

June 8, 2007

Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group (ACF-IPG) held on May 1, 2007, and sponsored by the National Geospatial-Intelligence Agency (NGA), Reston, VA. An office of primary responsibility (OPR) action listing and an attendance listing are attached to the minutes.

Please review the minutes and attachments for accuracy and forward any comments to the following:

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The AFS-420 web site contains information relating to ongoing activities including the ACF-IPG. The home page is located at:  
[http://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afs/afs400/afs420/acfipg/](http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs420/acfipg/)  
This site contains copies of past meeting minutes as well as a chronological history of open and closed issues to include the original submission, a brief synopsis of the discussion at each meeting, the current status of open issues, required follow-up action(s), and the OPR for those actions. We encourage participants to use this site for reference in preparation for future meetings.

ACF Meeting 07-02 is scheduled for **October 23-25, 2007** with ALPA, Herndon, VA as host. Meeting 08-01 is scheduled for **April 22-24** with AMTI, Rosslyn, VA as host.

Please note that the **meetings begin promptly at 8:30 AM**. Please forward new issue items for the 07-02 IPG meeting to the above addressees not later than October 5<sup>th</sup>. A reminder notice will be sent.

We look forward to your continued participation.

Thomas E. Schneider, FAA/AFS-420  
Co-Chairman, Aeronautical Charting Forum,  
Chairman, Instrument Procedures Group

Attachment: ACF-IPG minutes

**GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM  
INSTRUMENT PROCEDURES GROUP  
Meeting 07-01      Reston, VA  
May 1, 2007**

**1. Opening Remarks:**

Mr. Tom Schneider, AFS-420, Flight Standards co-chair of the Aeronautical Charting Forum (ACF) and chair of the Instrument Procedures Group (IPG) opened the meeting at 8:30 AM on May 1, 2007. The National Geospatial-Intelligence Agency (NGA) hosted the meeting at the US Geological Survey (USGS) facility in Reston, VA. Lance Christian, NGA/OMSF made welcoming and administrative comments on behalf of NGA and USGS. A listing of attendees is included as attachment 2.

**2. Review of Minutes of Last Meeting:**

Bill Hammett, AFS-420 (ISI) briefed that the minutes of ACF-IPG 06-02, which was held on October 17, 2006 were electronically distributed to all attendees as well as the ACF-IPG Master Mailing List on November 3<sup>rd</sup>. No comments/corrections were received and the minutes are accepted as distributed.

**3. Old Business (Open Issues):**

- a. **92-02-105:** Review Adequacy of TERPS Circling Approach Maneuvering Areas and Circling at Airports with High Heights Above Airports (HAAs).

Bill Hammett AFS-420 (ISI) provided an update, with input from Jack Corman, the AFS-420 lead criteria specialist, on the proposed new TERPS criteria for circling that was briefed at the last meeting is planned to be included in TERPS change 21. It is anticipated that Change 20, which will be limited to a new TERPS Volume 1, Chapter 3, *Takeoff and Landing Minimums*, will enter formal coordination within the next two weeks. Change 21 is planned to include the new circling criteria and radar procedures among other changes. Jack noted that it is against current administrative practices to have two changes in coordination at the same time; therefore, we cannot submit change 21 into internal coordination until Change 20 has cleared. AFS-420 has a work plan that includes conventional TERPS, RNAV, and RNP. That work is prioritized and the prioritization for this year has been #1-RNAV, #2-RNP, and #3-conventional TERPS. AFS-420 has not had the opportunity to fully explore the NBAA recommendation to consider a second evaluation when the initial HAA is greater than 1,000' that was presented at the last meeting due to workload and staffing limitations. The NBAA request will be evaluated prior to criteria finalization and circulation for formal comment. Further comments on the new criteria are welcome and may be forwarded directly to Jack Corman at [jack.corman@faa.gov](mailto:jack.corman@faa.gov).

**Status:** AFS-420 to keep the group apprised of progress on criteria coordination.  
**Item Open (AFS-420).**

**92-02-110:** Cold Station Altimeter Settings (*Includes Issue 04-01-251*).

Ernie Skiver, AFS-410 briefed that MITRE has been contracted to assess cold weather impact in the lower 48 states. Tom Schneider, AFS-420, stated that it has been agreed that a correction is necessary; the study is to determine which locations require correction. Ernie further stated that AFS is still undecided whether to make the adjustment procedurally or operationally. Lance Christian stated that DOD believes the issue should be addressed through standardized pilot training and use of a conversion table. Bill Hammett, AFS-420 (ISI) recommended that the study should include MVA and MIA charts. Frank Flood, ACPA, stated it is a science issue and a pilot responsibility. It is up to the government to determine how to implement cold temperature adjustments. Frank also offered assistance to both the FAA and MITRE by contributing operational experience to the study. Mark Ingram, ALPA, stated that a Boeing study indicates cold temperature adjustments can be applied via avionics. Brad Rush, AJW-321, responded that while the Boeing criteria may be good for large aircraft, it is of no use for smaller aircraft. Kevin Comstock, ALPA, re-iterated ALPA's previous requests that industry and ATC participate in any cold temperature altimetry study.

**Status:** AFS-410 will continue to track the issue and report. [Item Open \(AFS-410\)](#).

**c. 96-01-166:** Determining Descent Point on Flyby Waypoints (Originally: Definition of "On Course").

Ernie Skiver, AFS-410, briefed that there has been no progress on this issue. Wally Roberts, NBAA, briefed that TSO 149 and 146 boxes switch to the next leg at the bisector of the fix. Brad Rush responded that flight inspection practices are not to descend until the aircraft is wings-level after the turn.

