

May 30, 2012

Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group (ACF-IPG) held on April 24, 2012. The meeting was hosted by Innovative Solutions International at Pragmatics, Inc. Corporate Headquarters, 1761 Business Center Drive, Reston, VA 20190. 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 **12-02** is scheduled for **October 23-25, 2012** with the Air Line Pilots Association (ALPA) as host. ACF meeting **13-01** is scheduled for **April 23-25, 2013** with Innovative Solutions International as host.

Please note that **meetings begin promptly at 8:30 AM**. Dress is business casual. Forward new agenda items for the 12-02 IPG meeting to the above addressees not later than October 5, 2012. 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 12-01
Innovative Solutions International
April 24, 2012**

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 24. Innovative Solutions International (ISI) hosted the meeting at Pragmatics Inc. Headquarters in Reston, VA. Mr. Tim Strutzel, ISI, Director, Performance Based Navigation, made welcoming and administrative comments on behalf of ISI and Pragmatics. 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 11-02, which was held on October 25, 2011 were electronically distributed to all attendees as well as the ACF Master Mailing List on November 21, 2011. No comments were received; therefore, the minutes are accepted as distributed.

3. Briefings:

There were no formal briefings scheduled; however, Bill Hammett took the opportunity to note that this meeting marks the Twentieth Anniversary of the ACF. The Forum was formed at the request of several aviation groups to provide a medium for industry to have input to instrument flight procedure criteria and policy, as well as aeronautical charting standards and products. The ACF first met in 1992 and since its inception, hundreds of stakeholder recommendations have been addressed within the FAA and many adopted, resulting in significant improvements to instrument flight procedures criteria and enroute/terminal charting standards. The ACF has a strong record of achieving results as a proven government/industry success story that continues to provide an invaluable service to the aviation community. Tom Schneider, AFS-420, added that FAA Order 7910.5 has been updated to reflect FAA-ATO organizational changes and is still in coordination. The coordination process is taking a bit longer as the revised Order is being processed for FAA Administrator signature.

4. Old Business (Open Issues):

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

Kel Christianson, AFS-470, briefed that the cold temperature ad hoc working group formed at meeting 11-02 met and validated the parameters used in the MITRE study. Kel added that the AIM has cold temperature adjustment guidance similar to ICAO; however, to date, there is no published directive that states it must be implemented. The MITRE model is valid and automated; however, work is on-going to develop an implementation methodology. Rich Boll, NBAA, stated that making cold temperature changes to IAPs seemed to be the easiest solution. Tom Schneider, AFS-420, responded that one reason for not modifying procedure design criteria is because the FAA does not want to permanently "penalize" all operations for seasonal

conditions, or create separate procedures based on those conditions. Kel commented that many options are being considered. The current thought is to have pilots add the ICAO correction to all IAP segments from IAF through missed approach at specific airports. Rich questioned whether an IAP design fix is off the table. Kel said that nothing is off the table. Tom Schneider, AFS-420, noted that the ad hoc working group had no ATO representation. Kel responded that the working group was primarily established to validate the MITRE model and AFS-470 is now actively working with Air Traffic to develop an implementation scheme. Paul Eure, AJE-31, stated that the En Route Service Unit has provided input. Paul added that they are concerned when AFS issues non-directive policy memorandums, AIM changes, etc., that may not drive an associated change to AT requirements. A directive document; e.g., an FAA Order, will also drive ATO changes. Gary Fiske, representing AJT-2A3, added that the cold temperature adjustment issue is not controversial, but the application is. He asked whether rulemaking will be affected. There was no answer to this comment. Kel closed by stating that AFS-470 will continue to develop and coordinate an implementation plan.

Status: AFS-470 will develop an implementation plan. **Item Open (AFS-470).**

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

Kel Christianson, AFS-470, briefed that the change as agreed to by consensus of the ACF and described in the minutes of meeting 11-02 was published in the February 9, 2012 AIM as new paragraph 5-5-16a-11. Kel recommended the issue be closed and the group agreed.

Status: **CLOSED**

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

Bruce McGray, AFS-410, provided a briefing on the joint AFS-410-NBAA Transport Airplane Performance Planning (TAPP) Working Group's progress in addressing this issue and issue 09-02-287 (A copy of Bruce's slide presentation is included here ). The primary goals of the TAPP are: 1) to provide updated guidance material and enhanced job aids for operators and inspectors; 2) to improve operator and inspector knowledge of OEI performance planning; and, 3) to improve inspector and Part 142 training of Part 25 performance planning requirements. Bruce briefed that the group is making progress in addressing the issue through OpSpec C46. He added that the TAPP will be increasing awareness by making presentations at the October NBAA conferences as well as the upcoming Bombardier conference. Bob Lamond, NBAA, interjected that it is not too early to make reservations for the NBAA conference now. Steve Serur, ALPA, asked if any progress is being made on getting information from aircraft manufacturers. Bruce replied that this issue has been identified as a problem and is being addressed. Roy Maxwell, Delta, stated that the problem is data. Twenty years ago, there was none; today, there is too much. There are computers today that will assess performance, but require many data inputs. The effort should be to simplify requirements to coincide with current information. Rich agreed that data is an issue; however, the climb profile must be known. On a second IOU for the issue, Bill Hammett, AFS-420 (ISI), asked whether a decision had been made by AFS--470 to re-engage the PARC on this issue. Mark Steinbicker, AFS-470, responded that the PARC would not be approached at the present time.

