Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group (ACF-IPG) meeting held on October 28, 2014. The meeting was hosted by Pragmatics, Inc, 1761 Business Center Drive, Reston, VA. An office of primary responsibility (OPR) action listing (Atch 1) and an attendance listing (Atch 2) are appended to the minutes.

Please note there are briefing slides inserted in the minutes as PDF files shown as stickpins. All are asked to 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/afs/afs400/afs420/acfipg/ This site contains copies of minutes of the past several meeting 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. There is also a link to the ACF Charting Group web site. We encourage participants to use these sites for reference in preparation for future meetings.

ACF meeting **15-01** is scheduled for **April 28-30**, **2015** with ALPA, Inc., Herndon, VA as host. ACF **15-02** is scheduled for **October 27-29**, **2015** with Lockheed Martin as host.

Please note that **meetings begin promptly at 8:30 AM**. Dress is business casual. Forward new agenda items for the 15-01 ACF-IPG meeting to the above addressees not later than April 10, 2015. 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

GOVERNMENT / INDUSTRY AERONAUTICAL CHARTING FORUM INSTRUMENT PROCEDURES GROUP Meeting 14-02 Pragmatics, Inc. October 28, 2014

1. <u>**Opening Remarks:**</u> 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 October 28. Pragmatics Corporation hosted the meeting at their Reston, VA facility. Mr. Tim Strutzel made welcoming and administrative comments on behalf of Pragmatics. A listing of attendees is included as attachment 2.

2. Briefings:

a. Tom Schneider, AFS-420, discussed enhancements to the ACF-IPG web site, including functionality of the site, the ongoing effort to expand the history data base to include all issues from inception to present. Contact Steve VanCamp if any specific items are needed prior to placement on the web site. We hope to have all of these on the site prior to the ACF 15-01. The web site also now has a PDF version of the ACF booklets from previous meetings.

b. Joshua Fenwick, AeroNavData, Inc. briefed the group on behalf of Garmin on the issue of coding of Charted Visual Flight Procedures (CVFPs) discussed at the ARINC NDB working group meeting in held in October, 2014. (4) Discussed were two CVFPs at SFO, both for RWY 28L the TIPTOE VISUAL RWY 28L/R and the QUIET BRIDGE VISUAL RWY 28L/R. Users want these in their FMS, but understand there is no FAA certification guidance for coding them. These two procedures are displayed as "R28L V" and "R28L F". The ARINC 424 group decided not to address the issue with a new character code and it is not yet decided how this will be handled in the future, but that somehow the relationship between the ident and the correct procedure needs to be established. Joshua brought up RNAV visuals, and Rick Dunham, AFS-420, stated we are not ready to discuss that issue. Tom Schneider, AFS-420, added that these are not RNAV approaches, but are CVFPs. Valerie Watson, AJV-344, inquired if the problem was that the title on the chart does not match the ARINC coding. Joshua responded that the disconnect is having two different approaches to the same runway end and no way to distinguish them in the coding. Joshua acknowledged that these are Visual approaches and as such the FAA never planned to code these procedures. Ed Ward, Southwest Airlines, said he is surprised that the FAA is producing these and that they are out there in an avionics database. Tom responded by reiterating these are CVFPs and the FAA never intended to put them into a database. Ted Thompson, Jeppesen, supported this view, and further stated that nothing precludes an airline from pursuing an RNAV overlay to a procedure. If the airline does this, they incur the responsibility of charting, naming convention, and other issues under their own operating procedures. Related to this, there is the complex issue of choosing and selectively adding VFR waypoints to IFR databases. Rick reiterated that RNAV visual criteria is under review, and not ready to discuss. Ted agreed. Brad Rush, AJV-344, and Valerie discussed documentation issues. Joshua will take back the ACF input, explain that this is an issue between the customer (airline) and the database supplier and that at this time, decisions on coding these procedures and including them in specific databases will need to be decided between the two.

3. <u>Review of Minutes of Last Meeting</u>: Steve VanCamp, AFS-420, (ISI/Pragmatics Contract Support), briefed that the minutes of ACF-IPG 14-01, which was held on April 29, 2014 were electronically distributed to all attendees as well as the ACF Master Mailing List on June 11, 2014. There were no changes submitted, and the minutes are accepted as distributed.

