

Government/Industry Aeronautical Charting Forum (ACF)

Meeting 06-01

April 19-20, 2006

MINUTES

I. Opening Remarks

The Aeronautical Charting Forum (ACF) was held at the Advanced Management Technology, Incorporated (AMTI) office in Arlington, Virginia. Mr. John Moore, National Aeronautical Charting Group (NACG), the ACF Co-Chair and Chair of the Aeronautical Charting Forum, Charting Group, opened the Forum on April 19, 2006 with thanks to AMTI and AMTI representative Mr. Tom Reiss for hosting the meeting. Mr. Reiss welcomed the ACF participants to AMTI. Mr. Moore acknowledged the ACF Co-Chair Mr. Tom Schneider, AFS-420. Mr. Schneider chaired the ACF Instrument Procedures Group meeting held on April 18, 2006. Separate minutes of that meeting will be distributed.

II. Review of Minutes from Last Meeting

The minutes from the 05-02 ACF meeting were accepted with the following correction:

Section VII:

05-02-177 Identifiers for Copter Point-in-Space Procedures change Mr. Gary Bobick to read Mr. Gary Bobik.

III. Agenda Approval

The agenda for the 06-01 meeting was approved with the following additions:

Section VI. New Charting Topics

Add item 06-01-185 RNAV 1 and RNAV 2 Descriptors for DPs, STARs and Routes and item 06-01-186 STAR Procedures and their Terminations.

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

High Altitude Redesign Briefing

Mr. John Timmerman, System Operations, was unable to attend the ACF. No briefing or update was provided.

ATA Charting Committees

Mr. Ted Thompson, Jeppesen, reported that the Air Transport Association (ATA) Chart and Data Display Working Group has not met since the last ACF. The last meeting was held in August 2005; as a result no update is available.

ACTION: Mr. Thompson will report on the ATA Chart and Data Display Working Group at the next forum.

SAE G-10 Electronic Symbology Committee Report

Mr. Ted Thompson, Jeppesen, updated the ACF on the Society of Automotive Engineers (SAE) G-10 Committee. Mr. Thompson provided a brief overview of the committee's ongoing efforts to develop a basic, simplified set of symbols for use in electronic chart displays and electronic maps. The group met twice since the last ACF, once in February in Orlando, Florida and an off-cycle meeting in April in Montréal, Canada. The group is chaired by Pedro Rivas, and attendees include representatives from Jeppesen, National Aeronautical Chart Group (NACG), Honeywell, National Geospatial-Intelligence Agency (NGA), Air Line Pilots Association (ALPA), International Civil Aviation Organization (ICAO), Volpe National Transportation Systems Center, and other interested parties. The group has been tasked by the FAA Certification Group to help simplify and standardize the appearance of symbols used in the various electronic displays.

To date, the committee has developed an intuitive set of symbols for VHF and LF radio aids to navigation. Also, intuitive symbols for airports, and airspace fixes have been created. Volpe NTSC conducted human factors testing on pilot recognition of the symbol set. Approximately 150 pilots took place in the study with good preliminary results. The testing on the initial set of symbols confirmed they were intuitive and proved a high recognition rate of upwards of 65%. To broaden the spectrum of the testing to include pilots that are currently using more advanced avionics, Volpe will be extending its testing to include some members of National Business Aviation Association (NBAA). Volpe will be providing the results of the study in a report to the FAA in September 2006.

The SAE G-10 will continue to work on additional symbols, such as airspace symbology. The group is progressing and plans to complete their initial work by January 2007. The outcome will be a standard set of symbols that the FAA can use in the certification process that are intuitive and universally recognizable. The next SAE G-10 meeting is scheduled for August 7-10, 2006 in San Diego, California. Mr. Thompson encouraged additional participation and requested that interested parties contact Pedro Rivas for additional information. Mr. Gary Bobik, FAA/ATO-R, commented that the Radio Technical Commission for Aeronautics (RTCA) Special Committee (SC) 206 was established at the request of the Federal Aviation Administration (FAA) to provide a data transmission of weather, Notices to Airmen (NOTAMs), and other aeronautical information via satellite to the cockpit. SC 206 will be coordinating the symbology with the SAE G-10 Committee.

ACTION: Mr. Thompson will report on the SAE G-10 Committee at the next forum.

RNAV Airway Program Sub-group

Mr. Brad Rush, NFPO, reported the ACF RNAV Airway Program Sub-group was formed to review and make recommendations to the ACF concerning the naming convention for RNAV routes in the National Airspace System (NAS). The group, chaired by Mr. Rush, conducted two telcons since the last ACF to discuss ICAO, Mexican, and Canadian chart standards for RNAV route classification. The group recommends that domestic RNAV routes at or above FL180 be designated as 'Q' Routes and RNAV routes below FL180 be designated as 'T' Routes. All RNAV routes and associated route data will be charted in blue and DME/DME/IRU Minimum En Route Altitudes (MEAs) will be charted with a 'D' suffix. T Routes should not overlap existing Victor airways and chart clutter should be considered when developing the routes.

