

Government/Industry Aeronautical Charting Forum (ACF)
Meeting 00-02
November 30 - December 1, 2000
MINUTES

I. Opening Remarks

The ACF was held at the Airline Pilots Association (ALPA) Headquarters in Washington, D.C. Mr. Dick Powell, FAA/ATA-100, the ACF Chair, opened the Forum on March 30, 2000 with thanks to Mr. Simon Lawrence and Mr. Kevin Comstock and ALPA for hosting the Forum. Mr. Dave Eckles, FAA/AFS-420, chaired the ACF Instrument Approach Procedures Subgroup meeting held on November 28-29, 2000. Separate minutes of that meeting have been sent to those participants.

II. Review of Minutes from Last Meeting

The minutes from the 00-01 have were accepted with the following corrections.

Section I. Opening Remarks:

Change spelling to Mr. Landsberg.

Section III. Presentations, ACF Working Group Reports, ACF Project Reports:

AIS/MAP Initiatives Update item b change to Only a few States produce type "C" charts.

Section IV. Outstanding Issues:

*98-01-108 change last sentence to Adding City names to VFR charts will be addressed at a later time.
Identifiers are already on Sectional charts.*

91-01-40 change to OPEN.

99-02-117 change to OPEN.

97-02-105 change to ATCAA.

00-01-119 change from Non-Part 131 to Non-Part 139.

III. Presentations, ACF Working Group Reports, ACF Project Reports

NACO Moved to FAA

Mr. Charles Branch, Manger, NACO Aeronautical Chart Division, reported that the Office of Aeronautical Charting and Cartography (AC&C) was moved from the Department of Commerce to the Department of Transportation effective 1 October 2000. AC&C was also renamed the National Aeronautical Charting Office (NACO) as part of its move to the FAA. Mr. Branch stated that NACO moved to the FAA intact and that there was no change in staffing or services.

ICAO AIS/MAP Update

Mr. Dave Lewtas, ICAO, updated the Aeronautical Chart Forum on several ICAO issues. Mr. Lewtas stated that the terrain data proposal was withdrawn and will await the conclusion of RTCA SC 193. In addition, the AOC Type C change proposal was also withdrawn. Mr. Lewtas provided a preview of Amendment 52 of Annex 4. He stated that the changes that originated from AIS/MAP 98 will have a proposed applicability date of November 2002. The changes to Annex 4 include, a new chapter 20 for electronic aeronautical chart display (AN 91/00/48), airspace class depiction changes, and changes to the charting of ADIZ.

Mr. Lewtas stated that the electronic aeronautical chart display requirements will support free flight and were developed using the RTCA DO-257 MOPS as well as the SAE G-10 work on symbols. Mr. Lewtas also discussed initiatives resulting from the CFIT Task Force. Those initiatives include portrayal of terrain on instrument approach charts and standards related to terrain impacted aerodromes. A sample instrument approach chart depicting terrain was presented.

Mr. Lewtas also discussed RNAV/RNP, LNAV/VNAV reference datum requirements and vertical paths (refer to letter SP22/4-00/62). A new symbol for nuclear power stations was also discussed [refer to letter (AN10/1-99/69)]. The need for a nuclear power station symbol proposed by the World Meteorological Organization. The new waypoint symbols were also presented. Mr. Lewtas described possible future amendments. These amendments may include changes to/or cover electronic terrain data, AOC Type C charts, and electronic chart displays.

Mr. Lewtas stated that there was also a proposal to rename taxi-holding positions to runway holding positions. The next AIS/MAP meeting will be held in May 2001.