4. Old Business (Open Issues):

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

John Blair, AFS-410, said he has been directed to send the cold temperature NTAP information out for publication on Dec 12, 2014. Valerie Watson, AJV-344, asked Kel Christianson, AFS-470, to brief the Bruce DeCleene, AFS-400, proposal to include separate temperature values for different segments on the approach. Kel briefed that the proposal would involve charting Intermediate (I), Final (F), and Missed (M) cold temperature values, rather than the single temperature previously agreed upon. Valerie asked if we could discuss that, since she had made a charting specification that had already gone thru both Flight Standards and the users, and all had signed off on it. The usefulness of this information to a pilot was discussed and whether this should be documented on the approach chart. Michael Stromberg, Air Wisconsin, said what would be extremely useful with all these digital charts is if the pilot could just enter in a temperature, and then the digital charts would tell you what the new altitude would be. John and Valerie agreed that this would be the simplest for the user, but this would not be possible at this time. Michael said although the FAA is not able to accomplish this, other manufacturers of charts might. After a lengthy discussion, the consensus of pilots in attendance voiced that multiple cold temperature values for the different segments of the approach is not supported. Overwhelming opinion is that this would not be utilized by the pilot and would only add confusion. Lev Prichard, APA, said he would prefer to correct for worst case across the board, so calculation can be made en route, planned and briefed. Charles Wade, Delta Airlines, voiced that multiple temperatures and multiple corrections is far too complicated and requests that the FAA "keep it simple". Ted Thompson, Jeppesen, briefed that at the request of the FAA, he reached out to users, and the overwhelming consensus was to chart the single (warmest) temperature only. The ACF pilot group participants in attendance concurred. Tom verified with Kel that the multiple temperature depiction was a proposal only, suggested by Bruce, and based on input from the group; the FAA will go forward with a single altitude correction value on the chart. Kel said he would inform Bruce that the pilots at the ACF did not support the multiple temperature proposal. John restated that the NTAP cold temperature information should still be in published on 12 December and pilots are expected to know how corrections are to be made. If pilots choose not to correct when an FAA inspector is on board, there will likely be consequences. Tom inquired about the list of affected airports, and asked if they have been NFDD'd? Kel stated he is prioritizing the list of airports. Valerie stated they cannot begin publishing the airport remark in the NFDD until the charting specification is signed off, and that should be happening soon. Kel briefed that he coordinated with Valerie that a maximum of 175 charts (not airports, since some have multiple procedures) will be revised each 8 week cycle. Tom asked Kel about Aeronautical Information Manual (AIM) guidance. Kel advised that AFSinitiated cold temperature guidance will be in the January publication. He also said the ATO would be including some AIM guidance, but was not sure if this would make it into the AIM this January. Rick Dunham, AFS-420, tasked Mason Curling, AFS-405, to ensure the information gets into the AIM (critical). Mason said if info is provided from Kel, he will ensure it is included in the AIM. Michael asked if there is a list of when the chart changes will be published so the airlines will know. Valerie said all of the changes will be in the NTAP in December and will be published incrementally on the charts. Kel restated that the NTAP will document all airports that require correction, regardless of chart publication cycle. He stressed that the approach plate is

not the trigger, the NTAP is. Rich Boll, NBAA, said he understands that initially the NTAP will be the only source of temperature correction airports and that have a correction and that corrections are mandatory, but pilots do not always fly with the NTAP in hand. He stated that publishing only an NTAP listing will not be sufficient, and this list needs to be sourced someplace else also. Kel suggested pilots carry a copy in their flight bag. Rich said this is not feasible, and asked if we could place in the list in the TPP. Valerie said they had discussed placing this list on a web site. Pilots commented about not having internet access on the aircraft. Rich stated with info in the TPP, at least information is in the aircraft, but acknowledged that this was not a perfect solution. Brad Rush, AJV-344, advised this would require the extra information be in all the books, including Florida, where the issue will never be applied. Lev asked why the information would not be disseminated via D-NOTAMs. Tom advised that to his knowledge, the information would not go out as NOTAMs. Michael said the difficulty is enforcing a procedure where there is no cue for the pilot on the approach plate, but they are responsible for compliance. Lynette said NOTAMs could be issued, but questioned whether the pilot community wants 200+ NOTAMs. The group discussed the NOTAM subject, but no clear preference was expressed. Valerie suggested AeroNav Products could issue a Safety Alert to inform users of the affected airports and to point them to the NTAP & AIM for further guidance. She shared that there would also be a list of the airports posted on the AeroNav Products website on the TPP page. Tom asked Rich if this would suffice. Rich said he is concerned about distribution.