Route developers should coordinate with NACG Requirements and Technology Team prior to submitting the new routes for the Notice of Proposed Rule Making (NPRM). FAA Order 7400.2, Procedures for Handling Airspace Matters, and the Aeronautical Information Manual (AIM) should be amended to reflect the recommendations of the Sub-group. The proposed changes for consideration by the Office of Primary Interest (OPI) are attached to these minutes. The 'T' and 'Q' route designations will facilitate a low and high altitude stratum. It will provide the basis of navigation as GNSS. It will allow addition of other RNAV capabilities as authorized without requiring changes to the majority of published charts, through the chart legends. It will also allow other RNAV capabilities in the low altitude stratum as deemed necessary in future applications.

Mr. Rush reported that the Sub-group recommendation was forwarded to AFS-410 and AFS-420 for comment and human factors evaluation in February 2006. Mr. Eric Secretan, NACG, inquired if the Canadian and Mexican RNAV routes are charted using the same route designators as the U.S. Mr. Rush responded that Mexico is using the 'T' designator while Canada is using 'Q' and both are using the 'R' designator to indicate RNAV routes, there is no consistency. Hopefully once the U.S. position is established Canada and Mexico will follow the U.S. lead. Mr. John Moore, NACG, reported that ICAO has provided four route designators 'Q', 'T', 'Y', and 'Z' for all Air Traffic Service (ATS) routes in North and South America. He explained that there are no constraints on the U.S., based on what other countries are charting. Once the U.S. position is established the International Office will, if necessary, coordinate the U.S. position.

The ACF participants discussed the Sub-group's recommendation that T Routes should not overlap existing Victor airways. Mr. Secretan stated that overlying RNAV routes on Victor airways should not be a charting issue as long as both routes use the same fixes. Problems arise when new fixes are established for the RNAV route instead of using the underlying or existing fixes established for the Victor airway. As long as the routes use the same fixes, the hierarchy concept will handle the charting of overlying routes. Mr. Rush explained that there is no need to overlay T Routes/Q Routes on existing Victor/Jet routes. The existing Victor/Jet route should be modified to authorize RNAV operations by adding a Global Navigation Satellite System (GNSS) or DME/DME/IRU MEA. Mr. Rush informed the group that there is a plan to start shutting down VHF omni-directional radio range (VORs) in the next few years. As facilities are shutdown the associated routes should be evaluated to determine if the route is required and if an RNAV route at its current location should replace the Victor/Jet route or moved to facilitate air traffic.

Mr. Secretan inquired about the status of the VOR/DME RNAV routes in Alaska. He explained that these four or five routes are causing programming issues for the NACG's en route automation. Mr. Rush agreed to look into the possibility of changing these routes to RNAV routes. Mr. Ted Thompson, Jeppesen, stated that in the mid 1970's Jeppesen created a series of RNAV/DME route charts. Last year after polling their users,

Jeppesen discontinued the separate RNAV/DME chart, with minimal impact to their users. [The RNAV Route Naming Convention Recommendation](#) is attached to these minutes.

STATUS: OPEN

ACTION: Mr. Mark Steinbicker, AFS-410, and Mr. Thomas Schneider, AFS-420, will report on the RNAV Route Naming Convention Recommendation at the next forum.

ACTION: Mr. Rush will submit a recommendation document outlining the VOR/DME RNAV routes in Alaska issue.

RNP Chart Briefing

Mr. Tom Schneider, AFS-420, was unable to attend the ACF. Mr. Bill Hammett, AFS-420/ISI, provided the following briefing. An ad-hoc group meeting was held in October 2005 to determine if RNP values should be charted for RNAV RNP missed approach procedure text. Representatives of AFS-420, AFS-410, AOPA, ALPA, Transport Canada, NACG, Cartographic Standards, NGA, and Jeppesen attended the meeting.

The group consensus was that a note is only required when other than a 15 degree splay to RNP 1.0 is used in the procedure design; however, the actual missed approach RNP value is not required. After subsequent AFS/AIR coordination, the following policy guidance is to be included in the FAA Order 8260.19 Flight Procedures and Airspace:

RNAV (RNP) missed approach procedures require a note in the briefing strip that informs the pilot when the missed approach segment requires the use of RNP less than 1.0. Use: "Chart Note: Missed Approach Requires RNP less than 1.0".

Mr. Hammett added that this note is required when the final approach segment (FAS) RNP is carried into the missed approach segment; i.e., missed approach does not splay at 15 degrees from the FAS RNP area. The [RNAV Missed Approach Charting Ad Hoc Meeting Minutes](#) are attached to these minutes.

STATUS: CLOSED

RNAV-1 and RNAV-2 Descriptors for DPs, STARs and Routes

This briefing has been assigned FAA Control Number ACF-CG RD 06-01-185. The report and group discussion are part of Section VI, New Business.