Status: 1) AFS-410 and NBAA to keep the ACF-IPG apprised of the TAPP progress. **Item Open (AFS-410/NBAA).**

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

Paul Eure, AJE-31, briefed that a change to Order JO 7210.3, similar to what Terminal had published, had been completed and approved levying the requirement for en route facilities to add climb-in-hold patterns to position binders. However, late input from field facilities forced a change to make the requirement a note. Bill Hammett, AFS-420 (ISI) asked whether a note would have the same weight as inclusion in a basic paragraph. Paul responded that it would.

Status: AJE-31 to track change. [Item Open \(AJE-31\)](#).

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

Kel Christianson, AFS-470, reported that guidance updates have been approved by the AFS Document Control Board and were submitted into formal coordination on September 8, 2011. The document is currently at AFS-1 for signature. Rich Boll, NBAA, stated that his organization is still concerned over the lack of opportunity for Part 91 transport aircraft to take advantage of the option. Rich added that NBAA had forwarded the specific request and associated rationale to AFS-470 on March 29, 2012. A copy of that correspondence is included here  at the request of Bob Lamond, NBAA. Mark Steinbicker, AFS-470, and Bob agreed that their respective organizations would discuss the issue off line and report at the next meeting. Status changed from "Open Pending Publication" to "Open".

Status: AFS-470 to track guidance. [Item Open \(AFS-470\)](#).

Editor's Note: *The NBAA representative advised the recording Secretary that updated OpSpec C073 was released on 27 April, 2012. It should be noted the OpSpec is limited to Part 91K, 121, 125, and 135 operators; there is no provision for part 91 participation.*

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

Tom Schneider, AFS-420, briefed that the issue was discussed at the US-IFPP meeting on April 12, 2012. Rather than waiting for 8260.3C, the change as briefed at the last ACF-IPG will be included in Change 26 to Order 8260.3B.

Status: AFS-420 will continue to track the issue until published. [Open Pending Publication \(AFS-420\)](#).

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

Tom Schneider, AFS-420, provided attendees the following report as received from Steve Jackson, the AFS-420 point person for holding issues:

"Work is on-going to revise FAA Order 7130.3 as an 8260-series order (8260.Hold). Drawings are being redone with color, extraneous text is being removed, policy memos and letters are also being incorporated. Additionally the holding paragraphs from Order 8260.3 (TERPS) will be incorporated into draft '8260.hold' to provide one-stop shopping for holding patterns. The goal is to provide an updated manual that will form the basis for future additions of other holding material, while still providing the baseline criteria

basis for the many thousands of existing holding patterns. Handbook 7130.8, *Development of Holding Pattern Criteria and Procedures*, has been archived as reference material, since today this document would be written as a test report, or a scientific finding paper based on modeling. Its only purpose was as background material for 7130.3 and to document how the areas sizes and shapes were derived. The existing holding areas are not inherently navigation system dependent. They were derived based on turn performance, with wind applied. Issues such as slant range, as well as the cone of confusion, are handled by the placement of the template, and VOR radial dispersion was handled by specifying which template is used based on distance from the NAVAID. The wind variable included in timed holding was not included in the DME holding since it assumes the aircraft will turn at the slant range distance from the facility providing DME.

The PBN Study Group definition of holding as, waypoint, inbound course, direction of turn and outbound distance, supports how we have done holding historically. No agreements could be reached on more advanced holding concepts due to the wide disparity in equipment capabilities. How outbound distance is defined, or more importantly interpreted, is still a source of concern since turning at the slant range distance from the waypoint, versus turning abeam a point on the inbound leg causes considerable variation in the turn point, especially on shorter holding patterns at higher TAS (wider pattern width). Differences of 2-3 NM are possible. There is also still concern with some aircraft "making good" the specified distance on the inbound leg by extending the outbound leg past the specified distance. Resolution of this issue will be a major factor in future revision of holding pattern size.

Part of the holding discussion at the new RTCA SC-227 working group was that the FMS would keep the aircraft inside the holding airspace, with the assumption that they could use all of the area. There is no realization that the entire holding area defined by the template may not be available due to the end reduction areas, which assume the aircraft turns at the specified distance or time. This further complicates the distance issue.

MITRE will hopefully be able to rerun last year's base line no-wind holding modeling on the manufacturer's bench top equipment this year, with wind. This information, if available in time, will be useful in SC-227 discussions of holding requirements, and in writing future NavSpecs on holding to support PBN criteria."

There was no further discussion, except that Rick Dunham, AFS-420, added that it is an AFS-420 goal to have draft PBN holding criteria developed by year's end.

Status: AFS-420 to continue development of revised holding criteria. **Item Open (AFS-420).**

h. 09-01-282: Glide Slope Intercept Altitudes on ILS Parallel Approaches

Brad Rush, AJV-3, briefed that AeroNav Products has completed removing the notes from approximately 525 IAPs via P-NOTAM amendments. There are still some procedures requiring update, mostly PRM approaches, which weren't considered in the initial tasking. Brad added that AeroNav Products hopes to have all remaining procedures completed by the end of 2012 or the first chart cycle in 2013. Tom Schneider, AFS-420, asked the reason for the delay in addressing the remaining procedures. Brad replied that AeroNav products had a "Tiger Team" addressing the initial problem and the team was disbanded before PRM approaches were considered. PRM procedures are being amended by the responsible branch. Rick Dunham,