Status:

Continue to work AIM/AIP guidance: AFS-470 to keep AFS-420 updated regarding IPH guidance required; AFS-405 will follow up with AFS-470 regarding AIM updates; and AFS-470 to provide a status update at the next meeting. Valerie Watson, AJV-344, will finalize charting specifications, work with AFS-470 to issue a Safety Alert and will keep Jeppesen informed. <u>Item</u> **Open:** AFS-405, AFS-420, AFS-470 and AJV-344

b. 02-01-241: Non Radar Level and Climb-in-Hold (CIH) Patterns.

Eric Fredricks, AJV-823, briefed that the DCPs have been rewritten, passed internal review, and they are going out for coordination/comment in the next two weeks. The intent is to publish on the June 2015 publication date.

Status: Continue to track FAA Order JO 7210.3 DCPs. Item Open: AJV-8

c. 07-01-270: Course Change Limitation Notes on SIAPs.

Tom Schneider, AFS-420, briefed updates are in the draft FAA Order 8260.19G, which is out soon for coordination, and planned for March 5, 2015 publication. The paragraph 8-2-5e will read as follows: (___). John Collins, GA pilot, asked whether RNAV approach procedure feeders within 30NM are RNAV 1 or 2. Brad Rush, AJV-344, advised RNAV 1 & 2 standards are used in the development of procedures, but as a pilot your operating standard for Nav specifications is RNAV 1. John said when operating on feeder routes the system scales from 2 to 1 at 30NM. Valerie Watson, AJV-344, inquired if this is not always en route criteria. John agreed and will research the issue and write up a formal RD for the next ACF if necessary.

Status: AFS-420 to track Order 8260.19G update. John Collins will research the issue and address at next ACF as need be. **Item Open:** AFS-420 and John Collins.

d. 07-02-278: Advanced RNAV (FMS/GPS) Performance of Holding Patterns Defined by Leg Length

Tom Schneider, AFS-420, briefed that Bob Lamond, NBAA, had sent Steve Jackson, AFS-420, correspondence as agreed upon, and here is Steve's response (\mathbf{I}). Tom advised there will be no NavSpec changing current RNAV holding practices as described in the AIM/AIP. Rick Dunham, AFS-420, asked Rich Boll, NBAA, to explain the purpose of this agenda item. ICAO is revising their RNAV holding guidance and there is no NavSpec specifically defining RNAV holding. Rich said AIM guidance is insufficient. His concern is that as long as both ATC and pilots knows aircraft may fly outbound more than prescribed before turning back to achieve desired leg length NBAA is satisfied. Tom indicated Steve is saying pilot must follow AIM guidance regardless of what the box does. Rich said that the current nav system would require pilot initiate turn and re-intercept pattern, which is too much leg work for the pilot. He would recommend a return to timed holding, and AIR-130 would have to go to manufacturers and have them fix their systems. Kevin Bridges, AIR-130, said there is no NavSpec for automated RNAV holding. Current MOPS define it, but it is not a required function. The pilot needs to fly what the procedure says, regardless of what the box manufacturers have programmed into their systems. Group discussion followed on box functionality and differences, and the fact that this is not a coding issue. Rick Dunham, AFS-420, said AFS-420 will take another look at the language in AIM/AIP and IPH, in conjunction with AFS-470, to ensure pilots know to stay inside airspace. Joshua Fenwick, AeroNavData, said this would be a good issue for the ARINC NDB group to take up, and he will forward it to Sam Buckwalter to discuss. The group meets in June 2015. Tom added we could see if RTCA or ARINC 424 group can take, since there is nothing more the ACF can do at this point.

