

AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
Meeting 04-01 – April 26-27, 2004
History Record

FAA Control # 04-01-249

SUBJECT: RNAV Terminal Routes for ILS SIAPs

BACKGROUND/DISCUSSION: The ILS will remain the precision instrument approach of choice for many years to come. The time is overdue to meld the maturing LNAV capabilities now present in most turbine aircraft with the ILS final approach segment. Although this technically has been accomplished by coding the existing ground based feeder routes, initial approach segments, and missed approach segments into an ILS IAP FMS database, flexibility and efficiency of operation has been denied by not designing unique and efficient LNAV terminal routes for ILS IAPs. At high traffic locations, it possibly makes little practical difference. But, at non-radar, mountain locations such as Jackson Hole, WY and Helena, MT, great savings in route miles could be achieved while providing optimal non-radar routing for both operators and ATC.

A case-in-point: Jackson Hole's terminal instrument procedures are presently in coordination for revision because of the relocation of the JAC VOR. Also, Salt Lake Center, which provides non-radar terminal ATC services for this location, no longer wants the long-standing "return to facility" missed approach procedure. This present missed approach procedure represents some 70-90 flight-path miles to attempt another Runway 18 ILS approach, depending upon climb performance. The proposed missed approach goes to Big Piney, WY, many miles away. This is because the VOR navigation system in the Jackson Hole area is terrain-blocked from providing efficient missed approach routing, other than the present return-to-facility procedure. The Big Piney routing, if continued on airways for another ILS approach, would require 377 flight-path miles, vice the present 70-90 flight-path miles. With an LNAV missed approach flight track, this mileage could be significantly reduced, yet satisfy ATC's new requirements. This is demonstrated by a proposed RNAV SIAP for Runway 18, which has an efficient return-to-approach missed approach flight track.

RECOMMENDATION: AFS-420 should establish policy guidance to use existing RNAV criteria for AVN-100 to use to design efficient LNAV terminal routing for ILS SIAPs at locations where efficiency of operations would be enhanced. This "ILS/LNAV" procedure should be issued so that it is the coded database ILS procedure for a given runway. The existing, ground-based terminal routing ILS SIAP should become the secondary "NOT IN DATABASE" ILS SIAP for a given runway. This would not impose a hardship on anyone because the non-RNAV aircraft simply uses the paper chart and the associated ground-based navigation facilities.

COMMENT: This recommendation affects FAAH 8260.3B, 8260.19C, and various internal FAA directives.

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Initial Discussion – Meeting 04-01: New issue presented by Steve Bergner, NBAA, recommending that RNAV should be used in conjunction with conventional ILS approaches to enhance efficiency. Ted Thompson, Jeppesen, stated that there has been discussion on this issue within Jeppesen and he does not recall any contradiction with coding RNAV transitions to ILS final approach courses. He believes the suggestion is acceptable but will research procedure-coding capabilities. Steve suggested that two procedures could be developed and only one coded. Ted responded that this could create chart-database harmonization problems. Kevin Comstock, ALPA, asked if this concept was originally proposed for Order 8260.51 but dropped by RNP purists. Tom Schneider responded that the proposed combined RNAV order would assess using RNAV to join conventional final approaches. **ACTION: AFS-420, AVN-503, and Jeppesen.**