**Status:** AFS-410 to continue efforts to develop AIM material. [Item Open \(AFS-410\)](#).

**d. 98-01-197:** Air Carrier Compliance with FAA-specified Climb Gradients.

Mark Ingram, ALPA, provided an update briefing as well as a chronological listing of ALPA actions on this issue since 1998 (See attachment 3). ALPA is now proposing that the FAA establish essentially the same guidance contained in AC 90-101, applicable to RNP (SAAAR) approaches (extract below), for all procedures with charted climb gradients [i.e. departures (ODPs and SIDs) and missed approaches for RNAV and conventional procedures regardless of whether they are public or special procedures].

*AC 90-101, Appendix 2 extract:*

*"m. Non-Standard Climb Gradient. When the operator plans to use the DA associated with a non-standard missed approach climb gradient, he must ensure the aircraft will be able to comply with the published climb gradient for the planned aircraft loading, atmospheric conditions and operating procedures before conducting the operation. Where operators have performance personnel that determine if their aircraft can comply with published climb gradients, information should be provided to the pilots indicating the climb gradient they can expect to achieve."*

Ernie Skiver, AFS-410, stated that pilots are currently using the rate-of-climb table. He believes that manufacturers should be able to provide the data to the aircrews. Rich Boll, NBAA, responded that maybe manufacturers can but they don't. Kevin Comstock, ALPA, emphasized

that ALPA does not want the procedures published in AC 90-101; however, they do want the language published in other Orders. Tom Schneider, AFS-420 recommended that ALPA pursue rulemaking. Kevin responded that past history indicates that it won't do any good. It will achieve more by putting the requirement in other FAA Orders. Tom emphasized that this issue was going nowhere fast and he sees only 3 options: 1) Take to the PARC for emphasis; 2) Determine exactly what other ACs/Orders to publish the requirement; or, 3) Admit defeat. Wally Roberts, NBAA, recommended that AFS-410 take the issue to John McGraw, AFS-400, for PARC consideration. Mark Ingram, ALPA, also suggested an FAA simulator study.

**Status:** AFS-410 to coordinate the issue with the Manager, AFS-400 for PARC consideration. **Item Open (AFS-410).**

**e. 02-01-238:** Part 97 "Basic" Minima; ATC DP Minima, and DP NOTAMs.

Bill Hammett, AFS-420 (ISI), briefed that since the last meeting, he has forwarded preliminary draft material for FAA Order 7930.2 to AJR-32. Gary Prock, AJR-32, briefed that the Order has not been revised yet. The Order now falls under the purview of AJR-32 and has been under much discussion recently and many changes are under consideration. Short-term changes should be coordinated within the next two months. Long-term changes include doing away with the current NOTAM designations; i.e., FDC, L, D, etc. and changing to ICAO series type NOTAMs. Bill Hammett, AFS-420 (ISI), asked whether, SID and STAR NOTAMs would be included with all other flight procedure NOTAMs. Gary responded yes. Tom Schneider, AFS-420, asked if the new series will include military as well as civil NOTAMs. Gary responded that the new system will be more a Federal NOTAM system for both civil and military users. Brad Rush, AJW-321, noted that the proposed changes will also require changes to the NOTAM Entry System (NES) and NOTAM Tracking System (NTS), which is currently used by NFPO and NACO to input FDC NOTAMs. Gary will continue to monitor progress and report.

**Status:** AJR-32 to revise Order 7930.2 to include SIDs and STARs with all other flight procedure NOTAMs. **Item Open (AJR-32).**

**f. 02-01-239:** Minimum Vectoring Altitude (MVA) Obstacle Accountability; Lack of Diverse Vector Area (DVA) Criteria.

Bill Hammett, AFS-420 (ISI) briefed that validation of the MVA and MIA software for the Sector Design Automation Tool (SDAT) is complete. After participating in several field tests in both ARTCCs and TRACONs, both AFS-400 and the NFPO are satisfied that the software applies the rules in FAA Notice 8260.57 for MVA charts and Order 7210.37 for MIA charts. A memo confirming this assessment has been forwarded to the appropriate ATO Service Units. All that remains is for the ATO to mandate SDAT use by field units for MVA and MIA development and submission. Bill added that, although the software will apply the rules correctly, AFS-400 has expressed concern to the En Route Service Unit that ATC facility staff specialists are not using all the software features to ensure policy compliance. For example, Order 7210.37 requires MIAs to be 300' above the floor of controlled airspace. During the SDAT evaluations of Atlanta and Washington ARTCCs, airspace was not considered in computing MIAs. This was confirmed through analysis of the results and conversations with the facility specialists. The result is that some MIAs are actually in uncontrolled airspace. AFS-400 has also met resistance in requiring a 200' adverse assumption obstacle (AAO) additive be made when computing an MIA. An AAO additive is required for MVA computations as well as other TERPS procedural segments to ensure

clearance over unreported obstructions up to 200' above ground level (14 CFR Part 77.13). AFS is in continuing dialog with the En Route Service Unit regarding these issues.

The following additional update items were provided by the SDAT project manager for inclusion in the minutes:

- SDAT version 5.10 was released to the field in January 2007. This version contains updates and enhancements requested by both Flight Standards and the NFPO from the November, 2006 meeting.
- Development of a SDAT Project Repository has begun. The repository will provide assistance to users with the design-submit-publish workflow of MVA and MIA charts. The Repository includes a web-based interface to MVA/MIA charts designed in SDAT; a beta-version was successfully field tested by NFPO during the ZDV and ZMP MIA chart reviews.
- The SDAT team continues to assist Air Traffic field units in updating MVA/MIA charts and demonstrating the advantages of SDAT. To date the team has assisted 13 ARTCCs and 5 TRACONS in using SDAT to update their MIA and MVA charts. The team's goal is to complete all ARTCCs by December 2007 and this initiative is on track.
- The SDAT Team met with NACO in April to discuss transferring SDAT MVA data electronically for printing paper charts and creating radar video maps. A format for data exchange was agreed to.
- The SDAT Team met with the NFPO to discuss PTS/SDAT integration and to train NFPO trainers on SDAT use for chart reviews.

