

RTCA Special Committee 186

Working Group 4

Airborne Surveillance and Separation Assurance Processing

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Action Item #77 Response

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Response to SC-186 ASSAP WG Action Item #77

World-wide precision airport mapping databases for aviation applications

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Abstract:

Future cockpit and aviation applications require high quality airport databases. Accuracy, resolution, integrity, completeness, traceability, and timeliness are key requirements. For most aviation applications, attributed vector databases are needed. The geometry is based on points, lines, and closed polygons. To document the needs for aviation industry RTCA and EUROCAE developed in a joint committee, the DO-272/ED-99 document. It states industry needs for data features, attributes, coding, and capture rules for Airport Mapping Databases (AMDB). This paper describes the technical approach Jeppesen has taken to generate a world-wide set of three-hundred AMDB airports. All AMDB airports are DO-200A/ED-76 and DO-272/ED-99 compliant. Jeppesen airports have a 5m (CE90) accuracy and an 10/sup -3/ integrity. World-wide all AMDB data is delivered in WGS84 coordinates. Jeppesen continually updates the databases.

Reference DO-272A Section 4.3.7.1 Pg. 77 for definition of Survey Control Point = PACS.

Reference DO-272A Section 4.4.1.2 Pg. 78 for airport elements' coordinates referenced to WGS-84 and the Primary Aerodrome Control Sites (PACS).

Reference DO-272A Section 4.4.4 Pg. 79 and Table 4-5 Pg. 81 for definition of medium data quality requirements at 90%. Accuracy of airport elements is the RMS of each element's accuracy and the accuracy of the survey control point = RMS of [5 m & 0.5 m] ~ = 5.02 m wrt to WGS-84.