

Government/Industry Aeronautical Charting Forum (ACF)

Meeting 03-01

April 30 to May 1, 2003

MINUTES

I. Opening Remarks

The Aeronautical Chart Forum (ACF) was held at the Hampton Inn, Frederick Maryland. Mr. Dick Powell, FAA/ATA-100, the ACF Co-Chair, opened the Forum on April 30, 2003 with thanks to AOPA and AOPA representatives Mr. Hal Becker and Ms. Heidi Williams for hosting the meeting. Mr. Becker and Ms. Williams welcomed the ACF participants to Frederick. Mr. Powell also acknowledged the ACF co-chair Mr. Tom Schneider, FAA AFS-420. Mr. Tom Schneider chaired the ACF Instrument Procedures group meeting held on April 28-29, 2003. Separate minutes of that meeting will be distributed.

II. Review of Minutes from Last Meeting

The minutes from the 02-02 meeting were accepted as distributed.

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

RNAV Transition Working Group Update

Mr. Eric Secretan, AVN-503 co-chair of the RNAV Transition Working Group, provided the ACF with the [final report of the working group](#). The report is attached to these minutes. Mr. Secretan then led the ACF in a review of the significant issues covered by the working group. He pointed out that the hierarchy of symbology issue was approved by the Interagency Air Cartographic Committee but pointed out that the compulsory vs. non-compulsory issue is still being addressed. He also stated that the waypoint symbol would be used only when the points are identified as coordinates and only when they can be used by RNAV equipped aircraft. He stated that compulsory reporting could be handled by filling in the waypoint. He also pointed out that a fix, any fix, is always charted the same regardless of the chart it appears on (terminal or enroute). Mr. Secretan also stated that the charting requirements for a redesign of the very high (FL390 and higher) Enroute structure was considered out of scope for the working group and forwarded to the IACC for further consideration.

The significant issues that Mr. Secretan addressed were that the working group recommends not using nested symbols (RNAV TWG issue 00-01-01). He pointed out that there would be an increase in IFR enroute charts (Lows go from 28 to 36, Highs go from 6 to 12). This is due to an increase in information to be charted. NIMA asked for advance warning before NACO implements this increased charting. It was also pointed out that the IACC has signed off on increased charting (00-01-05). Mr. Secretan pointed out that RNAV MEAs have been added to charts in Alaska and that they are being charted in aeronautical blue. He stated that stand alone RNAV MEAs will be charted in July 03 (00-01-06). Mr. Secretan stated that the WG recommends converting offshore reporting points to waypoints when their locations are defined as coordinates and not based on NAVAIDs (01-02-01). Ms. Pat Fair pointed out that Air Traffic has coordinated the charting of RNAV routes through Class B airspace and that the charted routes will be a single page graphic in the A/FD (01-02-03). Mr. Secretan reported that the WG recommends charting an outbound magnetic bearing at waypoints on RNAV routes that do not have a collocated ground-based airway (01-05-01). He stated that the IACC has approved the recommendation. Mr. Secretan also pointed out that guidance will be written by AFS for the AIM.

Mr. Secretan also pointed out that the ICAO AIS/MAP meeting to be held in June 03 would address the hierarchy issues as well as other issues identified by the RNAV TWG. Mr. Mike Riley stated that NIMA is concerned about not having coordinates charted for waypoints. Mr. Ted Thompson pointed out that Jeppesen they add coordinates only to pure RNAV procedures. Mr. Thompson stated that if Jeppesen were to add coordinates to all charts that the charts would change more frequently and that there could be chart and database harmonization issues. It was also stated that not charting coordinates was generally accepted in the U.S. but not

overseas. Mr. Howard Stewart stated that beginning with the 15 May effective date all NACO waypoints will be charted in aeronautical blue.

Mr. Dick Powell thanked Mr. Secretan and Mr. Kenagy for chairing the working group. He stated that the AIS working group and the AIS/MAP working groups would address the recommendations.

ACTION: Mr. Eric Secretan will provide Jeff Williams, ATP-104, with information on how NACO will determine the magnetic bearing values. This will likely be the in-house guide that NACO will use.

ICAO AIS/MAP Initiative Update

Mr. Dave Lewtas, ICAO, provided an ICAO update. His update included information on radar minimum altitude charts, OCP13, electronic terrain data, ICAO AOC charts, and the upcoming AIS/MAP SG meeting.