Wally Roberts, NBAA, briefed that his organization has been in contact with Luis Ramirez, Director of Safety and Operations Support, AJE-3. NBAA requested the opportunity to review draft Order 7210.37 and was provided a copy to review off-line. Wally added that during conversation, Luis stated that en route facilities develop MIA charts using the guidelines specified in Order 8260.19. Bill Hammett, AFS-420 (ISI) noted that while that may be true for the current version of Order 8260.19C, the En Route Service Unit had non-concurred with 8260.19D. AFS-400 has responded to the AJE-0 comments and is awaiting their response. Brad Rush, AJW-321, recommended that the SDAT Team work with the IAPA team and AFS-420 to include FAA approved precipitous terrain algorithms in SDAT.

**Status:** AFS-420 and AJW-321 will continue to track software development. Item Open (AFS-420 and AJW-321).

**g. 02-01-241:** Non Radar Level and Climb-in-hold (CIH) Patterns.

Bill Hammett, AFS-420 (ISI), briefed that he has seen no item in the ATC Bulletin to date. There was no representative from the Terminal Service Unit in attendance. Tom Schneider, AFS-420, stated that he, as Chair of the ACF-IPG, would contact Ms. Coopwood for an update. Paul Ewing, AJR-37 (AMTI), questioned the importance of the issue as nothing has been done for several years.

**Status:** 1) Chair of the ACF-IPG to follow up on the lack of response on the issue by AJT-2300; 2) AJT-2300 to prepare ATC Bulletin addressing impromptu climb-in-hold (CIH) clearances. **Item Open (Chair, ACF-IPG and AJT-2300).**

**h. 03-01-247:** Holding Pattern Criteria Selection and Holding Pattern Climb-in-Hold Issues.

Tom Schneider, AFS-420, briefed the following progress report as received from Dr. Richard Greenhaw, AFS-440: The holding pattern analysis is on schedule. The following target dates are applicable:

GPS Holding Report: 7/2/2007

Conventional (including Helicopter/STOL/Cat AB) Holding Report: 7/2/2007

RNP Holding Report: 9/4/2007.

AFS-420 will update Order 7130.3 after the study is complete.

**Status:** AFS-440 to continue ASAT/simulator analysis and report. **Item Open (AFS-440).**

**Editor's Note:** *After the ACF-IPG meeting, the following update was received from Dr. Greenhaw: After reviewing the holding test results with Carl Moore and Greg Cox here in AFS-440, we have decided to ask the contractor (ATSI) to modify the pilot model to more accurately reflect typical pilot behavior during a holding operation. This will likely delay our report date for about 45 days. However, we believe the change to the software is necessary and that neither AFS-420 nor AFS-440 would be satisfied with the results without this change.*

**i. 04-01-250:** RNAV and Climb Gradient Missed Approach Procedures.

Tom Schneider, AFS-420, briefed that guidance has been developed for Order 8260.19D to allow an option to use a missed approach climb gradient to gain lower minimums. The guidance was published in the minutes of the last meeting as requested by NBAA. Since the last meeting, the ATO En Route (AJE) and System Operations (AJR) Service Units have non-concurred with the draft 8260.19D. Flight Standards has responded to the comments and is awaiting an AJE-0 and AJR-0 response. Kevin Comstock, ALPA, asked if there was any parallel effort to publish pilot educational material. Rich Boll, NBAA, stated that climb gradient text was added to the DP section of the AIM, but not to the missed approach section. Tom agreed to take this issue to the AFS-420 AIM OPR.

**Status:** AFS-420 to: 1) track publication of Order 8260.19, and 2) consider AIM language for missed approach climb gradients. **Item Open – (AFS-420).**

- j. **04-02-258:** Vertical Navigation (VNAV) Approach Procedures Using DA(H); OpSpec C073.

Ernie Skiver, AFS-420, briefed that no update was available. Ted Thompson, Jeppesen, stated Jeppesen still has issues with publishing a constant descent final approach (CDFA) angle. Jeppesen currently provides a VNAV angle even when one is not indicated on the source 8260-series form. Ted further stated that Jeppesen would like written guidance when CDFAs are allowed. In other words, will the proposed FAA guidance allow for use of a commercially developed VNAV angle for the "DA" in lieu of "MDA" maneuver? Tom Schneider, AFS-420, stated that FAA intends to consult with the ICAO OCP before issuing a change to HBAAT 99-08 to ensure compatibility with the FAA/JAA harmonized minima effort. Wally Roberts, NBAA, stated that if WAAS is active all Garmin receivers will receive vertical guidance.

**Status:** AFS-410 to work the issue and revise HBAAT 99-08. **Item Open (AFS-410).**

- k. **05-01-259:** Visual Climb Over Airport (VCOA).

Tom Schneider, AFS-420, briefed that Phil Prasse, the AFS-420, departure criteria specialist has developed new VCOA criteria for TERPS Volume 4, Chapter 4, which will be included in change 21 or 22. A copy of the draft criteria is included as attachment 4 and comments may be forwarded directly to Phil at [phil.prasse@faa.gov](mailto:phil.prasse@faa.gov).

