June 15, 2015

Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group (ACF-IPG) meeting held on April 28, 2015. 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/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 **15-02** is scheduled for **October 27-29, 2015** with Lockheed Martin as host. ACF **16-01** is scheduled for **April 26-28, 2016** with ALPA as host.

Please note that **meetings begin promptly at 8:30 AM**. Dress is business casual. Forward new agenda items for the 15-02 ACF-IPG meeting to the above addressees not later than October 8, 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 15-01
Pragmatics, Inc.
April 28, 2015

1. Opening Remarks:

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 April 28. Pragmatics Corporation hosted the meeting at their Reston, VA facility. Steve Vancamp made welcoming and administrative comments on behalf of ISI/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 the functionality of the site. Previously missing issue papers have been located and PDF history files created and posted. Minutes of previous meetings are also shown. The next effort will be to make a user-friendly search mechanism for the site.

b. Kevin Bridges, AIR-131, briefed on a recently issued Special Airworthiness Information Bulletin (SAIB) on step-down fixes (SDF's). ( ). The FAA began to randomly code some waypoints (WPs) prior to the FAF SFD's, which AIRNC 424 allowed (not written to prevent). Some Aircraft Flight Management Systems (FMS) equipment has limited data base storage capacity and cannot support these fixes. The FAA stopped coding WP's prior to the FAF as SDF's, but several hundred still exist. It will take a while to fix these, so SAIB 15-16 was published April 23, 2015. It recommends OEM and other equipment manufacturers modify their instructions to the database suppliers regarding removing SDF's from the database. This allows the database suppliers to remove the step-down designation on WP's prior to the FAF before sending out data and will ensure that WP's prior to the FAF do not get deleted. If one is observed, notify the data base provider. Lev Prichard, Allied Pilots Association, inquired how to receive the SAIB and Kevin advised it is on the FAA home page as a link; copy attached ( ). Tom Schneider, AFS-420, inquired about priority of fixing procedures and Kevin advised they will be modified as procedures come up for review. Vince Massimini, MITRE, inquired if all have been identified. Kevin said he did not know, adding that all records would need to be examined since the original coding issue was random. Questions were raised about how this came about, with emphasis on preventing similar occurrences. Tom advised Order 8260.19 doesn't specify coding guidance. Discussion followed on ARINC records and how database providers work. Kevin added that some equipment can support SDF's and they are unaffected by this SAIB. This SAIB is for equipment that cannot support SDF's and includes instructions on how to remove the SDF's. There also was discussion on safety concerns with possible missing WP's. Rick Dunham, AFS-420, asked Valerie Watson, AJV-553, if there is a way to get an automation dump on how many there are. Valerie agreed to research this. Kevin said previous conversation with Brad Rush, AJV-54, had indicated it would be an intensive search. Ted Thompson, Jeppesen, gave a brief history on issue.

Editor's note: After the ACF, Garmin provided a list of affected SDF's. ( )

3. Review of Minutes of Last Meeting:

Steve Vancamp, AFS-420, (ISI/Pragmatics Contract Support), briefed that the minutes of ACF-IPG 14-02, which was held on October 28, 2014, were electronically distributed to all attendees as well as the ACF Master Mailing List on Dec 12, 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*).

Kel Christianson, AFS-470, briefed that a Notice to Airman Publication (NTAP) was published in December 2014, making cold temperature altitude corrections at cold temperature restricted airports mandatory. The language in the NTAP was changed in Feb 2015 to non-mandatory to allow operators additional training time. In September of 2015, the language in the NTAP will change back to mandatory and cold temperature altitude corrections will become mandatory. An Information for Operators (InFO) was published in Feb 2015 detailing the change. In March 2015, a “snowflake” icon with associated temperature began being placed on affected FAA approach plates and will be completed by March of 2016. The procedures in the NTAP will be evaluated during the 2015/2016 winter season to see if any changes need to be made. If no changes need to be made, the information from the NTAP may be included in the AIM. Rick Dunham, AFS-420, reemphasized all the efforts to promulgate the information, so there should be no surprises. Rich Boll, NBAA, asked if the InFO should be released again, and Kel said he would take the suggestion to his management. Michael Stromberg, Air Wisconsin, asked if there is any change in the airport listing. Kel advised that MITRE is running a new list and he will compare them. Ted Thompson, Jeppesen, questioned if an airport is added to NTAP list, what triggers a NFDD change notifying chart makers of changes? If the list is dynamic, procedures need to be in place for when changes occur for NFDD action to take place. Kel acknowledged this and if a new airport is affected, will send the cold weather airport remark to NFDC for publication. The NASR airport remark will continue to serve as the trigger to add the snowflake and temperature to the charts. Kel asked if Jeppesen will use the snowflake icon and Ted said their policy is to explain in word form vs. icons. Pilots at the ACF said they just need to know if an airport is affected. Michael asked about turnaround time from once an airport is identified as a cold weather location to the information reaching the chart. Kel stated that the list will be updated each year in time for changes to be published by the fall. Charles Wade, Delta Airlines, inquired about how to get on the notification list for changes so that they had more lead time to react. Ted said if approaches are added, there may be a period where some approaches at an airport have the information on the chart and some do not, and inquired if these criteria will be in TERPS policy; the answer is currently “no” (see comment below about incorporating into an FAA directive or Advisory Circular). Valerie voiced that since the “cold weather” trigger is a NASR airport remark, the snowflake (or in Jeppesen’s case, the note) should be added to ALL approaches at that airport. Gary McMullin, Southwest Airlines, brought up ATC issues of not allowing pilots to fly corrected procedures and would like a meeting discussing what is actually happening. Kel said ATC must allow the procedure to be flown, and Gary Fiske, AJV-82, said controllers cannot disapprove a procedure, but ATC can delay. A military participant questioned about military airfields not being in the NTAP. The military said they are not worried about their aircraft since they have procedures; however, they are concerned about the civilian operators flying into military airfields. They are also concerned about GA airports in airspace controlled by military. Tom Schneider, AFS-420, acknowledged a lot of work has been accomplished, and now all of this needs to be quantified into an FAA directive; i.e., Order and/or an Advisory Circular. All the requirements/policies need to be put into writing in addition to the information that goes into the NTAP and AIM/AIP. Ted added that in addition to adding affected military

