

**GOVERNMENT / INDUSTRY AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
Meeting 97-02 October 27-28, 1997
ALPA Headquarters/Washington, DC
(Transcribed/Reformatted)**

1. **Opening Remarks:** Paul Best, AFS-420 and Dick Powell, ATA-100 Co-chairs of the ACF, Instrument Procedures Subgroup, opened the meeting at 1300 October 27, 1997. The meeting was held at the Air Line Pilots Association (ALPA) Headquarters, with Mr. Kevin Comstock and Mr. Tom Young hosting. A listing of attendees is attached.

2. **Briefings:** None

3. **Review of Minutes of Last Meeting:** Minutes of the last meeting, which was held on April 7-8, 1997, were mailed on May 2, 1997. No comments were received and the minutes were accepted as distributed.

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

a. **92-02-102** IFR Departure Procedures and Standard Instrument Departures (SIDs)

Since the 97-1 meeting, FAA Order 8260.DP was developed, circulated for comment, and is in coordination for signature. Expected effective date is 1 Jan 98. Departure procedures will take one of two formats: Textual or Graphic. Current SID's will become graphically published DP's. The departure procedures currently in FLIP are textually published DP's. There was much discussion on the subject of pilot training and education material needed. Recommendation to draft an FDC NOTAM was adopted. Develop and coordinate AIM/AIP changes for August 98 publication. Coordination of required cartographic changes must be staffed through IACC-Commander Eric Secretan (NOAA). Item remains open to be tracked till fully implemented. AFS-440 will circulate draft Order 8260.PID for signature. **Action: Item Open (AFS-440 & NOAA).**

b. **92-02-103** Minimum Crossing Altitude (MCA) on Obstacle Clearance SIDs.

Status remains unchanged and no significant action taken since 97-1 report. Tom Young, ALPA researched the NASA ASRS data base and discovered there were 16 filings on departures, 5 of which related to the subject. Discussion indicates that there is still no consensus on this issue. As noted in Issue 92-02-102, Charlie Guy, ASAP, emphasized that this item should be addressed in the proposed 8260.PID Order. Pat Fair, ATA-130 and Bill Mosley, ATO-120 took an IOU to check IACC specifications and report at the next meeting. ATA-130 and ATO-120 will research the IACC specifications to determine charting applicability for MOCAs on SIDs. **Action: Item Open (ATA-130 and ATO-120).**

c. 92-02-104 TERPS Paragraph 323a, Precipitous Terrain Additives

Don Pate, AFS-450, reported that funding has been received for the project and a contract is in place for the National Center for Atmospheric Research (NCAR) to assist AFS-450 in the development of an analytically based geographic definition of precipitous terrain and associated formulas for use by procedure developers to identify and make appropriate adjustments for precipitous terrain. Don then gave a presentation outlining AFS-450 action to present, and talked to the attached Status Document. AFS-450 will work closely with NCAR to ensure that the terms of contract are adequately addressed to accomplish these goals. NCAR will develop a simple empirical model for determining the required increases in obstacle clearance near precipitous terrain. **Action: Item Open (AFS-450)**

d. 92-02-105 Review of Adequacy of TERPS Circling Approach Maneuvering Areas and Circling at Airports With High Heights Above Airports (HAA's)

Don Pate, AFS-450 reported the study and analysis continues. Proposed criteria development is expected to be complete, and a draft prepared by the spring 98 meeting. Wally Roberts, ALPA expressed concern over the possibility circling maneuvers would be altogether deleted. He does not consider deletion to be a valid option, and maintains the pilot should determine the option to circle. AFS-450 will continue Aircraft Simulation and TERPS (ASAT) modeling/testing and report the results at the next meeting. **Action: Item Open: (AFS-450)**

e. 92-02-110 Cold Station Altimeter Settings

Jack Corman, AFS-440 briefed that criteria development is progressing. He noted the following recommendations: 1) Publish a temperature adjustment chart in the front of the approach booklets; 2) Publish instructions in the AIM specifying how and when to use the chart; 3) Have air carriers identify locations exhibiting significant indicated altitude error, and make the following annotation on approach charts at these locations: "USE TRUE ALTITUDE WHEN AIRPORT TEMPERATURE IS BELOW ISA". Pilot education issues have to be addressed. Recommendations were well received and initiatives are to be work further. Don Pate, AFS-440 expects to present proposed criteria at the next meeting. **Action: Item Open: (AFS-440)**

f. 93-01-121 Provision of Current IAP Procedural Directive Guidance to the Aviation Community (AC90-XX)

