

Government/Industry Aeronautical Charting Forum (ACF)
Meeting 04-02
October 27 to October 28, 2004

MINUTES

I. Opening Remarks

The Aeronautical Chart Forum (ACF) was held at the Advanced Management Technology Incorporated (AMTI), office in Arlington, Virginia. Mr. Dick Powell, Aeronautical Information Services, the ACF Co-Chair, opened the Forum on October 27, 2004 with thanks to AMTI and AMTI representative Mr. Tom Reiss for hosting the meeting. Mr. Reiss welcomed the ACF participants to AMTI. Mr. Powell acknowledged the ACF Co-Chair Mr. Tom Schneider, AFS-420. Mr. Schneider chaired the ACF Instrument Procedures Group meeting held on October 25, 2004. Separate minutes of that meeting will be distributed.

II. Review of Minutes from Last Meeting

The minutes from the 04-01 ACF meeting were accepted with the following correction:

Section V Outstanding Issues:

00-01-119 Adding PCNs (Ground/Airports) first paragraph Canadian Airport Pavement Bearing Strengths (TP 2126E) to read (TP 2162E).

III. Agenda Approval

The agenda for the 04-02 ACF meeting was approved as presented.

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

ACF AIS/MAP Initiative Update

Mr. Davis Lewtas, ICAO, was unable to attend the ACF. Mr. Lewtas sent his regrets and submitted the following report presented by Mr. Dick Powell, Aeronautical Information Services. Mr. Powell reported that there are new amendments to Annex 4, Aeronautical Charts and Annex 15, Aeronautical Information Services, which become effective on 25 November 2004. Except for Annex 15, Chapter 10, Electronic Terrain and Obstacle data that becomes applicable on 20 November 2008 and 18 November 2010.

Mr. Powell summarized the Annex 4, Amendment 53 contents stating the new provision concerning definitions; vertical and temporal reference systems; terminal arrival altitude; Radar Minimum Altitude Chart-ICAO; and symbols for altitude/flight level and final approach fix. He provided an update of the existing provisions related to the World Geodetic System – 1984 (WGS-84); obstacles; chart identification, aerodrome operating minima and supplementary information on the Instrument Approach Chart – ICAO; and aeronautical data quality requirements.

Mr. Powell summarized the Annex 15, Amendment 33 contents stating that new provision concerning definitions; vertical reference system and the temporal reference system for international civil aviation; electronic terrain and obstacle data; aeronautical data quality requirements; inclusion of GNSS-related elements in aeronautical information; and the Radar Minimum Altitude Chart-ICAO; and updating the

existing provisions related to the World Geodetic System – 1984 (WGS-84); and the Aeronautical Information Publication (AIP).

In addition to the Annex 4 and Annex 15 changes, Mr. Powell stated that a new Amendment 27 to PANS-ABC-ICAO abbreviations and Codes becomes applicable on 25 November 2004. Future proposed charting amendments which are under development include a proposal for a new electronic aerodrome terrain and obstacle chart type which may be provided instead of the existing ICAO obstacle chart types, and charting proposals being worked by the ICAO Obstacle Clearance Panel (OCP). The developments of these proposals are in initial stages and have yet to be distributed to States for comments. Mr. Eric Secretan, NACO, provided an OCP update. Work to define Procedures for Air Navigation Services-Operations (PANS-OPS) material for support of noise abatement procedures continues. Point-in-space helicopter procedures have some questions to be resolved on how to handle the visual segment after the MAP. (How long, what to do if need to go “missed” after passing the MAP, etc.)

There is agreement that DME stations should not be included in flight databases if they do not comply with requirements contained in Annex 10 (i.e., pre 1989 DMEs). Additionally, changing LLZ to LOC – looks like this is going to be approved at OCP 14. This will also require the redefining of the abbreviation of location from the current “loc.” A proposal that Annex 4 be changed to require that every instrument procedure chart list whether it was designed using “PANS-OPS” or “TERPS” was withdrawn. The US, Germany and Canada argued that the information was currently available to pilots in the State’s AIP, and that there was no reason to duplicate the information on every chart.

The OCP Charting Sub-Committee is considering an ACF recommendation to use “fly-by” symbology for holding pattern fixes on RNAV procedures in lieu of “fly-over” symbology. Future work on the OCP calls for ICAO dissemination of an automated tool that would be capable of developing FAS Data Block as part of procedure design. This tool still needs to be defined and created. The use of MDA in place of DA is starting to be discussed within OCP. Discussion is on for standardization of the method of application of mag/var in procedure design. Discussions are on as well for the depiction of procedure altitude and obstacle clearance altitudes. There are significant issues related to charting and depiction of this concept.

CD’s containing Annex 4, Amendment 15 and Annex 15 Amendment 33 were provided to interested ACF members.

ACF ICAO Identifier Working Group

Mr. Dick Powell, Aeronautical Information Services, reported that the ICAO Identifier requirement came to the ACF in 01-02 from Jeppesen out of the ATA Charting/Database Harmonization Group, to add ICAO identifier code K in front of three-letter airport identifier. NATCA and ATP non-concur to the Cartographic Change Proposal (CCP). Mr. Powell reported that on April 24, 2003 ATP dropped its non-concur, supporting a phased-in approach to changing all airport identifiers to four characters to be in compliance with ICAO. Mr. Powell stated that work would continue with NATCA to resolve the non-concur. At the 04-01 ACF Mr. Powell disseminated the CCP, “Proposal to Phase-in International Identifiers” for review and comment. Mr. Powell briefed the ACF members on the CCP responses:

- Jeppesen concurs supporting the proposal as an important aspect of internationalization of US airports with other countries that are in compliance with ICAO Doc 7910. Jeppesen expressed concern over airport identifiers in Kansas, Kentucky, Alaska and Pacific.
- ICAO concurs noting that ICAO Doc 7910 Location Indicators directs that letters are to be used to compose airport indicators.

