepted. It's with the "Date" in the AC. We will fix the Appendices.	
18.	Header Area, Page 1	Incorrect format.			Remove the date place holder and AC number from the top of the page.			Accepted.	
19.	Between logo and solid black line, Page 1	Incorrect spacing.			Remove the extra space from between the logo and the solid black line.			Accepted.	
20.	Subject Area, Page 1	Incorrect formatting.			Remove the period after the acronym "ATS" found parenthesis in the AC title.			Accepted.	

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21.	Under Subject Area, Page 1	Missing solid black line.		Non-compliance to Order 1320.46C.		Place a solid black line under the "Subject" area.		Accepted.	
22.	Paragraph 3, Page 1	Change title.				Rewrite title to read: Cancellation.		Accepted.	
23.	Footer Area, Page 1	Incorrect format.				Remove page 1 from the footer. Page numbers should not appear until page 2.		Accepted.	
24.	Paragraph 4a(2), 1 st sentence, Page 2	Define the term "International Civil Aviation Organization" first.				Use the acronym "ICAO" after the first usage.		Accepted.	
25.	Paragraph 4b, Page 2	Missing capitalization.				Capitalize the following terms in the title: "Link Systems – Interoperability Designators".		Accepted.	

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26.	Notes Below Figure 1, Page 3	Incorrect format.	Inconsistent with the rest of the document.	Remove the italic from the application designator and description and change the font size.	Accepted. The Description is intended to be of this nature to show the intensity.				
27.	Paragraph 4c, Page 4	Missing capitalization.		Capitalize the following terms in the title: "Link Services – Safety and Performance Criteria".	Accepted.				
28.	Paragraph 4c(1), Note Section, Page 5	Missing bold.	Inconsistent with the rest of the document.	Remove the underline from the labeling of the "Note" section and bold.	Accepted.				
29.	Paragraph 4c(1), Note Section, Page 5	Incorrect format.		Remove the labeling of "1" since there is only one Note in this section.	Accepted.				
30.	Paragraph 4c(2), 1 st sentence, Page 5	The term "safety and performance" has already been define on the previous page.		Use the acronym "SPR".	Accepted.				

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31.	Paragraph 4c(2), 1 st sentence, Page 5	Missing period.				Place a period after the term "implementation".		Accepted.	
32.	Paragraph 5a, last sentence, Page 5	Change wording.				Rewrite to read: ...for any of the designators selected in tables 5-1 and 5-2.		Accepted. Para is written in such format.	
33.	Paragraph 5b(3), 2 nd sentence, Page 6	Incorrect spacing.				Remove the extra space from between reference "IR-215" and the term "to".		Accepted.	
34.	Paragraph 5c(1) – (5), Pages 7 & 8	Clarity.				The meaning of the brackets uses is unclear. Why use brackets?		Acknowledged. [] Brackets are used for a reason. It means an actual number of Route Clearance would appear in it.	
35.	Tables 5-1 & 5-2, Pages 6 - 9	Inconsistent usage of period.				Either use a period after each phrase/reference under the "Applicable Standards" section or remove all periods.		Accepted. Period removed.	

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36.	Paragraph 5d(2), Page 8	Missing comma.			Place a comma after the terms “specifications and configuration”.		Accepted.		
37.	Paragraph 6a(4), last sentence, Page 10	Missing comma.			Place a comma after the reference “AC 25-11A”.		Accepted.		
38.	Paragraph 6a(5), Page 10	Missing comma.			Place a comma after the reference “DO-306”.		Accepted.		
39.	Paragraph 6b, Page 10	Define the term “Title 14 of the Code of Federal Regulations” first.			Use the acronym “14 CFR” after the first usage.		Accepted.		
40.	Paragraph 6b(5), Page 11	Change wording.			Rewrite to read: ...when the system exceeds it’s memory capacity such that storage or printing...		Partially accepted. It’s written in such a manner to synch with other subsectors above. The “System exceeds” is only an example, not the main issue. See correction on page 11.		

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41.	Paragraph 6f, 1 st sentence, Page 12	Change wording and remove the word "title".			Rewrite to read: Data communication recording requirements are defined by the operating rules provided in 14 CFR parts 91, 121, 125, 129, and 135.	Accepted.			
42.	Paragraph 6g, Page 12	Incorrect font size.			Use Times New Roman, 12pt. on all text.	Times New Roman, 12 pt is used on all text.			
43.	Paragraph 6g, 3 rd & 5 th sentence, Page 12	Typo.			The term "database" is one word not two separate ones.	Accepted.			
44.	Paragraph 8b(2), Text in quotation around the chart, Page 13	Clarity.			Is this one example? Italicize the whole example and label if there is more than one example being used.	Acknowledged. Text is italicized as an example.			
45.	Paragraph 8b(3), 1 st sentence, Page 13	The term "Federal Aviation Administration" has already been defined.			Use the acronym "FAA".	Accepted.			