Status: AFS-420/470 will look at AIM and IPH language. Joshua Fenwick, AeroNavData, will bring issue up with ARINC 424 committee. **Item Open:** AFS-420/470 and Joshua Fenwick, <u>AeroNavData</u>

e. 09-02-291: Straight-in Minimums NA at Night

Tom Schneider, AFS-420, provided an update (\mathbf{I}) from John Bordy, AFS-420, showing the current standard and what changes are in progress. Rick Dunham, AFS-420, advised this may change before FAA Order 8260.3C is finalized, and stated that the guidance will harmonize the visual straight-in and circling issue, along with a number of 20:1 issues. Tom said the last slide will be submitted at January 2015 US-IFPP. Rick has done some ad-hoc coordination with US-IFPP members via email and received verbal concurrence on proposed changes. Kevin Bridges, AIR-130, inquired about the splay to be used, stating his concern on flight check of obstacles. Rick said they will report any obstacles they see along edges. Rick discussed safety case and data risk management methods used to warrant this change. Vincent Massimini, MITRE, asked if the intent is to prohibit night landings on instrument approaches. Tom stated that policy in FAA Order 8260.19 has changed and addresses "instrument" flight procedures and this does not impact operations conducted under VFR. Rick advised that a memo is being finalized to change the current FAA Order 8260.3B criteria immediately (not wait for FAA Order 8260.3C publication). Rich Boll, NBAA, asked about procedure revisions and Brad Rush, AJV-344, said policy when reviewing a procedure is to review "all" runway visual areas at same time at the airport.

Status: AFS-420 will continue to work the issue through the US-IFPP. **Item Open:** AFS-420 (US-IFPP).

f. 10-01-292: Removal of the Visual Climb Over Airport Option on Mountain Airport Obstacle Departure Procedures

Eric Fredricks, AJV-823, briefed DCPs were rewritten for FAA Order JO 7110.65, the AIM Pilot Controller Glossary and the AIP. These documents are being reviewed by ATO Terminal Operations. Targeted publication date is June 2015.

Status: AJV-823 to continue to track the change and will advise on progress of DCP's. **Item Open:** AJV-823.

g. 10-01-294: RNP SAAAR Intermediate Segment Length and ATC Intervention.

Kel Christianson, AFS-470, briefed () that the PARC has completed work on this topic and the report on vectors to RNP final was published on August 22, 2014. Gary Fiske, AJV-8, added that FAA Order JO 7110.65 has already been changed to account for 90 degree turns. He stated that the subject has been expanded into a paragraph 4-8-1 change on parameters for turns onto an RF leg, which is due to be published January 8, 2015. Tom Schneider, AFS-420, advised that changes to FAA Order 8260.58 will appear in the "A" revision. Rick Dunham, AFS-420, added the change will address design criteria for these types of procedures, will be aligned with other changes, and that speed concerns (design constraints) remain. Planned publication for Order 8260.58A is July 2015.

Status: AFS-420 will report on changes to FAA Order 8260.58A. Item Open: AFS-420

h. 11-02-298: Converging ILS Coding and Chart Naming Convention.

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. <u>Item Open: AFS 410/420</u>

i. 12-01-299: Loss of CAT D Line of Minima in Support of Circle-to-Land Operations.

Tom Schneider, AFS-420, briefed on slides () provided by John Bordy, AFS-420. He then asked Rich Boll, NBAA, to elaborate on the issue. Rich briefed that there are a large number of airports in the NAS that do not have, or will soon be losing CAT C & D minima on the basis of airport design code/runway reference code. Rich provided an example of an airport in Iowa losing its CAT C line of minima because the runway was designated to a class BII category. Tom said that in the majority of these cases, when procedures are being designed, the RAPT, in conjunction with the airport regional authority, decide on categories to publish. Rich mentioned the stronger language added to FAA Order 8260.3B, change 26, to support circle to land

operations has helped. Rick Dunham, AFS-420, said there is also additional guidance for the RAPT on CAT C & D in an official memo that should come out soon. Tom advised if additional information becomes available prior to publishing the ACF minutes, it will be attached.

Status: AFS-420 will continue to track US-IFPP action and report on publication of new guidance memo. **Item Open:** AFS-420 (US-IFPP)

<u>Editor's note:</u> Memorandum: RAPT criteria guidance for inclusion of instrument approach categories C & D on instrument procedures signed 12-04-2014. (

j. 12-01-301: Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment (*Includes Issue 13-01-309 LP Procedure Cancelled Because of VDA Not Being Charted*)