- NGA concurs with a phased in approach.
- AOPA concurs with no comment.
- NAVFIC concurs expressing concern over airports in Alaska and Hawaii that have four letter identifiers already.

Mr. Mark Ingram, ALPA, concurred with the CCP at the ACF. Mr. Powell addressed the CCP comments stating that airport identifiers in Kansas and Kentucky have been changed and the National Flight Data Center is continuing to change identifiers in the NAS that begin with the letter K. Mr. Powell informed the group that location identifiers are referred to as location indicators when used internationally. ICAO has published recommendations for establishment of four letter location indicators for geographical locations. These location indicators are published in ICAO Document 7910. Location indicator assignments for Alaska are PA followed by a unique pair of letters. Additional Alaska prefixes, PF, PO and PP have been assigned and grandfathered. The location indicator assignment for Hawaii is PH followed by a unique pair of letters. The Pacific Islands are assigned PB, PJ, PL, PG, PM, PT, and PW for various islands, followed by a unique pair of letters. Puerto Rico is assigned TJ and TI for the Virgin Islands, followed by a unique pair of letters. Mr. Powell stated that the FAA has filed an exemption with ICAO to use numbers for ICAO Location Indicators.

Mr. Gary Bobik, NOTAMs Programs Office, provided a brief update on the impact to the NOTAM system. Mr. Bobik stated that the current NOTAM system would not handle the ICAO location indicators. The civil system will reject the use of the ICAO identifier code K in front of the three-letter airport identifier. The military NOTAM system will accept the ICAO identifier code K. Mr. Bobik informed the group that under the Air Traffic reorganization the NOTAM system is now under Ms. Linda Schuessler. He stated that there is no funding for new programs and funding will be required for NOTAM system updates. Mr. Mike Riley, NGA, inquired if the funding problem will prevent this issue from moving forward. Mr. Powell stated that a plan is in place and that we should proceed. Mr. Powell proposed that Aeronautical Information Services continue working with Jeppesen, NGA, and NACO to provide an implementation schedule for phased-in location indicators. Mr. Powell [provided the ACF with a revised CCP](#) that addressed the issues and comments identified in the original CCP. Mr. Riley stated that DoD has implemented the new location indicators. Mr. Dick Powell thanked everyone who responded to the CCP and asked the industry for patience.

ACTION: ACF Members to [review and comment on the attached CCP](#) by November 29, 2004. Comments maybe sent via email to kistina.overby@faa.gov.

ACTION: Mr. Powell will report on the CCP comments at the next ACF.

ACTION: Aeronautical Information Services will provide a time-line for phased-in location indicators.

ACTION: Aeronautical Information Services will continue working with NATCA to resolve non-concurs.

ACTION: Gary Bobik will provide a cost estimate for NOTAM system updates at the next ACF.

High Altitude Redesign Briefing

Mr. Larry Bicknell, MITRE-CAASD and Mr. Scott Godfrey, Crown Consulting, Inc., updated the ACF on the High Altitude Redesign (HAR). Implementation of Phase 1 rollout is designed to provide balanced flexibility and structure to obtain maximum system efficiency in the Northwest seven ARTCCs (Chicago, Denver, Kansas City, Minneapolis, Oakland, Salt Lake City and Seattle). This roll out has provided web access to

SUA/ATCAA (sua.faa.gov) schedules and locations, publication of eleven 'Q' routes, and initiation of nonrestrictive routing (NRR) and point-to-point (PTP) navigation. Other parts of Phase 1, the charting of Navigation Reference System (NRS) waypoints and the lifting of GNSS restrictions enabling DME/DME took place in the fall of 2004. Phase 1 expansion will expand the airspace to an additional seven ARTCCs and lower the airspace floor.

Phase 1 Initial "Rollout"

Waypoints have been established around the perimeter of SUA/ATCAA to minimize the impact of flights within the HAR environment. Pilots should flight plan around these areas using the waypoints when the SUA and ATCAAs are active. These waypoints are being used by ATC to reroute aircraft should an unanticipated activation occur.

The first eleven 'Q' routes were effective July 10, 2003. DME/DME/IRU MEAs were added to Q1, Q3, and Q5, effective 30 September 2004, as published in the Amendment to Part 95. NACO charted this information on the enroute high charts and added the DME facilities associated with these routes to the Preferred Route section of the A/FD. In addition NACO charted southbound directional arrows on the enroute high charts for Routes Q1, Q3, Q5, Q7, Q9, and Q11, effective 30 September 2004. For the 25 November 2004 effective date DME/DME/IRU MEAs were added to the enroute high charts for Q7, Q9, and Q11 and the southbound directional arrows were deleted from these routes. DME/DME/IRU MEAs were added to the enroute high charts for Q501, Q502, Q504, and Q505. DME facilities associated with these routes were added to the Preferred Route section of the A/FD.

The FAA formally submitted an exemption to ICAO Annex Material explaining the U.S. intent to express NRS grid points as a series of alphanumeric points on U.S. charts and databases. Four hundred-fifty, NRS waypoints were published in the NFDD 069 dated April 9, 2004. These NRS waypoints were effective/published on the 10 June 2004 high altitude charts.

A NRS video is available for viewing on the HAR website: http://www.faa.gov/ats/nar/har_section.htm.