AFS-420, stated that following intermediate stepdown altitudes seemed contradictory to PRM approaches. John Blair, AFS-410, responded that they would have to check PRM guidance, but it would seem consistent to also remove the notes from PRM IAPs. A side discussion ensued when Tom Schneider, AFS-420, asked the status of the plan to publish a single AAUP for all approaches to an airport. Valerie Watson, AJV-3B, responded that this was discussed several years ago and an IACC requirements document was staffed through the IACC to re-index IAPs to make a single AAUP feasible. However, procedure amendments are required because the current AAUP is documented on a continuation FAA Form 8260-10 and is therefore under Part 97. Implementation of a process to make the AAUP non-regulatory will require close coordination between AeroNav Products, NFDC, and AFS-410. Brad recommended this be worked off-line through the Aeronautical Information Services Working Group (AISWG). Ted Thompson, Jeppesen, requested that if documentation requirements change, FAA must ensure that Jeppesen and LIDO are made aware. *Editor's Note: The AAUP issue will be worked through the AISWG and not tracked in the ACF-IPG minutes. Briefings will be provided as deemed necessary by the Chair.*

Status: 1) AJV-3 to continue efforts to remove the profile notes on all ILS IAPs
Item Open (AJV-3B).

i. 09-01-284: Question of TERPs Containment with Late Intercepts

Gary Fiske, representing AJT-2A3, briefed that he believed all comments regarding the Document Change Proposal (DCP) for Order JO 7110.65, paragraph 4-8-4, had been vetted and the DCP forwarded for signature. He thought the document was hung up in AOV, but has since learned that it is in the En Route Service Unit. Paul Eure, AJE-31, stated that publication of the change was awaiting training guidelines. Those guidelines have been written and the training package forwarded to the ATO National Training Group. Paul added that to expedite implementation, the guidance will be published as a Notice, targeted for June, 2012, rather than awaiting formal change to Order JO 7110.65. Bruce McGray, AFS-410, stated that he has the DCP and is authoring AIM/AIP changes to support it. Rich Boll, NBAA, recommended that if a Notice is published in June, similar language should be published concurrently as a Graphic Notice in the Notices to Airmen Publication (NTAP) pending publication in the AIM/AIP. Bruce agreed to pursue this

Status: 1) AJT-2A3 and AJE-31 to track and report status of the proposed change to Order JO 7110.65; 2) AFS-410 to review the proposed changes to Order JO 7110.65 and make necessary changes to AIM 5-4-7i; and, 3) AFS-410 to consider interim publication of AIM guidance as a Graphic Notice in the NTAP. **Item Open (AJT-24, AJE-31, and AFS-410).**

j. 09-02-286: Initial "Climb & Maintain" Altitude on Standard Instrument Departure Procedures

Bruce McGray, AFS-410, briefed the following proposed change to AIM paragraph 4-4-10g that is being planned for publication in August, 2012. It is proposed to revise the introductory text and add a new Example 1 and renumber the remaining Examples:

g. The guiding principle is that the last ATC clearance has precedence over the previous ATC clearance. When the route or altitude in a previously issued clearance is amended, the controller will restate applicable altitude restrictions.

1. The term "Maintain", when used in issuing an altitude assignment as an item in the initial ATC clearance delivered to an aircraft prior to departure, does not constitute an amended

clearance that cancels altitude restrictions issued by ATC or contained on any DP issued as an integral part of the same clearance. The depicted or assigned altitudes apply. However, in subsequent transmissions, restating a previously issued altitude to maintain is an amended clearance. If an altitude to "maintain" is changed or restated, whether prior to departure or while airborne, and previously issued altitude restrictions are omitted, altitude restrictions are cancelled, including DP/FMSP/STAR altitude restrictions if any.

2. Standard Instrument Departure Procedures (SIDs) may or may not include an initial "climb and maintain altitude" in the SID verbiage. If an altitude is not printed on the procedure, ATC will issue an altitude in its original IFR clearance (usually from clearance delivery or by PDC). In either case, this is your original clearance altitude, and pilots should comply with all altitude restrictions published on the departure procedure. If any time thereafter, a new altitude is assigned by ATC, all previous restrictions are canceled unless they are re-issued by ATC such as "Climb and maintain XXXX, comply with restrictions."