ICAO OCP Update

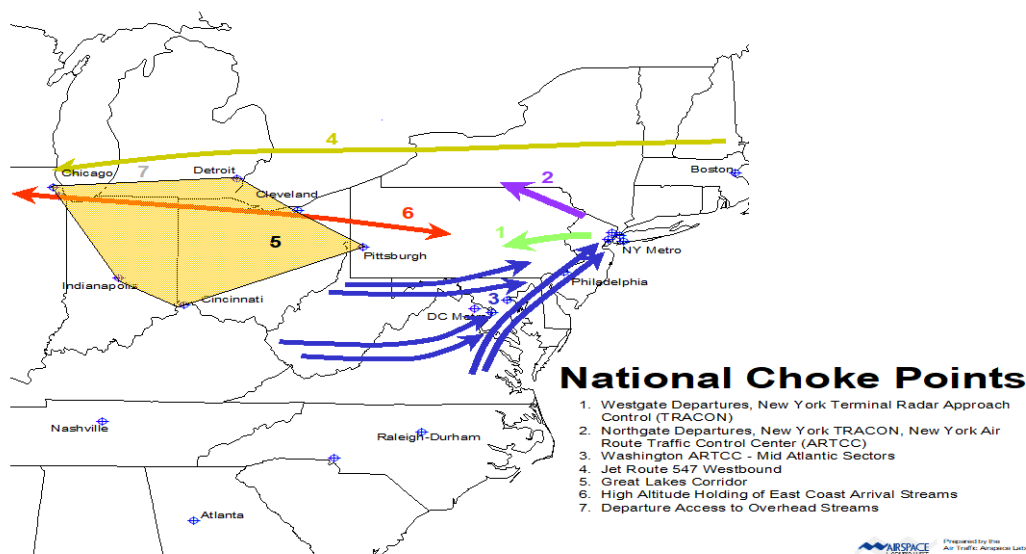
Mr. Jim Terpstra, Jeppesen, described the recent work of the ICAO OCP related to Instrument Approach Procedure altitudes. These altitudes include obstacle clearance altitudes, procedure altitudes, and final approach fix altitudes. The next meeting of the OCP should finalize IAP altitude requirements. Mr. Terpstra also pointed out that the OCP would address three major issues at its next meeting. These issues are Fly Over waypoint issues, IAP procedure titles (to harmonize with charts, databases, and controllers). The equipment name, such as DME, may come out of the title. Mr. Terpstra provided everyone with a handout entitled "Procedure Title Standardization". The process of amending ICAO documents was also addressed. This sequence was outlined as: a proposal is made, followed by an OCP working group, then an OCP plenary, an ANC meeting, and finally a state letter.

ACTION: FAA ATA-100 will send notification to everyone in the ACF the ICAO waypoint symbol change for fly-over and fly-by waypoints.

National Airspace Redesign-Choke Points

Ms. Nancy Shelton, FAA ATA-11, [described 7 airspace areas that the FAA has identified as choke points](#), which have an extremely high volume of traffic. These choke points are identified by the FAA/NATCA and Industry and are shown above. Mr. John Walker, ATA-1, is the point person on choke points for the FAA. This is a two-year initiative that should be complete by June/July 2002 and will be a collaborative effort with the FAA, Union, and customers.

Twenty-one actions were discussed based on airspace changes, procedure changes, traffic management, and technology. The FAA plans to establish new sectors in the Great Lakes and Northeast. The FAA will work with DoD to optimize use. In addition, the FAA will redesign and model airspace and flows in Philadelphia, New York, and the Mid Atlantic.



Near term initiatives include the redesign of the holding fix at New York Center to improve sector operation and ensure a ready reservoir of aircraft for Dulles. The FAA will work on RNAV procedure development for a departure to the East in Chicago and an offset route over MAZIE. Traffic management initiatives such as a Tactical Altitude Assignment Program and rerouting aircraft in New York and New England were discussed. Departure stops, miles-in-trail, predictability, sector load, aircraft ground time, and block times will be used as metrics for the program.

Shuttle Radar Topography Mission (SRTM) Update

Mr. Tom Henning, project lead for the SRTM, provided an overview and status. Mr. Henning began by stating that the topographic (terrain elevation) data was collected using C band Interferometric Synthetic Aperture Radar (IFSAR). This means that the elevation data represents the reflective surface of the earth, not necessarily where the ground is. That is, the surface represented may be the top of the tree canopy or some depth into the canopy. The elevation measurement is based on what the radar reflected off of.