Phase 1 Expansion

Expansion plans include implementation of Reduced Vertical Separation Minimum (RVSM). The goal of RVSM is to reduce the vertical separation above flight level (FL) 290 from the current 2000-ft minimum to 1000-ft minimum. This will allow aircraft to safely fly more optimum profiles, gain fuel savings and increase airspace capacity. Proposed effective date for RVSM implementation is 20 January 2005. Seventeen new Q routes are proposed for the 12 May 2005 effective date. In addition to expanding the NRS grid points for an additional seven centers which include Los Angeles, Jacksonville, Fort Worth, Miami, Memphis, Albuquerque, and Houston. These NRS grid points will be published as add-on pages to the NFDD.

Upon completion of the HAR presentation, Mr. Dick Powell, Aeronautical Information Services, provided the following National Airspace System Resources (NASR) briefing. Mr. Powell stated that since the last ACF the HAR/NAR functionality patch was added to NASR on September 16, 2004. The November 25, 2004 NASR subscriber file included a separate HAR/NAR file. Additionally NASR now identifies HAR/NAR Fixes and NAVAIDs in the Fix NAVAID files. Also Pitch, Catch, and SUA/ATCAA Avoidance Fixes are now identified in NASR. These were previously annotated in the remarks section of the Fix File. Q routes are now listed in a separate RNAV file. NASR now includes the functionality to specifically identify and sort for HAR Fix/NAVAID.

Mr. Bicknell's presentation led to an extensive discussion by the ACF members. Mr. Ted Thompson, Jeppesen, inquired as to when will the U.S. expand or except RNAV routes coming into the U.S. from South America. Mr. Godfrey stated that Miami is currently looking into this issue. Mr. Bill Hammett, AFS-420, inquired as to the feasibility of using the NRS waypoints for the severe weather avoidance plan (SWAP). He stated that in many cases a SWAP point has been established within a few miles of an existing waypoint. This causes excessive chart clutter. Mr. Ted Thompson, Jeppesen, concurred stating that waypoints should be used for several functions, combining the use of waypoints will reduce the excessive number of waypoints in the database. Mr. Hammett stated that the severe weather avoidance plan predated the NRS waypoints. Mr. Powell commented that the FAA needs to look at how one program affects another program. Mr. Tom Schneider, AFS-420, inquired as to the definition of "offshore" in terms of distance for NRS waypoints. Mr. Bicknell stated that NRS waypoints are only used in areas of radar coverage. He stated that there is diverse opinion in the centers and the issue needs to be resolved prior to NRS expansion. Mr. Hammett stated that NFPO is responsible for the FDC NOTAMs on enroute airways and fixes.

ACTION: Mr. Bicknell will coordinate the NOTAM issue with Seattle FPO.

ACTION: Ms. Valerie Watson, Cartographic Standards, will coordinate a review of SWAP points with Ms. Ann Moore of Enroute Services. To combine the use of SWAP points and NRS waypoints and the possible elimination of SWAP points within a close distance to NRS waypoints. As more NRS waypoints are established then additional SWAP points could be eliminated.

V. Outstanding Issues

[00-01-119 Adding PCNs \(Ground/Airports\)](#)

Mr. Dick Powell, Aeronautical Information Services, reported that initial work has begun on this issue. The Office of Airport Safety has completed a review of pavement classification number (PCN) pavement bearing strength specifications and requirements. FAA Order 5010 has been amended to include improved collection guidance for pavement classification. Training for the State and Federal Airport Inspectors is under development. The NASR database has been modified to include data fields for rating method, pavement type, subgrade strength, tire pressure limit, and pavement class. Individual airport runway pavement classification reviews must be conducted. NASR PCN data for civil airports is unavailable or outdated; this outdated data has been pulled from NASR. Mr. Powell stated that a great deal of work remains on this issue.

During the 04-01 forum ACF members determined that a new working group should be created to identify the pavement classification requirements for airport surfaces to include runways, taxiways and parking areas. Several individuals/organizations expressed an interest in participating in this new working group. The Aeronautical Information Services was unaware that the Airport Source Data Committee chaired by Mr. Dave Goehler of Jeppesen had been examining the PCN issue. Mr. Powell requested that the ACF members who are interested in participating be given the opportunity to attend the next Airport Source Data Committee meeting. Mr. Powell opened the issue for ACF discussion.

Mr. John Ingram, NGA, questioned if the runway weight bearing capacity data would be deleted at civil facilities. Ms. Valerie Watson, Cartographic Standards, responded that the weight bearing capacity data would continue being published in the Airport/Facility Directory (A/FD) and the Terminal Procedures Publication (TPP) in addition to the PCN data. Mr. Frank Flood, Air Canada, stated that Canada depicts PCN data for runways, taxiways, and aprons on the airport diagram as a remark. In addition, this data is published in the Canadian Airport Pavement Bearings Strengths (TP 2162E).

ACF members expressed concerns over data maintenance and chart clutter issues in addition to the importance of establishing PCN data for taxiways. Mr. John Ingram stated that recently constructed runways and taxiways are in agreement; they support the same weight or type of aircraft. The issue is older taxiways; they do not support the same weight as the runway.

STATUS: OPEN

ACTION: Mr. Dave Goehler will notify interested participants of the next Airport Source Data Committee meeting.

***Editors Note:** The next meeting of the Airport Source Data Committee is scheduled for Tuesday, December 7, 2004, at FAA Headquarters Building 10A, Room 621 from 1:00 to 3:30 p.m.*

ACTION: The IACC MPOCs will evaluate the charting specifications and if required submit a requirement document to modify the IACC charting specifications.

ACTION: Mr. Dave Goehler will report on the Airport Source Data Committee recommendations at the next forum.