The radar minimum altitude charts had been proposed by ICAO as supplemental charts. Mr. Lewtas stated that the ANC had reviewed the comments from the States regarding the radar minimum vectoring charts. As a result of the ANC review of the comments the ANC changed the title of this chart series to radar minimum altitude charts. In addition, other changes resulting from the State comments are that terrain contours and airspace will not be depicted only sectors and range rings. Mr. Bill Hammett asked what would happen when the range rings were not centered on the airport for example the radar is offset from the airport. Mr. Lewtas replied that the chart should be developed based on navaid location not the radar antenna site. He also stated that this new chart series is schedule for applicability in November 2004.

Mr. Lewtas also reviewed OCP13 issues. He stated that the OCP is working on procedure title standardization. He also pointed out that the ICAO AIS/MAP Study Group is reviewing this issue as well. He stated that the OCP recommended that procedure altitudes be charted were established as well as obstacle clearance altitudes/heights for aircraft categories. He discussed the RNAV and ground based symbol consistency and hierarchy issues, which have also been discussed by the ACF. Mr. Lewtas also stated that an altitude/flight level depictions State letter would be sent out soon. This would apply to Annex 4 and would be the same as the U.S. depiction. He also discussed the depiction of terminal arrival minimum altitude/heights. This depiction would be a profile view with the area below the step-downs shaded in.

Electronic terrain and obstacle data was also discussed. Mr. Lewtas stated that revisions to Annex 4, 11, 14, and 15 are under review to cover terrain and obstacle data function, quality, content, coverage, and availability. He stated that these requirements would be based on the RTCA SC193 requirements.

Mr. Lewtas described an ICAO of Aerodrome Obstacle Chart types. He stated that the AIS/MAP study group would be reviewing the number of charts as well as a possible provision for electronic rather than paper charts. He stated that this would require a revision to Annex 4 chapters 3, 4, and 5 and would include specifications for terrain and obstacle data to be used.

Other ICAO activities described by Mr. Lewtas included an amendment to Annex 15 and PANS ABC for NOTAM format and promulgation of contingency plans by NOTAM. He stated that IACO and IATA were working on contingency routes.

Mr. Lewtas provided an overview of the ICAO AIS/MAP study group. He stated that the AIS/MAP study group is a small group of experts that advise the Secretariat and generally meet once a year. He pointed out that the flow of recommendations is from the AIS/MAP SG to the ANC to States to the ANC then to the Air Navigation Council. He stated that the June 2003 meeting of the group would include consideration of a concept for RNAV/Ground Based charting symbols, the depiction of geographic coordinates, terminal and enroute waypoint

naming (alpha/numeric within the terminal), electronic terrain data and electronic obstacle charts, and the update of the AIS/MAP manuals.

Mr. Mike Riley asked about the AIXM/SICIM issue. Mr. Lewtas stated that this issue is being addressed by the Aeronautical Data Modeling study group with it's next scheduled meeting in the fourth quarter of 2003. Mr. Lewtas stated that the University of East Tennessee has been contracted by ICAO to study the issue. Mr. Lewtas also stated that ICAO has funding for 1 person to pursue this issue but they have not yet hired anyone. He stated that the model would be XML based. Mr. Powell stated that he would invite NACO and that Mr. Barry Davis from ATA would be attending the meeting.

Finally, Mr. Lewtas discussed database issues. He stated that the Operations Airworthiness Panel is planning to address data base issues soon. It was stated that in the U.S., AFS-420 is notified if there are flight database problems (ARINC-424/GPS-FMS) and they determine if there is a safety issue. It was also pointed out that the FAA tries to stay away from issuing NOTAMs for private database problems.

ACF ICAO Identifier Working Group

Mr. Patrick Millspaw provided the ACF with this update. He reported that ATP would be withdrawing its non-concur and now the Air Traffic non-concur issues must be resolved. He stated that once the non-concurs were resolved existing airports with ICAO idents would be taken care of first, followed by adding a "K" to those with existing three letters. Mr. Millspaw stated that the airports with non-ICAO four letter idents are the problem. It was pointed out that all U.S. four letter idents (i.e. MD32) are private. Mr. Millspaw also stated that ambiguity issues between airport and navaid idents would be addressed as well. It was pointed out that the ICAO 7910 specification states letters only. John Moore stated that we need to resolve this issue soon for the enroute high rescale scheduled for December 2003. Mr. Moore also stated that adding idents to controller charts could cause a chart clutter issue.