Tom Schneider, AFS-420, briefed there are two parts to the issue. The first provided by Dan Wacker, AFS-420, (I) shows what is in coordination for VDA design in FAA Order 8260.3C. The chart note change is in FAA Order 8260.19G, which will be published in March 2015. Rick Dunham, AFS-420, advised that they are working on IPH guidance and strengthening the language in FAA Order 8260.3C to maximize use of vertical guidance. The goal is to provide vertical guidance if at all possible on all procedures. Revised AIM/AIP language will follow as appropriate. John Collins, GA pilot, pointed out that higher angles will restrict categories and would not want to see an approach "lost" because of a high angle. Rich Boll, NBAA, asked Ted Thompson, Jeppesen, what happens if AeroNav Products does not provide a Descent Angle or a Descent Angle NA note, and Ted replied they code a zero angle. Kevin Bridges, AIR-130, said charts can be tailored to user requests and they can provide whatever they want on advisory vertical guidance. Joshua Fenwick, AeroNavData, said the ARINC NDB group looked at this issue and was interested in the ACF discussion, which he will communicate. The ARINC group acknowledged if coding a zero is a bad idea, they will consider removing angle from the ARINC 424 coding. There are pilots that may want the advisory angle to continue to be calculated and coded. John asked if the zero is used as an angle or code and Kevin said it depends on the manufacturer. Kevin added that AIR-130 was against using zero as a solution because of the problems it may cause. Brad Rush, AJV-344, said that AeroNav Products will not source or support the enabling of an angle on a procedure that would take aircraft thru an obstacle. Discussion followed on how the angle is coded and how it's used by pilots. The main issue is use of an angle below the MDA. Lev Prichard, APA, said this is an education issue since pilots are "visual" at that point. Tom said issue was discussed internally and there will not be a SAFO issued, however, clearly pilot education needs to be expanded. Rick added that language in the AIM/AIP and IPH are under review. Kevin said the angle is being coded as a zero and guidance has been published that this can cause problems with boxes. There is nothing that prevents a manufacturer from using another method to calculate advisory vertical guidance or charts being tailored to display information, but it might be good idea to publish a list of affected airports until all notes have been published. Discussion followed on possible benefits of a list and who would use information. Brad is looking internally at the possibility. Kevin then addressed a second issue () with a recap that there are no MOPS/TSO requirements and people can choose how to use. AIR-130 issued a Special Airworthiness Information Bulletin (SAIB) (**I**) to inform that the issue exists (i.e., be ready for it) and also alerted aircraft OEMs, avionics manufacturers, and operators, providing suggestions on mitigation.

Status: Joshua Fenwick, AeroNavData, will bring the issue back to the ARINC NDB workgroup and report at the next ACF; AFS-420 will review AIM/IPH language; AJV-344 will look at

possibly developing a list of affected airports. Item Open: Joshua Fenwick, AeroNavData, AFS-420, and AJV-344

k. 13-01-311: Terminal Arrival Areas

Tom Schneider, AFS-420, briefed all references to free flight in FAA Order 8260.58 are being removed (although already accomplished via waiver) and IPH guidance will be in the next release. AIM/AIP diagram work has been completed. There is guidance for TAA placement on RNAV to ILS procedures; however, TAAs are not placed on procedures that contain conventional means (i.e., either an MSA or a TAA can be published, but not both). Rich Boll, NBAA, agreed to close the agenda item.

Status: Item Closed

I. 13-02-312: Equipment Requirement Notes on Instrument Approach Procedures

John Blair, AFS-410, briefed the status and stated his belief that it would be beneficial to have consistent chart placement of a box with required equipage (items not in procedure title) for conventional and PBN approaches. This would enhance preparation and briefing of the approach. Tom Schneider, AFS-420, referred to PBN information box work in progress and Kel Christianson, AFS-470, said that for approaches, the group briefed last time that equipment requirements would be published above the existing notes box of the briefing strip. He briefed that this should be done initially with conventional procedure information, then as PBN information is developed and finalized, it can be placed in the same location. Rich Boll, NBAA, said the original issue was about both contradictory information and various locations of information on the approach plate/chart, and inquired about the 2020 timeframe on PBN information. Ted Thompson, Jeppesen, brought up that chart note placement has historical inferences: placement in the planview means one thing and briefing strip placement means another. If equipment notes were consolidated to perhaps publication of the most onerous one and placed in a standardized location, much pilot confusion may be alleviated. The nuances of note placement are fairly subtle and are probably often misinterpreted. There may also be a need to enhance wording for applicability to a certain phase of the procedure. Rick Dunham, AFS-420, acknowledged the concerns of the group, but stated that staffing dictates that at this time this is not a high priority issue. A work group formed at ACF14-01 did not meet, although there is still interest. A copy of the previous work group list was read and is included (\mathbf{I}) .

