

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
October 25, 2011
HISTORY RECORD

FAA Control # 11-02-298

Subject: Converging ILS Coding and Chart Naming Convention.

Background/Discussion: With the addition of LNAV, some aircrews will utilize the FMS on missed approach. The ILS in the FMS boxes allows only one missed approach procedure. The missed approach for the standard ILS and Converging ILS differ and the possibility exists for the aircrews to use the LNAV, which executes the standard missed approach procedure when they should be executing the Converging missed approach. When the Converging Approaches were developed years ago, this problem did not exist because all aircrews "hand flew" the missed approach. FAA Order 7110.98A needs to be updated to allow for a revised naming convention so the FMS boxes can be modified to allow for more than one ILS approach per runway.

Recommendations: Change FAA Order 7110.98 guidance to allow multi-character coding (X, Y, Z) for Converging ILS approaches. Each approach will be coded and charted as Converging ILSxxLZ or Converging ILSxxLY. Recommend starting with Philadelphia Int'l (KPHL) Converging ILS09R or ILS 17

Comments: This recommendation affects FAA Order 7100.98, which may be viewed at: <http://www.faa.gov/documentLibrary/media/Order/ND/7110.98A.pdf>

Submitted by: Kevin Allen
Organization: US Airways
Phone: 480-693-4637
FAX: 480-693-4936
E-mail: kevin.allen@usairways.com
Date: October 7, 2011

INITIAL DISCUSSION (Meeting 11-02): New issue presented by Kevin Allen, US Airways, expresses concern that pilots flying converging ILS approaches may engage the autopilot LNAV mode for the missed approach and subsequently fly an incorrect missed approach procedure. The ILS in the FMS boxes allows coding of only one missed approach procedure and that is normally the one associated with the standard ILS approach. The missed approach for the standard ILS and the Converging ILS approaches differ and the possibility exists that if a pilot flying a Converging approach should use autopilot LNAV mode for the missed approach, he will incorrectly fly the standard missed approach routing. When the Converging approaches were first introduced, this problem did not exist because all aircrews "hand flew" the missed approach. Kevin recommended that FAA Order 7110.98A be updated to allow for a revised naming convention so the FMS boxes can be modified to allow for more than one ILS approach per runway. Brad Rush, AJV-3B, briefed that he has forwarded this same issue to the US-IFPP as an agenda item recommending that all ILS variations have suffixes in the procedure title. Terry Pearsall, AJT-28, added that this should also be done for LDA procedures. Tom Schneider, AFS-420, stated that there is

emphasis on controller phraseology when Converging approaches are used and pilots should be aware of the differing missed approach procedures. Gary McMullin, Southwest Airlines, endorsed the use of suffixes to clearly indicate to pilots that the procedures are separate. Ted Thompson, Jeppesen, added that there are about 45 Converging approaches in the U.S. and none outside the U.S. He also endorsed using a suffix and recommended retaining "Converging" in the IAP title and controller phraseology. John Moore, AJV-3B, stated that keeping "Converging" in the procedure title is against ICAO and, if you are using a suffix, why do you need both. It was mentioned that not all users are capable of using the suffix codes. Kevin responded that, in those cases, the crews would have to "hand fly" the procedure that was NOT included in their navigation database, something they're already trained to do. Tom Schneider, AFS-420, concluded the discussion by noting that Brad Rush has forwarded the issue to the US-IFPP for consideration. Tom advised that the Executive Director of the US-IFPP will keep the ACF apprised of the issue status. **ACTION: AFS-420 (US-IFPP).**

MEETING 12-01: Brad Rush, AJV-3B, briefed that this issue was discussed at US-IFPP on April 11, 2012. The subject is still under consideration by the ATO as part of 3 items being worked regarding Simultaneous Operations; i.e., procedure naming; combining of SA CAT I/II onto one chart; as well as CAT II/III on to one chart; and, converging operations. Ted Thompson, Jeppesen, asked what is the prognosis for using suffix codes noting that not all users have the capability to code the 'X', 'Y', 'Z' suffixes. Brad responded that including the use of suffix codes (for ARINC 424 multi-coding purposes) is being considered while somehow retaining the term 'converging' as part of the procedure title or as a chart note; however, nothing has been finalized to date. Tom Schneider, AFS-420, stated that the use of 'converging' in the title and approach clearance is intended to enhance pilot situational awareness. Ted added that the original issue was to ensure the suffix is in the data base so use of "converging" in phraseology would ensure correct coding. The issue is still being worked within the US-IFPP and Brad agreed to monitor the issue and provide activity updates to the ACF. **ACTION: AJV-3B and US-IFPP.**