ACTION: Mr. Pat Millspaw will develop an action plan for implementation to four letter ICAO idents for distribution at the next ACF if the cartographic change proposal non-concurs are withdrawn/resolved.

High Altitude Redesign Briefing

Mr. John Timmerman [updated the ACF on the high altitude redesign](#). Mr. Larry Bicknell assisted Mr. Timmerman. Mr. Timmerman stated that the redesign was influenced by RTCA and based on evolutionary implementation based on emerging technology. He stated that initial implementation is scheduled for 2003 with planned additions out to 2008 and beyond. It was stated that with each evolutionary change the benefits would be increased consistent with user equipage.

Mr. Timmerman stated that the goal is to balance flexibility and structure to obtain maximum system efficiency. He stated that this would be achieved by reducing the route structure, eliminating airspace miles-in-trail, point-to-point navigation using pilot navigation in lieu of radar vectors, non-restrictive routing where efficient, RNAV/parallel RNAV routes in high density areas, efficient routing around SUA/ATCAAs, and improved knowledge of SUA/ATCAA status. He pointed out that the FAA had looked at selected city pairs and concluded that using these city pairs an average savings of 8 miles per flight could be achieved which would result in an estimated annual savings to airlines of \$7,000,000.

Mr. Timmerman stated that the first 11 RNAV routes would be effective July 10, 2003. He stated that rulemaking for RNAV "Q" routes was completed and that these "Q" routes would be effective down to FL180 and that the NRS waypoints would be good down to FL180 as well. It was stated that RNAV route MEAs are

based on the lowest common denominator equipage i.e. ground based navaid (DME-DME RNAV). RNAV routes will be radar monitored initially as well.

It was stated that ATCAA status would be provided with a 24 hour "look ahead" at the following web site, www.faa.mil/hialt_test. He pointed out that the redesign is based on aircraft avionics systems of the mid 1980s. He stated that it was recognized that database capacity would be an issue as well as human factors for NRS point naming. He stated that waypoint charting would begin May 15, 2003 and that NRS waypoints would be established September 4, 2003. It was stated that the initial set of NRS points would number about 500. It was also stated that the ATC "Playbook", which is revised every year, identifies the usage of waypoints for weather and capacity.

The initial Phase 1 implementation is scheduled for fall 2003 and includes seven Northwest enroute centers (ZAU, ZMP, ZLC, ZSE, ZAO, ZDV, ZKC) at FL390 and above. The Phase 1 expansion will occur in 2004 and add an additional seven enroute centers in the South and Southwest. The Phase 1 completion will occur in 2005-06 and include the remaining six centers in the East and Southeast. Mr. Timmerman pointed out that the Phase 1 design would include RNAV/closely spaced parallel RNAV routes, a Navigational Reference System (NRS points), non-restrictive routing, and ATCAA/SUA waypoints. The initial NRS points will be established every 30' of latitude and every 2 degrees of longitude. The full population of NRS points will be every 10' of latitude and every 1-degree of longitude for a total of 6514 points. The NRS points will be labeled thus KD54W where K=the FIR, D=the center, 54=the latitude, W=the longitude. He also stated that coordinate for these points would not be charted.

Mr. Terpstra stated that NRS waypoints would be broken into several different types by Jeppesen. These types support users needs and are pitch-catch, ATCAA, NRS, VFR, and off-airway.

Mr. Steve Berger stated that a human factors study should be conducted to determine how many "fat finger" errors, controller errors (verbal), and error detection rate would be for the NRS points.

Finally, Mr. Timmerman stated that the new airspace structure would need to be charted for both users (pilots) and service providers (controllers). He stated that NASR is being modified to support fix usage (initially in remarks later with a database structure change). He pointed out that a vast majority of "traditional" waypoints for phase 1 are already charted.

NACO provided a prototype chart with NRS waypoints in green at 75% the size of normal waypoints, with all other waypoints in blue for ACF review.