Mr. Henning stated that SRTM data was collected for the area from 60° North latitude to 56° South latitude. Of this area, 99.96% was covered once and 94.59% was covered twice. The area collected is approximately 119,000,000 square km. There are six holes in the United States where there is no coverage. The area of the

holes is approximately 80,000 square miles or about the size of the state of West Virginia. Mr. Henning also stated that the extraction of vertical obstruction data was investigated but will not likely be produced as a product. As background Mr. Henning described NIMAs Digital Terrain Elevation Data (DTED) and the general structure of that data.

- DTED Level 0 (GTOPO 30) 30 Arc Second Post Spacing (approximately 900m)
- DTED Level 2 3 Arc Second Post Spacing (approximately 90m)
- DTED Level 2 1 Arc Second Post Spacing (approximately 30m)

- DTED Level 1 accuracy 90% +/-50m Horizontal +/-30m Vertical
- DTED Level 2 accuracy 90% +/-20m Horizontal +/-16m Vertical

- Currently only about 5% of the world is covered by DTED Level 2.

Mr. Henning stated that SRTM DTED Level 1 data for the World will be publicly available and that SRTM DTED Level 2 data covering the United States will be publicly available. The accuracy of the data will exceed that of conventional DTED data. Delivery will begin in 2002 and will continue through 2004. The sequence of delivery will be North America, South America, Australia, Africa, Eur-Asia, and Islands. Mr. Henning stated that DTED Level 2 data consists of 350 Gigabytes of information (400-600 conventional CDs, or 70 Low Density DVDs, or 20 High Density DVDs). More information can be found at <http://www.jpl.nasa.gov/srtm/>

Final Approach Fix Altitudes

Currently, NACO publishes minimum altitudes. It was stated that ICAO will propose the creation of a procedure altitude. Mr. Jim Gregory, Transport Canada, originally proposed this issue. The ACF will await the decision of the OCP, which is expected at OCP 13, scheduled for late February 2001.

Area Chart Terrain Depiction Update

Mr. Eric Secretan, FAA NACO, provided this update and began by showing the ACF prototypes of area charts with terrain depicted. It was also pointed out that NIMA produces area charts with terrain and that the NIMA specification might be a good source of information. In addition, it was pointed out that ICAO has a standard for the depiction of terrain. Two prototypes were presented one covering Juneau, Alaska, and the other the A-2 area chart. The terrain was depicted in 2000' intervals beginning at sea level. The prototypes used brown tint to depict the terrain with screens of 0%, 5%, 15%, 25%, 35%, 45%, and solid. One comment mentioned by the group was to consider the use of a line or vignette symbol rather than tint to depict uncontrolled airspace.

ACTION: All. Please provide area chart with terrain depiction comments to Mr. Eric Secretan or Mr. Dick Powell.

ACTION: Mr. Eric Secretan will prepare a prototype area chart based on comments and ICAO standards for the depiction of terrain.

ACTION: Mr. Dave Lewtas will provide Mr. Eric Secretan with the ICAO proposed terrain depiction requirements.

ACTION: Mr. John Moore, Mr. Dave Thompson, and Mr. Mike Riley will coordinate the development of an IACC specification for the depiction of terrain on area charts.

IAP Terrain Depiction Update

Mr. Eric Secretan stated that NACO IAPs would start to be published with terrain depicted beginning with the March 22, 2001 cycle. He stated that this would be implemented on a volume by volume basis. It was suggested that NACO chart terrain as Jeppesen does, white at the airport elevation, then with 2000' contours which begin at the nearest 1000' contour above the airport elevation with a maximum of 9 different contour colors. The IACC has approved criteria to add contours on IAPs with airports where the terrain rises 4000' above the airport reference point or 2000' within 6 miles.