The proposal prompted a lively discussion. Gary Fiske, representing AJT-2A3, asked whether the acronym "FMSP" could be removed as there are no known FMS procedures in publication. Mark Steinbicker, AFS-470, agreed that a global scrub should be made to delete this acronym. Steve Moats, AFS-220, expressed concern over the word "maintain" having two meanings in the same paragraph of the proposed AIM change. Rich Boll, NBAA, expressed concerns about ambiguity and the potential confusion over the differences between initial ATC "climb and maintain" clearances (unrestricted climbs) vs. published (charted) altitude restrictions which are "downstream" on the SID, especially when the climb is restricted due to 'At' or 'At or Below' altitude restrictions. Paul Eure, AJE-31, stated that the ATO is working a Notice on assigned altitudes for departures to include a training bulletin. Mark Steinbicker, AFS-470, added that an AFS InFO, an NTAP Graphic Notice as well as other items are being prepared to clarify the issue for pilots and controllers alike. Steve Serur, ALPA, confirmed that departure altitude restrictions have been an area of concern for years. Ben Rich, Metron Aviation, stated that the problem goes back as far as 1977 and the confusion in the cockpit is even greater today, especially with increased ATC intervention on SIDs and STARs, coupled with the increase in "At" and "At or below" altitudes. Rich Boll, NBAA, added that many SIDs do not specify an altitude, only "as assigned". Kyle McKee, AJV-14, stated that the "climb via" phraseology and procedures for SIDs is piggybacking on what has been implemented for STARs. When issued, "Climb via" will mean that the SID's vertical profile and lateral track must be adhered to. Mark Steinbicker, AFS-470, noted that the "climb via" issue was also being addressed within the PARC and expressed reservation regarding an issue being worked by two separate entities. Bill Hammett, AFS-420 (ISI), agreed with Mark's statement regarding separate groups working the same issue. However, Bill disagreed that the PARC is better suited to resolve the issue unless an ad hoc working group is formed and assigned the project, similar to the PARC Nav-Data Currency WG, or the PARC RNP Charting WG. These aforementioned PARC WGs were willing to "get down in the weeds" and address all facets of an issue and resolve them. Ted Thompson, Jeppesen, agreed that the PARC subcommittee process should address **all** aspects of a given subject. Mark agreed to take the issue before the PARC to see whether they will accept it. Bill agreed to provide Mark the ACF history file regarding the issue, and added that if the PARC accepts the issue, it will be closed as a recommendation from the ACF-IPG and subsequently carried as a briefing item.

Editor's Note: Rick Dunham, AFS-420 forwarded the ACF-IPG history file of issue 09-02-286 as well as the draft minutes of the ACF 12-01 meeting discussion on the issue to Mark Steinbicker on May 14.

Status: AFS-470 will present the issue before the PARC for acceptance and report the decision. **Item Open (AFS-470).**

k. 09-02-287 Operator Training Concerning One Engine Inoperative (OEI) Contingency Planning For IFR Departure Procedures

Bruce McGray, AFS-410, provided a briefing on the AFS-410-NBAA Transport Airplane Performance Planning (TAPP) Working Group's progress in addressing this issue and issue 09-02-287 (A copy of Bruce's slide presentation is included here [I](#)). The primary goals of the TAPP are: 1) to provide updated guidance material and enhanced job aids for operators and inspectors; 2) to improve operator and inspector knowledge of OEI performance planning; and, 3) to improve inspector and Part 142 training of Part 25 performance planning requirements. Bruce briefed that the group is making progress in addressing the issue through OpSpec C46. He added that the TAPP will be increasing awareness by making presentations at the October NBAA conferences as well as the upcoming Bombardier conference. Bob Lamond, NBAA, interjected that it is not too early to make reservations for the NBAA conference now. Steve Serur, ALPA, asked if any progress is being made on getting information from aircraft manufacturers. Bruce replied that this issue has been identified as a problem and is being addressed. Roy Maxwell, Delta, stated that the problem is data. Twenty years ago, there was none; today, we have too much. There are computers today that will assess performance, but require many data inputs. The effort should be to simplify requirements to coincide with current information. Rich agreed that data is an issue; however, the climb profile must be known. On a second IOU for the issue, Bill Hammett, AFS-420 (ISI), asked whether a decision had been made by AFS-470 to re-engage the PARC on OEI procedures. Mark Steinbicker, AFS-470, responded that the PARC has no interest in pursuing OEI issues at this time.

Status: 1) AFS-410 and NBAA to keep the ACF-IPG apprised of the TAPP progress.
Item Open (AFS-410 and NBAA).

l. 09-02-288 VNAV Minimums vs. Circle to Land

Bruce McGray, AFS-410, reported there has been no activity on this issue since the last meeting.

Status: AFS-410, in concert with NBAA, APA, and Horizon Air, develop AIM and IPH language.
Item Open (AFS-410).

m. 09-02-289 Use of Leg Combinations and Altitude Constraints on RNAV Departure Procedures

Tom Schneider, AFS-420, briefed that NBAA has forwarded the following recommended change to Order 8260.46D, Appendix A, which has been accepted by AFS-420 and the US-IFPP. Tom briefed that it will be included in draft change 3:

² VA (Heading-to-an-altitude) may only be used as the first leg of a departure and must be followed by a DF leg. The altitude must be an at-or-above altitude; a mandatory (i.e., "at") altitude must not be used at the first fix.

Gary Fiske, representing AJT-2A3, stated that this change can't be used at places like Teterboro where two mandatory altitude restrictions are necessary for ATC separation between Teterboro departures and Newark arrivals. Rick Boll, NBAA, stated that some FMSs will never reach a mandatory altitude. Tom advised that all will have an opportunity to comment when Change 3 to Order 8260.46 is circulated for comment.

Status: AFS-420 will track the issue until published. **Open Pending Publication (AFS-420).**

n. 09-02-290 Call for Review and Revision of ARINC Leg Types Used in Construction of RNAV Departure Procedures

Tom Schneider, AFS-420, briefed that per the most recent US-IFPP meeting on April 13, it is AFS-420's understanding that the use of "leg-types" is now going to be addressed at RTCA within subcommittee 227 (SC-227). The US-IFPP will monitor further developments as they occur and provide support where needed. Tom recommended the issue be closed. Rich Boll, NBAA, stated that NBAA was satisfied with the action and agreed that the issue can be closed.