fields, FAA Form 8260-7A (Special instrument approach procedures) needs to be included (since these are not maintained by the same folks).

Status: AFS-470 will review these comments/questions and report back at the next meeting. **Item Open: AFS-470**

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

Gary Fiske, AJV-82, briefed that Eric Fredricks, AJV-72, had the IOU but has changed positions in the ATO. A DCP was sent out for comment and returned in early February 2015. Work was delayed by higher priority activities, so he was asked to take over. The June 25th charting date will not be made.

Status: Gary Fiske is working thru the comments and pub date is now anticipated in December 2015. **Item Open: AJV-8**

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

Tom Schneider, AFS-420, provided a slide ( ) showing language in draft Order 8260.19G (same as last ACF); all formal coordination comments relating to the order have been received and are being mitigated. John Collins stated his concern is not with vertical ROC, rather his concern is with lateral ROC on RNAV segments at more than 30 NM from the airport ( ) since there is a difference from en route sensitivity. He questions if en route obstacle clearance applies to feeder routes for RNAV (as it does for ground based). Tom advised the system used on the approach (conventional vs. RNAV) will evaluate accordingly. John questioned the scaling at 30nm.

Status: Tom took IOU to bring issue back to AFS-420. **Item Open: AFS-420**

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

Joshua Fenwick, AeroNav Data, was not present to brief on ARINC 424 meeting. Tom Schneider, AFS-420, briefed ( ) using a slide provided by Steve Jackson, AFS-420, consisting of proposed AIM language. This proposed AIM language was provided to NBAA in advance for feedback. Rick Dunham, AFS-420, stated that the slide was mislabeled since we have no RNP holding. Rich Boll, NBAA, provided ( ) a short history on this item specifically that observed RNAV performance in holding is different than current AIM guidance. The equipment extends the outbound leg to achieve the desired inbound leg programmed length. AIM paragraph 5-3-8 holding guidance is not representative with regard to bank angles and says holding distance is applied to outbound leg, whereas the RNAV systems extend the outbound leg to make distance good on the inbound leg. Kevin Bridges, AIR-131, confirmed that different boxes are designed to different standards depending on type/usage. Rich discussed his review of Steve's proposed AIM language and inquired if there was a shift toward requiring stronger language (perhaps new information). Rick advised there has been no shift, and this is AFS-420's first draft at what AIM holding language should be, showing how pilots interpret it and how it is to be used. Rich stated that this proposed language is overly complex and hard to understand. Rich would like the ACF to form an ad-hoc workgroup to look at holding operations, certification, criteria, and query OEM's for recommendations on revised AIM guidance specific to the issue. Topics would be: Is this an issue (altitude)? When is it an issue? When should it be considered? And what are viable alternatives? Tom inquired how to move this issue forward. Rick said he was not against

a group forming to address this, but does not want this ACF issue expanding and commented that no protected airspace risk based data has been presented on this issue by anyone. Revised AIM language can raise awareness to all groups and his office is also looking at IPH language on how holding is flown, but there are questions on the training aspect. Group discussion followed on if there is actually a problem with what aircraft are doing. Gary Fiske, AJV-82, stated that in light of the radar environment in the U.S., ATC monitors flights and adjusts as necessary. Rich indicated that the ultimate solution of the group may be the AIM guidance and this may be all that is needed. Tom discussed holding templates are 60+ years old and wondered if FMSs are keeping aircraft inside these areas, and if so, do we care how? Rick said his goal would be for the ad-hoc group to take the AFS-420 draft AIM language and adjust as necessary to meet industry needs. Lev Prichard, Allied Pilots Association, added that he feels there is not a large technical issue, but rather a need to renew AIM/IPH guidance. Rick said the Holding Order 7130.3A will be absorbed by Order 8260.3C; the criteria updated, and will be out for coordination soon. Brian Townsend, American Airlines, said the answer may be as simple as a cautionary statement that if you are doing FMS holding, you may not be getting your desired results. Tom stressed the need for generic language such as desired distance on legs. Rich volunteered to chair an ad-hoc holding group since he has already reached out to industry on this topic. They will look at AIM language, review draft Order 8260.3C language, and look at including information that ATC is monitoring the aircraft flight pattern. Rick volunteered any assistance to the group as required from AFS-420.The sign up list is included ( ).

