

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM 01-01

April 26-27, 2001

Recommendation Document

SUBJECT: Charting waypoints with both fly-over and fly-by functions

BACKGROUND/DISCUSSION: On some GPS/RNAV Instrument Approach Procedures (LAPS) a single waypoint may serve as both an Initial Approach Fix (IAF), as well as the holding for the missed approach procedure. Normally an IAF is a "fly-by" waypoint, and the holding pattern fix is a "fly-over" fix.

A similar problem could occur when the last fix on a Departure Procedure (and thus also charted on the Enroute chart) is a "fly-over" waypoint, but the same waypoint is used as a standard "fly-by" fix in the en-route structure.

This dual designation of a fix as both a "fly-over," and a "fly-by" fix is not a problem for the flight database, because the designation of a fix is defined within the database for each specific use of a waypoint. The problem lies in the physical charting of a fix with both "fly-over" and "fly-by" designation because only a single symbol can be used. How should waypoints with both fly-over and fly-by functions be charted on paper charts?

This issue is referred on request from the Satellite Procedure Implementation Team (SPIT) to the Government/Industry Aeronautical Charting Forum for charting recommendation.

RECOMMENDATION: A standard charting hierarchy, separate "dual designation" charting symbol, or some other charting method needs to be defined to address the case where a single waypoint has both fly-by and fly-over functions. One possibility is to use a "broken" circle around the waypoint, with some method (e.g., chart note, etc.) to indicate on the appropriate procedure segment when the waypoint is to be treated as a "fly-over" waypoint.

COMMENT: This recommendation affects IAPs, DPs, STARS and Enroute charts.

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01-01 MEETING: This issue was deferred to the next meeting due to time constraints.

01-02 MEETING: The ACF consensus is to chart as fly-by in the plan view. Mr. Dave Lewtas stated that the OCP felt that it should be charted as the most constraining feature (fly-over). It was further stated that ICAO plans to include guidance in PANS OPS to cover this. ICAO also recommends against creating dual use points. It was stated that if the waypoint were charted

twice then it should be charted as fly-by on the plan view and fly-over on missed approach icons. Mr. Brad Rush stated that 2500 GPS waypoints still need to have fly-over/fly-by designated. **ACTION:** AVN and AFS.

02-01 MEETING: The ACF consensus is to chart as fly-by in the plan view. The waypoint will then be depicted as fly-over in the VOLPE missed approach icon area. Mr. Secretan will take the ACF's consensus decision to the IACO OCP and brief the ACF on OCP action as appropriate. **ACTION:** IACC and AFS-420.

02-02 MEETING: The ACF had previously reached a consensus is to chart as fly-by in the plan view at the last meeting. The waypoint would then be depicted as fly-over in the VOLPE missed approach icon area. Mr. Eric Secretan reported that the ICAO OCP felt that the most restrictive should be charted and that there were cases where the waypoint in question was not also a missed approach waypoint. Mr. Secretan stated that the OCP would not accept any new issues until after OCP 13. He stated that he would bring the issue up after OCP 13. Mr. Secretan stated that STARS waypoints might be a concern as well. The RNAV (GPS) RWY32 KRAP was used to illustrate with NIRYO. The ACF consensus was that all holding fixes would be charted as fly-by waypoints on procedure charts. Mr. Secretan will take the ACF's consensus decision to the IACO OCP and brief the ACF on OCP action as appropriate. **ACTION:** IACC MPOCs - IACC and AFS-420/AFS-600 will amend specifications, Instrument Handbook (8083), and AIM as appropriate.

03-01 MEETING: Ms. Val Watson reported that RD 531 was signed by IACC. It was also stated that this issue would be forwarded to ICAO for consideration. Mr. Tom Schneider will amend the AIM and Instrument Handbook to support new charted hierarchy. Mr. Eric Secretan will forward his ICAO paper on charting waypoints to Mr. Mark Ingram, Mr. Tom Schneider, and Mr. Steve Bergner. **CLOSED**