**Status:** AFS-420 will continue to work the issue and report. **Item Open (AFS-420).**

- l. **05-02-261:** RNAV Substitution Within the NAS (*Also includes Issue 03-02-248*).

Ernie Skiver, AFS-410 briefed that guidance addressing all aspects of RNAV substitution was published as a Graphic Notice in the NTAP and subsequently included in the February 2007 AIM update (paragraph 1-2-3). Additionally, a re-write of AC 90-100, *U.S. Terminal and En Route Area Navigation (RNAV) Operations*, is in coordination and will be released immediately following the final RNAV rule. Ernie recommended the issue be closed and the group concurred.

**Status:** **Item Closed.**

- m. **06-01-262:** More Flexible Hold-in-Lieu (HIL) Alignment Options For Public RNAV IAPs.

Tom Schneider, AFS-420, briefed an update from Jack Corman, the AFS-420 RNAV criteria developer, stating that a change to Order 8260.54 is being processed that will allow up to a 90 degree offset for RNAV HIL.

**Status:** AFS-420 track criteria publication. **Item Open – Pending Publication (AFS-420).**

- n. **06-01-263:** Uniform Application of FAA Order 7130.3A RNAV Charted Holding Pattern Lengths.

Tom Schneider, AFS-420, briefed that a policy clarification memorandum has been written supporting the NBAA position that Table 8 should be used to determine RNAV holding pattern leg lengths. The memorandum was signed on November 27, 2006 and a copy was

included in the meeting handout material and posted on the AFS-420 policy web site. Once the total AFS-440 holding study is complete (see issue 03-01-247), the updated guidance will be included in the re-write of Order 7130.3. Brad Rush, AJW-321, stated that his office did not receive the memorandum and that the change will require an IAPA programming change. Tom stated that it is on the AFS-420 policy memorandum web site.

**Status:** [Item Closed](#).

*Editor's Note: Post meeting review of the discussion indicates policy has been clarified and no further action is required. The issue is closed.*

**o. 06-02-264:** Uniform Standard for Use of Climb Gradients in Public IAPs

Tom Schneider, AFS-420, briefed the policy to specify a Ft/NM gradient vice a rate of climb has been included in Order 8260.19D. Tom stated that he had spoken to Brad Rush, AJW-321, to request that all currently published procedures with a climb gradient (CG) required missed approach be amended to reflect Ft/NM. Danny Hamilton, AJW-321, took the IOU at the last meeting to follow up on amendments at San Francisco and Burbank; however, the changes have not yet been published. Brad Rush briefed that both procedures are in work for amendment to revise the notes. Brad added that the change will require re-processing the associated waiver(s). Tom also briefed that the NBAA recommendation to allow up to 3 lines of minimums, each with a lower DA/MDA and a separate CG, was discussed at the AFS-400 Technical Review Board with no consensus reached. It was proposed that AFS-410 take the issue to AFS-400 for a decision. Wally Roberts, NBAA, recommended retaining a single climb gradient pending resolution. Brad Rush, AJW-321, noted that 3 lines of minima will greatly increase workload as the missed approach for each DA/MDA would have to be evaluated, flight inspected, and require NOTAM action. Frank Flood, ACPA, recommended keeping the charts as simple as possible. Tom proposed two lines of minima, one to accommodate a standard 200 ft/NM CG and one to accommodate a single CG up to a maximum of 425 Ft/NM. Rich Boll, NBAA, asked where the CG should be depicted. Tom responded that notes are driven by Order 8260.19. A missed approach CG note should be prefaced by "Chart Note", which indicates it should be placed in the briefing strip.

**Status:** 1) AFS-410 coordinate a standardized decision with the Manager, AFS-400; 2) AJW-321 to track procedure amendments at KSFO and KBUR; and, 3) AFS-420 to track policy change publication. [Item Open \(AJW-321 and AFS-420\)](#).

**p. 06-02-265:** Retention or Development of Lowest Possible RNAV LNAV and/or VNAV Minimums.

Brad Rush, AJW-321, briefed that the RNAV approach at French Valley, CA (F70) is under amendment to lower the LNAV MDA. The RNAV approach at St. George, UT (SGU) requires the initial portion of the missed approach be straight to accommodate LPV. Air Traffic wants the same track for the LNAV approach. Brad further stated that the NFPO has approximately 6-8 airports where 2 RNAV approaches were published to retain the lowest minimums for both LNAV and LNAV/VNAV and LPV. NFPO personnel are trained to develop separate approaches when necessary to preclude high LNAV minimums. Wally Roberts, NBAA, asked how a user can find out about air traffic decisions for restrictions on approaches. Brad recommended contacting the applicable ATO Service Area FPO. Bill Hammett, AFS-420 (ISI) briefed that current policy requires that the minimum step-down

altitude be at or below the descent path on procedures that provide both vertically guided (LNAV/VNAV and/or LPV) and non-vertically guided (LNAV and/or LP) minimums. Jack Corman, the AFS-420 RNAV criteria writer, is studying this requirement and the feasibility of not requiring the non-vertically guided procedure to provide a stabilized descent from the (P)FAF to TCH. If this were the case, F70 LNAV minimums would still be the lower value even if the LPV were published. Brad Rush, AJW-321, advised that if new policy is under consideration, it should include exact criteria when a separate procedure is required.