Status: Rich Boll volunteered to chair an ad-hoc holding group. **Item Open:** NBAA (Rich Boll), Ad-Hoc sub group

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

Tom Schneider, AFS-420, briefed using a slide ( ) provided by John Bordy, AFS-420, recapping the issue of segment width differences for circling vs. straight-in. The old policy was a 400' width and the new policy is a 200' width, providing consistency between straight-in and circling. The memo issued in November 2014 was also displayed to the group. The policy is now in use by Aeronautical Information Services (AIS). Procedures will be updated at the time of the next Periodic Review. Lev Prichard, Allied Pilots Association, asked if PAPI/VASI mitigation for 20:1 surface penetrations can be waived and Rick Dunham, AFS-420, said yes. Tom advised the issue is still open in US-IFPP, pending publication of Order 8260.3C and asked NBAA if they would be willing to close.

Status: Rich Boll, NBAA, agreed to close. Item Closed.

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

Gary Fiske, AJV-82, advised he had inherited this item and that the DCPs that were sent out for comment on Order JO 7110.65 are back; however, he has not acted upon them yet due to staffing changes and he needs to review the issue again. Gary said the original goal was a June 2015 publication, which will not happen, but if possible, his office will try for a December 2015 publication. Along with the DCP's, the AIM and PCG guidance will be reviewed by the ATO.

Status: Gary will work the issue and report back at the next ACF. **Item Open:** AJV-8 (Gary Fiske)

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

Tom Schneider, AFS-420, briefed ( ) showing new language for the draft Order 8260.58A, adding that TJ Nichols, AFS-420, is lead on the Order. FAA JO 7110.65 paragraph 4-8-1 issue is already taken care of. Gary Fiske, AJV-82, said language in Order JO 7110.65 does not allow vectoring to an RF leg. Rick Dunham, AFS-420, advised that the last piece of the puzzle is Order 8260.58A language.

Status: Item open pending guidance in Order 8260.58A. **Item Open:** AFS-420

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

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)

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

Tom Schneider, AFS-420, briefed a slide ( ) provided by John Bordy, AFS-420, showing language going into Order 8260.3C. Lev Prichard, Allied Pilots Association, questioned RAPT actions on issue. Tom stated that the Airports Division has a problem with an airport having Cat C-D minimums that cannot support Cat C-D type aircraft. Michael Stromberg, Air Wisconsin, said he flies a Cat D aircraft at 53,000 lbs. Some airports are trying to limit Cat D aircraft because they do not want B747 aircraft operating there, not understanding this would include his aircraft also, thus eliminating their regional jet service. Michael added that to have an airport say they do not want Cat D service is a bad way to limit the type of aircraft operating there. If they want to limit a size aircraft, they need to say that. Tom said proposed guidance is in progress and this item is open at the US-IFPP, adding that work is being done on consolidated surfaces and that changing categories involves rulemaking. Lev inquired about what the airport operator's responsibility is with this. Rick Dunham, AFS-420, spoke about the RAPT process being a group effort from all concerned to work these issues for each airport. A group discussion followed on what an airport can support, i.e., weight and tail heights, infrastructure; runway safety areas, airport reference codes (ARCs), airport design, etc. There was discussion on how there needs to be separation between design standards and operating standards. Rick stated that airport categories were created 50+ years ago. There are ongoing discussions and the initial thought is to get the RAPT more involved in considering all capabilities at a given airport and matching these capabilities to the aircraft that use the airport. Tom showed the December 4, 2014 memo issued by AFS-400 regarding approach category inclusion. Bruce McGray, AFS-410, suggested the FAA consider an outreach to regional carriers for more information. Tom

advised there is guidance in Order 8260.3C pointing to the RAPT Order (8260.43), and that the RAPT Order is being revised to incorporate this guidance.