Status: Item CLOSED.

o. 09-02-291 Straight-in Minimums NA at Night

Tom Schneider, AFS-420, briefed that, as noted at the last US-IFPP meeting on April 13, research of the history defining the current obstacle areas is on-going within AFS-420 and 450 and AFS-450 is still studying the adequacy of the circling visual segment. Steve Serur, ALPA, asked whether any check had been made regarding VGSI flight inspections. Tom responded, no. Brad Rush, AJV-3B, stated that procedure specialists check the Air-Nav data base when developing procedures. Tom stated that one would have to assume that the VGSI systems at all Part 139 airports have been flight inspected. Brad added that if there is no survey for the airport, they must assume 20:1 penetrations exist.

Status: AFS-420 and 450 will continue to work the issue through the US-IFPP.

Item Open [AFS-420 and AFS-450 (US-IFPP)].

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

Tom Schneider, AFS-420, briefed there were 4 open IOUs for this issue. Each is addressed separately below:

1) Track IPH Guidance. Tom Schneider, AFS-420, briefed that IPH guidance has been developed and circulated for comment. Comments have been received and are currently being mitigated.

2) Develop AIM Educational Material. Bruce McGray briefed that he has reviewed the IPH guidance and AIM guidance is under development with a targeted publication date of August, 2012. Bruce noted that the TPP lead-in material for Section L also requires cleaning up. Bruce stated that the material should specify that an ATC clearance is required to fly an ODP according to 14 CFR Part 91.173. There was much discussion regarding this statement since it has been long publicized that an ATC authorization is not required to fly an ODP when on an IFR clearance. Bill Hammett, AFS-420 (ISI), noted that if issued an ATC clearance and not assigned a SID or radar vector, then under Part 91.175(f) the ODP is mandatory for certain operators (Editorially added: Part 121, 125, 129, 135), whether specified by ATC or not; however it is optional for Part 91. John Collins, GA Pilot, commented that at Andrews, NC, the only ODP option available is a VCOA and that he, as a Part 91 operator, can use/not use the procedure at his discretion. Rich Boll, NBAA, added that the solution is to have pilots advise ATC if the VCOA option will be used. Bill Hammett, AFS-420 (ISI), responded that there has been much discussion regarding when to advise ATC; i.e., when receiving the initial clearance, before taxi, before takeoff, etc. Some places do not have a "hammerhead" taxiway; therefore, if

a pilot announces he will use the VCOA when he is at number 1 for takeoff, it could cause problems for ATC. Tom Schneider, AFS-420, recommended that an ad hoc working group be formed to resolve AIM guidance and TPP language. The Forum agreed and the following personnel signed up for the working group:

<u>ODP/VCOA Working Group</u>			
<u>Name</u>	<u>Organization</u>	<u>Phone</u>	<u>Email</u>
Paul Eure (Chair)	AJE-31	202-385-8451	paul.eure@faa.gov
John Collins	GA Pilot	704-576-3561	johncollins@carolina.rr.com
Bruce Ofstun	Horizon Air	503-384-4503	bruce.ofstun@horizonair.com
JD Hood	Horizon Air	800-451-0222 Ext44346	jd.hood@horizonair.com
Valerie Watson	AJV-3B	301-427-5155	valerie.s.watson@faa.gov
Bruce McGray	AFS-410	202-385-4625	bruce.mcgray@faa.gov
Tom Schneider	AFS-420	405-954-5852	thomas.e.schneider@faa.gov
Bill Hammett	AFS-420 (ISI)	603-521-7706	bill.ctr.hammett@faa.gov
Rich Boll	NBAA	316-655-8856	richard.boll@sbcglobal.net
Tom Kramer	AOPA	301-695-2064	tom.kramer@aopa.org
Terminal Service Unit	(TBD)		

3) MBI for Terminal Facilities. Terry Pearsall, AJT-2B2, was not available to provide an update on this IOU.

4) Re-establish VCOAs at Selected Mountainous Airports. Bob Lamond, NBAA, stated that his organization is working closely with AJE-31 and making progress. They are currently working with Denver ARTCC to establish both an ODP without VCOA and a separate SID with VCOA instructions.

All 4 IOUs remain open with taskings as indicated below.

Status: 1) AFS-420 to track applicable IPH guidance until published; 2) AJE-31 (Paul Eure) to lead the ad hoc working group to develop AIM/AIP and TPP material; 3) AJT-2B2 (Terry Pearsall) to develop a MBI for terminal facilities; and 4) NBAA and AJE-31 to work jointly to re-establish VCOAs at selected mountainous airports.

Item Open (AFS-420; AJE-31); AJT-2B2; and, NBAA.

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

Gary Fiske, representing AJT-2A3, stated that the DCP for FAA Order JO 7110.65U, paragraph 4-8-1, has been completed and is awaiting publication. The group consensus was to leave the issue open until published. AJT-2A3 to track the DCP change until published

Status: AJT-2A3 to track the DCP change. **Item Open Pending Publication (AJT-2A3).**

r. 11-01-296 Magnetic Variation Differences and FMSs

Bill Hammett briefed that he had spoken to Kurt Swanick, AFS-240, and an AFS InFO addressing the subject has been developed; however, not signed yet. A copy of the draft InFO was presented to the attendees; however, a hard copy was not provided the attendees as the document is still in draft form. Kurt also indicated that he had received no updates from the CNS Task Force Tech Pilots Group, who is supposed to be working the issue. Bill also briefed

that he had received an email from Lev Pritchard, APA, stating that he also would not be in attendance at ACF 12-01 due to personal reasons. Lev wrote that he was pleased with the InFO as drafted and strongly recommended its signature and publication. He added that pilot education is the best path to create understanding at this point in time and made the following suggestions: 1) publish the InFO; and, 2) Use the information in the InFO to enhance AIM, Chapter 1, paragraph 1-1-19I, *Conventional Versus GPS Navigation Data*; and, Cross reference paragraph 1-1-19I in paragraphs 5-2-8f, *RNAV Departure Procedures* and 5-4-1e, *RNAV STAR*. Tom Schneider, AFS-420, also recommended that AFS-200 consider contacting AFS-630 and request mag var information be included in the Practical Test Standards. Tom also recommended forwarding the InFO, when signed, to the OPR for the IPH for consideration. The issue is still on record to be addressed by the ATA CNS/ATM Task Force. AFS-240 to track status of the InFO.