Paul Best, AFS-420 briefed that there has been no change in status since the last meeting. An update on the status of AC61-27 was not available. **Action: Item Open (AFS-420 & AFS-440)**

g. 94-02-133 SIAP Optimum Final Approach Segment Descent Gradient for Categories C and D Aircraft

Jack Corman, AFS-440 reported that TERPS Change 17 coordination nearly completed, and

expect coordination for final publication after the first of the year. There followed a discussion over a possible editorial inconsistency in TERPS. Until recently the optimum descent gradient for all non-precision final approach segments was considered 300ft/NM. It has been determined that this is true for Radar, RNAV and GPS SIAPs, but not true for VOR, LOC, or NDB SIAPs. At least one VOR SIAP has been located with a less than 300 ft. /NM final segment. Change 17 to TERPS revised the descent angle/gradient guidance to 3dg/318 ft. /NM. This issue is under review. General consensus among those that have reviewed the draft criteria is that it is good and will close this issue when published. The change should be out for formal coordination within the next month. AFS-440 will continue efforts to publish TERPS Change 17. Jeppesen will provide AVN with a listing of non-standard procedures, and copy to AFS-400, Paul Best. **Action: Item Open (AFS-440).**

h. 95-01-140 Sector Arrival Zones for GPS SIAPs and Turning Protection Over Such Fixes

Jack Corman, AFS-440 briefed that the basic "T" IAP (TAA) design concept is continuing to be developed. The draft Order (8260.TAA) specifying TAA design criteria has been coordinated within the FAA, with the military, and various user groups. The order is in final coordination; awaiting AFS-1 signature. TAA guidance is to be published in the February 1998 AIM, and should be fully implemented by the next ACF meeting. The item was recommended for closure, held open till publication of the order. AFS-440 will continue to track the TAA program and provide status reports until implemented. **Action: Item Open AFS-440).**

i. 95-01-141 Multiple DME ARC IAFs

Paul Best, AFS-420 briefed (during the 97-1 meeting) the following 3 options: (1) Establish an IAF in all requested segments which cross arc initials in a non-radar environment. The fixes should be named for air traffic purposes. (2) Remove the current IAF at the beginning of each arc segment and established a single named IAF where the arc joins the intermediate segment. Use feeder segment criteria for all arcs. CNFs would have to be assigned to all arc/airway which meet criteria. (3) Review all arc/airway intersections to determine compliance with TERPS criteria. Publish an annotation on the plate for the intersections that do not comply. AFS-440 will coordinate with legal to review possibility of a change in policy. AFS-440 will continue working the issue and provide update at the next meeting. **Action: Item Open (AFS-440).**

j. 95-01-143 Establish and Publish Procedural Maximum Speeds for Terminal Instrument Procedures

Don Pate, AFS-450 briefed FAA analysis results thus far. His staff has concluded that the existing Procedure Turn (PT) area will only accommodate a maximum airspeed of 200 Kts through 6000 MSL in extreme adverse wind conditions. Above 6000 MSL, the area will only accommodate airspeeds up to 165 Kts (See the attached status report for further details). The question was put to the forum as to the direction to proceed. Wally Roberts, ALPA recommended specifying a 200 Kt maximum airspeed as an immediate safety improvement pending completion of the study. If additional airspace must be consumed, then publish the maximum speed on the chart to maintain containment. The group consensus favors a two phased approach: First, publish pilot guidance restricting airspeed to 200 Kts for PT

maneuvers as an interim safety measure (documents include the AIM, AIP, IAP booklets and the Instrument Flying Handbook). The AIM/AIP changes have been submitted for publication, and will appear in the Feb 98 print. Second, AFS-450 will continue assessing the airspace required for PTs above 6000 MSL and make a determination whether or not new criteria development is warranted. AFS-450 will continue testing and report progress at the next meeting. **Action: Item Open (AFS-450)**

k. 96-01-155 Operational Status for OROCAs and Implementation of GPS TAAs.