Status: Rick suggested keeping issue open pending publication of Order 8260.3C, update of Order 8260.43, and other related work being done regarding aircraft categories. **Item Open:** AFS-420

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)*

Joshua Fenwick, AeroNavData, was not present to brief an update from the ARINC NDB workgroup. Tom Schneider, AFS-420, briefed a slide (1) provided by Dan Wacker, AFS-420 contract support, emphasizing that item #1 in draft Order 8260.3C language has been established to address the criteria portion. Lev Prichard, Allied Pilots Association, asked if this means the FAA intends placing a VDA on every procedure including a circling minimums approach, unless Flight Inspection determines it cannot be done (even after trying different designs/angles/displaced thresholds/RAPT process review). Rick Dunham, AFS-420, answered yes, but that applies to only those straight-in aligned procedures (per Order 8260.19F, paragraph 8-6-8s). Tom briefed slide item #2 regarding draft Order 8260.19G language, showing how the chart note will read. Rick advised that the visual segment language has been rewritten for the AIM/AIP and is being reviewed in AFS-400. John Moore, Jeppesen, inquired about possible differences between Order 8260.3 and Order 8260.19 language regarding reworking procedures that fail flight check. Tom explained the Order 8260.3 is for design and Order 8260.19 is for documentation. John Collins, GA pilot, asked what actually gets documented as directed in Order 8260.19 and Tom responded information placed in the additional flight data block of FAA Form 8260-3. Discussion followed on how this will not prevent manufacturers from publishing an angle in their database and/or on a chart if they so choose, but the required note will provide warning to the pilot if they choose to follow that angle below the MDA. The note will now read: “Visual Segment – Obstacles.” Ted Thompson, Jeppesen, asked about the note wording rationale. Tom responded this is an AFS group consensus and it could have been different (matter of opinion), but this was the final AFS/AIR group decision. Valerie Watson, AJV-553, added guidance is already in the AIM/AIP about this angle being advisory and we are expanding on that. Tom briefed that item #3 shows the SAIB guidance (previously discussed) as put out by Kevin Bridges, AIR-131. Tom briefed item #4 showing draft (DCP format) of proposed AIM/IPH language and again advised it is being reviewed internally in AFS-400, adding that nothing is finalized yet. Rick said to keep in context that there are over 20,000 procedures and only 180 (so far) have encountered this issue; the intent is to either redesign the procedure(s) to eliminate the issue or provide pilot education that there may be obstacles in the visual path. Lev asked if visibility tables are being looked at and Rick responded “yes,” but no change yet. Ted Thompson, Jeppesen, added visibility tables are typically based on level segments of the approach and not revised with vertically guided procedures. Tom said the last IOU was for Aeronautical Information Services (AIS) to develop a list of affected airports for the web site and discussion with Brad Rush, AJV-54, prior to the meeting, indicated there was some resistance to that idea. Rick stated that at some point, maybe there should be no procedure developed at some airports due to obstacles. There is a balance between safety and airport access, adding this is our first attempt at guidance change.

Status: Tom requested all read the AIM draft (work in progress) in the minutes and send comments to AFS-420. **Item Open:** AFS-420

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

Mike Webb, AFS-420, briefed ( ) regarding a sub-group that met to formulate ways to de-conflict required equipment information on charts; i.e., briefing strip notes vs planview notes may list different requirements than the procedure title indicates. This sub-group broke out what was specifically required to enter the procedure and fly the entire procedure in addition to Final Approach Segment requirements. The goal is to locate information in one spot on U.S. Government charts to help the pilot determine requirements (this process should also work on non-government vendor chart vendor products). Just as the PARC recommendation (with VOLPE input) for a PBN information box, the result is having an "equipment requirements box," as shown on the slide, in the same location on each chart. Ted Thompson, Jeppesen, stated that if a note applies in general, you want that in one location, but if a note has applicability to a specific point in space, it should be attributed to the point where it applies. Mike asked for ACF direction/input from here. The move is for standardization. The ACF attendees liked the proposal and the sub-group will formalize it as a recommendation. Tom Schneider, AFS-420, advised that any changes will be submitted in Order 8260.19H (at the earliest). Tom took an IOU to work on draft language for the Order 8260.19H, in consultation with Valerie Watson, AJV-553, to facilitate charting issues. Ted recommended drafting language in a way that also supports long term PBN goals for notes. Recommendations should include what to name the box so that it encompasses both conventional and RNAV type instrument procedures.

Status: Sub group will formalize recommendations. Tom took an IOU to work on draft language for the Order 8260.19H. **Item Open:** AFS-420/ AFS Sub Group

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

Tom Schneider, AFS-420, ( ) said issue was brought to US-IFPP for discussion. Rick Dunham, AFS-420, said initial discussion was to harmonize to 90 degrees to simplify for procedure design and standardize across the board vs.120 degrees which presented some airspace issues. The question becomes the magnitude of the problem and how many resources will be required to resolve it. Decision is to place on hold and work at a later date. The item will remain open in the ACF and US-IFPP. AFS-420 will brief when any progress is made. Rich Boll, NBAA, indicated his one main concern is MagVar change resulting in exceeding a 90-degree airway intercept turn.

Status: AFS-420 will brief when any progress is made. **Item Open:** AFS-420

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

Tom Schneider, AFS-420, spoke with Aeronautical Information Services (AIS). They have an IOU on the issue and Brad Rush, AJV-54, advised they are still working on the issue. Item is status quo, nothing to report, and still open.