Status: 1) AFS-240 to track publication of the InFO, and 2) Issue inactive to be addressed by the CNS/ATM Task Force. **Item Open (CNS/ATM Task Force and AFS-240).**

s. 11-02-297 Airway "NoPT" Notes on Instrument Approach Procedures

Bruce McGray, AFS-410, briefed that he had presented the issue to FAA Human Factors, ANG-C1 who conducted some studies using the Chester, CT VOR-A approach. Based on the currently charted NoPT note, 50% of the pilots queried were correct in understanding that being on the airway was required to take advantage of the NoPT route. The other 50% incorrectly understood the radials could be interpreted as defining a NoPT "sector". Several verbiage changes were again discussed; "*NoPT for arrivals on MAD Victor Airway radials 235, 258, and 317*"; "*NoPT for arrivals on airways V-1, V-475 and V-34 on MAD VOR radials 235, 258, and 317*". Gary Fiske, representing AJT-2A3, suggested the note just state the applicable airways. Bill Hammett, AFS-420 (ISI), responded that if this is done, since many airways are bi-directional over a facility/fix, the direction must be included to ensure maximum turn limitations were not exceeded. He referred to the verbiage in the original Recommendation Document, which, although lengthy, cannot be confused. Gary then stated that imbedded in the guidance in Order JO 7110.65, paragraph 4-8-1, controllers may clear aircraft on unpublished routes direct to an IAF or IF, if within 90 degrees, and specifically state "straight-in" in the approach clearance. John Collins, GA Pilot, stated that it is a good idea for controllers to assume that pilots will not conduct a course reversal maneuver if on an obvious route for a straight-in approach, even though one is required under Part 91. No consensus on preferred language was reached and AFS-410 will continue to work the issue.

Status: AFS-410 to continue to track the issue and report. **Item Open (AFS-410).**

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

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

ensure the suffix is in the data base so use of "converging" in phraseology would ensure correct coding. The issue is still being worked within the US-IFPP and Brad agreed to monitor the issue and provide activity updates to the ACF.

Status: AJV-3B will monitor US-IFPP activities and keep the ACF apprised of the issue status.
Item Open (AJV-3B and US-IFPP).

5. New Business:

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

New issue presented by Rich Boll on behalf of NBAA. The lack of CAT D minimums on many IAPs results in the loss of access to some airports by operators of turbine-powered business aircraft in the event that a circle-to-land approach is required. The vast majority of these aircraft fall within the CAT C approach category; however, the maneuvering speed required during the execution of a circling maneuver often requires using next higher approach category. Without CAT D minima, access to the airport is effectively denied if a straight-in approach is not available. Rich stated that NBAA believes that one reason that the CAT D line of minima is not published at many of these airports may be due to the runway's designated Airport Reference Code (ARC), a designation used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport (ref: AC 150/5300-13, Airport Design). A runway's designated ARC is defined in part by the design aircraft's approach category (e.g. C-IV, B-II). In the past, the runway's design ARC was used as a justification for not publishing lines of minima above the runway's design ARC. The NBAA recommendation is that the Note in TERPS paragraph 3.1.1a be expanded to include a requirement that whenever CAT C circling minimums are authorized at an airport, CAT D circling minima must also be published. Brad Rush, AJV-3B, asked if it would be appropriate to only publish CAT D circling minima on an approach that had CAT A-C straight-in minimums. Tom Schneider, AFS-420, said that there is nothing to preclude this. Roy Maxwell, Delta, stated that this is a problem for airlines also, especially charters operating into smaller airports. All CAT C aircraft use CAT D minimums. Roy added that the ARC was never intended to specify aircraft category for an airport. Normal growth will normally increase aircraft movements, which would, in turn, increase runway design to handle higher category aircraft. It was noted during the discussion that if CAT D minima was published, the possibility exists that a CAT D aircraft could use the approach and may land at an airport not suitable for the aircraft. Tom Schneider, AFS-420, stated that there had been some initial discussion of developing a "C+" line of circling minima. This would indicate that a CAT D circling evaluation had been made, but the approach was restricted to CAT C aircraft use; however, this would require a possible rule change and associated legal action. Mark Steinbicker, AFS-470, stated that this issue needs further internal AFS-400 discussion. Rick Dunham, AFS-420, added that there also needs to be further discussion with other lines of business that may be involved; e.g., Airports. Tom closed by stating that the issue will impact TERPS criteria; therefore, must go through the US-IFPP.

Status: AFS-420 will forward the recommendation to the US-IFPP for consideration.
Item Open (AFS-420).

b. 12-01-300 Public Access to RNAV Visual Flight Procedures.