Status: AFS-410 will work toward scheduling a meeting with those signed up to participate and report back at the next meeting. **Item Open:** AFS-410

m. 13-02-313: Chart Notes for Simultaneous Approaches

Gary Fiske, AJV-8, briefed that the chart note will now read "simultaneous approach authorized" (specific runway numbers will be removed) and that FAA Order JO 7110.65 is in update process. Rick Dunham, AFS-420, advised that charts will be revised, with the notes simplified and extraneous language removed. John Blair, AFS-410, stated that explanatory language is in the AIM. Gary recommended this item be closed. The group agreed.

Status: Item Closed

n. 14-01-315: 90 Degree Airway-to-RNAV-IAP Course Change Limitation; Arrival Holds

Tom Schneider, AFS-420, briefed that the US-IFPP decision was to maintain status quo and recommends that no further work be done on the issue. Rick Dunham, AFS-420, said attempting to harmonize the intercept between RNAV and conventional was problematic due to the anecdotal data which indicates greater than 90 degree turns for RNAV provide flight track problems. The decision was made to leave the rules and guidance as-is, pending further study. Tom asked Rich Boll, NBAA, how this issue works with new agenda item on RNAV substitution (14-02-317). Rich responded that the issues are different. Rich mentioned older RNAV procedures with 90 degree design intercepts that exceed these limits due to MagVar changes. The group discussed containment issues and the fact that pilots are now flying these procedures with RNAV.RNAV does turn anticipation (FB) and conventional assumes fly over (FO). The concern is that the area assessed for obstacles is very different. There was the suggestion of coding as FO, but that adds area outside of the turn.. Discussion ensued, with Rick committing to AFS-420 taking the issue back to the US-IFPP again for consideration.

Status: AFS-420 will return to US-IFPP for further discussion. Item Open: AFS-420 (US-IFPP)

o. 14-01-316: RNAV Fixes on Victor Airways Used for RNAV SIAPs.

Paul Gallant, AJV-11, briefed they are constrained by 14 CFR Part 71 legal description on VOR airways criteria that does not allow placement of an RNAV waypoint (WP) on the legal description of the airway. This would require a major rule change which is a lengthy process. There are many fixes on airways, but criteria define the legal description in the airway docket only as the endpoints (NAVAIDS), and where there is a change of airway direction. The 8260-16 document only cites NAVIADs & fixes used both to describe the line work and to document en route altitudes, changeover points and equipment requirements. Gray Fiske, AJV-8, asked if it would suffice to just add RNAV WP on the Form 8260-2, rather than as part of the legal description. Valerie Watson, AJV-344, said Form 8260-2 documentation in "fix use" would show the RNAV WP on the airway. Rich Boll, NBAA, said the problem is coding the fix on the airway for the data base providers and cited as example the RNLDI DEPARTURE (SID from Washington Dulles airport) to OTTTO WP which is directly over Linden VOR and doesn't join J134. A lengthy group discussion ensued with the acknowledgement that there are problems/issues with placing a waypoint on a conventional airway. If a convention (groundbased) fix were established and USED as a waypoint on the RNAV procedure, it could be documented as part of the airway on Form 8260-2, which will trigger NFDD action. Admittedly, clarity of fix intended use in the documentation will help; current AeroNav policy is to, when possible, use existing fixes in development and adjust new procedures accordingly. Brad Rush, AJV-344, stated that current fix documentation is presently very good (i.e., box is checked on Form 8260-2 for fix type and remarks section is annotated for fix use). The issue remains whether a WP can be placed on an en route victor airway and document strictly as WP on the airway via 8260-2? There needs to be defined guidance to place WP on airway. Tom Schneider, AFS-420, stated FAA Order 8260.19 guidance says fix must have use to match procedure. Any fix can be used as a waypoint. We expect that when it is documented in the "fix use" block on the Form 8260-2 (i.e., on the airway), it will be NFDD that way, ATC will use it that way, and all users will place it where it belongs. Guidance is already in place, the fixes used as WPs are on the Form 8260-2 and no further action is required. Brad will work on expanded guidance for when a fix is placed on an ATS route. When possible it should be supportive of the route (i.e., hierarchy concept from years past).

