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Title	Approval requirements for Air-Ground Data Link and ADS-B in support of Interoperability requirements
NPA Number	NPA 2012-19

UK CAA (European.Affairs@caa.co.uk) has placed **8** unique comments on this NPA:

Cmt	Segment description	Page	Comment	Attachment
304	A. Explanatory Note - IV. Content of the draft Decision - Summary	5 - 6	<p>Page No: 5</p> <p>Paragraph No: 13.</p> <p>Comment: "This application will be limited to very few installations in aircraft that are not operating IFR flights in Europe." This statement is intended to apply to Mode A/C installations (which is not the main subject of this NPA) nevertheless it does not appear to add clarity; and it could lead to further questions and misunderstanding on the scope/applicability of the CS on areas which are not necessarily the remit of this NPA.</p> <p>Justification: This statement is not necessarily true across all Airspace User groups, and does not add clarity to the guidelines.</p> <p>Proposed Text: Delete the sentence 'This application will be limited to very few installations in aircraft that are not operating IFR flights in Europe.'</p>	
310	A. Explanatory Note - IV. Content of the draft Decision - Current regulatory context	6 - 7	<p>Page No: 6</p> <p>Paragraph No: 24.</p> <p>Comment: "Aircraft previously compliant with JAA TGL 13 are not considered compliant with the requirements as specified in Commission Regulation (EU) No 1207/2011 for the Mode S Elementary Surveillance." There are four differences in relation to Mode S ELS for which demonstration is required over and above JAA TGL 13 Rev1. These are listed under Annex D. Of these four, one implies the provision of a capability that was not previously required under the previous regulatory context: to be able to change aircraft ID in flight. While it is made clear that further assurances have to be made over and above those previously required in JAA TGL 13, there is no specific guidance offered in this NPA on what constitutes acceptable evidence, and any transitional measures that apply for aircraft previously certified under the provisions of JAA TGL 13.</p> <p>Justification: Clarity.</p>	

			<p>Proposed Text: Appropriate guidance is required to inform GA and aircraft operators on the implications of the new certification requirements on current installations.</p>
305	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 1 - Subpart D - CS ACNS.AC.2000	21	<p>Page No: 21 and 23</p> <p>Paragraph No: CS ACNS.AC.2000 (c) and (d). CS ACNS.ELS.2000 (c) and (d).</p> <p>Comment: In the interests of facilitating user readability and traceability of the requirement, it is recommended to add the absolute power values in brackets, in a similar way that the non metric units are provided in the same paragraphs for the altitude/speed metrics.</p> <p>Justification: Better visibility to the reader on the extent of change or otherwise of the power requirements with respect to the former specifications.</p> <p>Proposed Text: Add 70 Watts in brackets for 18.5 dBW, and similarly 125 Watts for 21dBW and 500W for 27dBW.</p>
306	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 1 - Subpart D - CS ACNS.ELS.2000	23	<p>Page No: 21 and 23</p> <p>Paragraph No: CS ACNS.AC.2000 (c) and (d). CS ACNS.ELS.2000 (c) and (d).</p> <p>Comment: In the interests of facilitating user readability and traceability of the requirement, it is recommended to add the absolute power values in brackets, in a similar way that the non metric units are provided in the same paragraphs for the altitude/speed metrics.</p> <p>Justification: Better visibility to the reader on the extent of change or otherwise of the power requirements with respect to the former specifications.</p> <p>Proposed Text: Add 70 Watts in brackets for 18.5 dBW, and similarly 125 Watts for 21dBW and 500W for 27dBW.</p>
307	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 1 - Subpart D - CS ACNS.EHS.3010	26	<p>Page No: 26</p> <p>Paragraph No: CS ACNS.EHS.3010</p> <p>Comment: This paragraph does not include an appropriate AMC reference, as provided for the continuity paragraph on page 22. For example for CS.ACNS.EHS.3010 "The Mode S EHS airborne surveillance system is designed to an allowable qualitative probability of probable", It is unclear what requirement is being referenced.</p> <p>Justification: Clarity.</p> <p>Proposed Text: Add appropriate AMC reference.</p>
309	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 1 -	28	<p>Page No: 28</p> <p>Paragraph No: CS ACNS.ADS.2008</p> <p>Comment: See AMC1 ACNS.ADS.2008(a)(c). '(a) All data provided by the ADS-B Out system comes from approved</p>

	Subpart D - CS ACNS.ADS.200		sources.' There is no further guidance on what constitutes suitable approved sources in the NPA. Justification: Clarity. Proposed Text: Provision of guidance on what is considered as suitable approved sources.
308	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 1 - Subpart D - CS ACNS.ADS.302	30	Page No: 30 Paragraph No: CS ACNS.ADS.3022 Comment: The latency requirement quoted here is a blanket requirement of 1.5 seconds. AMC 20-24 (section 8.2.3) on the other hand takes a probabilistic approach "The latency of the horizontal position data, including any uncompensated latency, introduced by the (overall) ADS-B System does not exceed 1.5 second in 95% and 3 seconds in 99.9% of all ADS-B message transmission cases" Justification: This section may be confusing for readers familiar with AMC 20-24. Proposed Text: Add justification on whether AMC 20-24 figures apply or not, and clarify whether the total latency requirement is 1.5 seconds 100% of the time.
311	B. Draft Decision - I. Draft Decision on CS, AMC and GM for CS ACNS - CS - Book 2 - Appendix I	103	Page No: 103 Paragraph No: Appendix I, Last Paragraph Comment: The requirement specified in AMC1 ACNS.ADS.2018, first paragraph is not always consistent with the recommendations set forth in Appendix I on page 103 in relation to determination of on-the-ground status for light aircraft. The text in question is "For aircraft that have fixed-gear, the ADS-B Out system should be able to determine the air-ground status of the aircraft using other means." Furthermore, "Installations that provide a means to automatically determine on-the-ground status based on input from other aircraft sensors are acceptable if they are demonstrated to accurately detect the status. Otherwise, ground status validation algorithms should be implemented, using speed thresholds that match the typical aircraft's rotation speed as closely as possible." The "otherwise" clause is potentially confusing and inconsistent with the guidance in Annex I which suggests that some categories of aircraft (helicopters, lighter-than-air and fixed undercarriage aircraft) need to set the parameter to "airborne" at all times "unless an automatic means of determining On-the-ground status is available." Justification: The guidance offered by the NPA on the implementation of this requirement should be unambiguous as to whether any category of aircraft licensed by the CAA is exempt from providing either a ground status validation algorithm, or an automatic means

of determining on-the-ground status.

Proposed Text: “For installations intended for this category that are unable to provide a compliant automatic ground status detection function, the status of the parameter should be set to “airborne”.