New issue presented by Rich Boll on behalf of NBAA. In 2010 the FAA issued Order 8260.55 allowing the development of RNAV Visual Flight Procedures (RVFPs) that capitalize on the capabilities of RNAV systems to provide repeatable flight paths, reduce pilot-controller

communications and enhance safety through the use of vertical guidance during visual approaches. These RVFPs are not “Public” procedures. Instead, they are approved by a process similar to “Special” IFPs and are only available to part 121 and part 135 operators through OpSpec approval. NBAA is concerned that that these benefits should not be restricted to a limited number of operators; but should be extended to all operators of aircraft with demonstrated RNAV system performance. This becomes especially critical in places such as Teterboro with the recent FAA NextGen initiatives to employ the “Better Equipped, Better Service” model. NBAA requests that FAA Flight Standards (AFS) and the Air Traffic Organization (ATO) begin developing procedure design, aircraft equipage, charting specifications, and operational criteria supporting the deployment of Public RVFPs. Mark Steinbicker, AFS-470, stated that RVFPs were originally developed for a limited number of runway ends where pilots were often requested to make abnormal approaches. The intent was to standardize operations for all carriers using AC90-100 as a baseline; however, many require RNP design criteria. Therefore, there is no hard design criteria and the procedures are tailored for individual operators and specific runway ends. Mark added that it was not intended to proliferate these procedures across the NAS; however, increased capability is leading to more requests. If RVFP proliferation is desired, it will be a coordination nightmare; therefore, AFS-470 and the PBN Group prefer to focus on what capability is needed. Rich re-iterated that NBAA wants some of the benefits of RVFPs in the public realm as continued exclusion of many users causes increased ATC problems. There have already been instances where ATC has cleared business aircraft for a RVFP only to be told the aircraft doesn't have the procedure available. Bob Lamond, NBAA, added that there are too many times when the ATO and AFS are not on the same page. The NAS needs procedures that will accommodate the maximum number of users. Bruce Ofston, Horizon Air, stated that it causes another procedure to be trained on and gave an example of programming a charted visual flight procedure (CVFP) into a database. Rich Boll, NBAA, noted that the example is an "AR" procedure and not available for most Part 91 operators. Ted Thompson, Jeppesen, commented that there is also another issue related to how required “visual” waypoints would be defined, categorized, named, sourced, and coded. In other words, such RNAV “visual” Waypoints would be intended for use in VFR operations but would have to be coded in such a way that would allow them to be extracted and included in IFR navigation databases. This would be necessary in order to filter out (omit) hundreds or thousands of non-essential VFR Waypoints that have no practical use in “IFR” navigation databases. Al Ball, NetJets, stated that repeatable legs in VMC provides a good tool for operations in noise critical areas. Brad Rush commented that these RNAV Visual Flight Procedures, by definition and by nature, are 'visual' procedures and therefore fall outside the scope of the ACF-IPG and TERPS criteria. He believes these procedures should be addressed separately, as such, by Flight Standards AFS-410. Mark Steinbicker, AFS-470, stated that FAA is trying to capture locations that would benefit most. Mark closed the discussion by stating that Order 8260.55 is currently being updated and this recommendation will be considered, although oversight is an ongoing issue. If there are locations where a public RVFP will work and is needed, then maybe AFS and ATO should work together and move forward.

Status: AFS-470 will consider the recommendation during the update of FAA Order 8260.55.
Item Open (AFS-470).

- c. **12-01-301** Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment.

Tom Schneider, AFS-420, presented this new issue on behalf of the Flight Inspection Services, AJW-331. Tom agreed to put the issue before the ACF-IPG for preliminary discussion until a representative of Flight Inspection can attend the October meeting. The issue arose when

Southwest Airlines complained of receiving GPWS alerts while flying a published vertical descent angle (VDA) on approach to Birmingham, AL. Flight Inspection validated the complaint, also receiving GPWS alerts. Although the IAP has a VDA, the 34:1 surface is not clear as indicated by the lack of the "stipple" on the profile view. John Collins, GA Pilot, also expressed concern when VDAs and VDPs are published when 34:1 and 20:1 visual surface penetrations exist. He has forwarded a similar issue to the Charting Group recommending that a cautionary note be published when this condition exists - see ACF Charting Group issue 12-01-252. A copy of John's briefing slides is included here . Ted Thompson, Jeppesen, provided an explanation of the history of how VNAV angles came to be added to Jeppesen charts, along with the "DA in lieu of MDA" profile note which Jeppesen charts as a 'value added'. Both of these enhancements were based on ATA/Airline requests to Jeppesen in order to support industry use of vertically-guided, stabilized descents in the final approach segment. Mike Frank, AFS-52, asked whether Jeppesen charted VDAs from the 8260 forms. Ted replied yes, and if one was not provided, Jeppesen would compute the angle. Brad Rush, AJV-3B, interjected that the angle was computed from FAF altitude to TCH, not the runway. John Collins, GA Pilot, stated that it is impossible to fly a stabilized approach to the runway when there is terrain penetrating the VDA. Tom emphasized that VDAs are for information only, advisory in nature, and are not protected for use below the MDA (Editor's Note: See AIM paragraph 5-4-5i). Rich Boll, NBAA, noted that FAA provides an indication of a clear 34:1 on RNAV IAPs, but nothing for conventional IAPs. Tom expects that Bill Geiser, AJW-331, or a member of his staff will attend the next ACF to elaborate on his recommendations and asked all attendees be prepared for further discussion and offer recommended solutions.