02-02-148 Obstacles not in Public Data

Mr. Eric Secretan, NACO, provided a brief update on the Obstruction Repository System (ORS). Mr. Secretan stated that once the ORS is modeled, current obstacles would need to be incorporated and the duplicate record issue would need to be resolved. Resources are an issue and as a result the full implementation of the ORS is several years down the road. (NACO anticipates ORS replacing their current obstacle database within a year.) The ORS screens have not been developed. Mr. Secretan stated that Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) data maybe accepted without verification if the data meets ORS business rules. Automation to link OE/AAA to the ORS is a problem. Mr. Terry Laydon, NACO, stated additional work would need to be completed prior to the ORS accepting the OE/AAA data. Mr. Secretan stated that the ORS will be a web-based service that will allow for selecting different obstacle types and will include proposed obstacles.

Mr. Brad Rush, NFPO, stated that there is an issue with proposed obstacles that are not built. Mr. Rush explained that numerous sites could be requested for one obstacle. The unused proposed sites remain in the file. These sites would need to be flagged for removal from the database. Mr. Mike Riley, NGA, asked if there is a data exchange agreement between NGA and AVN. NACO and NGA currently exchange and ingest the NACO DOF and NGA foreign obstacle data. Mr. Rush stated that obstacle data is a difficult process to collect; there is no guarantee that any database has all the obstacles. The ORS requirements will be to capture all this data with no minimum elevation for obstacles. The initial release will replace the DOF and include all manmade obstacles according to FAR Part 77. A future release will include all obstacles, manmade as well as natural with no height restrictions.

Mr. Bill Hammett, AFS-420, inquired if NACO could add obstacles under 200 feet to the current database. Mr. Secretan responded that if requested NACO would add obstacles under 200 feet to the DOF. FAR Part 77 requires certain obstacles under 200 feet to be in the DOF, all obstacles received via 7460, no matter what the height. Mr. Mark Ingram, ALPA, asked if the two obstructions on the final at Lihue Hawaii would be added to the DOF. Ms. Rosemarie Longobardo, NACO, stated that NACO would add the obstructions based on the FCC database as source.

ACTION: NACO will add the two obstructions at Lihue Hawaii to the DOF.

ACTION: NACO will provide an update at the next ACF.

03-01-151 Charting of IFR Transition Routes

Mr. Paul Ewing, ATP, provided the following update. The FAA is working towards the final development phase and charting of RNAV IFR Terminal Transition Routes (RITTR). These routes through Class B and Class C airspace are designed for RNAV (E/F/G) equipped aircraft. Currently the transition route graphic and the associated text for Charlotte, NC and Cincinnati, OH are published in the Preferred IFR Routes section of the A/FD. Mr. Ewing reported that since the last ACF it has been established that the routes are technically low altitude RNAV routes and must go through similar rule-making process. The routes will be charted on the enroute low charts in blue type and will be GNSS only. They will carry T airway idents and airway numbers will be assigned from T200 to T500. The minimum enroute altitude (MEA) will be established for each segment of the RITTR. The altitudes will be flight checked, an 8260.16 will be issued, and the MEAs will be published in the Part 95 amendment.

Mr. Ewing stated that RITTRs have been established to allow aircraft flying in the low altitude enroute structure to transition through a single terminal airspace. Low altitude Q routes for transitioning two or more terminal areas will be established. Both route types require rulemaking. Air Traffic would be the primary office responsible for establishing the transition routes and the number of routes per terminal area should be limited. The Jacksonville terminal area has eight routes and Charlotte terminal area has four routes. Air Traffic will designate expect altitudes for each RITTR. The expect altitudes will be published on the title panel of the enroute low chart and designated for use by GNSS aircraft only.

Mr. John Moore, NACO, has created prototypes depicting the Charlotte, Cincinnati, and Jacksonville transition routes and the expect altitude tables. The [Jacksonville prototype](#) and an [expect altitude table](#). Mr. Ewing stated that Interim Policy Guidance would be provided by AFS for NFPO, NACO, NFDC, and other concerned offices. Mr. Ewing provided the ACF members a copy of the [Draft Interim Guidance for RNAV IFR Terminal Transition Route Publication](#).

Mr. Ewing stated that the goal is to have Jacksonville and Charlotte published on the enroute low charts by 17 March 2005. If we are unable to meet this ambitious goal the implementation date will be moved back until 12 May 2005. Once the RITTRs are published on the enroute low charts the graphic and associated text will be deleted from the A/FD. Mr. Ewing thanked NACO for providing the prototypes and commended Mr. Moore on an exceptional job.

Mr. Ewing opened the issue for ACF discussion. Mr. Ray Nussear, NACO, inquired if the T routes would be published in the Digital Aeronautical Chart Supplement (DACS). Mr. Nussear stated that the DACS would need to be modified to accept the T idents. Mr. Ewing responded that the transition routes would need to be published in the DACS. Mr. Mark Steinbicker, AFS-410 stated that the T routes are for GNSS aircraft only and cannot be flown DME/DME. Mr. Steinbicker asked should the G be published after the MEA.

After extensive ACF discussion on this issue Mr. Ewing stated that further discussion would be required. Mr. John Ingram, NGA, stated that NGA might have an issue with coding the transition routes. Mr. Dick Powell, Aeronautical Information Services, stated that the T routes would be added to the NASR subscriber file as part of the RNAV routes. In addition, these routes will be added to the National Flight Database (NFD). Mr. Ewing stated that the AIM would be modified to provide RITTR guidance. Mr. Eric Secretan,

NACO, stated that NACO would send out a Charting Notice to its users. In addition this information would be placed on the AOPA and NACO websites. Mr. Ted Thompson, Jeppesen, requested a copy of the charting notice going out to NACO users. Mr. Hal Becker, AOPA, provided [a formal written request](#) for charting the transition routes. Mr. Becker thanked everyone for pulling together to get the T routes charted.