At the 97-1 meeting, Bill Mosley, ATO-120 reported that there had been no further progress on this issue pending resolution of the supplemental navigation status of GPS. An ATO-120 representative was not present at the meeting; therefore, no further update was provided. **Action: Item Open (ATO-120)**

l. 96-01-159 Specified Ceiling Requirement for High HAA/HAT MDAs

At the 97-1 meeting, a discussion was led by Wally Roberts, ALPA. ALPA believes that a ceiling should be required for all IAPs that have a HAA/HAT of 700' or greater. The premise is that approaches with such high minimums must also have high obstructions in the final/circling areas that must be seen and avoided once leaving the MDA. Requiring a ceiling for the approach will enhance safety. Jim Nixon, AFS-440 noted that this would require a change to the CFRs. Wally noted that, as long as the requirement is on the 8260 form, Part 97 would be satisfied. Maj. Mike Miller, AFFSA noted that the USAF currently only requires visibility to conduct an approach, but is re-visiting the ceiling and visibility requirement. Rudy Ruana, Jeppesen noted that this is an issue currently being addressed by the JAA and the JAA position should be considered before making U.S. policy changes. Jim asked if applying this requirement at Part 139 airports would satisfy ALPA's concerns. The response was yes. AFS-420 will research this issue through legal and try to get AOPA and NBAA inputs for the next meeting. IOUs' are continued to next meeting (98-1). AFS-420 will coordinate with AOPA, NBAA and AGC for input and discussion at the next meeting. **Action: Item Open (AFS-420).**

m. 96-01-162 GPS NoPT Terminal Routes and PT Required Terminal Routes

Paul Best, AFS-420 briefed that the request for revision has been forwarded to AFS-600. AFS-440 will monitor the progress of the re-write and report to the Instrument procedures Subgroup. The issue will remain open for tracking and closed when guidance is published in AC61-27. **Action: Item Open (AFS-440 & AFS-600)**

n. 96-01-163 Purpose of ILS Fix Inside the Precision FAF

Paul Best, AFS-420 coordinated with ARM and determined that the change to Part 91.175(k) has been written. He has a verbal agreement that they will increase the priority on processing this rule change. AFS-420 will continue to track the status of the CFR change and brief at the next meeting. **Action: Item Open (AFS-420).**

- o. 96-01-166** Determining Descent Point of Flyby Waypoints (Originally Submitted as Definition of "On Course" – title changed at ACF 97-01)

The discussion on "when may descent begin on flyby waypoints" continued. Jim Terpstra, Jeppesen explained Canada's desire to establish a flyover fix on the approach course inside the IF. He also recommended that Canada be invited to attend ACF meetings. ALPA took an IOU to prepare a paper defining "on course" at meeting 97-01; however, it was not presented. AFS-450 took an IOU to report progress on the issue at meeting 97-01; however, no report was given. Wally Roberts, ALPA agreed to send Howard Swancy, AFS-420 a copy of the ALPA "on course" paper. **Action:** Item Open (AFS-450 and ALPA)

- p. 96-02-170** Visibility/RVR Issues in VNAV/RNAV IAPs

It was agreed to give ATPAC a chance to resolve the issue, if there is no satisfactory resolution, the matter can be re-addressed by the ACF. **Status:** Item Closed