AOPA Airport Watch Presentation

Ms. Melissa Bailey, AOPA, provided the ACF with a briefing on the new AOPA Airport Watch program and the associated U.S. Government National Response Center 1-866-GA-SECURE phone number. She stated that in December 2002 the hot line was started. The ACF also viewed to videos on Homeland Security and the Airport Watch Program. It was pointed out that the Airport Watch Program is a partnership with the Transportation Security Administration and is modeled on the "Neighborhood Watch Program". She also identified additional security measures aircraft owners and operators could take such as the using of throttle locks, prop locks, and locking aircraft doors. Finally, all ACF participants were provided Airport Watch Pamphlets. These are the same pamphlets that AOPA mailed to all pilots recently.

OE/AAA Update

Mr. Kevin Hagerty, ATA-400 provided the ACF with an update on the FAA efforts related to Obstacle Evaluation and Airport Airspace Analysis. He outlined 14 CFR Part 77 notice criteria.

He also stated that ATA is working on a public web site for submitting FAA Form 7460s. (Editor's note: the following ATA web site <http://www1.faa.gov/ATS/ata/ata400/oeaaa.html> is a good source of information on the process.) Mr. Hagerty stated that in the summer of 2003 the ATA web site will have a link for submitting 7460s.

He stated that OE/AAA uses NASR for aeronautical information and obstacles they have their own database. This database is based on regional information and ATA-400 is working on developing a national system that brings in all the regional databases. It was also stated that AVN is working on a national obstruction database that would become the obstruction source for the FAA.

Mr. Hagerty pointed out that airport layout plans define areas to be protected but that not all runways are protected for instrument approaches. He also stated that OE/AAA would not protect private airports and heliports. He stated that no off-airport 7460 information would be missed but that on-airport information would still be a manual process. It was also stated that obstructions with no frequency or below notice criteria may not flow through the system to the FAA because the public doesn't have to provide information. He pointed out that in these cases companies only provide the information as a result of due diligence and insurance reasons.

Minimum Vectoring Altitude Chart Certification Automation

Mr. Bob Niedermair and Mr. Tim Thornberg of AVN-40 [provided a briefing](#) on the certification tool being developed by AVN. They stated that they are early in the process demonstrating the proof of concept and that airspace rules haven't yet been applied to the prototype tool they demonstrated.

It was also stated that Air Traffic Procedures still has no plan to distribute MVA Sector Boundaries and their altitudes. It was stated that AFS would develop tool criteria, that AVN would develop the tool and evaluate quality, and that ATP would be involved in the development and release of the tool.

Mr. Terpstra stated that the United States is one of the few countries that doesn't publish MVAs. Mr. Steve Berger stated that NBAA is interested in having this data available for EFB use.

Naming Approach Procedures

Mr. Jim Terpstra provided this update to the ACF. He stated that the ICAO OCP was addressing the issue. He stated that the OCP was working on approach procedure title standardization. He stated that the OCP position was that procedure titles should be named according to the navaid(s) to be used. He also stated that there are currently many variations from State to State and that this causes pilots to hear different clearances from State to State. He stated that the OCP had some disagreement over the use of parenthetical with RNAV, for example RNAV (DME/DME). He also stated that the naming convention for charted visual procedures was not addressed by the OCP.

Committee Update

Mr. Jim Terpstra provided an update on the work of some RTCA and SAE committees. He stated that RTCA had published DO-272 "User Requirements for Aerodrome Mapping Information" as well as DO-276 "User Requirements for Terrain and Obstacle Databases". He stated that RTCA SC193 is now working on a document covering data exchange requirements to support DO-272 and DO-276. Mr. Terpstra stated that SAE G-10, Aerospace Behavioral Engineering Technology-Aeronautical Charting Subcommittee is working on the electronic display of aeronautical information and that they will be holding their next meeting in Denver, November 19-21, 2003. He stated that they would be working on a matrix of display priority among other things.

Procedure Title Briefing

Mr. Tom Schneider provided the ACF with a sample approach plate for review (RNAV RWY 28L San Francisco INTL). He also discussed a revision to the minima naming for LPV, LNAV/VNAV, LNAV. The chart passed out was for RNP RNAV and he pointed out the change on the minima lines. He pointed out that RNP procedures might come out in a separate book. He stated that he thinks that the larger airports will get RNP procedures first. He also solicited comments on the sample approach plate. Mr. Brad Alberts commented that he was concerned about the proliferation of meaningless acronyms. Mr. Brad Rush offered FAA Order 8260.50, which has a definition of LPV. It was pointed out that RNP 0.3 lower minima (RNP 0.15) on the special line of the distributed procedure probably are based on aircraft equipment requirements, TAWS etc.