**Status:** AFS-420 to study whether policy change is warranted. [Item Open \(AFS-420\)](#).

- q. **06-02-266:** Lack of Pilot and Controller Understanding of when an IF/IAF fix is also an IF

Paul Ewing, AJWR-37 (AMTI) took an IOU at the last meeting to clarify the AIM guidance in paragraph 5-4-9 to better help pilots understand direct-to clearances. Paul briefed that upon further review of the AIM, he sees no reason for further editing as the AIM is in concert with 14 CFR Part 91.175(j). Wally Roberts, NBAA, re-stated that there is confusion on the part of controllers on what fix is the IF. For example, the RNAV (GPS) RWY 16L at Seattle-Tacoma has three waypoints fixes published between the IAF and FAF. Prior to KENMO being identified as the "IF", a controller or pilot would have no idea from the chart which waypoint serves as the IF (See attachments 5 & 6). Paul advised that he would prepare an ATC Bulletin article advising controllers that, if the IF was in doubt, to question the facility procedures specialist. Janet Myers, AJW-3532, advised that any time a chart is put into work for any revision (procedural or non-procedural), NACO is checking the source 8260 form and charting the "IF" when the intermediate fix is identified. Since no AIM change is required, Paul recommended the issue be closed and the group agreed.

**Status:** [Item Closed](#).

- r. **06-02-267:** Pilot Option to Use Standard Timing for RNAV IAP Holding Patterns

Tom Schneider, AFS-420, briefed that the request has been made to have a specialist in AFS-420 review the criteria to ensure protection is provided to allow timing substitution. The issue has also been added to the AFS-440 holding pattern analysis requested under issue 03-01-247. Brad Rush, AJW-321, stated that there are approximately 5,000 RNAV procedures with one or more holding patterns that now may require change. Wally Roberts, NBAA, responded that ATD should still be published; however, guidance should be issued to pilots that timing is also satisfactory. Brad suggested this should be included in AC 90-100.

**Status:** 1) AFS-440 to include timing for RNAV holding in the study, and 2) AFS-420 to monitor study results and report. [Item Open \(AFS-440 and 420\)](#).

- s. **06-02-268:** Lack of Graphic Obstacle Departure Procedures (ODPs).

Both Mitch Scott, Continental Airlines, and Rich Boll, NBAA, reported that each forwarded a list of their top 10 locations of concern to the ACF-IPG Chair, who, in-turn forwarded the list to the NFPO for action. Brad Rush, AJW-321, briefed that the lists have been received and the locations have been added to the production schedule. Mitch asked what procedure should be followed for other airports of concern. Brad recommended forwarding additional requests to the servicing FPO. Bill Hammett, AFS-420 (ISI), stated that the AFS-400 memorandum of

September 15, 2006, which had been sent to AJW-3 highlighting ODP charting/development discrepancies and recommending a 3-step QA process to help eliminate errors has been received and is being acted upon.

**Status:** The NFPO continue efforts to graphically chart complex ODPs and report progress. Item Open (AJW-321).

#### **4. New Business:**

##### **a. 07-01-269: Diverse Vector Areas (DVAs).**

New Issue presented by Rich Boll, NBAA, expressing concern over disconnects between DVA information provided to pilots in the AIM, information provided to air traffic managers in FAO 7210.3U, *Facility Operation and Maintenance*, and information provided to controllers in FAO 7110.65R, *Air Traffic Control*. Rich used an example of ST Paul Downtown, MN (KSTP) where controllers frequently give initial radar vectors and assigned altitudes that are contrary to the ODP for runways 14/32. Additionally, the runway 32 climb gradient is not provided when the vector clearance is issued. Wally Roberts, NBAA, stated that NBAA conducted an informal survey of the ATO Service Areas and found that there are less than 10 DVAs in the entire country. How is a pilot to know whether a DVA exists and what the dimensions are (approved initial headings)? Wally also stated that if there is a climb gradient associated with the published ODP, it must be issued with an unpublished radar vector (DVA) departure. Paul Ewing, AJR-37 (AMTI) stated that if NBAA suspects that DVA criteria are being violated, they should report it to Air Traffic. There was a discussion on when pilots should fly the published and when not to. Also under discussion was when pilots should make the turn to an assigned ATC departure heading. Bill Hammett, AFS-420 (ISI), used the textual ODP for runway 35 at Manchester, NH (KMHT) as an example that has been under discussion in the New England Region. The ODP states to "...climb runway heading to 1200 before proceeding westbound..." Controllers frequently issue "...left turn to XXX, cleared for takeoff". Does the pilot turn at 400' AGL or climb to 1200 before taking the turn? Unfortunately, there was no Terminal Service Unit representation at the meeting to participate in the discussion. Tom Schneider, AFS-420, as Chair of the ACF-IPG, took an IOU to send the agenda item and initial discussion to the Terminal Safety and Operations Support Office, AJT-2 requesting a response and participation in future meetings.

**Status:** 1) ACF-IPG Chair to forward request for response to the ATO Terminal Service Unit; 2) Terminal Service Unit work issue and respond. Item Open (Chair, ACF-IPG and AJT-2).

##### **b. 07-01-270: Course Change Limitation Notes on SIAPs.**

New Issue presented by Rich Boll, NBAA, expressing concern over procedural data notes at both feeder fixes and IAFs where course change in excess of 120 degrees could alter arrival procedures along an airway or pertinent approach segments. The NFPO has included these notes for years and they are in consonance with the TERPs criteria contained in paragraphs 220b (feeders) and 232a(1) (initial segments). Recently, AFS-420 advised the NFPO that Order 8260.19C policy permits such notes only at IAFs. NBAA questions whether policy should require charting such notes because the criteria have a design limitation for both feeder and initial approach segments? The statement in Paragraph 220b does not seem to be concerned with the airway case. Wally Roberts, NBAA, questioned why we have these notes at all. Perhaps a better methodology would be to eliminate the notes and update the AIM and IPH. Brad Rush, AJW-321, echoed Wally's sentiments and also recommended doing away with these notes. Tom Schneider, AFS-420, stated that turns in the en route environment from one en route fix to

another are TERPS protected; therefore, perhaps turns from feeder routes to IAFs are also protected. He took the IOU to present the issue to the AFS-420 TERPS criteria writers for action.