Status: AJV-344 will work on and provide recommended language on the issue for consideration. <u>Item Open: AJV-344</u>

5. New Business:

a. 14-02-317: Use of GPS on Conventional (Ground-Based NAVAID) Instrument Approach Procedures (IAPs)

New issue presented by Rich Boll, NBAA, (**I**); provided background on the GPS overlay program. The third phase (first two done) added the "...or GPS" on conventional procedures. With addition of new RNAV approaches, the "or GPS" is are being removed from the conventional procedure chart titles (i.e. if currently a VOR or GPS RWY 14 approach exists, addition of an RNAV 14 approach will cause the "or GPS" is being removed from the VOR 14 approach title). The VOR approach is still in the database, but if flying it using RNAV, what guidance is the pilot to use on the final approach? FAA does have guidance in the AIM, paragraph 1-2-3, and AC 90-108, with respect to substitution (i.e., using GPS in lieu of an inoperative NAVAID or aircraft equipment) and is not the issue here. Rich is inquiring into AIM/AIP guidance where RNAV can be used on conventional procedures. Particularly in the final approach segment, defining what monitoring requirements are, what conventional NAVAID course guidance is sufficient, any limitations/tolerances, and how to resolve contradictory information. Vince Massimini, MITRE, pointed out that AC 90-108 covers most of this already. up to final, and allows for lateral guidance except on final (pilot needs to switch to conventional for final). Rich pointed out this not clear in the AIM/AIP and there is some confusion/ disagreement in the field. Rich believes that this is not a certification issue, but an operations issue. John Blair, AFS-410, said that if on a VOR approach and using the benefits of RNAV, you need to have VOR guidance up somewhere. Group discussion ensued regarding different airline Op Specs and operations, the fact that how no one is flying raw data, use of approach overlays and differences for Part 91 & 135 operations. Rich said that all NBAA is looking for is more definitive AIM/AIP guidance on this issue, whatever it comes out to be. AFS-470 will take IOU to look it over for possible AIM/AIP enhancement of current guidance.

Status: AFS-470 will review and look at AIM/AIP guidance. Item Open: AFS-470

b. 14-02-318: Charting LNAV Engagement Altitudes

New issue presented by Lev Prichard, Allied Pilots Association. (I) Lev briefed the issue and talked about the Pilot Controller Procedure and Systems Integration (PCPSI) work group discussions on "Climb Via" vs. "climb and maintain" procedure differences. Discussions within the PCPSI led to the question of what are "LNAV engagement altitudes" and is this a procedure attribute that should be identified and called out to users on a chart? A lengthy group discussion followed (referencing examples on the presented the slides). Lev wrapped up the discussion with recommendations to define LNAV engagement altitude and to ascertain whether there is a need to identify it on procedures, explain it in published guidance, etc. Tom Schneider, AFS-420, advised there was never any intent to chart an "LNAV engagement altitude". We have VA-DF (Heading to an Altitude [VA] until Direct to Fix [DF]) altitudes to support various needs, such as diverging courses for simultaneous departure procedures. These charted altitudes are not specifically for LNAV engagement. There is a requirement that LNAV be engaged no later than 500 feet above the airport elevation, prior to the aircraft executing a turn (i.e., altitude to climb to before next leg type navigation). A discussion followed regarding how this came to be interpreted as a constraining altitude and if it needs to appear on a chart or in the FMS. Tom asked the group where the ACF should go with the issue. Rick Dunham, AFS-420, briefed that they are reviewing FAA Order 8260.53, Standard Instrument Departures That Use Radar Vectors to Join RNAV Routes, criteria as it is absorbed by FAA 8260.58 and that AFS-420 would take a look at the guidance. Brad Rush, AJV-344, advised that by current criteria

standards, all altitudes are "at-or-above" unless specifically stated otherwise, so that a pilot should never be leveling out on what is published as an at-or-above altitude on a Departure. Gary McMullen, Southwest Airlines, said in the short term, we should focus on VA/DF legs and publish all these altitudes as "at-or-above". The group discussed a host of human factor issues, including historical issues and pilot techniques. Tom discussed looking at policy guidance regarding departure instructions text to help procedure designers publish these in a more clearly understood fashion.