STATUS: OPEN

ACTION: The IACC MPOCs will evaluate the charting specifications and submit a requirement document to modify the IACC charting specifications. MPOC will report on the IACC response at the next ACF.

ACTION: NACO will send out a Charting Notice to its users and provide a copy to Mr. Thompson.

ACTION: Mr. Ewing will provide an update at the next ACF.

03-01-152 Marine Navigation Lights on VFR products

Mr. Charles Chung, HAI, confirmed the HAI position stating that offshore aircraft operators still use the marine navigation lights for navigation. Mr. Chung stated that from a user's perspective they should remain on the charts. Mr. Mike Riley, NGA, concurred stating that as a user of FAA visual charts DoD is requesting that they remain on the charts for situational awareness. Mr. Dick Powell, Aeronautical Information Services, stated that NGA and HAI have both expressed the need for marine navigation lights on the visual charts. ACF consensus is to retain this information on the charts.

STATUS: CLOSED

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

Mr. Dick Powell, Aeronautical Information Services, stated that the issue has been discussed with the Land and Hold Short (LAHSO) office, initially Ms. Diane Crean, and then with Mr. Gary Norek, and most recently with Ms. Angela Nelson, Terminal Services. All three have concurred with charting of LAHSO hold short point data on Airport Diagrams. However the hold short lights remain in question. Mr. Mark Ingram, ALPA, stated that the hold short lights are not always available and that this information is critical to the user. Ms. Valerie Watson, Cartographic Standards, stated that the Terminal Services office has not submitted a formal requirement request. When the Aeronautical Information Services receives the official request a requirement document will be submitted to the MPOC adding the recommended symbology and text to the airport diagrams.

STATUS: OPEN

ACTION: The IACC MPOCs will evaluate the charting specifications and submit a requirement document to modify the IACC charting specifications. MPOC will report on the IACC response at the next ACF.

03-01-154 Charting of RNAV legs adjacent to Fly-Over and Fly-By Waypoints

At the 04-01 Aeronautical Charting Forum consensus was reached on this issue and Requirement Document 565 was submitted to the IACC MPOC on June 1, 2004. The requirement document stated that pilots want the intended track of the aircraft depicted on RNAV SIDs and STARs. The intended track would be

cartographically rendered based on the type of waypoint, the type of legs into and out of that waypoint and turns required at the waypoint. For instance, if the waypoint were a fly-by waypoint and the legs into and out of the waypoint formed anything other than a straight line, the procedure line would curve prior to the waypoint to intercept the outbound leg. In the same example but with a fly-over waypoint, the outbound procedure line would start at a point 180 degrees from the inbound leg and curve (past the waypoint) to intercept the outbound leg. The procedure track arcs would be indicated with a dashed line, as opposed to the current solid lines, to indicate expected track of an aircraft.

Mr. Mike Riley, NGA, stated that DoD Flight Standards non-concurs stating that the current symbology is adequate. Mr. Riley stated that the implied accuracy of the depiction is also an issue for DoD. Mr. Ted Thompson, Jeppesen, agreed stating that the turns on the plainview will not adequately depict the aircraft track due to aircraft performance. The graphical depiction may not depict the ground track. Mr. Ron Canter, NACO, stated that there are one hundred ninety-six RNAV SIDs and twenty-two RNAV STARs that would be affected by this requirement. Mr. Mark Steinbicker, AFS-410, stated that the industry must work towards charting standardization. Mr. Thompson stated that most pilots support this change and Jeppesen is currently working on specifications that will accurately provide this data to its users. Mr. Riley inquired if this was a safety of flight issue. He stated that resources are an issue for DoD and if FAA provides the funding DoD will implement the change.

ACF discussion led to the consensus of the ACF that Mr. Mark Steinbicker and Mr. Vincent Chirasello, AFS-410, would submit a revised recommendation document to eliminate the fly-by issue. Recommendation of the ACF is that this issue be applied in the near future. NACO agreed to work towards standardization and provide prototypes of RNAV legs with specific information based on their type at the next ACF.

STATUS: OPEN

ACTION: The IACC MPOCs will evaluate the charting specifications and verify that there are specifications for fly-over standards. MPOC will report on the IACC response at the next ACF.

ACTION: NACO will provide prototypes depicting the following track types:

- Heading – no waypoints shown, “hdg” charted after degrees (i.e., 330 degree hdg), no mileage shown.
- Direct – waypoint at termination of leg, no course shown, no mileage shown.
- Course – waypoint at termination of leg, course shown, mileage shown only if first leg upon departure.
- Track – waypoints at beginning and termination of leg, course shown, mileage shown.

ACTION: AFS-410 will submit a revised recommendation document eliminating the fly-by issue at the next ACF.

03-01-155 Broadcast Stations on VFR Charts

Mr. Dick Powell, Aeronautical Information Services, stated that Mr. Dick Wright, HAI, reported that HAI members show no interest in broadcast stations. HAI concurred with the removal of broadcast stations from the VFR Charts. Mr. Powell stated that he was unable to obtain an EAA position and recommended removal of the broadcast stations from the charts. ACF members concurred with the recommendation.