Reconfiguration of Instrument Flight Rules (IFR) Enroute High and Low Altitude Alaska Charts

Mr. Eric Secretan, NACG, briefed that beginning 8 June 2006 the FAA will introduce a reconfiguration of the Alaska IFR Enroute High and Low Altitude Charts. The charts will have a larger scale to allow for improved depiction of aeronautical information and the area of coverage has shifted slightly. The most significant change will be the depiction of the Low Altitude Chart L-2. The L-2 chart will be three separate charts L-2 East, L-2 Central, and L-2 West combined on one piece of paper. There will be no increase in the amount of charts. Graphics depicting the [new chart coverage](#) are attached to these minutes.

STATUS: CLOSED

V. Outstanding Issues

00-01-119 Raising Nationwide Charting Standards (PCNs)

Mr. Dave Goehler, Jeppesen, was unable to attend the ACF. Mr. George Sempes, Cartographic Standards, provided the following briefing. The ad-hoc Airport Source Data Committee met in February 2006. Boeing Aeronautical Information Retrieval System provided the National Flight Data Center (NFDC) and Airport Safety Data Program Office, AAS-330, Pavement Classification Numbers (PCNs) for 934 U.S. open to the public airports. The Airport Safety Data Program Office was not comfortable publishing the PCN data without verification of the data by the FAA.

Through a letter from Mr. Ben Castellano, Airport Safety Data Program Office, AAS-330, the FAA has requested that Federal and State Airport Inspectors as part of their annual airport inspection process verify the PCN data submitted from Boeing. Upon verification the National Flight Data Center (NFDC) will enter the PCN data into the National Airspace System Resource (NASR) database and publish the PCN data through the National Flight Data Digest (NFDD).

Mr. Sempes reported that there has been a minor problem with the Airport Inspector's Labor Union objecting to the additional workload. The union is currently negotiating with the FAA's Airport Division to resolve the issue. The next Airport Source Data Committee meeting is scheduled for June 2006.

STATUS: OPEN

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

02-02-148 Obstacles not in Public Database

Mr. Kevin Haggerty, Obstruction Evaluation Service, provided the following update. The FAA is actively working to improve the processes for collecting and dissemination of obstacle data in the NAS. Over the last four years the Obstruction Evaluation Service Office has been working towards automating the 7460-1, Notice of Proposed Construction or Alteration, in nine regions. Currently 86% of all reported 7460-1s are filed electronically. Evaluations and responses are all submitted electronically with the results posted on the web at <https://oeaaa.faa.gov>. There is no paper submitted for those studies filed electronically. These are immediately added to the website where the public can view the site and determine the impact proposed structures will have on the NAS.

Next in the automation process is the 7460-2, Notice of Actual Construction or Alteration. During this automation process several issues have arisen with the -2, NACG, and other user groups. The Obstruction Evaluation Service is working to resolve the automation issues. In addition, there are current logic issues that don't conform to the automation process, which need to be resolved. Mr. Haggerty will provide access to the actual OE/AAA working site. Interested persons should contact him at 202-267-9219. Mr. Scott Jerdan, NACG, commented that some of the issues were being worked independently of the ACF, through the Aeronautical Information Service Working Group (AISWG) and that NACG is also working directly with Kevin at the bi-weekly Configuration Management Board meetings.

Mr. Haggerty informed the group that the -2s can now be submitted completely digitally. In the past the paper -2 was submitted to Air Traffic (Obstruction Evaluation Service) for review prior to going to the NACG.

Now with the digital –2, NACG receives the information much quicker. The –2 is immediately put on the web for use by the airlines and other interested user groups, after it is reviewed for completeness by the Obstruction Evaluation Service. The information can then be easily downloaded.

Mr. Mark Ingram, ALPA, asked if the paper mailers are still being sent to effected airports. Mr. Haggerty responded that they are in the process of eliminating the paper mailers and in the near future all correspondence will be electronic. Mr. Bill Hammett, AFS-420/ISI expressed his concerns about the issue being worked by two different groups, at the ACF and the AISWG. Mr. John Moore, NACG, recommended that the ACF issue be closed and the issue remains open at the AISWG. Mr. Hammett requested that Mr. Haggerty participate in the quarterly AISWG meetings. The next meeting will be held on July 12, 2006 at the NACG facility in Silver Spring, Maryland.

STATUS: CLOSED

[03-01-153 Depicting LAHSO Hold Short Lights and Hold Short Points](#)

Ms. Val Watson, Cartographic Standards, reported that IACC Requirement Document (RD) 595, Charting of Land and Hold-Short Operations (LAHSO) points on airport diagrams was signed by the IACC and implemented for the 13 April 2006 effective date. Jeppesen currently depicts the LAHSO distance information as part of the Additional Runway Information section of their airport diagrams. ALPA requested that the depiction of LAHSO points on NACG and Jeppesen charts be consistent. FAA will provide a copy of IACC RD 595 to Mr. Ted Thompson, Jeppesen, for review. Mr. Brian Townsend, ALPA, questioned the LAHSO data currently published on the 10-9 pages for Las Vegas McCarran International. Mr. Townsend explained that Las Vegas does not participate in LAHSO and charting the information is misleading to the flight crews. Ms. Valerie Watson will contact Terminal Operations to verify the information.