IV. Outstanding Issues

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

Ms. Pat Fair reported that ATA has frequencies for SUAs. She stated that a document change proposal was in work for document 7210.3 to support SUA frequency database maintenance. She also stated that there is a DoD non-concur to chart ATCAAs but that waypoints would be charted as part of the "grid system" (high altitude redesign) to get folks around ATCAAs. Mr. Steve Bergner stated that is concerned about route changes enroute affecting fuel.

STATUS: CLOSED

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

The SUA issue (charting SUA frequencies on VFR charts in the SUA tabulations) from 94-01-040 was previously moved to this item. Ms. Pat Fair updated the ACF on this issue. She stated that FAA legal says they won't change MOA descriptions. She stated that ATA has frequencies for these as well. She stated that the 7210.3 must be amended to support frequency database maintenance. She stated that it was hoped that this would be published July 10, 2003. It was suggested that AIM guidance be included when the MOA frequencies are published and that an additional note be included on the charts to check DoD NOTAMs.

STATUS: OPEN

ACTION: Mr. Mike Riley will provide DoD text to the IACC MPOCs.

ACTION: Mr. John Moore will develop a boxed note for VFR products based on the text that Mike Riley provides.

ACTION: ATA will forward the AIM revision suggestion to the owner of the appropriate AIM section, perhaps ATP-300. It was stated that the deadline for AIM revision is August 7, 2003.

ACTION: Mr. Hal Becker and Mr. Bill Hammett will coordinate with the military to add other times by NOTAM in their new legal descriptions of MOAs.

00-01-119 Adding PCNs (Ground/Airports)

Mr. Dick Powell reported that he and Mr. Alan Ball met with Mr. Ben Castellano, FAA AAS-300, on January 16, 2003. He stated that FAA Order 5010 would be amended to include PCNs. Mr. Powell stated that the information would be collected by State and Federal airport inspectors as part of the airport inspection program administered under the airport improvement program. Mr. Steve Bergner, NBAA, reported that there is a tremendous interest by his constituents to have this data available.

STATUS: OPEN

[00-02-122 Note for Offset Localizer](#)

Mr. Brad Rush reported that the policy is in place and that IACC MPOCs had signed off on the RD and that NACO would implement.

STATUS: CLOSED

[01-01-136 Charting Waypoints with both Fly-over and Fly-by Functions](#)

Ms. Val Watson reported that RD531 was signed by IACC. It was also stated that this issue would be forwarded to ICAO for consideration.

STATUS: CLOSED

ACTION: Mr. Tom Schneider will amend the AIM and Instrument Handbook to support new charted hierarchy.

ACTION: Mr. Eric Secretan forward the ICAO paper on charting waypoints to Mr. Mark Ingram, Mr. Tom Schneider, and Mr. Steve Bergner.

[01-01-140 Tabular Information for Descent \(non-precision approaches\)](#)

Mr. Val Watson reported that ATA expects non-concurs from DoD. In addition, Mr. John Moore reported that AVN had formally non-concurred to RD538. Mr. Ted Thompson stated that Jeppesen won't create these "ribbons" on their own and that they must be supplied by a State or be done as a special request for an Airline. Mr. Thompson also stated that the ATA rejected terrain in the profile view. It was stated that ICAO has a recommended practice the portrayal of terrain and that when DME is required the distance/altitude should be depicted. Mr. Ted Thompson stated that the NTSB recommendation was before VNAV.

STATUS: OPEN

ACTION: ATA will forward the rational for the non-concurs to Mr. Tom Schneider, AFS-420.

[02-01-145 LPV Minima Charting](#)

It was stated that RD541 is still being staffed and coordinated with the SPIT. It was also stated that procedure development, chart specifications included IAP legend changes, and AIM guidance have been developed.

STATUS: OPEN

[02-01-146 Codes for Non-ICAO Airfields](#)

See *ACF ICAO Identifier Working Group* presentation by Mr. Pat Millspaw in the presentation section of these minutes.