STATUS: CLOSED

ACTION: Ms. Debbie Copeland, NACO, will submit a requirement document at the next MPOC meeting.
04-01-158 Depiction of takeoff minimum on Standard Instrument Departures and those associated with Obstacle Departure Procedures

Mr. Chuck Schramek, Delta Airlines, submitted this issue. Mr. Schramek was unable to attend the ACF. Delta representatives briefed the ACF stating that this is an internal issue between Jeppesen and Delta. Mr. Ted Thompson, Jeppesen, stated that the graphic departure includes takeoff minimums and climb gradient for route segments. These same airports also have takeoff minimums listed on the back of the airport page, which may not agree or apply to the departure procedure. These minimums and gradients are being depicted in various formats and in several places. This inconsistency makes it difficult for pilots and operators to quickly determine the appropriate takeoff minimums to apply. Mr. Thompson stated that Jeppesen is currently working to resolve this issue.

STATUS: OPEN

ACTION: Mr. Thompson will provide an update at the next ACF.

04-01-159 RNAV Idents

Mr. John Ingram, NGA, requested the removal of the R suffix on the Alaska VOR/DME routes. The waypoints are being identified as RNAV, but are only used on non-RNAV routes on enroute airways. These non-RNAV waypoints are on enroute airways when the airway record doesn't contain the waypoint. It was stated that the waypoints are a tie-in to a procedure. ACF discussion led to the determination that Jeppesen and NACO are charting/coding these waypoints as part of the airway segments. Mr. Ingram stated that the DAFIF does not agree with the NACO enroute charts. NGA needs the 8260-2 to update DAFIF. Mr. Ingram requested access to the FTP site to obtain the 8260-2.

Mr. Brad Rush, NFPO, stated that IFP is used to generate the 8260-2 and that firewall issues will need to be resolved. Mr. Rush suggested that the 8260-2 be published in the NFDD as an add-on page. Mr. Rush stated that the IFP Group, a subgroup of the AISWG, is currently working the connectivity issue. AIXM, which was developed by Eurocontrol, will be the FAA standard. This medium should resolve all data exchange issues. Until then, Mr. Rush agreed to work with Mr. Ingram to resolve the 8260-2 issues for NGA.

STATUS: OPEN

ACTION: Mr. Rush will provide NGA access to the 8260-2.

04-01-160 Charting Low Altitude Q Routes

Mr. Paul Ewing, ATP, included the low altitude Q route briefing with FAA Control #03-01-151 Charting of IFR Transition Routes. See page 7, [03-01-151 Charting of IFR Transition Routes](#), of these minutes for additional information.

STATUS: OPEN

04-01-162 Use of Lead-In Light Systems (LDIN)

Mr. Dick Temple, AFS-410, submitted this issue. Mr. Temple was unable to attend the ACF. Mr. Dick Powell, Aeronautical Information Services, provided the following briefing. LDIN consists of a series or group of 3 flashing lights in a linear or cluster configuration and may be augmented by steady-burning lights. These lights are installed along the approach path at or near ground level where special problems exist such as hazardous terrain, obstructions, or for noise abatement procedures. LDIN are terminated at the approved approach lighting system or at a distance from the threshold compatible with authorized visibility minimums permitting visual reference to the runway environment.

FAA Order 6850.2A, Visual Guidance Lighting Systems and FAA Order 8260.3, TERPS, refer to LDIN as a VFR lighting system and not approved for use with precision or non-precision approaches. LDIN would not qualify for lighting credit under 14 CFR Part 91.175 and 121.651. Currently Jeppesen charts LDIN as a series of open circles at their approximate ground location while NACO charts LDIN as an open circle. Examples of [Jeppesen](#) and [NACO](#) LDIN depictions have been attached to these minutes.

Mr. Mark Steinbicker, AFS-410, recommended that standardized symbology be created for LDIN and that NACO add LDIN symbology to the TPP Legend. Mr. Eric Secretan, NACO, non-concurred with this recommendation stating that NACO explains the LDIN symbology on the procedure. ACF consensus was to close the issue.

STATUS: CLOSED

04-01-163 Depicting Required DME Facilities on Q Route Segments

Mr. Dick Powell, Aeronautical Information Services, provided the following update. DME/DME/IRU MEAs were published on the High Altitude Enroute Charts for three Q routes for the 30 September 2004 effective date. The associated critical DME information was published in the A/FD. An additional seven Q routes had DME/DME/IRU MEAs published effective for 25 November 2004. The MEAs were published in Part 95 and critical DME facilities were published in the NFDD. NACO sent out a Charting Notice to its users.

STATUS: CLOSED

04-01-166 Charting of RNAV SIDs, STARs and Q Routes

Mr. Mark Steinbicker, AFS-410, reported that Advisory Circular (AC) 90, US RNAV is nearly ninety percent completed with a proposed effective date of January 20, 2005. The change will revise aircraft equipment suffixes beginning on November 25, 2004. These suffix changes will be implemented by NOTAM and placed in the NTAP. The existing SID and STAR charted equipment requirement notes will be invalid. The notes on approximately one hundred ninety-six RNAV SIDs and twenty-two RNAV STARs will be replaced with either "Type A" or "Type B" notes. The IACC specifications will not be impacted if the note is published using the same font size and type. The 8260 FAA Order has been updated and sent out for comment. Mr. Paul Ewing, ATP, will verify that the FAA Order 7100.9, Standard Terminal Arrival has been updated. Implementation of Type A or Type B note changes on RNAV SIDs and STARs is targeted for September 1, 2005. AIM guidance will be effective September 1, 2005. Equipment suffixes will be modified as follows:

/E – DME/DME
/F – DME/DME/IRU

STATUS: OPEN

ACTION: Mr. Ewing will verify that the 7100.9 Order, Standard Terminal Arrival has been updated.