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46.	Signature Block, Page 14	Incorrect formatting.			Move the title "Division" to appear on page 13 after the title "Assistant Manager, Aircraft Engineering". And delete page 14			Accepted.	
47.	Appendices A & B, Pages A-1 & B-1	Incorrect format size.			Use Times New Roman, 12pt. in labeling of the Appendices titles at the top of the page.			Times New Roman, 12 pt is used.	
48.	Appendices A & B, Pages A-1 thru B-2	Incorrect formatting.			Move the labeling of Appendices A and B in the header over a space to the left to align directly under the AC number.			Accepted.	
49.	Appendix A A, Pages A-1 thru A-3	Typo.		Delete the labeling of "Appendix B" from the header.	Replace with "Appendix A".			Accepted.	
50.	Appendix A, Paragraphs 1 – 5, Pages A-1 & A-2	Incorrect format.		Delete the colon after the paragraph titles.	Replace with a period.			Accepted.	

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51.	Appendix A, Paragraph 1, Page A-1	Change wording in title.			Rewrite paragraph title to read: International Civil Aviation Organization (ICAO).			Accepted.	
52.	Appendix A, Paragraph 2b, Page A-1	Incorrect format.			Remove the italic from the title "Normative appendix, section 2".			Accepted.	
53.	Appendix A, Paragraph 2e, Page A-1	Clarity.			Is the text in parenthesis "Continental SPR Standard" part of the reference title? If not, remove the italic.			Accepted. Part of Title.	
54.	Appendix A, Paragraph 2g, Page A-1	Clarity.			Is the text in parenthesis "Oceanic SPR Standard" part of the reference title? If not, remove the italic.			Accepted. Part of Title.	
55.	Appendix A 2j, Paragraph, Page A-1	Missing period.			Place a period after the term "Service".			Accepted.	

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56.	Appendix A, Paragraph 3, Page A-1	Define the acronym "ARINC" first.			Use the acronym "ARINC" after the first usage.			Acknowledged. "ARINC" is a name of a company. NO other name to it.	
57.	Appendix A, Paragraph 3b, c, & d, Page A-2	Incorrect spacing.			Remove the extra space from between paragraph 3b & 3c and 3c & 3d.			Accepted. No extra space between the paras.	
58.	Appendix A, Paragraph 4b, Page A-2	Missing italic.		Inconsistent with the rest of the document.	Italicize the AC title.			Accepted.	
59.	Appendix A, Paragraph 4d – f, Page A-2	Missing period.		Inconsistent with the rest of the document.	Place a period at the end of each reference.			Accepted.	
60.	Appendix A, Paragraph 5d, 1 st sentence, Page A-2	Outdated information. Delete the mailing address since we do not print or stock our documents anymore.			Rewrite to read: You can get copies of FAA ACs from our websites at http://www.faa.gov/regulations_policies/advisory_circulars/ and www.airweb.faa.gov/rgl .			Accepted.	

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61.	Appendix A, Paragraph 5e, Page A-3	The term "technical standard orders" should be defined earlier in the document.			Rewrite to read: You can find a current list of TSO on the FAA website at www.airweb.faa.gov/rgl .		Accepted.		
62.	Blank Page	Incorrect format.			Remove the blank page from between pages A-3 and B-1.		Accepted. (Blank pages shows up on print only sometimes).		
63.	Appendix B, 14 CFR, Page B-1	Change wording of title.			Rewrite to read: Title 14 of the Code of Federal Regulations.		Accepted.		
64.	Appendix B, A/RFM, Page B-1	Improper capitalization.			Remove the capitalization from the terms "rotorcraft flight manual".		Accepted.		
65.	Appendix B, AC, Page B-1	Improper capitalization.			Remove the capitalization from the term "circular".		Accepted.		

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66.	Appendix B, CSP, Page B-1	Improper capitalization.			Remove the capitalization from the terms "service provider".			Accepted.	
	67.	Appendix B, SATCOM, Page B-2	Incorrect alignment.			Align acronym "SATCOM" to appear directly under the previous acronym "RTCA DO".			Accepted.