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| **Title** | | Develop radio frequency and interference rejection characteristics for radio altimeters | | **Reference**: | | FSMP.00X.01 | | | | |
| **Source** | | FSMP/2 Report | | | | | | | | |
| **Problem Statement** | | Recent ITU activities have threatened aeronautical systems operating in the 4200-4400 MHz band by considering the introduction of mobile broadband systems in adjacent frequency bands. Existing ITU-R documentation, and related documentation such as RTCA DO-155 *Minimum Performance Standard Airborne Low-Range Radar Altimeters,* describe some performance characteristics for radio altimeters, however additional/refined details are necessary to enable a proper assessment of suitable protection requirements for systems operating on adjacent frequency bands. Without standardized frequency and interference performance characteristics, there is no way to specify suitable protection from interference from services operating in adjacent frequency bands. This creates safety risks to flying aircraft operating radio altimeters, especially noting that non-aeronautcial systems can now operate at the adjacent frequency bands. | | | | | | | | |
| **Specific Details (including impact statements)** | | Radio frequency interference rejection characteristics and associated standards for radio altimeters are needed to ensure frequency sharing compatibility between aircraft radio altimeters and other aeronautical applications, namely Wireless Avionics Intra-Communications (WAIC), in the same band. Furthermore, out-of-band interference susceptibility and rejection characteristics are also required for protecting the operations of the radio altimeters from harmful interference caused by non-aeronautical systems operating in adjacent frequency bands. | | | | | | | | |
| **Expected Benefit** | | Protection of continued safe operations of radio altimeters from potentially harmful in-band and adjacent band radio frequency interference, and guidance for future radio altimeter design. | | | | | | | | |
| **Reference**  **Documents** | | Annex 10  ARINC 707-7B  RTCA DO-155 Minimum Performance Standard Low-Range Radar Altimeters | | | | | | Attachments | | N |
| **Primary Expert Group**: | | [FSMP] [to be determined] | | | | | | | | |
| **WPE No.** | **Document affected** | | **Description of Amendment proposal or Action** | | **Supporting Expert  Group** | **Expected dates:** | | | | |
| **Expert Group** | **Effective** | | **Applicability** | |
|  | Annex 10 | | Technical provisions defining technical aspects relating to radio frequency and interference rejection characteristics of the radio altimeters | |  | Feb, 2019 [Depends on WAIC measurement effort] |  | |  | |
| Initial Issue Date: | | | Date approved by ANC: | | Session/Meeting: | | | | | |
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