- q. 96-02-171** Temporary vs. Permanent FDC NOTAMs

Jack Corman, AFS-440 briefed current "T" NOTAM policy from 8260.19c: "shall be used when the amended procedure will be effective for less than 120 days. If the condition is longer or becomes permanent, an amended FAA 8260 series for, incorporating the NOTAM material and any additional changes to the procedure, must be submitted prior to the expiration of the temporary time frame". "P NOTAM: "...shall be used when the amended procedure will be effective for more than 120 days." "The chart change permanent (CCP) NOTAM is a sub-category of the P NOTAM used to more effectively use the NOTAM system for changes to instrument procedures. This sub-category will be absorbed into the description of a "P" NOTAM. AFS-440 will report on progress at the next meeting. **Action:** Item Open (AFS-440)

- r. 97-01-174** AVN-100 Letter re: FPO/Pilot Interface

A discussion was led by Tom Young, ALPA noting that AVN-100 had sent a letter to user groups advertising regional FPO telephone numbers. The objective is to have line pilot input concerning problems associated with SIAPs. ALPA believes this information should be published in the AIM. Terry Deplois, AVN-160 reported to the group that this item was elevated to the HQ/FAA for publication in the AIM. AVN-160 will staff the issue with AVN-100 and report at the next meeting. **Action:** Item Open (AVN-160).

- s. 97-01-175** Pilot Duties to Confirm GPS Data Base.

Wally Roberts, ALPA restated their concern that the FAA needs to clearly define the responsibility of the pilot in flying GPS SIAP's from a manufactured database. The intent was for the crew to accomplish a reasonableness check to validate that charted points match databases, not to verify geographic coordinates. Database integrity is not an issue due to checks and balances in the ARINC and RTCA documentation. AFS-410 was assigned as OPI for this issue with responsibility to develop a FSIB for AFS-200 dissemination. **Action:** Item Open (AFS-410)

t. 97-01-177 Non Collocated DME use at/inside FAF

No significant action has been taken since the last meeting. Jeppesen and AFS-420 retain IOU's as noted at the last meeting. **Action: Item Open (Jeppesen and AFS-420).**

u. 97-01-178 JFK VOR RWY 13L/R Waivers/LDIN Lights

Position paper presented by Tom Young, ALPA. Key issue is contradiction between the pilot/Controller Glossary which lists LDIN lights as an approach light system, whereas TERPS Order lists the as VFR aid. Discussion also centered the value of LDIN lights in VFR and IFR arenas. Wally Roberts, ALPA has done some research in this arena and provided a draft of a proposal letter to AFS-420/440. ALPA believes if the FAA wants to use LDIN lights as ALS, then the FAA needs to develop criteria that specifically defines LDIN light (i.e. light spacing and intensity). Jack Corman, AFS-420 briefed that Flight Standards position is that LDIN lights are approach lights. ALPA did not question this position, but want the regional office to verify that the JFK LDIN systems had proper spacing and number of lights. **Action: non-specific.**

v. 97-01-181 Non-Precision Missed Approach Turns

Issue paper presented by Wally Roberts, ALPA. It is ALPA's opinion that any non-precision IAP that has a HAT/HAA of 400' or greater need not have a straight ahead segment when an immediate turn could provide obstruction relief and lower minima. Additionally, all non-precision IAPs with a HAT/HAA of less than 400' should have a straight climb segment prior to any turns greater than 15dg. A suggested project study group was agreed upon: Wally; Tom Schneider, AFFSA; and Rudy Ruana, and they will prepare a report for the next meeting. AFS 420/440, ALPA, Jeppesen, AFFSA took an IOU for this issue to report at the next meeting. **Action: Item Open (Group IOU)**

w. 97-01-182 Charted Fixes on SIAPs that Have No Apparent Purpose (originally ACF-CG issue 97-01-093)