RTCA SC193/EUROCAE WG4 Update

Mr. Jim Terpstra, Jeppesen and Co-Chair RTCA SC193/EUROCAE WG4, provided the update. He stated that the specification for terrain is very close to completion with 3 or 4 more meetings required to complete the terrain and obstacle document. Mr. Terpstra stated that the airport mapping /database working group should complete its work in 2 to 3 meetings. Finally, Mr. Terpstra stated that the National Geodetic Survey has proposed producing digital Obstruction Charts.

RNAV Transition Working Group Update

Mr. Randy Kenagy, AOPA and RNAV Transition Working Group Co-Chair, stated that the group had met twice and provided the ACF with 6 consensus recommendations developed as a result of those meetings. These recommendations are:

1. Chart fixes as originally established (i.e.VOR, waypoint, etc.). Waypoints should not be charted as waypoints if the point already exists as a reporting point or facility.
Consensus recommendation supported by the ACF
2. Expand the scale of enroute high and low charts.
Consensus recommendation supported by the ACF
3. Charting of waypoints on enroute charts should only be done when the waypoint is only usable for RNAV, not as reporting points, etc.
Consensus recommendation supported by the ACF
4. Waypoints should not be established close to existing waypoints. AT guidance should be used to clarify when to establish/not establish waypoints.
Consensus recommendation supported by the ACF
5. Develop criteria for RNAV airways to support the transition period before Free Flight.
Consensus recommendation supported by the ACF
6. Develop a process to coordinate among all FAA lines of business to develop an end-to-end process for the establishment of RNAV airways.
Consensus recommendation supported by the ACF

The RNAV working group will work to help prepare a process to support item #6 above. In addition, the working group also discussed the choke point initiative. Mr. Kenagy stated that the OROCA issue is fine, but there is some concern about communication and radar for off-route. Mr. Kenagy stated that this is an open issue in the

ACF TERPs group. The next meeting of the RNAV Working Group will be held January 30-31, 2001 at NACO in Silver Spring.

VFR Waypoints Working Group Update

Mr. Randy Kenagy, AOPA, provided the ACF with an update on the work of the VFR Waypoints Working Group. Mr. Kenagy stated that the charting of VFR waypoints has been expanded to include the Kansas City TAC with an effective date of 30 November 2000. In addition, the Salt Lake City TAC will have 30 VFR waypoints charted in late spring 2001. There are some problems with charting VFR waypoints on the St. Louis TAC.

Mr. Kenagy stated that the FAA Southern Region has taken the lead on the establishment of VFR waypoints on Sectionals. The Southern Region has developed a Florida Coastline Project with the goal of charting VFR waypoints on Sectionals and additional TACs in Spring/Summer 2001. Mountain pass VFR waypoints were also discussed. Mr. Kenagy stated that the FAA (AFS and AVN-500) are working to resolve mountain pass waypoint issues with a meeting scheduled for December 18, 2000. AFS is working a risk mitigation strategy following the CFIT/JSIT recommendation.

An ATC Guidelines-Facility Manager's Handbook draft is in preparation and information is scheduled for AIM publication in January 2001. Mr. Brad Alberts, ALPA, stated that the language in the AIM is not a strong enough warning for waypoint traffic convergence. Mr. Secretan stated that a note in the AFD could be added. It was also suggested that a FAA notice could be sent to FBOs. It was pointed out that AFS-410 is the contact point on this issue.

ACTION: ALPA and AOPA will coordinate a strategy to address the waypoint traffic convergence issue.

IV. Outstanding Issues

94-01-40 Charting of Parachute Jumping Areas

Mr. Dick Powell, ATA-100, stated that ATA would populate the database in March 2001. ATA-100 has received the initial list of parachute jump area frequencies from ATO. Also, frequency maintenance remains an issue. ATA-100 is planning to NFDD jump area frequencies. The IACC process is complete and frequencies will be published by the jump area symbol. The AIM must be amended to address what the frequency is to be used for.