STATUS: OPEN

[02-02-147 FAA Electronic Regulations/Documents \(Central location of FAA electronic regulations\)](#)

Ms. Pat Fair reported that the FAA is writing a new 1100 Order to address similar issues. She stated that each office would host their own regulations and documents.

STATUS: OPEN

ACTION: Mr. Dick Powell will research if outside comments are possible to influence Order language.

[02-02-148 Obstacles not in Public Data](#)

Mr. Mark Ingram, ALPA, provided a background update on this issue stating ALPA's concern that some OE obstacle data may not be available in the DOF. Mr. John Brennan stated that procedures for the flow of obstacle data (7460.2 Part 77 obstructions) are well defined and that information that flows from the regions at a rate of 300-400 obstacles a week to AVN. He stated that the FCC database is also checked for obstacle data. Mr. Brennan stated that all obstacle information that NACO receives goes into the DOF.

STATUS: OPEN

[02-02-149 Obstacles on Departure Procedures](#)

Mr. Jim Terpstra, Jeppesen, briefed the ACF on the background of this issue. He stated that the Houston 8260.15 had more than 100 obstacles on it. He stated that Jeppesen could not chart all 100+ obstacles graphically so they listed them textually on several pages. He stated that airlines decided not to subscribe to those pages. He stated that many of these obstacles feel below airlines level of need. Mr. Tom Schneider reported that the FAA was obligated to identify those obstacles that penetrate the 40:1 surface. Mr. Schneider stated that AFS has reevaluated the requirement and that as a result the 8260.46B is being rewritten so that procedure designers could "clump" together obstacle information. Ms. Heidi Williams stated that AOPA has had reports of other airports having similar problems resulting from multiple airports on a SID.

STATUS: CLOSED

ACTION: Mr. Bill Hammett will discuss the issue with Mr. Jack Forman and Mr. Phil Crasse to see if TERPS criteria can be reviewed for this issue.

V. New Charting Topics

03-01-150 Airway Intersections on VFR Charts

Mr. John Moore presented this issue relating to inclusion of IFR information on visual charts. The recommendation is to remove the airway intersection information to reduce clutter and reduce maintenance costs. Ms. Heidi Williams stated that AOPA would like the intersections to stay on the charts and that ATC is using the intersections for egress and ingress for the ADIZ around Washington DC.

ACTION: Mr. Dick Powell will issue a chart change proposal and report at the next ACF.

03-01-151 Charting of IFR Transition Routes

Ms. Pat Fair presented this issue for Mr. Gary Powell. She stated that the request is for the FAA to develop more IFR transition routes through TRACON airspace for RNAV (/E/F/G) equipped aircraft. The proposal is to discuss alternatives for publishing the routes in the A/FD. It was also stated that AOPA strongly supports this issue. Mr. Hal Becker and Mr. Ted Thompson stated that these routes need to be uniquely identified and that this is a storage issue in databases. Mr. Thompson stated that connectivity and naming issues for databases apply to this issue as well as to preferred routes. It was stated that were area charts don't exist that these routes would show up on the IFR enroute lows and that the route depiction would add clutter to both area charts and the lows. It was stated that Jacksonville would be put in the A/FD. It was also suggested that these routes be identified by airport (e.g. KCLT1, KCLT2).

ACTION: ATA and ATP-104 will research this issue further and report at the next ACF.

03-01-152 Marine Navigation Lights on VFR products

Mr. John Moore presented this issue relating to suggested removal of marine navigation lights on visual charts. The recommendation is to remove the marine navigation lights to reduce clutter and reduce maintenance costs. Mr. Dave Lewtas stated that ICAO has a specification for charting these lights.

ACTION: Mr. Mike Riley will research the issue with DoD and report at the next ACF.

ACTION: Ms. Heidi Williams will research the issue with AOPA members and report at the next ACF.

03-01-153 Depicting LAHSO Hold Short Lights and Hold Short Points

Mr. Kevin Comstock, ALPA submitted this issue. He recommends the depiction of LAHSO hold short points, distance lines and hold short lights as well as a description of LAHSO hold short points and lights be added to the FAA airport diagrams. He also recommends the depiction of LAHSO hold short points (-9 page) and LAHSO distances as well as LAHSO hold short lights (-9a page) on the Jeppesen airport diagrams. He also recommends a description of LAHSO hold short points and lights be added to the Jeppesen legend. A handout was provided by ALPA to illustrate the recommendations. Mr. Ted Thompson stated that airport information must flow to ATA to do this. There was also a discussion about lighting standards for LAHSO and it was pointed out that air carriers need lights for LAHSO operations.