Status unchanged. Issue was not worked due to higher priority tasking and staffing constraints. **Action: Item Open: (AFS-440 and ATA-130)**

x. 97-01-183 VDPs on SIAPs w/Part Time Altimeter

Issue paper presented by Wally Roberts, ALPA. ALPA's position is that a VDP should be on every IAP that meets obstruction clearance criteria. Paul Best, AFS-420 noted that on part-time altimeter IAPs, this would require two VDPs which could present a human factors issue. He noted that perhaps a note could resolve the charting of dual VDPs "...use xxx altimeter and change VDP to x.x DME". AFS-400 will consider the issue and report at the next meeting. **Action: Item Open (AFS-410/420/440/450).**

y. 97-01-184 Clarity of Missed Approach Procedure Verbiage

Issue paper presented by Wally Roberts, ALPA. ALPA believes that the language used for the missed approach text used by some AVN-100 procedure specialists is sometimes

ambiguous. It was felt by FAA that the example quoted was an anomaly; however, AFS-440 and AVN-160 will jointly review current guidance to ensure that it is adequate. AFS-400 provided an Action memo to AVN-100 which addresses the issues involved with providing absolutely clear, concise, and accurate missed approach and/or departure instructions. Subsequent meetings between AVN-100 and AFS-400 resulted in an agreement to conduct joint reviews of missed approach and/or departure instructions for standardization and minimize pilot confusion. Terry Deplois, AVN-160 stated a report is being prepared for the next meeting. AVN-160 will report at next meeting. **Action: Item Open (AVN-160)**

5. New Business:

a. 97-02-185 Charting of DME Fix for Precision MAP in ILS/DME SIAP's.

Tom Young, ALPA presented the recommendation document and led the discussion. Eric Secretan, NOS noted that the recommendation would probably require action through the IACC because information would be added to the chart. Bill Mosley, ATO-120 took an IOU to coordinate this through the FMS Task Force to validate the problem and provide information for discussion at the next meeting. **Action: Item Open (ATO-120)**

b. 97-02-186 Circling-only SIAPs. Chart Descent Gradient to Touch down on Straight in Aligned

Wally Roberts, ALPA led a discussion on the idea that there is a lack of pilot information about SIAPs that are aligned for straight-in landing, but do not indicate straight in minimums because of excessive descent gradient. ALPA believes the issue to be critical to safety-of-flight, and development of a method of disseminating information to pilots is essential. AFS-440 is to make a report at the next meeting. **Action: Item Open. (AFS-440)**

c. 97-02-187 Simultaneous Reception Requirements for ALL Fixes from Intermediate Fix to MAP.

Tom Young, ALPA led discussion pertaining to the TERPS presumption that positive course guidance (PCG) is maintained from the intermediate fix to the missed approach point (critical phase of flight). ALPA believes many pilots manage critical fix crossing radials by tuning back-and-forth between the primary navaid and the navaid providing step down fix information. ALPA contends pilot actions result from lacking FAA guidance. ALPA's recommendation is: Amend all appropriate directives requiring simultaneous reception of the facility providing final approach guidance, and when two facilities are required, annotate the SIAP with a procedural note "simultaneous reception required". Paul Best, AFS-420 recommends coordination with AFS-200/800. AFS-420 will study the issue, coordinate with AFS-200/800, and report at the next meeting. **Action: Item Open (AFS-420)**

d. 97-02-188 Mandatory Requirement to Chart Minima with and Without Step-down Fix.

Tom Young, ALPA led discussion to support the requirements to chart dual minimums in all cases where a final segment stepdown fix requires two navaids (except DME SIAPs). ALPS's contention is based on Order 8260.19C, para 813(1)(7) which requires dual minimums be published both with and without reception of a final-segment stepdown fix, where fixes are

derived from two navigational facilities. Jack Corman, AFS-440 took IOU to coordinate with AVN and make report at the meeting. **Action:** Item Open (AFS-440).

e. 97-02-189 IFR Departure Minimum Turning Altitude Requirement

Tom Young, ALPA presented this issue on behalf of ALPA recommending clarification of ATC directives pertaining to the 400' minimum turning altitude (above DER) elevation during departure operations IMC. ALPA believes, based on recent incidents, that ATC personnel issue instructions that require air carrier operators to turn prior to reaching an altitude 400' or greater above DER, and that these turns are unsafe. It was recommended that ALPA and AFS-420 co-lead an effort with representatives of ATO-120, AFS-800 and AFS-200 to develop a joint response on the issue for presentation at the next meeting. **Action:** Item Open (AFS-420 and ALPA)

f. 97-02-190 Precision ILS Missed Approach Obstacle Surface (and future Precision GPS MA Surface)