STATUS: OPEN

97-02-105 Charting of Air Traffic Control Assigned Airspace (ATCAA) Frequencies Above 18,000

Mr. Dick Powell, FAA ATA-100 reported that an RTCA SC192 report was due to be presented to the RTCA Program Management Committee in December 2000. Mr. Powell stated that the ACF should await the results of this report.

STATUS: OPEN

ACTION: ATA-100 will prepare a Chart Change Proposal to add frequencies for ARTCCs on the MOA tabulations.

98-01-103 ARTCC-Lost Communications

Mr. Dick Powell, FAA ATA-100 reported that a Chart Change Proposal had been issued with an 80% response. Alaska non-concurred. However, ATA-100 will go forward with the IACC staffing process. Mr. Jim Terpstra, Jeppesen stated that the latitude and longitude associated with the frequencies would be good for FMS equipment.

STATUS: OPEN

ACTION: IACC will investigate Mr. Terpstra's suggestion of including lat/long information associated with ARTCC frequencies and report at the next ACF.

98-01-108 Airport Names, Identifiers, and Associated Cities

The IACC agree to add city and identifiers to enroute charts. However, the ICAO 4 letter identification needs to be cleaned up by ATA. In addition, there are private airport problems. Mr. Terpstra suggested that all IFR airports be corrected first followed by all public VFR public airports and finally all VFR private airports. Mr. Terpstra suggested that a FAA plan be developed for cleaning up airport 4-letter identification. NACO reported that they would chart what NFDD publishes.

STATUS: OPEN

98-02-111 Tabular Data for Military Operations Areas (MOAs) times of use NOTAMs issue

Mr. Powell stated that ATA has frequencies for all MOAs. Since "Other times by NOTAM" is incorrect, the ACF felt that something should be done. However, the FAA can't remove anything from a chart that is still a rule. Mr. Powell reported that the NOTAM manual is currently under rewrite by the NOTAM work group and that the MOA NOTAM issue is on the agenda for the NOTAM work group.

STATUS: OPEN

ACTION: Mr. Eric Secretan will provide ATA-100 with suggested changes to the note on the Special Use Airspace tabulation.

99-02-111 Elimination of Air/Ground Communication Tabulation on En-Route Low Altitude Charts

At IACC (signed by NACO and FAA awaiting NIMA signature).

STATUS: OPEN

99-02-115 Charting Enhancements to Reduce the Risk of Landing at the Wrong Airport

Mr. Dick Powell reported that he is still awaiting the list from ALPA.

STATUS: OPEN

ACTION: ALPA will send a list of look-alike airports to Mr. Dick Powell, FAA ATA-100.

00-01-118 Displaced versus Relocated Thresholds

The only airports identified by NIMA were Birmingham and Cheyenne. AVN stated that Birmingham needs to be flight checked after a re-survey. AVN will take a look at Cheyenne. It was suggested that the FAA move to TORA and TODA as written in ICAO documents and that the 5010 be changed to reflect this. In addition, the AIM needs to be changed to match ICAO Annex 14 and 15.

STATUS: OPEN

00-01-119 Raising Nationwide Charting Standard

Mr. Dick Powell reported that ATA-100 is getting good data from the military. He stated that ATA-100 receives bad data from civil airports. As a result all data except military data was removed from the database. Finally, it was stated that the 5010 must be enhanced to support this issue.

ACTION: Mr. Allen Ball will meet with Mr. Dick Powell and FAA Airports to discuss this issue.

00-01-120 Charting Aerobatic Areas

Mr. Powell is awaiting a letter from Dr. Finigin. Mr. Powell also stated that a source of information on these "waivered boxes" is required in addition to the initial input on their position.

STATUS: OPEN

ACTION: Dr. Finagin will provide a letter covering aerobatic charting issues (see ACF minutes 00-01), including coordinates of the 160 “waivered box” areas. Mr. Powell will then forward the letter to the relevant FAA offices and the IACC.