LAHSO data is published by the NFDC as an add-on page to the NFDD. However, NASR version 7.2 scheduled for release in October 2006 will include discrete LAHSO fields. Mr. Mark Ingram, ALPA, inquired about the depiction of LAHSO lighting. Mr. Thompson responded that due to chart congestion Jeppesen would not chart LAHSO lighting. Mr. Ingram inquired if the lighting information was available in NASR. Ms. Watson responded that standard LAHSO lighting is always installed at the LAHSO points. Therefore charting of this information is not required. Mr. John Moore, NACG, informed the group that the LAHSO distance information is published alphabetically by city, state and airport name in Section O of the Terminal Procedures Publication (TPP) Legend.

STATUS: CLOSED

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

Lt. Col. Monique Yates, NGA/OMSF, reported that the Department of Defense (DoD) Flip Coordinating Committee (FCC) non-concurred with the proposed IACC RD to graphically depict the flight path for fly-over waypoints as a stylized line on all procedures. Mr. James Spencer, NAVFIG, reported that the Navy non-concurred with the IACC recommendation based on aircraft performance characteristics and the differences in cockpit displays, and moving map displays. The stylized line may not graphically depict the ground track of the aircraft. The Navy prefers point-to-point straight-line depiction. The Air Force representative stated that they non-concurred for the same reasons. The DoD (Air Force, Navy and Army) unanimously non-concurred.

The military response led to extensive discussion by the ACF participants. Mr. Vincent Chirasello, AFS-410, expressed his disappointment stating the fly-by portion of the requirement was eliminated in October 2004 based on the recommendation of the ACF and now we are getting pushback on the fly-over issue. The ACF participants provided several examples of NACG procedures that are currently using the stylized lines. Mr. John Moore, NACG, responded that there are specifications outlining the charting standards and using a stylized line is not currently in our specifications and the procedures in question should be corrected. Mr. Ted Thompson, Jeppesen, commented that there are several other situations where flight tracks are symbolic in nature and do not reflect the true flight tracks such as holding patterns, course reversals, and turn-and-proceed direct-to flight tracks and these are accepted. Mr. Thompson stated that based on user requests, this subject is one of several chart and database compatibility issues being considered by Jeppesen. Regardless of the group's decision, Jeppesen will continue to pursue the issue.

Mr. Mark Ingram, ALPA, questioned how many fly-over points are currently in the Jeppesen database. Mr. Thompson responded thousands; the fly-over points will never be eliminated. However, in comparison the percentage of fly-over points are considerably less than fly-by. Mr. Moore inquired if the Military Services would be willing to reconsider their position. Lt. Col. Yates stated that the military would not reconsider their position. Mr. Moore noted that the current specifications are clear and require point-to-point depiction. Mr. Chirasello stressed the importance of charting standardization. Mr. Moore recommended providing DoD examples of problematic charts corrected to show point-to-point depiction for the FCC to review. Lt. Col. Yates commented that perhaps the DoD pilots were not as familiar with the procedures as are the airline pilots. She suggested that ALPA representatives brief the issue at the next FCC meeting.

STATUS: OPEN

ACTION: NACG and Jeppesen will provide problematic charts for the FCC briefing.

ACTION: ALPA representatives Mark Ingram, Kevin Comstock or Brian Townsend will brief the FCC.

ACTION: Lt. Col. Yates will report the FCC decision at the next ACF.

[04-01-167 Charting of Altitude Constraints on SIDs and STARs](#)

Ms. Val Watson, Cartographic Standards, reported that the IACC is currently coordinating RD 616 for IACC signature. The RD will establish the requirement for using over line and underline bars to depict maximum/minimum altitudes and airspeeds on SIDs, STARs and Instrument Approach Procedure (IAP) Charts.

STATUS: OPEN

ACTION: The MPOCs will report on the IACC response at the next ACF.

[04-01-168 Identifiers for Heliports and Helipads](#)

Mr. Dick Powell, ATO-R, was unable to attend the forum. Mr. John Moore, NACG, provided a brief recap of the issue. The FAA is working to create location identifiers for heliports and helipads in order to support helicopter operations. The initiative is intended to provide the required NOTAM support to private use heliports and helipads. Ms. Val Watson, Cartographic Standards, reported that Mr. Mark Washam, ATO-T,

provided NFDC a listing of private heliports that require identifiers. These facilities have been assigned reserved location identifiers.

Mr. Bill Hammett, AFS-420/ISI, expressed his concerns regarding the NOTAM Office ability to accept NOTAM data for facilities with a reserved location identifier. Mr. Hammett informed the group of a recent incident concerning a special procedure. Mr. Gary Bobik, ATO-R, stated that they are currently working to reeducate the NOTAM Office to prevent a recurrence of the issue. Ms. Valerie Watson recommended performing a test of the NOTAM system to insure that the system is operating accurately. Mr. Bobik responded that the NOTAM system is normally not used for testing. However, they will consider the recommendation.