Status: AJV-54 working issue. **Item Open:** AJV-54

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

Kel Christianson, AFS-470, stated that a draft language for the AIM has been accomplished and is under review by managment. John Collins inquired about the direction this is taking and Kel advised it is essentially "monitoring." The pilot will need the VOR or NDB working to monitor;

i.e., use RNAV for guidance and the conventional systems operating for monitoring and if there are differences between the two, the conventional system takes precedence for course guidance or missed approach. Rich Boll, NBAA, said that would mean if an aircraft is not ADF equipped, then you cannot shoot an NDB approach. Kel supported this statement. A brief discussion followed on differences between alternate means of approach vs. substitute means. Rich discussed the SMO VOR-GPS-A approach being changed to a VOR-A only. He is concerned the RNAV approach may not be operational then. Tom Schneider, AFS-420, said policy is that VOR-GPS procedures will not be removed until an RNAV approach is in place (normally this happens concurrently).

Status: Kel will brief on progress at next ACF. **Item Open:** AFS-470

o. **14-02-318:** Charting LNAV Engagement Altitudes

Tom Schneider, AFS-420, briefed ( ) on the last ACF discussion to remove the term "LNAV engagement altitude", by revising the Order 8260.46 language for a climbing altitude to support a turn without referring to it as an "LNAV engagement altitude." LNAV engagement is also referred to in Order 8260.53, which is being absorbed into Order 8260.58A, and steps are being taken to remove the term during the transfer. This term is not in the AIM/IPH. Lev Prichard, Allied Pilots Association, asked what this altitude is being called now and why. Tom said this is for the procedure developer, not the pilot, and we are saying there may be an altitude you need to reach before initiating the turn (a VA-DF scenario). It is then an at-or-above crossing altitude required before commencing a turn. Lev pointed out this would be a climbing constraint, and it is convoluted since it is driving whether "Climb Via" vs. "climb and maintain" situation exists. His conclusion is that it's become a "climb via" scenario. Group discussion followed on existing procedures and different flight director systems. Three examples of ways to handle these: San Antonio (KSAT) – fly heading assigned by ATC; Nashville (KBNA) – fly heading xxx; Houston (KIAH) – heading to altitude to heading. He believes the KSAT example works the best. The question was asked how you reach a standard solution. Tom said there are design constraints for text to be used for charting. Tom advised that Order 8260.46 terminology for initial climb instructions is used when required departure instructions must specify the actual heading to be flown after takeoff. Any existing procedures with "fly runway heading" will eventually be changed. Rick Dunham, AFS-420, advised the RNAV language currently in the Order 8260.53, will go away when absorbed into Order 8260.58A, and he wants to ensure this is being looked at. Tom will look at the language used for KSAT for possible incorporation into Order 8260.46F. Lev restated his desire to make the departures look the same (standardize) as much as possible. Gary Fiske, AJV-82, stated his desire to maintain ATC flexibility. Tom said original policy with for "Radar Vectors To Join RNAV Routes" departures was no coding until you reached the IDF (it was intended for ATC to allow for whatever ATC wanted until that point), which has now changed.

Status: AFS-420 will look at KSAT language to consider additions to Order 8260.46F. **Item Open:** AFS-420

5. New Business:

a. **15-01-319:** Removal of the Epoch Year documentation on 8260-series FAA Forms.

Tom Schneider, AFS-420, briefed item submitted by Aeronautical Information Services (AIS) at request of AFS-420 to remove epoch year value associated with magnetic variation (MV) depicted on the applicable 8260-series Form. There is a concern that an older (but correct) epoch year on a procedure form may imply procedure has not been reviewed since that date specified on the form. Tom posed a question to database providers/manufacturers/users regarding need/use of actual epoch year date value on procedure forms. Ted Thompson, Jeppesen, advised Jeppesen determined there is value of epoch year as a reference, but would support removal from the 8260-forms provided the date is readily available thru NASR or appropriate airport/NAVAID record. He added that epoch year data would then not be duplicated since revisions may not occur at same time. Kevin Bridges, AIR-131, said if epoch year values are taken off 8260-series forms, the FAA must ensure all know where to access the information. Valerie Watson, AJV-553, advised epoch year information is not on airport 5010 form. Martin Zillig, Lido, said they prefer epoch year remain on 8260-series Forms, and added other states put the epoch year on procedure plates. Ted said Jeppesen does not. NGA said they need the date information available.

Status: Tom advised he will take this information back to AFS-420 and relay the importance of information availability. **Item Open:** AFS-420