**Status:** AFS-420 to study issue and report. **Item Open (AFS-420).**

**c. 07-01-271:** ADF or DME Required on Alternate Missed Approach.

New Issue presented by Rich Boll, NBAA, expressing concern over additional equipment requirements when an alternate missed approach is necessary. It is NBAA's position that pilots may become confused when the alternate missed approach has an equipment requirement, such as ADF or DME that is not required for either the IAP or the charted primary missed approach procedure. The NFPO has advised NBAA that pilots can always refuse the alternate missed approach except when it is NOTAMed as the temporary primary missed approach because of a NAVAID outage; however, there is no instructive material that makes this clear to the aviation community. NBAA also recommends consideration be given to charting the alternate missed approach text in the alternate missed approach holding pattern graphical insert. Bill Hammett, AFS-420 (ISI) provided ACF background on alternate missed approach charting. It has been policy for some time to place the alternate missed approach holding pattern on the approach chart as was discussed and agreed to at the ACF-IPG under closed issue 97-01-182. The bottom line is that the group believed it is beneficial to depict the alternate missed approach holding pattern to facilitate ATC operations and provide instant pilot situational awareness; however, the group was opposed to publishing the actual instructions, deferring that portion of the issue to the Charting Group. John Moore, AJW-352, suggested that equipment requirements could possibly be added to the alternate missed approach fix holding pattern. Mitch Scott, Continental Airlines, stated that sometimes when databases are coded, NDBs are eliminated. Frank Flood, ACPA, recommend that another term, e.g., "secondary", be used when describing the alternate missed approach fix. Rich Boll, NBAA, reiterated that the primary thrust of the issue is to get pilot educational material updated in the AIM and Instrument Procedures Handbook. Tom Schneider, AFS-420 stated that he was against publishing alternate missed approach equipment requirements and would take the issue to AFS-420 for action. He also noted that a related issue regarding alternate missed approach fix and holding pattern charting is on the Charting Group agenda for discussion.

**Status:** AFS-420 to review AIM guidance and revise as necessary. **Item Open (AFS-420).**

**d. 07-01-272:** Using an ODP in lieu of the Published Missed Approach Procedure.

New Issue presented by Rich Boll, NBAA. NBAA is concerned over The AIM contains language that recommends a pilot, who commences a missed approach below the MDA/DA or after the MAP, use the runway's ODP instead of the published missed approach. This is contrary to adherence to the air traffic clearance that authorized the instrument approach procedure. Further, it becomes more problematic when an IAP has circling-only minimums. In any case, NBAA believes it is both bad advice and causes the pilot to be in violation of his air traffic clearance. In some cases a pilot can obtain a timely amendment to an air traffic clearance; in other cases, such as relay through an FSS communications outlet, he most likely cannot. NBAA is recommending the AIM language delete any reference/recommendation about "converting" authorized missed approach procedures into unauthorized ODPs. Tom Schneider, AFS-420, stated that he believed that the AIM is correct. Once a pilot who has to go-around (balked landing, tower clearance cancelled, etc.) after leaving the MDA or passing the MAP and is committed for landing, the "TERPSed" missed approach is no longer any good, ergo the AIM

language is correct. Chasing after the charted missed approach track could prove disastrous; however, the ODP will provide a safe extraction. Ernie Skiver, AFS-410, agreed with Tom stating that from landing to take-off mode, the ODP was a safer option. Brad Rush, AJW-321, stated this may be true for places like Eagle, CO, but do we want to endorse the practice everywhere. Frank Flood, ACPA, noted that the aircraft will fly the coded data base missed approach track. Frank added that 99% of Air Canada pilots will fly the charted missed approach instructions in this situation. James Taylor, USAF/AIS agreed that better missed approach guidance should be published in the AIM to highlight the hazards of a late missed approach. Ron Graham, Air Canada, stated that pilots must review all options prior to getting into a late missed approach situation. Lance Christian, NGA, noted that there are many airports in rugged terrain areas where chasing the published missed approach could be fatal. Tom agreed to take the issue back to AFS-410/420 for updated AIM guidance.

**Status:** AFS-410 and 420 to consider updating AIM language. **Item Open (AFS-410 and 420).**

**e. 07-01-273:** Timely Rectification of Significant NFPO Errors.

New Issue presented by Rich Boll, NBAA, regarding procedure design and charting anomalies. Normally, concerned stakeholders are expected to express concerns when the procedure is in the coordination process. However, it is a reality that most stakeholders neither have the inclination nor expertise to evaluate procedures in coordination and often, the first practical indication of an adverse change in an IAP occurs when the new chart is effective. NBAA recommends that where stakeholders have a “wish list” request, consideration of that request should wait to be considered at the next biennial review. But, when the stakeholder brings a defective amendment to the attention of the NFPO, the procedure should be corrected immediately by NOTAM. Or, where policy requires the procedure be amended in the normal manner, the amendment should occur within six months of the NFPO being placed on notice. Additionally, NBAA desires that where feeder routes meet the alignment and descent gradient requirements for NoPT designation, those feeder routes should be designated as initial approach segments except where excessive length will not permit that treatment (excessive length would never be an issue with RNAV IAPs). Rich added that when a procedure is charted incorrectly, it should be corrected immediately by NOTAM. Brad Rush, AJW-321, agreed that charting errors should be corrected immediately and current policy requires FDC NOTAM action. Design errors should also be corrected immediately; however, procedure re-design to accommodate a single user’s “wish list” could cause excessive workload. He has briefed the NFPO staff to closely review and apply correct No-PT criteria. Brad agreed to work directly with NBAA on a notification system for procedure design problems.

