

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Subgroup
History Record

FAA Control # 00-01-224

SUBJECT: Unnamed Stepdown Fixes

BACKGROUND: Many stepdown fixes located in the final segment of an instrument approach procedure exist without names or identifiers. The stepdown fixes are shown on aeronautical charts as intersections, DME fixes or along-track distance (ATD) fixes but generally are not included in navigation databases and therefore will not be displayed by Flight Management Systems (FMS) or GPS receivers. This is yet another example of lack of harmonization between charts and databases identified by the Charts, Database and Avionics Harmonization (CDAH) committee.

DISCUSSION:

1. Even if named, stepdown fixes in the final segment cannot be handled by some navigation systems. TSO C-129A makes no mention of fixes between the FAF and the MAP. Presumably, stepdown fixes could be filtered out of the databases meant for systems that can't handle them.
2. Some factions believe that inclusion of stepdown fixes will negate use of VNAV on the final segment.
3. Notwithstanding 1 and 2 above, the FAA should name stepdown fixes for the following reasons:
 - a. Stepdown fixes are a viable method for obtaining the lowest possible minimums on an instrument approach. TERPS does not allow a stepdown fix in the final segment unless a decrease of at least 60' in MDA or a reduction in visibility minimums is achieved.
 - b. Stepdown fixes usually signify the presence of an obstruction, therefore it is imperative that the pilot/aircrew be aware of the fix's location and associated altitude.
 - c. Not all aircraft are VNAV equipped and even those aircraft which are, will have occasion to fly LNAV only; e.g., VNAV inoperative.

RECOMMENDATION: Whenever possible, charts, databases, and displays should match as closely as possible; e.g., if the stepdown fix is on the chart, it should be on the display with the associated altitude. We believe that consideration should be given to using a Computer Navigation Fix (CNF) for final segment stepdown fixes, as these fixes are not needed in pilot-controller communications. We also advocate documenting, promulgating and maintaining these CNF's on the associated IAP 8260-3/5/7 form vice the 8260-2.

COMMENTS: This recommendation affects Order 8260.19, Flight Procedures and Airspace.

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INITIAL DISCUSSION (Meeting 00-01): Bill Hammett, AFS-420 (ISI), presented this new issue paper prepared by Carl Moore on behalf of AFS-420. The issue revolves around naming all DME and ATD stepdown fixes to accommodate both conventional navigation and high-end automated flight systems. AFS-420 will begin addressing this issue and desires input from the subgroup. The following questions were specifically mentioned; a) how to best achieve chart/avionics system correlation, b) is the computer navigation fix (CNF) concept acceptable as a naming convention as these fixes are not normally used in pilot-controller communications, c) what fix documentation methodology is preferred - use FAA Form 8260-2 or applicable SIAP 8260-series forms, d) what is the impact on AVN-100 & NFDC workload. AFS-420 will work the issue and requested concerned comments and recommendations be forwarded. Jim Terpstra, Jeppesen, gave a strong endorsement to FAA taking on this project and supported using CNF's. **ACTION: AFS-420.**

MEETING 00-02: Bill Hammett AFS-420 (ISI) briefed this issue. The issue was presented to the Aeronautical Information Service Working Group (AISWG) for input. Based on comments received, AFS-420 has decided that: 1) Stepdown fixes will be named with 5-letter, pronounceable names vice CNF's; 2) Stepdown fix names will be processed using standard 8260-2 forms; 3) Stepdown fix names will be added as new procedures are produced and as existing procedures are reviewed/amended; 4) Pending issuance of change 3 to FAAO 8260.19C, interim guidance has been provided to AVN-100 via memorandum dated October 17, 2000; 5) Change 3 to FAA Order 8260.19C will require the naming of stepdown fixes in addition to all other navigation fixes. Based on these actions, he recommended the issue be closed – the group concurred. **Issue Closed.**