MEETING 12-02: Brad Rush, AJV-3B, briefed that he has discussed the issue with Ron Singletary, AJT-2A3, and he is looking at the FAA Order on the naming convention for converging approaches. The Order affects the ATO and the converging portion may need to be transferred to AFS for inclusion in the planned "8260.Simuls" Order, which is currently under development. AT is supportive of changing the titling to eliminate "converging" in favor of using a suffix. The discussion includes whether to use the standard "Z, Y, X" methodology or use something different for converging approaches. Tom Schneider, AFS-420, asked whether the use of "converging" would be continued in the approach clearance. Brad responded that this issue is still under discussion. Charting the requirement may be a consideration so the verbiage can be eliminated from ATC phraseology. Kevin Allen, US Airways, asked about corrective actions for Philadelphia (KPHL) as it is a safety issue. Brad responded that the KPHL procedures should be amended in April/May of 2013. Similar problems also exist at KIAD, KDFW and not all can be fixed until ATC decides how they want the rules to work. He agreed to monitor US-IFPP activities and keep the ACF apprised of the issue status. **ACTION: AJV-3B and US-IFPP.**

MEETING 13-01: Valerie Watson, AJV-3B, provided the following update as received from Brad Rush, AJV-3B, who was unable to attend: "This is a joint response from AJV-3B and AFS-420: Converging ILS procedure naming is contained in Order 7110.98. There are no plans to add specific converging ILS naming convention rules to Order 8260.3 based on the expectation that when Air Traffic cancels Order 7110.98, naming of converging procedures will be in accordance with normal ILS naming conventions; i.e., distinguished by an alphabetical suffix. For example, if a location currently has an "ILS RWY 31" and a "CONVERGING ILS RWY 31", when Order 7110.98 is cancelled, these procedures would be renamed "ILS Z RWY 31" and "ILS Y RWY 31". There may be a requirement to include in parenthetical at the end of the procedure title with the word "CONVERGING". AJV-3B has provided marked up copies of approach plates to Air Traffic to review and is awaiting comments." An excerpt of the January 2013 US-IFPP minutes is included here (). Lynette Jamison, AJR-B1, asked whether the suffix addition would impact NASR. Val Watson, AJV-3B, responded no, the FAA already names procedures in this format and the NASR database can accommodate them. Valerie stated that AJV-3B will continue to monitor US-IFPP activities relating to this issue. **ACTION: AJV-3B and US-IFPP.**

MEETING 13-02: Brad Rush, AJV-3B, briefed he is working with Air Traffic (Ron Singletary's office, AJV-8) on this issue. They have developed a draft Document Change Proposal (DCP) to eliminate Order 7110.98 and incorporate policy into Order JO 7210.3. The target date to eliminate the current converging naming convention and move towards a suffix is 2014-2015. Possible interim steps of using "converging" in phraseology and a suffix in the procedure title are under consideration. This is a work in progress and hopefully advancement will be seen within a year.

Tom Schneider, AFS-420, briefed that draft Order 8260.19F, includes added guidance in new paragraph 8-6-5 m (8) as follows:

"Simultaneous Converging Approach Operations. When informed by ATC that Simultaneous Converging Approach Operations will be conducted, use Order 8260.3 instrument procedure naming standards with a "suffix" to distinguish between the standard instrument procedure and the procedure used for converging operations. Additionally, the applicable "Converging" approach charts must be annotated to indicate they support this concept. "Converging," in parenthesis, will be placed following the procedure name; i.e., "ILS Y RWY 31R (CONVERGING)."

Val Watson, AJV-3B, asked when this will occur. Tom responded, when Order 8260.19F is published. Brad Rush, AJV-3B, disagreed stating that naming conventions are specified in Order 8260.3 and the .19 cannot contradict those criteria. John Blair, AFS-410, asked about avionics coding limitations. Brad said there should be no problem as 6 characters are OK. Rich Boll, NBAA, stated that lots of FMSs can accept a suffix for RNAV, but not for conventional procedures. Brad reemphasized in other words, that since Order 7110.98 wouldn't go away until 2015, 8260.19 can't be change before that time. Tom agreed to work the issue off line to determine whether the draft guidance should be re-worded. Two taskings remain open: 1) AJV-3B will continue to monitor US-IFPP activities, as well as on-going AJV internal actions, and keep the ACF apprised of the issue status. 2) AFS-420 will track publication of Order 8260.19F. **ACTION: AJV-3B (US-IFPP) and AFS-420.**

Editor's Note: After post meeting discussion between Brad and Tom, it was decided not to make the above change to draft 8260.19F due to the fact that a final decision regarding procedure identification has not been made and it is still undetermined when the necessary controller guidance will be published in ATO directives.