V. New Charting Topics

It was suggested that meetings be held 3 times a year, this issue will be addressed at the next meeting. In addition, there was a proposal to limit time for presentations and working group reports. Finally, a cut-off time for submission of new items for the meeting announcement was proposed.

00-02-120 Airport Identifiers in the TPP

This issue was submitted by Mr. Brad Rush, AVN-160. His recommendation is to add the airport identifier to the TPP index, take-off minimums, and alternate minimums section of all Terminal Procedures Publication. The ACF supports this request.

STATUS: OPEN

ACTION: Mr. John Moore will prepare a requirement document to submit to the IACC.

00-02-121 Amendment Numbers in the TPP

This issue was submitted by Mr. Brad Rush, AVN-160. His recommendation is to add the amendment number to the take-off minimums and the obstacle departure procedures of the Terminal Procedures Publication in order to avoid confusion as to the accuracy and currency of these procedures when Notices to Airman are required. It was proposed that this be implemented on a day forward basis. This suggestion was supported by the ACF.

STATUS: OPEN

ACTION: Mr. John Moore will submit this issue to the IACC and report to the ACF.

00-02-122 Note for Offset Localizer

This issue was submitted by Mr. Brad Rush, AVN-160. His recommendation is to add a note to charts where the ILS procedure has an offset localizer. In addition ALPA would like the number of degrees the localizer is offset to be charted. Mr. Kevin Comstock reported that he sent an ALPA request to AFS-420 concerning the number of degrees offset issue and will provide a copy.

ACTION: Mr. Dave Eckles and Mr. Bill Hammett will research this request and report their findings to the ACF.

ACTION: Mr. Kevin Comstock will provide Mr. Eckles and Mr. Hammett a copy of the ALPA letter requesting the number of degrees the localizer is offset be charted.

00-02-123 Charting of ILS Glideslope Icon in Approach Plate Profile

This issue was submitted by Mr. James Nixon, AFS-420. Mr. Nixon suggests that the glideslope icon (feather) extends too far out on some profile views resulting in some pilots using the glideslope beyond the intended point of interception and violating step down fix altitudes.

STATUS: OPEN

ACTION: Flight Standards will issue guidance material to ATA-100 for the AIS/WG.

00-02-124 Non-radar Terminal Areas

This issue was submitted by Mr. Simon Lawrence, ALPA. Mr. Lawrence requests the identification and an indication on the charts of all procedures where vectors to the final approach course area available.

STATUS: OPEN

ACTION: ATA-100 will check to see what the source of the “circle R” symbol is that Jeppesen uses and report to the ACF.

00-02-125 Departure Procedures/Multiple Runways

Mr. Joe Bellabona and Mr. Gary Powell presented this new item with the goal of eliminating multiple departure graphics at major airports. They proposed an RNAV departure procedure independent of the departure runway. As an example a proposed Boston departure the “Bean Town RNAV Departure” was presented. It was stated that these procedures were expected to end with radar vectors. It was suggested that this presentation be made to the ATA/FMS Task Force as well as to the ARINC NDB (ARINC 424) working group. It was pointed out that navigation problems would occur since the procedure doesn’t terminate at an enroute fix. Finally, Mr. Terpstra pointed out that each runway departure would require a unique name to support FMS databases/equipment.

STATUS: OPEN

00-02-126 Circling Restriction Symbology

This issue was submitted by Mr. Dave Eckles, FAA AFS-420. Mr. Eckles suggested the development of a graphic representation of the circling area in which circling is not authorized.

STATUS: OPEN

ACTION: Mr. Dave Lewtas will provide some international examples to Mr. Dick Powell for Mr. Eric Secretan, Mr. John Moore, and Mr. Dick Powell to review and report their findings to the ACF.