Status: Withdrawn (ALPA)

g. 97-02-191 RNAV Approach Procedure Charting

Jack Corman, AFS-420 led discussion of AFS-440 (Lyle Wink) proposal to rename existing "RNAV" SIAPs to VOR/DME RNAV, and allowing for the naming of GPS stand-alone procedures. Recommendation to combine this issue with 97-02-193, adopted. AFS-440 is continuing development of position to support proposal and report next meeting. AFS-440 is to provide update at the next meeting. **Action:** Item Open (AFS-440)

h. 97-02-192 Waypoint contraction Change

Editor's note: No discussion documented in minutes. **Status:** Item Closed

i. 97-02-193 New Landing Minima Format

Jack Corman, AFS-440 presented an AFS-440 concept to revise FAA/NOS format for landing minima. This change is to standardize FAA/NOS more in line with Jeppesen and international format. The proposal is to adopt standardized landing minima format, as indicated on the attached, thus providing increased safety. Recommend coordination with Interagency Air Cartographic Committee for policy determination, combine and work with item 97-02-191, and return next term with a proposed position. AFS-440 will coordinate with IACC, and brief position next meeting. **Action:** Item Open (AFS-440).

j. 97-02-194 Introduction of Term "DA"

Jack Corman, AFS-420 presents a David Eckles, AFS-440 recommendation to adopt the term "DA" to mean Decision Altitude, an altitude (MSL) at which a landing/missed approach decision must be made during an ILS, MLS, BARO VNAV, or PAR instrument approach. The

recommendation is for revised US Terminal Procedures publications landing minima format accordingly, and elimination of the term "DH" concurrently with the adoption of "DA". AFS-440 continues to develop the position and will provide an update brief at next meeting. **Action: Item Open (AFS-440)**

k. 97-02-195 ACF Charter

Tom Roberts, ALPA expressed concern over the activities of the forum, its charter, and requested clarification of process associated with handling issues raised during meetings. ALPA believes the forum should be chartered as ATPAC, and requested an open agenda item until a clarification is given. Howard Swaney, AFS-420 took the IOU to review ALPA's position, review the group charter, and provide a report for clarification. **Action: Item Open (AFS-420)**

6. Attachment:

**ACF 97-02
Attendance Roster**

Attendees	Organization
Dick Powell	ATA-100
Paul Best	AFS-420
Terry DePolis	AVN-160
Jack Corman	AFS-440
Don Pate	AFS-450
Doug Helton	AOPA
Melissa Bailey	AOPA
Hal Becker	AOPA
Jim Terpstra	Jeppesen
Rudy Ruana	Jeppesen
Pat Fair	ATA-130
Randy Kenagy	AOPA
Carol Santelia	ATA-110
Bill Mosley	ATO-120
Tom Schneider	AFFSA
Tom Young	ALPA
Wally Roberts	ALPA
George Lutz	EAA
Howard Swancy	AFS-420
Kevin Comstock	ALPA
Glen Martin	ATA-6
Dalia L. Marin	NOS
Bill Thomas	ATA-130
Larry Weisman	NAVFIG
Paul Smith	NBAA
David Lewtas	ICAO
Tim Duerson	NIMA
Pat Banks	NOS/AC&C
Ronald Bolton	NOS/AC&C
Charles Branch	NOS/AC&C
Linda Cushing	NOS/AC&C
Art Dodds	NOS/AC&C
Davis Dudish	NOS/AC&C
Donna Gallant	NOS/AC&C
Terry Laydon	NOS/AC&C
John Moore	NOS/AC&C
Eric Secretan	NOS/AC&C
Howard Stewart	NOS/AC&C
Bill Parshall	USAASA
Ann Behrns	USAFFSA/XOIA
Dave Osborne	Volpe/NTSC