04-01-167 Charting of Altitude Constraints on SIDs and STARs

Mr. Mark Steinbicker, AFS-410, provided the following briefing. Currently SIDs and STARs do not depict altitude constraints in a consistent manner. Recommendation was made to establish a standard charting format for altitude constraints. Mr. Steinbicker stated that the depiction of altitude constraints should be standardized for all procedure types. Mr. Eric Secretan, NACO, stated that ICAO approved the change to Annex 4, which contained Charting Symbolology for SIDs and STARs using lines above and/or lines below the altitude to depict mandatory altitude constraints. Mr. Secretan stated that NACO would submit a requirement document to modify the IACC specifications at the next MPOC meeting.

Mr. Steinbicker requested that hard altitude maximum/minimum or maintain altitudes be published for the procedure beyond the fix, possibly using a boxed note format. ACF discussion led to the consensus of the ACF that the hard altitude requirement should be a separate issue. Mr. Steinbicker concurred and he will submit a recommendation document at the next ACF. ACF members discussed future charting requirements. Mr. Steinbicker stated that in the future we will need a process for charting climb via altitude and descent via altitude constraints.

STATUS: OPEN

ACTION: Ms. Debbie Copeland, NACO, will submit a requirement document at the next MPOC meeting. The MPOC will report on the IACC response at the next ACF.

ACTION: Mr. Steinbicker will submit a recommendation document for the hard altitude requirement at the next ACF.

04-01-168 Identifiers for Heliports and Helipads

Mr. Ted Thompson, Jeppesen, stated that there is an increasing demand for helicopter data in databases. Numerous heliports and helipads have no FAA identifiers and latitude/longitude information for most sites is non-existent. Without unique identifiers, and without latitude/longitude data, these sites cannot be included in NASR or navigation databases. Mr. Thompson stated that in order to include IFR helicopter approach procedures in navigation databases, the procedure must be coded to the location identifier with valid coordinates. There is a need for coordinates to the center of each helipad, including helipads that exist independently from airports. In addition NOTAMs are available for specials (instrument procedures into hospital heliports) but in order for the system to work these facilities must have identifiers.

Mr. Dick Powell, Aeronautical Information Services, requested a listing of pending specials. Mr. Powell stated that on August 11, 2004, a letter was sent to the Office of Airport Safety providing the names of heliports without official identifiers. This list contained heliports identified by AFS-420, HAI and NGA. About fifty helipads have been identified as missing FAA identifiers. Of these twenty-one have submitted 5010-5 forms to the ADO requesting the assignment of FAA identifiers, three have been assigned identifiers. ACF

members discussed the issue of one instrument approach procedure for multiple helipads and how to identify multiple helipads on an airport.

Mr. Thompson suggested giving each pad a unique five-character identifier, using the airport identifier and a number, e.g., CHI01. Mr. Thompson stated that he would solicit coordinate and identifier recommendations from Mr. Jim Terpstra and Mr. John Kasten. HAI requested that they be included in the coordination with Mr. Terpstra. Currently helipads do not have coordinates on the 5010.

Recommendation was made that the Office of Airport Safety modify the 5010 form and require state and federal airport inspectors to collect helipad coordinates. Mr. Powell stated that he would solicit recommendations from Office of Airport Safety. Mr. Powell inquired if HAI collected coordinates on helipads. Mr. Charles Chung, HAI, stated that they do have a database populated from the FAA database, which they update manually. Mr. Powell inquired if the FAA could obtain a copy of the database. Mr. Chung suggested that he contact Mr. Harold Summers and Mr. Dick Wright, Safety Director for HAI.

ACTION: Mr. Tom Schneider, AFS-420, will supply a list of pending specials to Dick Powell.

ACTION: Mr. Thompson will solicit coordinate and identifier recommendations from Mr. Terpstra and Mr. Caster. A representative from HAI will be included in the coordination process.

ACTION: Mr. Powell will solicit recommendations from the Office of Airport Safety on the modification of the 5010 form.

ACTION: Mr. Thompson will provide an update at the next forum.

V. New Charting Topics

04-02-169 Location of PRM monitor frequency on NACO charts for ILS PRM and LDA PRM approaches

Mr. Joe Lintzenich, Airways and Airports Consultants Inc., submitted this issue. Mr. Lintzenich was unable to attend the ACF; Mr. Dick Powell, Aeronautical Information Services, presented the issue on his behalf. Precision Runway Monitor (PRM) is a radar surveillance system that is certified to provide simultaneous independent approaches to closely spaced parallel runways. PRM has been operational at Minneapolis St Paul Intl (Wold-Chamberlain), MO, since 1997. PRM is available at Philadelphia Intl, PA, and San Francisco Intl, CA. PRM approaches are planned for Lambert-St. Louis Intl, MO, Cleveland-Hopkins Intl, OH, and Hartsfield-Jackson Atlanta Intl, GA.

PRM provides air traffic controllers a more accurate picture of the aircraft's location on final approach. Airport Surveillance radar currently used at most busy terminal areas provides an update to the controller every 4.8 seconds, PRM updates every second. During PRM operations, there is a separate controller monitoring each final approach course. Current TERPS criteria require that the PRM monitor frequency for both runways be published in a note on the planview of each PRM approach. This note is published in a small font that is hard to find and read. Air Traffic has requested that only the monitor frequency applicable to the charted approach be published. There are inconsistencies on the depiction of this information on the NACO charts; e.g. at Philadelphia Intl, the monitor frequency is in the text in the planview; at Minneapolis St Paul Intl it is in the approach control frequency box. Jeppesen publishes the monitor frequency in the tower frequency box.