b. **15-01-320:** Common Sounding Fix Names

Lev Prichard, Allied Pilots Association, briefed ( ) some examples of common sounding fix names in close geographic proximity, showing as examples three similar names in the Dallas area and two similar names in Atlanta. He said that when he questioned ATC about the three in Dallas, he was informed that the Navy veterans at the facility liked them. Lev acknowledged the massive number of fixes in the NAS and that finding all those with similar sounding names at inception is difficult, but there should be a mechanism to address when similar/confusing names/spellings are identified. A point was made that in the Dallas example, since the fixes are on different types of procedures, there should be no confusion. A spirited group discussion followed with pilot input that your procedure is often changed by ATC requiring a last minute data input into the navigation system during high work load periods, which is problematic if there are similar sounding/spelled fixes in close proximity, no matter what type of procedure the fix is tied to. A question was asked about when the aircraft is cleared to a new fix, shouldn't that fix be on the drop down list in the FMS (no confusion possible) since only one procedure is loaded in the FMS? Ted Thompson, Jeppesen, brought up the precedence of the Cali disaster with an airliner cleared to similar sounding named fix which put them into a mountain, so there is a foreseeable consequence. Gary Fiske, AJV-82, pointed out that when that procedure was designed in the days before FMS databases, aircraft could not have navigated to the wrong NAVAID/fix (not in conventional reception range), but conceded that we are in a new era. Further discussion ensued regarding how the aircraft's geographic position makes an easy cross check for the pilot and that even if the name is similar, the relative distance should indicate a problem. Rich Boll, NBAA, said he has noticed ATC issuing named fixes/WP's instead of headings for weather deviations which has pilots entering points not on their original flight plans. Lev proposed a solution of developing a process to alert the facility and require action, since there currently is not one. Tom Schneider, AFS-420, suggested an addition to Order JO 7400.2K, adding guidance to what is currently in paragraph 3-3-3d, for NAVAIDS, looking for similar sounding names within 300 NM, which prompted more group discussion. Mike Wallin, NFDC, said that when NFDC gets a name request, they do a search and if exact spelling is in use anywhere they deny. If spelled differently (slightly), he has no way of knowing

whether a fix with a similar sounding name is located in close geographic proximity. Mike said the local facilities should be cognizant of their own airspace, identify potential problem fix names, and address the issue in the interest of safety. Gary took an IOU to address the specific fix name issues at Dallas and Atlanta, and if any other very specific obviously problematic issues exist, bring them to his attention. Tom mentioned the NASA reporting system and the Aviation Safety (AVS), Air Traffic Operations Safety Oversight Division, which visits facilities, could address these circumstances too. Tom again mentioned Order JO 7400.2 existing language (policy guidance), inquiring if it can be strengthened, and is there a searchable mileage distance to scan for similarities. Mike said he is not sure who is the OPR in NDFC for that item but will take the IOU to research, and if any committees exist will join.

Status: Gary took an IOU to address the specific fix name issues at Dallas and Atlanta. Mike will take the IOU to research. **Item open:** AJV-8 (Gary Fiske)/ NFDC (Mike Wallin)

Editor's note: Later in the day Mike Wallin added that he had obtained draft language for the Order JO 7400.2, regarding similar sounding fix names, and there is proposed text that will read: "Fixes, WPs and LOMs are developed by Air Traffic, terminal products, DOD and third party developers and must not sound similar to existing fixes, WPs or NAVAIDs named within the originating ARTCC area, the adjacent ARTCC area, or within 300 NM of each location…"

c. **15-01-321:** Coding of Missed Approach for ILS31L and ILS31R at KJFK

Lev Prichard, Allied Pilots Association, briefed on an issue encountered by a crew where the missed approach verbiage does not match coding in the Flight Management System (FMS). The verbiage indicates an intermediate level off in the missed approach (use of word "then" in instructions) whereas the coding shows an at-or-above altitude crossing at all points. Lev took this issue to Brad Rush, AJV-54, who looked at it and said there were complications on the 8260-Forms that limited them to coding this way. Gary Fiske, AJV-82, inquired if anyone had asked the New York TRACON of their expectations of what the pilot will do in the event of a missed approach, and Lev said "no" since the procedure is spelled out on the approach plate. Rich Boll, NBAA, added to the discussion with a similar experience with JFK approaches on a different runway last year and when he asked ATC, they indicated they were "at" altitudes, which also did not match coding. Ted Thompson, Jeppesen, did research at Jeppesen on the history on these JFK approaches, and determined there was a back-and-forth change on how these altitudes would be coded. He inquired to Brad who pointed out the 8260-series Forms "boiler plate" guidance that says all altitudes are at-or-above unless otherwise designated. Ted said either the wording has to change to use "at," which also has issues (rapid climb rate not insuring level off), or change to at-or-below (as done in Seattle) since the FMS equipment will change the climb profile (soften) and solve problem. Brad had also reminded Ted that flight procedures are primarily designed for obstacle clearance and not ATC separation. Ted recommends the at-or-below method. Lev said the approaches in question need to be fixed ASAP, since this is a safety of flight issue and the long term solution needs to be addressed. Gary McMullin, Southwest Airlines, advised they have seen many of these before and when taken back to the FPT, all have been corrected with at-or-below altitudes. Lev displayed Order 8260.19F, paragraph 8-6-7d note, on meaning of word "then." Tom said this is written for procedure designers when developing the missed approach text and added that designers use TERPs to evaluate the missed approach segment (40:1 surface) but when there is a level off; the designer must switch to use a level surface evaluation for ROC, which was a major issue in Seattle. Rich said the issue is still the coding not matching what is on the chart. A group discussion ensued with several more examples and discussion of ARINC 424 coding of conventional approaches. Lev restated he is asking the group for two things: Fix the identified