Status: AFS-420 will review FAA Order 8260.53 & FAA Order 8260.46 and other criteria. Item Open: AFS-420

6. <u>Next Meeting</u>: ACF meeting **15-01** is scheduled for **April 28-30, 2015** with ALPA, Inc., Herndon, VA as host. ACF **15-02** is scheduled for **October 27-29, 2015** with Lockheed Martin as host.

<u>Please note the attached Office of Primary Responsibility (OPR) listing (attachment 1) for</u> <u>action items.</u> It is requested that all OPRs provide the Chair, Tom Schneider, AFS-420, a written status update on open issues not later than April 10, 2015 - a reminder notice will be provided.

7. <u>Attachments (2)</u>: 1. OPR/Action Listing 2. Attendance Listing

AERONAUTICAL CHARTING FORUM INSTRUMENT PROCEDURES GROUP OPEN AGENDA ITEMS FROM MEETING 14-02

OPR	AGENDA ITEM (ISSUE)	REQUIRED ACTION
AFS-405, AFS-420, AFS-470 and AJV-344	92-02-110: (Cold Weather Altimetry)	<u>AFS-405/470</u> : Work AIM/AIP guidance, keep AFS-420 updated for IPH changes, and provide a status update at the next meeting. <u>AJV-344/AFS-470</u> : Consider a safety alert and keep Jeppesen informed so they can prepare Briefing Bulletin.
AJV-8	02-01-241: (Non-Radar Level and Climb-in-hold (CIH) Patterns	Continue to track FAA Order JO 7210.3 DCPs.
AFS-420, John Collins	07-01-270: (Course Change Limitation Notes on IAPs)	<u>AFS-420</u> to track Order 8260.19 update. <u>John Collins</u> will research RNAV sensitivity issue and address at next ACF as need be.
AFS-420/470, AeroNavData	07-02-278: (Advanced RNAV (FMS/GPS) Holding Patterns Defined by Leg Length)	<u>AFS-420/470</u> review AIM/AIP and IPH language for possible enhancement. <u>AeroNavData</u> bring issue up with ARINC 424 committee.
AFS-420 (US-IFPP)	09-02-291: (Straight-in Minimums NA at Night)	Continue to work issue through the US- IFPP and report.
AJV-8	10-01-292: (Removal of VCOA Option at Mountainous Airports)	Continue to track the change and advise on progress of DCP's.
AFS-420	10-01-294: (RNP SAAAR Intermediate Segment Length and ATC Intervention)	Report on changes to FAA Order 8260.58A.
AFS 410/420	11-02-298: (Converging ILS Coding and Chart Naming Convention)	<u>AFS-420</u> Report on changes to Order 8260.19 and IPH. <u>AFS-410</u> Report on changes to AIM/AIP.
AFS-420 (US-IFPP)	12-01-299: (Loss of CAT D Line of Minima in Support of Circle-to-Land Operations)	Continue to track US-IFPP action and report on publication of new guidance memo.
AeroNavData, AFS-420, and AJV- 344	12-01-301: (Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment, <i>also includes issue 13-01-309</i>)	AeroNavData: Bring the issue back to the ARINC NDB workgroup and report at the next ACF. <u>AFS-420</u> : Review AIM/AIP and IPH language. <u>AJV-344</u> : Consider developing a list of affected airports.
AFS-410	13-02-312: (Equipment Requirement Notes on Instrument Approach Procedures)	Work toward scheduling a meeting with those signed up to participate in sub-group and report back at the next meeting.
AFS-420 (US-IFPP)	14-01-315: 90 Degree Airway-to- RNAV-IAP Course Change Limitation; Arrival Holds	Return to US-IFPP with results from ACF- IPG discussion for re-consideration.
AJV-344	14-01-316: RNAV Fixes on Victor Airways Used for RNAV SIAPs.	Work on and provide recommended language on the issue for consideration.
AFS-470	14-02-317: Use of GPS on Conventional (Ground-Based NAVAID) Instrument Approach Procedures (IAPs)	Review current guidance and consider revision/enhancement to AIM/AIP.
AFS-420	14-02-318: Charting LNAV Engagement Altitudes	Review FAA Order 8260.53 & FAA Order 8260.46 and other criteria to see if changes are needed.

ACF 14-02 INSTRUMENT PROCEDURES GROUP ATTENDANCE LIST

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