Ms. Watson inquired if the NOTAM system can accept four character alphanumeric reserved identifiers. Mr. Bobik stated that according to their contractors it could. However, the problem resides with the legacy systems. Sixteen facilities may not accept a FDC NOTAM with this type of identifier. Mr. Bobik stated that a FDC NOTAM will be issued and each Flight Service Station (FSS) will be polled to verify that the information has been disseminated properly.

STATUS: OPEN

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

[04-02-169 Location of PRM Monitor Frequency on NACG Charts for ILS PRM and LDA PRM Approaches](#)

Mr. John Moore, NACG, provided a brief overview of the issue. IACC RD 602, PRM Frequency, was signed by the IACC in January 2006. The IACC RD will standardize the placement of the PRM frequency by placing the frequency in the tower frequency box. Jeppesen includes PRM frequency information in the communications section of the briefing strip. The NFPO has issued P-NOTAMs to cancel the PRM communications notes contained on the 8260s.

STATUS: CLOSED

[04-02-170 Idents and Coordinates for Parachute Jump Areas](#)

Mr. George Sempeles, Cartographic Standards, briefed that National Airspace System Resource (NASR) would be modified sometime in FY06 to include data fields for unique identifiers, geographic position, civil or military use and jump volume. The identifier field will accommodate a six character alphanumeric identifier. The geographic coordinate field will be expressed in degrees, minutes, seconds and fraction of seconds to four decimal places. There will be one field for latitude data and a separate field for longitude data. The civil or military use field will display the values as 'civil', 'military' or 'joint-use'. The jump volume will display the level of activity/intensity.

Mr. Sempeles inquired as to what type of information would be shown in this field. Mr. Eric Secretan, NACG, reported that this field was requested by Mr. Edward Scott, U.S. Parachute Association and would show the activity schedule, i.e., weekends only. Mr. Sempeles informed the group that this type of scheduled activity is currently available in the parachute jump remarks portion of the NASR database. The radial and distance information currently available in NASR for the 100+ parachute jumping areas will be converted to geographical positions.

Mr. Mark Ingram, ALPA, inquired if a charting/no-charting field would be added to NASR. Mr. Sempeles explained that the charting/no-charting information is currently available in NASR. Additionally, the information is published in the Parachute Jumping Area section of the Airport/Facility Directory (A/FD). Jump sites that are depicted on the appropriate visual chart are indicated in the A/FD by a lower case letter "c" next to the jump site name/location.

STATUS: OPEN

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

05-01-173 ASR Symbol on Visual Charts

Mr. Mark Washam, ATO-T, was unable to attend the forum. Mr. Eric Secretan, NACG, provided the following update. On Sectional charts the NACG currently charts the negative type R symbol to indicate the availability of airport surveillance radar (ASR). The criteria to chart the ASR information have been determined to be shaky. Currently, the ASR symbol is added to the airport data block of the closest airport to the antenna site. Mr. Washam provided the NACG with a listing of FAA towers that have the ASR equipment. However, the listing does not provide the necessary information to determine if the equipment and personnel are certified.

The group discussed ASR, flight following, and VFR advisory service. Mr. James Spencer, NAVFIG, inquired about the source for this information at military facilities. Mr. Spencer indicated that a listing of certified and non-certified military facilities is available from his office. He expressed his concern regarding charting the negative type R symbol at facilities that are not certified. Mr. Secretan reiterated that the original intent of the recommendation was to delete the ASR symbol. However, the ACF has requested that the NACG keep digging into the source issue and determine the criteria for adding the negative type R symbology. The NACG will not pursue the AOPA recommendation to add the frequency data until the source and criteria issues are resolved.

STATUS: OPEN

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

ACTION: Mr. Washam will continue to work with Mr. Jim Grant, NACG and report at the next ACF.

ACTION: NACG will determine the criteria for charting the ASR symbol.

ACTION: Mr. Spencer will provide the military ASR listing to NACG.

05-01-174 Top Altitude Note on Standard Instrument Departures (SIDs)

Mr. Don Porter, ATO-R/RNP, provided the following update. At the ACF 05-02, Jeppesen and the NACG agreed to produce prototype charts for evaluation by the group. The requirements for the prototype charts were provided to both charting offices. The intent of the requirement was to standardize the depiction of 'Top Altitude' information on SIDs by placing the information in a standard location. Additionally, a box attached to the route will indicate the top altitude using a line above the altitude to indicate cross at or below and a line below the altitude to indicate cross at or above, as described in issue ACF-CG RD 04-01-167.