**Status:** AJW-321 to work directly with NBAA on notification process for procedure design problems. **Item Open (AJW-321).**

**f. 07-01-274:** AIM Information Regarding ODP Minimum Crossing Altitudes

New Issue presented by Rich Boll, NBAA, regarding AIM language relating to ODP altitude restrictions. The current AIM language in paragraph 5-2-7-d-7 relates to altitude restrictions on “any DP”. NBAA is concerned that since climbing crossing altitude restrictions in ODPs are for the sole purpose of providing obstacle clearance, ATC cannot cancel such restrictions when a pilot is using an ODP whether the ODP was assigned by ATC or elected by the pilot. ATC can cancel such restrictions on a SID, provided the restriction on the SID is for air traffic purposes rather than obstacle clearance. Paul Ewing stated that if the pilot had questions regarding an ATC clearance, he/she should advise ATC. Al Herndon, MITRE/CAASD, noted that the PARC

Pilot/controller Procedures and Phraseology Working Group is working on definition and use of the word “maintain” for staffing through ATPAC for eventual revision to the AIM and Order 7110.65. Tom Schneider, AFS-420, agreed to have AFS-420, as the OPR for AIM paragraph 5-2-7, review current guidance and update it as required.

**Status:** AFS-420 to review and update AIM ODP guidance (paragraph 5-2-7).

**Item Open (AFS-420).**

**g. 07-01-275:** Radar Required for Missed Approach.

New Issue presented by Rich Boll, NBAA regarding the procedural data note “RADAR or ADF REQUIRED” on the Wilmington, NC (KILM) ILS RWY 35. NBAA is concerned that many pilots will conclude that either radar or ADF is required for procedure entry. In fact, either ADF or radar is required for the missed approach procedure. Thus, the aircraft without ADF equipment has to “bet on the come” so to speak, that ATC radar vector services will be available in the future event of a missed approach. This appears to be a recent shift in FAA policy as NBAA is of the impression that Part 121 flights, for example, cannot be dispatched to use a procedure that provides only radar vectors for the missed approach. NBAA requests that the FAA be prepared to confirm or refute this understanding at the meeting for the benefit of the group. Historically, an IAP such as the example attached, would simply state “ADF Required.” NBAA urges the group to recommend the FAA return to that more conservative, NAVAID-based policy. Tom Schneider, AFS-420, responded that the plan view note on the approach in question is not in accordance with Order 8260.19. There is a terminal route from the en route structure to the IAF. However, the LOM is required for procedure entry and the course reversal maneuver, therefore, a planview note “ADF REQUIRED” is required under Order 8260.19, paragraph 855h(1). ADF or radar is also required for the missed approach; therefore a second equipment note “ADF or RADAR REQUIRED” is required for the briefing strip under paragraph 855h(2). A “RADAR REQUIRED” note in the plan view is only required when radar is the only method for procedure entry from the en route environment under paragraph 855g(2). Brad Rush, AJW-321, took the IOU to amend the procedure.

**Status:** AJW-321 to amend the KILM ILS RWY 35. **Item Open (AJW-321).**

**h. 07-01-276:** RNAV Hold-in-Lieu (HIL) Prior to the Intermediate Fix.

New Issue presented by Rich Boll, NBAA, regarding course reversal maneuvers. TERPS criteria require that course reversals be predicated on the intermediate fix. In the case of RNAV procedures this could create terminal routing limitations at some mountainous airports. NBAA recommends that TERPS criteria be amended to permit RNAV HIL course reversals at an IAF prior to the IF, but only where intermediate segment length won’t permit an HIL at the IF that clears terrain. Otherwise, any RNAV HIL should be anchored at the IF. Tom Schneider, AFS-420, responded that this issue is addressed in a change to Order 8260.54. Brad Rush, AJW-321, asked why NBAA was requesting a HIL pattern when an arrival holding pattern would serve the same purpose without making the course reversal mandatory (see Order 8260.19, paragraph 857c(4)). Tom Schneider, AFS--420, recommended that NBAA review the draft change to Order 8260.54 and the current guidance in Order 8260.19 for adequacy.

**Status:** NBAA to review draft change to Order 8260.54 and current policy in Order 8260.19 for adequacy. **Item Open (NBAA).**

i. **07-01-277: Routine Charting of Remote Altimeter Setting Source (RASS).**

New Issue presented by Rich Boll, NBAA, regarding RASS chart notes. NBAA is concerned that 1) when RASS increases the MDA, the associated visibility increases are not included in the charted notes; 2) in some cases, not all the IAPs at a given airport have the RASS notes; and, 3) that appropriate FAA oversight functions may not be fully aware of the implications of FAA RASS policy. Tom Schneider, AFS-420, briefed that RASS policy has been revised in Order 8260.19D to address NBAA concerns 1 and 2. Tom also stated that all policy is coordinated through AFS-200 and 800. Additionally, AFS-400 coordinates policy with the regional AWO/PMs. This should satisfy NBAA concern #3. Brad Rush, AJW-321, stated that the NFPO will ensure that all procedures at a given airport are addressed simultaneously prior to Order 8260.19D through AVN internal policy.

