

242A-WP-11-06  
Jan. 24, 2002  
rev. 1

RTCA SC-186  
Work Group 6

Proposed for Temporary Aircraft Address Assignments

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Reference: WG-6/IP51, "Optional use of temporary addresses identifiable only to ATC"

This input to SC-186 WG-6 is submitted in response to the proposal in the referenced IP51 for requiring an option for temporary aircraft address assignment for IFR aircraft. This proposal represents a major change from the current MASPS requirements and I contend it would be unacceptable. The 24-bit ICAO aircraft address is specified by ICAO Annex 10 to be the data address for the communications and surveillance systems onboard the aircraft. The use of a single common address across all of the onboard digital communications and surveillance systems offers significant technical and operational benefits. ICAO has already modified the flight plan to include provisions for indication of the aircraft ICAO address. The ground ATC automation systems, surveillance systems and communications systems can benefit from having a single, globally unique data address for the aircraft. None of the existing communication or surveillance systems specified by ICAO, RTCA nor AEEC require provisions for the use of temporary address. Furthermore, ICAO requires that only a single aircraft address be used for the onboard systems. It could seriously compromise the overall CNS/ATM system by allowing just the ADS-B system to use a different, temporary address.

The premise of IP51 that the provision of temporary aircraft address would address a safety concern is pure speculation at this time. The FAA is currently sponsoring a safety vulnerability assessment of ADS-B and such a change to the ADS-B MASPS requirements should not be considered by WG6 nor SC-186 unless a significant safety vulnerability is identified that can best be addressed through the provision of temporary aircraft address assignments.

Note that the above discussion applies only to aircraft receiving ATC services. The use of a temporary or an anonymous aircraft addresses may be considered acceptable for uncontrolled aircraft that are not equipped with another communications or surveillance systems that require the use of a fixed ICAO address (as per the current ADS-B MASPs).