Mr. Brian Townsend, ALPA, explained the 'Climb via' requirements and stated that charted altitude restrictions must be complied with. The group discussed several different SID procedures, and how the top altitude information applies to MEAs, and lost communication procedures. Mr. Porter inquired as to the source for the top altitude information. Mr. Ted Thompson, Jeppesen, stated that the source is the 8260 and the information must be clearly depicted by the procedure designers on the form. Several participants expressed issues with the depiction of the 'TRALR' box on the Jeppesen prototype. Mr. Thompson provided an example of the [Jeppesen Barkway Two Sierra Departure at London](#). Mr. Thompson recommended using standard text to relay the information. He expressed his concerns about the use of additional boxes on the chart stating more information in more boxes will only add to pilot confusion.

Mr. Brad Rush, NFPO, stated that the term 'Top Altitude' is misleading and should be changed. Mr. Townsend recommended the use of the term 'Initial Clearance Altitude' because this is the altitude provided by air traffic control (ATC) on the initial clearance. Technically, this will be your top altitude until additional clearance information is provided by ATC or in the event of lost communications you would follow lost communication procedures.

Mr. John Moore, NACG, stated the subject is still in the concept and coordination stage and recommended that the issue continue to be worked outside the ACF. Mr. Rush, and Mr. Tom Schneider, AFS-420, should get involved with Mr. Porter and Mr. Townsend's group to refine the issue(s). Then, after the procedural and ATC issues are resolved, the next step would be to consider the charting implications. Mr. Porter stated that he would coordinate a telcon to include Mr. Rush and Mr. Schneider. The [Jeppesen](#) and [NACG prototype](#) charts, and the Jeppesen Barkway Two Sierra Departure are attached to these minutes.

STATUS: OPEN

ACTION: Mr. Porter and Mr. Townsend will provide an update at the next forum.

[05-02-177 Identifiers for Copter Point-in-Space Procedures](#)

Mr. Mike Webb, AFS-420, briefed that since the last ACF, a meeting was held with the critical players to identify the challenges associated with helicopter Point-in-Space (PinS) instrument procedures. The main focus of the group was to determine how to get the final approach fix identified as a destination that can be used for a point-in-space approach. From this point the copter will proceed visually to the landing area. The issue is identifying these points or destinations for NOTAM support, and in the future OE/AAA support. Mr. Webb stated that his group recommended using a unique five-character identifier for these points. The first two characters will be the two letter state abbreviation followed by three unique characters. He informed the group that the state of Pennsylvania was considering adding a large number of GPS Helicopter approaches along Interstate 80 for evacuation purposes.

Mr. Webb reported that the NOTAM system could handle five character identifiers. However, there is a problem with some of the equipment at the FSS locations. The equipment is not standard throughout all the FSS locations. This issue will be resolved when Lockheed Martin begins installing new equipment in the spring of 2007. Mr. Webb stated that the requirements and funding issues will need to be resolved and it could take four years. The final approach fix point or destination will be a waypoint. These waypoints must be a pronounceable five-character name otherwise it becomes an ATC and an Air Traffic Union issue. The group will work with Air Traffic to resolve this issue.

Mr. Gary Bobik, ATO-R, reported that the five-character identifiers would be accepted in all the legacy systems except the sixteen Oasis systems. Oasis cannot store, process or retrieve any five-character

identifiers. He stated that a test FDC procedural NOTAM would be issued to determine the facilities' handling capabilities. Mr. John Moore, NACG, inquired if the group discussed the placement of these procedures in the TPPs or a listing in the A/FD. Mr. Webb responded that the group is looking into the technical aspects first. Once they are resolved they will resolve the implementation issues. Mr. Moore requested that the individuals/organizations that expressed an interest in participating on the working group at the last ACF be included in the next telcon.

STATUS: OPEN

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

ACTION: Mr. Bobik will continue to investigate the NOTAM issue and report at the next ACF.

ACTION: The NACG will provide circling issues/concept to Mr. Webb

05-02-178 Listing of Glider Field Frequency on Sectional Charts

Mr. George Sempeles, Cartographic Standards, reported that the Soaring Club of Houston has in excess of 12,000 operations a year. They have approximately 42 based gliders with over 40 gliders operating in the area at one time. The soaring club obtained authorization from the Federal Communications Commission to use the frequency 123.3 for local traffic advisories. They requested that the frequency information be charted. The NACG received a memorandum requesting the charting of a boxed note on the Houston Sectional, Terminal Area, and Flyway Planning charts to read:

<p>CAUTION Intensive Glider Activity 123.3</p>
--

The note was published for the 16 March 2006 effective date.

STATUS: CLOSED

05-02-179 Attention All-users Page for Simultaneous, Parallel RNAV Departures and PRM Approaches

Mr. Mark Steinbicker, AFS-410, was unable to attend the forum. Mr. Eric Secretan, NACG, provided a brief recap of the issue. The attention all users pages contain generic data or boilerplate information that is repeated at each facility that has simultaneous operations. The recommendation was to take this boilerplate information and publish it as a standardized text page in the A/FD or TPP Legend. Local operational notes for a particular facility could be added to the charts. Mr. Vincent Chirasello, AFS-410, recommended that the issue be tabled until the next forum.