**Status:** AFS-420 will track publication of Order 8260.19D. **Item Open – Pending Publication.**

**6. Next Meeting:** ACF Meeting 07-02 is scheduled for **October 23-25, 2007** with ALPA, Herndon, VA scheduled as host. Meeting 08-01 is scheduled for **April 22-24, 2008** with AMTI, Alexandria, VA as host.

**Please note the attached Office of Primary Responsibility (OPR) listing (attachment 1) for action items. It is requested that all OPRs provide the Chair, Tom Schneider, (with an information copy to Bill Hammett) a written status update on open issues not later than April 6, 2007 - a reminder notice will be provided.**

**7. Attachments (6):**

1. OPR/Action Listing.
2. Attendance Listing.
3. ALPA History - Issue 98-01-197 
4. Draft VCOA Criteria 
5. Seattle-Tacoma RNAV (GPS) RWY 16L (Old) 
6. Seattle-Tacoma RNAV (GPS) RWY 16L (Current) 

**AERONAUTICAL CHARTING FORUM  
INSTRUMENT PROCEDURES GROUP  
OPEN AGENDA ITEMS FROM MEETING 07-01**

<b><u>OPR</u></b>	<b><u>AGENDA ITEM (ISSUE)</u></b>	<b><u>REQUIRED ACTION</u></b>
AFS-420	<b>92-02-105</b> (Circling Areas)	Provide update on draft criteria coordination.
AFS-410	<b>92-02-110</b> (Cold Weather Altimetry)	Track issue and report progress on MITRE study.
AFS-410	<b>96-01-166</b> (Descent Point on Flyby Waypoints. Originally "on course")	Develop AIM material. Assess ICAO definition of "on course".
AFS-410	<b>98-01-197</b> (Air Carrier Compliance With Climb Gradients)	Coordinate an AFS-400 decision on the issue and coordinate PARC interaction.
AJR-32	<b>02-01-238</b> (Departure Minimums and DP NOTAMs)	Revise Order 7930.2 to include SID/STAR NOTAMs under the FDC process.
AFS-420 AJW-321	<b>02-01-239</b> (MVA Obstacle Accountability and Lack of DVA Criteria)	Continue involvement in the MVA/MIA automation project and report progress.
Chair, ACF-IPG AJT-2300	<b>02-01-241</b> (Non-radar Level and Climbing Holding Patterns)	Chair: Follow up on lack of AJT response. AJT-2300: Develop controller education material on the issue for the ATC Bulletin.
AFS-440	<b>03-01-247</b> (Holding Pattern Selection Criteria)	Continue research/evaluation on the issue and report.
AFS-420	<b>04-01-250</b> (RNAV and Climb Gradient Missed Approach procedures)	Track processing/publication of Order 8260.19D and consider AIM revision to address missed approach climb gradients.
AFS-410	<b>04-02-258</b> (VNAV IAPs using DA(H) and OpSpec C073)	Re-write HBAT 99-08 and lead ad hoc working group on the issue.
AFS-420	<b>05-01-259</b> (Visual Climb Over Airport)	Continue working the issue and report.
AFS-420	<b>06-01-262</b> (HIL Alignment Options for Public RNAV Approaches)	Track change to Order 8260.54.
AFS-410 AJW-321 AFS-420	<b>06-01-264</b> (Uniform Standard for Climb Gradients on Public SIAPs)	AFS-410: Coordinate a standardized AFS-400 decision. AJW-321: Amend existing IAPs. AFS-420: Track new policy revision in Order 8260.19D.
AFS-420	<b>06-02-265</b> (Lowest Possible LNAV or LNAV/VNAV minimums)	AFS-420: Consider policy change and/or requirements.
AFS-440 AFS-420	<b>06-02-267</b> (Option to Use Standard Timing for RNAV Holding Patterns)	AFS-440: Add to holding pattern study. AFS-420: Monitor progress and report.

AERONAUTICAL CHARTING FORUM  
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AJW-321	<b>06-02-268</b> (Lack of Graphic Depiction of Complex ODPs)	Continue efforts to chart complex ODPs and report progress.
ACF-IPG Chair AJT-2300	<b>07-01-269</b> (Diverse Vector Areas)	IPG Chair: Forward request for response to AJT-2300 AJT-2300: Work issue and report.
AFS-420	<b>07-01-270</b> (Course Change Limitation Notes on IAPs)	Study issue and report.
AFS-420	<b>07-01-271</b> (DME or ADF Required on Alternate Missed Approach)	Study issue, revise AIM guidance as necessary, and report.
AFS-410 AFS-420	<b>07-01-272</b> (Use of ODP in Lieu of Published Missed Approach.	Review AIM language and update as necessary.
AJW-321 NBAA	<b>07-01-273</b> (Rectification of NFPO Errors)	Jointly develop reporting process for procedure design problems.
AFS-420	<b>07-01-274</b> (AIM Information Regarding ODP Minimum Crossing Altitudes.	Review AIM paragraph 5-2-7 and update as necessary.
AJW-321	<b>07-01-275</b> (Radar Required Missed Approach)	Amend the Wilmington, NC (KILM) ILS RWY 35 approach
NBAA	<b>07-01-276</b> (RNAV Hold-in-Lieu Prior to the intermediate Fix)	Review draft change to Order 8260.54A and current policy in Order 8260.19C.
AFS-420	<b>07-01-277</b> Remote Altimeter Setting Source (RASS) charting)	Track publication of Order 8260.19D.

**AERONAUTICAL CHARTING FORUM  
INSTRUMENT PROCEDURES GROUP  
ATTENDANCE LISTING - MEETING 07-01**

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