MEETING 14-01: Brad Rush, AJV-3, briefed on the first location the FAA is changing procedure titles to resolve the converging ILS issues is at Philadelphia (PHL) and they are on schedule for July charting. Procedures are up on the gateway coordination website for viewing. The new naming convention eliminates the word "CONVERGING" prior to ILS in the title, adds "V" and places "(CONVERGING)" at the end of the procedure title. Example "ILS V RWY 27 (CONVERGING)". If the change at PHL is successful, 5 more locations will be scheduled. Tom Schneider, AFS-420, noted the word "converging" will still be in the title in parentheses, indicating a converging procedure, but NOT necessitating ATC to verbalize it as part of a clearance for the approach. This requirement will be in the next revision to Order 8260.19. All procedure title revisions will be promulgated via the formal amendment process. An inquiry was made as to whether FMS databases will have this "V"? Brad said "yes", if the specific system has the ability to display procedure suffixes. Mark Steinbicker, AFS-470, inquired about aircraft capabilities. Bob Lamond, NBAA, advised that 50% of business aircraft can currently accommodate more than one suffix. Under the current convention in many cases, the box will default to the lowest minimums and not show the actual suffix (the pilot may not know which approach is displayed). This will require a long term fix between the new software on many aircraft, new hardware on some, and may be a problem with new procedure development. Brad pointed out, with regard to the suffix issue, that right now zero aircraft have converging ILS procedures in their data base. With the "V" suffix convention, at least 50% will have it. General group discussion ensued. Martin Zillig, Lufthansa (LIDO), inquired about the use of "V" vs. a "C" suffix for converging approaches. Group discussion followed on how that was vetted and how the runway L/C/R designators at some airports affected the decision NOT to use "C".

Status: AJV-3 will continue to monitor US-IFPP activities as well as on-going AJV internal actions, and keep the ACF apprised of the issue status. Item Open AJV-3

Meeting 14-02: Brad Rush, AJV-344, briefed on the changed converging ILS approach naming standard (there are only 4 locations in US affected) and procedures at Philadelphia (PHL), ILS V RWY 17 (test case). All comments received so far are positive and the plan is to change Minneapolis (MSP) & Dallas-Fort Worth (DFW) in the March-April 2015 time frame. The remaining location, Washington-Dulles (IAD), may eliminate the converging approaches altogether, so these may not require revision. The FAA Order 8260.3C will include the naming convention with the suffix always being "V" for converging ILS approaches. Tom Schneider, AFS-420, added there are additional requirements for FAA Order 8260.19, regarding chart notes and these will be similar to other simultaneous procedures. This new guidance will be incorporated into the next revision of Order 8260.19 scheduled for March 2015 publication. AFS-420 will look at the IPH for any changes. John Blair, AFS-410, will look at changes for the AIM/AIP.

Status: AFS-420 will report on changes to Order 8260.19 and IPH. AFS-410 will report on changes to AIM/AIP. **Item Open: AFS 410/420**

Meeting 15-01: Kevin Allen, American Airlines, stated that the Minneapolis (KMSP) procedures are now coded and the Dallas (KDFW) procedures are in the process of being updated. The converging approaches at Dulles (KIAD) are being cancelled. Tom Schneider, AFS-420, briefed  his IOU showing revised language for simultaneous procedure chart notes in Order 8260.19G. A slide was also presented showing the new naming convention example with "V" in approach name and the converging in parentheses (silent). John Blair, AFS-410, advised that pilot guidance is in the next AIM/AIP. Kevin would like to keep the issue open until all IOUs are accomplished. Ted Thompson, Jeppesen, questioned if the item will remain open with the limited number of affected procedures or closed when those are revised; his concern is about this becoming a perpetual briefing item.

Status: Tom advised item will remain open and briefed at next ACF. The intent is for it to be closed at the next ACF when the AIM/AIP and Order 8260.19G guidance is published. **Item Open: AFS-410 (AIM/AIP Language) AFS-420 (Order 8260.19G language)**

MEETING 15-02: Tom Schneider, AFS-420, briefed the Instrument Procedure Handbook (IPH) change  guidance, which has been published. Kevin Allen, American Airlines, asked Brad Rush, AJV-54, about progress of implementing these changes. Brad said of the four airports with converging procedures (Philadelphia and Minneapolis) have been changed; Washington Dulles is scheduled for this year; and Dallas is delayed due to the Metroplex project. Aeronautical Information Services will continue to watch these. Tom advised guidance has been published in FAA Order 8260.19G. Kevin said as long as Dallas is not dropped, the issue can be closed. There were no objections.

Status: **Item Closed.**