STATUS: OPEN

ACTION ITEMS HELD OVER FROM LAST FORUM: Mr. Steinbicker will obtain the airport specific data to determine if the notes can be added to the face of the procedure; or option 2, add the information to the A/FD and publishing a caution note on the procedure; or option 3, add a separate page to the TPPs. Mr. Steinbicker will coordinate with Mr. Rush, Mr. Schneider, and NACG.

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

VI. New Charting Topics

06-01-180 Voluntary Designation of Collection Facilities for Contaminated Fuel, Used Oil, Universal Wastes, and Hazardous Materials on Airport Diagrams

Mr. Michael Baum submitted this issue. Mr. Eric Secretan, NACG, briefed the ACF. The improper handling/disposal of fuel, oil, and other chemicals used to operate and service aircraft (collectively “chemicals”) can contaminate soil, surface water, and ground water, degrade air quality, and harm wildlife, as well as violate the law, and in the longer run, harm aviation generally. The disposal of chemicals by pilots is hampered by not knowing the location and availability of chemical collection sites and ignorance of the impact of improper HazMat disposal. Pilot awareness is further challenged by non-uniform communications from airport and environmental authorities concerning collection sites. Recognizing the significant environmental consequences of improper disposal/handling of hazmat, this proposal seeks to advance environmental quality of airports and adjacent communities, create awareness and heightened visibility of petroleum disposal and recovery, highlight progressive airports’ collection programs and encourage other airports to do better.

Recommendations are to: 1. Include environmental collection sites in the approved list of “Source Data” permissible to be included in airport diagrams; and (optionally) 2. Approve one or more unique symbols to represent Collection Sites in airport diagrams. Mr. Secretan provided the group with the IACC Specifications and the ICAO Specifications that outline the primary intended use of airport diagrams.

IACC 4 Specifications Chapter I, Section 1.1.1 reads: Airport Diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and to provide information for updating computer-based navigation systems aboard aircraft, i.e., GPS, INS, etc. Airport Diagrams are not intended for use in approach and landing or departure operations.

ICAO Annex 4 Chapter 14, Section 14.1, reads: This supplementary chart shall provide flight crews with detailed information to facilitate the ground movement of aircraft to and from the aircraft stands and the parking/docking of aircraft. Mr. Secretans briefing resulted in extensive discussion by the forum participants. Mr. Hal Becker, AOPA, recommended the information be added to the airport remarks portion of the A/FD. Acquiring the source and maintaining the data could be an issue.

The initial consensus of the group is the intended use of airport diagram is to support ground movement of aircraft. The depiction of hazardous waste dumpsites is outside this intended use and scope. However, the issue will be forwarded to Air Traffic, for a formal reply and Mr. Becker stated that AOPA would revisit their position.

STATUS: OPEN

ACTION: Mr. Becker will coordinate the issue with AOPA and report at the next ACF.

ACTION: Ms Valerie Watson, Cartographic Standards, will obtain a formal reply from Air Traffic and report at the next ACF.

06-01-181 Declared Distance Information on Airport Charts

Mr. Richard Boll, NBAA, submitted this issue and [provided the following briefing](#). Declared distances are frequently used by Airport Authorities to comply with FAA requirements for Runway Safety Areas specified in AC 150/5300-13, Appendix 14. A runway's declared Accelerate-Stop Distance Available (ASDA), Takeoff Run Available (TORA) and/or Takeoff Distance Available (TODA) may each be shorter than the runway length depicted on an Airport Diagram. A runway's declared Landing Distance Available (LDA) may be shorter than the length of the surface beyond the Landing Threshold Point. In order to realize the intended safety benefits of declared distances, the information must be readily available to pilots on airport diagrams and in databases used by FMS. Currently, neither airport charts nor ARINC 424 databases consistently make available declared runway distance information. Because pilots rely on distances presented on airport diagrams and in FMS databases to calculate takeoff and landing performances, an absence of declared distance information may cause pilots to inadvertently exceed the maximum permitted takeoff and/or landing weight, thus nullifying the potential safety benefit of the declared distance.

NBAA recommends that Airport Diagrams should provide all declared distance information – TODA, TORA, ASDA, and LDA – whenever these differ from the total runway length. Additionally, when ARINC 424 data are used to calculate takeoff and landing performance, those data should include declared ASDA, TODA, TORA and LDA. Until pertinent 424 data can be provided by industry, flight crew operating guidance for FMS should require manual insertion of the most restrictive distance in accordance with the aircraft certification basis and operating rules. Currently the FAA provides declared distance information in the A/FD. The airport diagrams depict any variance in runway length by a note; e.g., Rwy 13 Ldg 5000'. Jeppesen provides TORA and LDA information on their 10-9 pages in the Additional Runway Information section.