issue at JFK; and for changes to ensure this scenario does not happen again. Ted stated his answer is make altitudes at-or-below, and Tom added that would require a waiver to establish criteria to support as was done in Seattle. The existing criteria is at-or-above, and there is policy to distinguish what the language in the missed approach means and how that should (technically) be coded; however, he cannot control how the conventional procedure is coded by database providers. Information is provided about coding RNAV procedures on the FAA Form 8260-10. Rich said his example was an RNAV procedure and data on the Form 8260-10 form did not match the text. Tom said this is an AIS problem and Brad should have corrected this; Rich advised no. Gary McMullin asked if there was documentation on coding conventional missed approaches (answer no) and could that be a first step. Tom answered FAA does not do coding on conventional procedures, adding that originally the FAA did not want to be involved in coding RNAV either. It is the responsibility of each manufacturer to insure their navigation equipment will comply with the instrument procedure lateral and vertical requirements. A group discussion followed on coding issues including Jeppesen history, OEM issues, climbing and level off issues with and without coding, etc. Tom added there are numerous iterations of missed approach procedures and procedure designers need flexibility. The FAA relies on data base coders to interpret what is needed to support the missed approach and that is how the ARINC record is formulated. The question now becomes how much more detail is required? Once the procedure is developed, it goes to flight check for flyability. If it does not pass flight check, they send it back to AIS for revision. Rick Dunham, AFS-420, specifically asked Lev what they are looking for since changes will not happen right away; i.e., issue a NOTAM? Lev said coding is out there and it does not match the procedure. Valerie Watson, AJV-553, stated that the FAA codes ILS procedures, but a Form 8260-10 is not provided as part of a procedure package for database developers outside the FAA. Tom inquired if there are any recommendations to change or improve guidance language to ensure that coding is done correctly.

Status: Rick took IOU for AFS-420 to take item back, review language, reach out to Lev and others, and see if there is an opportunity to clarify language (if needed) or determine if this is an AIS database issue. Tom added issue will be directed to US-IFPP due to impact on surfaces with at-or-below altitudes when executing a missed approach. Rick added US-IFPP has a database group to consider these kinds of issues. **Item open:** AFS-420 (US-IFPP)

d. 15-01-322: Charts for SID, STAR, and OPD do not provide accurate information for filing a flight plan in many cases.

John Collins, GA pilot, briefed ( ) the issue as outlined on the Requirements Document (RD) and showed examples of routes. If you file these routes as written, they are rejected. He recommended that if the pilot cannot file a code (associated with a route), that code should not be provided to the pilot. The problem is not the information but the usage. Gary Fiske, AJV-82, pointed out vector SIDs are not adapted in ERAM and cannot be filed, and John agreed and restated that is the point; do not provide a code if it cannot be filed in a Flight Plan (FP). A group discussion followed on filing, notifications, rejections, etc. Gary added that he had specifically requested no computer coding be allowed by facilities on radar vector SIDs in Order 8260.46, which would fix this problem. Tom stated that the ATO had instructed him to retain computer codes for Vector SIDs for those Air Route Traffic Control Center (ARTCC) locations that desire to use them. Gary added there are many routes in the ATC system that have codes but will never be adapted into ERAM (system cannot handle all of them). Language was put in Order 8260.46 stating that before the computer identification code could be added or deleted on radar vector SIDs, the ARTCC facility had to be contacted for desired action. Rich Boll, NBAA, said NBAA knows there are some SIDs that cannot be filed and that is covered in the AIM. NBAA's

issue is if computer codes are removed from some of the non-adapted SIDs. The RUUDY RNAV SID off Teterboro (KTEB) is not adapted, so if it's filed, the FP will be rejected; however, all the data driven maps today use that computer code to extract route information from the database. Removing the codes could have some serious unintended consequences. Rich suggested not removing the code but rather publish a chart note to not file the computer code in the FP and believes there is precedent on existing SIDs and STARs. Lev Prichard, Allied Pilots Association, stated he uses Foreflight and has encountered the same problem John Collins outlines. A group discussion on timing of FP submissions by user, database supplier, service provider, and Lockheed Martin's 3 hour filing window are causing the subsequent FP rejection after initial acceptance. Lev asked about expanded ERAM storage capabilities to allow longer lead times on FP filings. Ted Thompson, Jeppesen, expanded on Rich's previous comments that the computer code on these procedures is essential. It is used by Jeppesen for the chart image and coding for the procedure; not only the retrieval in the navigation database, but the overlay on data driven en route operations. On procedures not given a computer code by the FAA, Jeppesen has an internal specification for making one and adding it to make possible retrieval of images and overlays in a consistent way, so the absence of the codes is a problem. Rich Boll inquired how we inform pilots not to file certain routes. Tom said it is up to the ATC facility when developing the procedure (some already have the caveat). Gary acknowledged the issue but added this not easily fixed since different facilities want different things. Tom asked if the issue can be taken to ERAM automation staff at the ATO so they can be made aware and respond to it. Rich inquired if there could be an Order 8260.46 and Order 8260.19 forms requirement (charting specification) to have a check box indicating if computer code can/cannot be filed. Gary said the ATO needs to indicate which ones can/cannot be filed for whatever reason, i.e. "…assigned by ATC only…" Tom posed to the group the question if a chart note is needed. John Moore, Jeppesen, cautioned against chart notes in this case and Lev responded everything in Dallas has a chart note and that is good. Suggestion was made that new filing guidance requiring ATC to pre-screen clearances farther in advance. It was acknowledged this would be a good idea, but not likely to happen. Tom said guidance can be added in Order 8260.46 to remind the ATC facilities that if they are not going to allow the SID to be filed (for whatever reason); it must be indicated on the chart. Gary did not see any problem with STARs since all have computer codes.