00-02-127 FAF/PFAF Location

This issue was submitted by Mr. Carl Moore, AFS-420. This issue was deferred to the next meeting due to time constraints.

STATUS: OPEN

00-02-128 Temporary Flight Restriction/Notice of Proposed Rulemaking

This issue was submitted by Mr. Mike Brown, AOPA. AOPA proposed that a new Temporary Flight Restriction section be added to the AFD. This section should cover airshows, sporting events, etc. that do not change from year to year. NACO supports AOPA's request. This issue will remain open pending the outcome of the NPRM.

STATUS: OPEN

00-02-129 Airport Diagrams to AFD

Mr. Eric Secretan stated that NACO will publish airport diagrams in the AFD to support the Administrator's Safer Skies Agenda and addresses safety concerns related to taxi collisions and runway incursion. The ACF supports NACO's decision.

STATUS: CLOSED

00-02-130 Confusing Graphical or Textual Feeder Routes

This issue was submitted by Mr. Simon Lawrence, ALPA. The ACF consensus was that procedural data notes should be procedural and not actions to be flown. This ACF agreed to transfer this issue to the ACF TERPs Forum.

STATUS: CLOSED

ACTION: Transfer this issue to the ACF TERPs Forum.

00-02-131 VFR Waypoints

The VFR Waypoints working group proposed charting VFR waypoints on the VFR Flyway Planning Chart side of Terminal Area Charts. This recommendation was endorsed by the ACF.

STATUS: OPEN

ACTION: Mr. Dave Thompson will recommend to the IACC the charting of VFR waypoints on VFR Flyway Planning Charts as endorsed by the ACF.

00-02-132 Airport Diagram Magnetic Variation

This issue was submitted by Mr. Brad Rush, AVN-160. Mr. Rush points out that airport diagrams charted by both NACO and Jeppesen include a magnetic variation value provided by the National Geodetic Survey and these values are charted with an epoch value (currently 1995). In addition, he points out that all magnetic bearings on the airport diagram are charted based on this value. Mr. Rush states that this is a cause of confusion to pilots using instrument procedures which are developed using the Variation of Record value assigned to airports and facilities by AVN-160 IAW FAA Order 8260.19C paragraph 216. Currently on facility Variation of Record is published in the AFD. Mr. Rush suggests that airport Variation of Record be published in the AFD.

ACTION: Mr. Dave Eckles will take this issue back to AFS-200 to research and report to the ACF his findings.

00-02-133 Airport Hot Spots

Mr. Jim Terpstra, Jeppesen, presented a NTSB airport hot spot issue related to runway incursion to the ACF. These "hot spots" are areas on airfields where there has been an identified increased risk of runway incursion and/or taxi hazards. The ACF agreed to forward this issue to the Runway Incursion Program.

STATUS: CLOSED

ACTION: ATA-100 will forward this issue to Mr. John Meyerhauffer, FAA Runway Incursion Program.

00-02-134 Charting SMGCS This issue was submitted by Mr. Gerard Holtorf, AFS/ANE-230. Mr. Holtorf suggests that the FAA publish a low visibility taxi per the recommendation of FAA AC 120-57A. This issue was deferred to the next meeting due to time constraints.

STATUS: OPEN

00-02-135 DME Fix Authorization on Converging Initials or Feeders

Mr. Wally Roberts, ALPA, presented this new issue. He recommended that wherever DME is available from a VOR facility that provides feeder route or initial approach segment guidance, which facility is not the facility providing final approach segment guidance, the DME distance at the terminus of such feeder route or initial approach segment should be established and charted as a legal means of determining the terminus fix of the feeder route or initial approach segment. This suggestion was endorsed by the ACF.

ACTION: The IACC will address this as a specification change.

ACTION: AVN will identify on 8260, once this is done NACO will chart.

VI. Next Meeting

The next meeting of the ACF is scheduled for April 24-27, 2001. AMTI will host the meeting at their building in Virginia. Dress will be casual. The following meeting will be held October 23-26, 2001.