Recommendation was made to revise the TERPS policy to require that only the PRM frequency applicable to each charted approach be published. In addition, standardize the location of the PRM frequency by placing the frequency in the tower frequency box. Mr. Mark Ingram, ALPA, concurred with this recommendation. Mr. Brad Rush, NFPO, stated that the current note is part of the Part 97 legal description; the note must remain in the planview of each PRM approach. Policy guidance for TERPS will need to be changed.

Recommendation was made to duplicate the frequency in the bottom row of the pilot briefing information strip in a separate box. Due to space constraints Mr. Eric Secretan, NACO, recommended publishing the frequency in the tower frequency box. Discussion led to the determination that the PRM frequency data would require NFDD action. Mr. Powell stated that currently Air Traffic is not required to notify NFDC of PRM frequency changes; procedures must be established. Mr. Paul Ewing, ATP, stated that guidelines for Air Traffic could be established in the 7210.3. Mr. Secretan stated that each PRM procedure has an additional page published after the procedure, outlining the user requirements. The note on the face of the chart is a duplication of this information. He inquired as to the reasoning for the data duplication.

AFS-410 and AFS-420 agreed to take a look at this issue. This recommendation will affect FAA Order 8260.3, US Standard for Terminal Instrument procedures and 8260.19, Flight Procedures and Airspace. Mr. Tom Schneider, AFS-420, will coordinate the updates to both publications. In addition, updates to IACC specifications will be required.

STATUS: OPEN

ACTION: Mr. Powell and Mr. Ewing will review the 7210.3.

ACTION: Mr. Schneider will coordinate the updates to the 8260.19 and the 8260.3 publications.

ACTION: AFS-410 and AFS-420 will research the duplication of information on the PRM additional page.

04-02-170 Parachute Jump Areas in Aircraft Electronic Display and Navigation Systems

Mr. Eric Secretan, NACO, submitted this issue. Mr. Secretan stated that there is an increasing demand for parachute jump area (PJA) data. In order for aircraft electronic display and navigation systems to provide jump area information to pilots, the current method of describing jump area locations by bearing and distance needs to be supplemented with jump area coordinates and identifiers.

Recommendation was made to assign identifiers to parachute jump areas and provide geographic coordinates. Each jump area must have a unique identifier. A six-character identifier has been proposed by ARINC. There are approximately two hundred-fifty PJA associated with the US Parachute Association (USPA) in addition to fifty non-associated PJA. Mr. Dick Powell, Aeronautical Information Services, stated that NFDC could provide identifiers and coordinates.

USPA recommended that NFDC and USPA compare databases. ACF discussion led to the determination that a PJA working group should be created to identify the requirements and develop a proposal for ACF consideration. The following individuals/organizations have expressed an interest in participating on the new working group. Mr. Secretan or a member of the NACO Requirements and Technology Staff will chair the working group.

ACF Parachute Jumping Area Working Group

NAME	ORIGANIZATION	PHONE	EMAIL
Mark Ingram	ALPA		markt@mo-net.com
Ryan Kahl	AOPA	301-695-2207	ryan.kahl@aopa.org
Eric Secretan	NACO	301-713-2631	eric.secretan@faa.gov
Greg Yamamoto	NACO	301-713-2631	gregory.yamamoto@faa.gov
Michael Riley	NGA	703-264-7293	rileym@nga.mil
Jerry Leicht	NGA	314-263-4636	leichtj@nga.mil
Kelly McKee	MITRE	703-883-3398	kmckee@mitre.org
George Sempeles	Cartographic Standards	202-267-9290	george.p.sempeles@faa.gov
Dave Goehler	Jeppesen	703-519-5295	dave.goehler@jeppesen.com
Ed Scott	USPA	703-836-3495x325	escott@uspa.org

STATUS: OPEN

ACTION: Mr. Secretan will notify interested participants of the date and time for the Parachute Jumping Area Working Group meeting.

ACTION: The ACF Parachute Jumping Area Working Group will present a proposal for ACF consideration at the next forum.

04-02-171 Class D Airspace Without an Associated Control Tower

Mr. Eric Secretan, NACO, submitted this issue. Mr. Secretan stated that there have been instances of Class D airspace being created without the establishment of an associated control tower. This results in charts and the A/FD depicting the Class D airspace, but not control tower information. The sectional charts show the Class D airspace outlined by a blue dashed line, but with a magenta, uncontrolled, airport symbol. This has led to confusion by pilots.

Recommendation was made not to activate Class D airspace until the associated airport control tower can be commissioned and published in the NFDD for the same airspace effective date. Mr. Dick Powell, Aeronautical Information Services concurred. Mr. Powell stated official guidance will be issued from Ms. Sabra Kaulia to the Regional Offices to insure tower frequencies and operating hours will be published for the same effective date as the Class D. Mr. Secretan stated that if this guidance does not fix the problem NACO will add a note to its products. Mr. Powell stated the Mr. Reggie Mathews is the point of contact if additional assistance is required by NACO.

STATUS: OPEN

ACTION: Mr. Powell will follow-up on the guidance from Ms. Kaulia.

[04-02-172 Non-directional Beacon Magnetic Variation Maintenance](#)

Mr. Eric Secretan, NACO, submitted this issue. Mr. Secretan withdrew the issue stating the NACO will work with NFPO to resolve.

VI. Closing Remarks

Mr. Dick Powell, Aeronautical Information Services, thanked AMTI for hosting the ACF, and a special thanks was given to the out-of-town members who attended the forum.

VII. Next Meeting

The next meeting of the ACF is scheduled for May 9, 2005, and will be hosted by the National Aeronautical Charting Office, at their facility in Silver Spring, MD. Dress will be casual. The following meeting will be held at the Air Line Pilots Association in Herndon, Virginia, October 24-27, 2005.

VIII. Attachments

1. [Attendees/Mailing List](#)

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