Status: Tom will investigate what guidance can be added in Order 8260.46F. **Item open:** AFS-420

6. Next Meeting

ACF 15-02 is scheduled to be held on October 27-29, 2015, hosted by Lockheed Martin at their Global Vision Center in Crystal City, VA.

ACF 16-01 is scheduled to be held on April 26-28, 2016, hosted by ALPA at their Herndon, VA location.

ACF 16-02 is scheduled to be held on October 25-27, 2016, located and host to be determined.

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, AFS-420, a written status update on open issues not later than October 8, 2015 - a reminder notice will be provided.

7. Attachments (2):

1. OPR/Action Listing
2. Attendance Listing

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 15-01

OPR	AGENDA ITEM (ISSUE)	REQUIRED ACTION
AFS-470	**92-02-110:** (Cold Weather Altimetry)	Review comments/questions from last meeting and provide a status update at the next meeting.
AJV-8	**02-01-241:** (Non-Radar Level and Climb-in-hold (CIH) Patterns	Track FAA Order JO 7210.3 DCPs and report status at next meeting.
AFS-420	**07-01-270:** (Course Change Limitation Notes on IAPs)	Review concerns presented at the last meeting and provide a status update at the next meeting.
NBAA	**07-02-278:** (Advanced RNAV (FMS/GPS) Holding Patterns Defined by Leg Length)	Form an ad-hoc work group to review AIM/Order 8260.3 language/ATC monitoring.
AJV-8	**10-01-292:** (Removal of VCOA Option at Mountainous Airports)	Review comments received on DCP's, along with AIM and PCG guidance.
AFS-420	**10-01-294:** (RNP SAAAR Intermediate Segment Length and ATC Intervention)	Track changes to FAA Order 8260.58A and report status at next meeting.
AFS 410/420	**11-02-298:** (Converging ILS Coding and Chart Naming Convention)	AFS-420: Report on changes to Order 8260.19 and IPH. AFS-410 Report on changes to AIM/AIP.
AFS-420	**12-01-299:** (Loss of CAT D Line of Minima in Support of Circle-to-Land Operations)	Report on status of publication Order 8260.3C along with update of Order 8260.43.
AFS-420, and all ACF	**12-01-301:** (Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment, *also includes issue 13-01-309*)	AFS-420: Report status of proposed AIM language. All ACF: Provide comments on draft AIM language.
AFS-420	**13-02-312:** (Equipment Requirement Notes on Instrument Approach Procedures)	Prepare for future work on draft language for the Order 8260.19H, in consultation with Valerie Watson, AJV-553, to facilitate charting issues.
AFS-420 (US-IFPP)	**14-01-315:** 90 Degree Airway-to-RNAV-IAP Course Change Limitation; Arrival Holds	Placed on hold and work at a later date. The item will remain open in the ACF and US-IFPP. AFS-420 will brief when any progress is made.
AJV-54	**14-01-316:** RNAV Fixes on Victor Airways Used for RNAV SIAPs.	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)	Brief next meeting on progress.
AFS-420	**14-02-318:** Charting LNAV Engagement Altitudes	Track status of proposed language in Draft Order 8260.46F that eliminates term "LNAV engagement altitude.".
AFS-420	**15-01-319:** Removal of the Epoch Year documentation on 8260-series FAA Forms.	Discuss importance of information internally with AFS-420 and determine what action to take.
AJV-8/NFDC	**15-01-320:** Common Sounding Fix Names	AJV-8: Internally address specific issues identified. NFDC: Research specific language in Order 7400.2
AFS-420 (US-	**15-01-321:** Coding of Missed	Research item and take to US-IFPP.

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 15-01

OPR	AGENDA ITEM (ISSUE)	REQUIRED ACTION
IFPP)	Approach for ILS31L and ILS31R at KJFK	
AFS-420	**15-01-322:** Charts for SID, STAR, and OPD do not provide accurate information for filing a flight plan in many cases.	Look at incorporating additional guidance language in Order 8260.46F to add a chart note to SIDs that are to be assigned by ATC only.

ACF 15-01
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ACF 15-01
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ACF 15-01
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