Status: All participants to review the recommendation paper for discussion at meeting 12-02. **Item Open (All participants).**

6. Next Meeting: ACF Meeting **12-02** is scheduled for **October 23-25, 2012** with the **Air Line Pilots Association (ALPA)**, Herndon, VA as host. ACF Meeting **13-01** is scheduled for **April 23-25, 2013** with **ISI (Pragmatics, Inc.)**, Reston, VA as host.

7. Closing Comments: Mr. Max Hall, Chief Operating Officer (COO), Pragmatics, Inc made closing comments stating that ISI/Pragmatics was pleased to have hosted the 20th anniversary meeting of the ACF. Max offered the Pragmatics facility for future meetings and solicited feedback on what could be done to improve their support.

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 5 - a reminder notice will be provided.

8. Attachments (2):

1. OPR/Action Listing.
2. Attendance Listing.

**AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 12-01**

<u>OPR</u>	<u>AGENDA ITEM (ISSUE)</u>	<u>REQUIRED ACTION</u>
AFS-470	92-02-110 (Cold Weather Altimetry)	Develop and coordinate a cold temperature implementation plan.
AFS-410 and NBAA	98-01-197 (Air Carrier Compliance With Climb Gradients)	Continue to jointly work the issue through the Transport Airplane Performance Planning (TAPP) Working Group.
AFS-470 and NBAA	04-02-258 (VNAV IAPs using DA(H) and OpSpec C073)	<u>AFS-470</u> : Continue to track guidance changes until published. <u>AFS-470 and NBAA</u> : Jointly discuss the NBAA concerns regarding inclusion of Part 91 operators.
AFS-420 (US-IFPP)	07-01-270 (Course Change Limitation Notes on IAPs)	The Executive Director of the US-IFPP to keep the ACF apprised of the issue status.
AFS-420	07-02-278 (Advanced RNAV (FMS/GPS) Holding Patterns Defined by Leg Length)	Continue development of revised holding criteria.
AJV-3B	09-01-282 (Glide Slope Intercept Altitudes on ILS Parallel Approaches)	Remove currently published ILS intercept notes and report progress.
AJT-2A3, AJE-31, and AFS-410	09-01-284 : (Question of TERPs Containment with Late Intercepts)	<u>AJT-2A3 and AJE-31</u> : Track and report status of proposed changes to Order JO 7110.65, paragraph 4-8-1 <u>AFS-410</u> : Review proposed ATO changes to JO 7110.65 and make necessary changes to AIM paragraph 5-4-7i. <u>AFS-410</u> : Consider advance publication of AIM language as a Graphic Notice in the NTAP
AFS-470	09-02-286 : (Initial "Climb & Maintain" Altitude on SIDS)	Present the issue to the PARC for acceptance as a PARC work issue.
AFS-410 and NBAA	09-02-287 : (Operator Training Concerning OEI Contingency Planning For IFR Departure Procedures)	Continue to jointly work the issue through the Transport Airplane Performance Planning (TAPP) Working Group.
AFS-410	09-02-288 : (VNAV Minimums vs. Circle to Land)	Develop AIM and IPH language in concert with NBAA, APA, and Horizon Air.
AFS-420	09-02-289 : (Use of Leg Combinations and Altitude Constraints on RNAV Departure Procedures)	Track change to Order 8260.46.
AFS-420, AFS-450 (US-IFPP)	09-02-291 : (Straight-in Minimums NA at Night)	Jointly continue to work the issue through the US-IFPP and report.

**AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 12-01**

<u>OPR</u>	<u>AGENDA ITEM (ISSUE)</u>	<u>REQUIRED ACTION</u>
AFS-420 AJE-31 AJT-2B2 AJE-31 and NBAA	10-01-292: (Removal of VCOA Option at Mountainous Airports)	<u>AFS-420</u> : Track IPH guidance until published. <u>AJE-31</u> : Lead ad hoc WG to develop pilot VCOA guidance for the AIM and AIP. <u>AJT-2B2</u> : Develop an MBI for terminal facilities. <u>AJE-31 and NBAA</u> : Work jointly to re-establish VCOAs at selected mountainous airports
AJT-2A3	10-01-294: (RNP SAAAR Intermediate Segment Length and ATC Intervention)	Track the DCP change to Order JO 7110.65, paragraph 4-8-1 through publication.
ATA CNS/ATM Task Force AFS-240	11-01-296: (Magnetic Variation Differences and Flight Management Systems)	<u>ATA CNS/ATM Task Force</u> : Address the issue and report conclusions to the ACF-IPG. <u>AFS-240</u> : Track publication of the InFo on the subject and monitor ATA CNS Task Force activity on the issue and report progress.
AFS-410	11-02-297: (Airway "NoPT" Notes on IAPs)	Continue to work issue and report.
AJV-3B (US-IFPP)	11-02-298: (Converging ILS Coding and Chart Naming Convention)	Track and report US-IFPP actions on the subject.
AFS-420 (US-IFPP)	12-01-299: (Loss of CAT D Line of Minima in Support of Circle-to-Land Operations)	Present the issue to the US-IFPP for consideration.
AFS-470	12-01-300: (Public Access to RNAV Visual Flight Procedures)	Consider the recommendation during update of Order 8260.55
All Participants	12-01-301: (Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment)	Review issue for discussion at ACF-IPG Meeting 2-02

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INSTRUMENT PROCEDURES GROUP
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**AERONAUTICAL CHARTING FORUM
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ATTENDANCE LISTING - MEETING 12-01**

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