ACTION: Mr. Dick Powell will discuss this issue with the LAHSO Office and report his findings at the next ACF.

[03-01-154 Charting of RNAV Legs Adjacent to Fly-Over and Fly-By Waypoints](#)

This issue was submitted by Mr. Mark Steinbicker, AFS-410. He recommends that RNAV legs be depicted in a clear and concise manner resembling typical aircraft flight paths. He states “specifically, a charted leg surrounding a fly-over waypoint should intersect the waypoint and emerge in a curved line until proceeding direct to the next waypoint for a subsequent direct-to-fix leg or intersect and join the next path for a subsequent track-to-fix leg. A charted leg surrounding a fly-by waypoint should be indicated by a curved line inside the waypoint joining the tangents of the adjacent paths.” Mr. Jim Terpstra stated that the concept is good but that implementation is more difficult. Mr. Ted Thompson stated that performance characteristics vary by aircraft type as well and that there are chart scale issues.

The ACF consensus is that on RNAV procedures where fly-over is designated by the source and the waypoint is followed by a DF leg that the leg be depicted as flown. This ACF consensus only applies to SIDs and STARs.

ACTION: Mr. John Moore will discuss the ACF consensus on this issue with the IACC and report on the IACC response at the next ACF.

[03-01-155 Broadcast Stations on VFR Charts](#)

Mr. John Moore submitted this issue and stated that it is difficult to ensure that current frequency and call letter information is depicted on the charts. In addition, he states that pilots have commented that the usefulness of this information for navigation is extremely limited.

ACTION: Mr. Dick Powell will contact HAI and EAA to determine if they have any objections to removing broadcast stations from VFR charts.

[03-01-156 Inclusion of Parachute Jump Areas in GPS/FMS Databases, Approach Plates, and Arrival/Departure Procedures](#)

(Editors Note: Per ACF consensus 03-01-156 contains both of Mr. Scott’s issue submissions which were originally 03-01-156 and 03-01-157).

Mr. Ed Scott, US Parachute Association, presented this issue. He requests that a procedure be developed and instituted whereby active parachute jump areas are included in GPS databases and on aircraft displays. In addition, he requests the depiction of a parachute symbol and/or text describing the extent of parachute jump activity on instrument approach plates and arrival/departure procedures to ensure that pilots are aware of their proximity to parachute jump operations.

Mr. Terpstra stated that GPS/FMS database specifications, ARINC 424, don’t currently support the inclusion of the data. He stated that if there are radii it would make it easier to add the information to the database. It was stated that the information comes to ATA-100 from the FSS as a bearing/distance from an airport and that some are charted and all are listed in the Airport/Facility Directory. It was stated that the PAJAs must be in operation for a year before they are charted.

Mr. Hal Becker stated that in the mid-80s there was a midair between a commuter and a jump aircraft. He said that the NTSB felt that PAJAs should become restricted area and that the FAA had fought this.

ACTION: Mr. Jim Terpstra will bring this issue up at the next ARINC Navigation Database meeting.

ACTION: Mr. Dick Powell will investigate how many IFR airports have PAJAs.

ACTION: Mr. Mitch Scott, ATA, will discuss the issue with his constituents and report at the next ACF.

ACTION: Mr. Mark Ingram, ALPA, will discuss the issue with his constituents and report at the next ACF.
(***Editor's note:*** Since the ACF Mr. Ingram has replied that ALPA would like to have USPA quantify the nature and severity of the issue. It was suggested that USPA search ASRS and related databases in order to quantify the size and scope of the perceived problem.)

VI. Next Meeting

The next meeting of the ACF is scheduled for October 20-23, 2003 and will be hosted by the National Aeronautical Charting Office at their facilities in Silver Spring, MD. Dress will be casual. The following meeting will be held at the Airline Pilots Association in Herndon, Virginia, April 26-29, 2004.

ACF Website URL Disclosure: Website URLs included these minutes were accurate and reflect the URL address at the time these minutes were drafted and approved.