Mr. John Moore, NACG, inquired if there was a requirement to publish this information from any other group or organization. Mr. Ted Thompson, Jeppesen, commented the TORA, TODA, ASDA, and LDA information is provided by the FAA via the NFDD. Those declared distances represent the best the airport can offer. However, actual performance values of the aircraft can be significantly less. Several years ago the Air Transport Association made the same recommendation to Jeppesen. The consensus of the airlines was that each airline had their own dispatchers to compute and provide the distance information to flight crews. Their concern was the possibility of conflicting information. The distance provided by the dispatcher could be different from the information provided on the airport diagram. As a result the issue was dropped.

Mr. Thompson stated that adding this information would have a significant impact on chart revisions. Jeppesen does not update their airport chart for physical runway length changes of less than 200'. If the declared distance information was added to the airport chart using 25' as an update trigger there will be numerous revisions. Mr. Thompson stated that approximately 65% of the airports worldwide have no distance information available or the distances are the same as the runway length. The remaining 35% have distance information. Mr. Boll expressed the importance of this information to commercial carriers. Mr. Eric Secretan, NACG, stated that the information is available in the A/FD. The A/FD is a flight supplement to be used for flight planning and in flight and supplemental information should be published in the A/FD.

Lt. Col. Monique Yates, NGA/OMSF, concurred with Mr. Secretan stating that DoD would not publish the information on their airport diagrams. Mr. Secretan reiterated the primary intended use of airport diagram is to support ground movement of aircraft. The group discussed the value of runway slope information. The NACG currently charts runway slope on their airport diagrams when the slope is equal to or greater than 0.3%. However, Jeppesen does not chart slope data. Mr. Boll stated that it would be of value to have the information charted on the Jeppesen charts.

Mr. Boll provided alternative options for ACF consideration: 1) Provide complete landing distance information, don't show partial information; 2) Incomplete information currently depicted should be removed; 3) Add a note to the airport diagram to read: Declared distance information available for this airport; see A/FD. Mr. Boll also requested that the terminology currently used for landing distance information agree with the terminology in the Pilot Controller Glossary. Mr. Thompson stated that Jeppesen will pursue the issue and will explore the possibilities of a format change to their airport charts. Mr. Moore stated that we need general aviation input and additional input from the air carriers, DoD and AFS-200 for the next forum. The [Runway Declared Distance Information briefing](#) is attached to these minutes.

STATUS: OPEN

ACTION: Mr. Hal Becker, AOPA, will provide the general aviation position at the next forum.

ACTION: Mr. Thompson will report the Jeppesen position at the next forum.

ACTION: Lt. Col. Yates will report the DoD position at the next forum.

ACTION: Mr. Kevin Comstock and Mr. Mark Ingram will report the ALPA position at the next forum.

ACTION: Mr. Moore will obtain a position from AFS-200 and report at the next forum.

ACTION: Mr. Secretan will report the NACG position at the next ACF.

06-01-182 Alternate Missed Approach Holding Pattern

Mr. Eric Secretan, NACG, submitted this issue and provided the following briefing. The alternate missed approach holding instructions when established are published on the FAA Form 8260. Currently, they are not depicted on the instrument approach procedure charts requiring the controller to verbally provide the detailed clearance to the pilot. The alternate missed approach instructions are not charted.

Mr. Bill Hammett, AFS-420/ISI, commented Chapter 8, paragraph 856g of the 8260.19 reads: Alternate missed approach holding/termination facility/fix must be charted in the planview. Mr. Secretan stated that there has been comments from users reference the charting of this information. Mr. Secretan provided prototypes of the ILS or LOC Rwy 24 procedure at Lambert-St Louis Intl for discussion. The first handout is the current charted procedure that depicts the missed approach fix (FTZ) boxed. The alternate missed approach holding pattern, and radials are depicted (leg lengths, if available, would be shown).

The first prototype depicts the alternate holding pattern and radials as shaded gray to differentiate it from the missed approach holding. The second prototype chart includes the depiction of the St. Louis VORTAC and associated information shaded gray. The NACG recommendation is to depict the alternate missed approach holding pattern and its associated data in a shaded gray color. Lt. Col. Monique Yates, NGA/OMSF, briefed the DoD position.

The issue was submitted to the FCC in March 2006. Their conclusion was the shaded gray information was misleading. Pilots who are cleared to the missed approach could easily mistake the alternate missed approach hold for the missed approach hold. The FCC recommends that the alternate missed approach pattern not be charted on the IAP. Lt. Col. Yates commented that we are charting information that should be verbally provided by the air traffic controller. Therefore, we are deviating from the intended use of the

charted procedure. Mr. John Moore, NACG, commented that not charting the information would deviate from the 8260.19. Mr. Hammett stated that this same issue was brought before the ACF six or seven years ago.

At that time, the ACF participants agreed that charting the alternate missed approach holding pattern on the IAPs benefited both the pilot and controller. Depicting the information eliminated the pilot's need to write down the information and eliminated the controller's requirement to verbally provide the information. Additionally, if the alternate missed approach fix were not charted on the IAP the pilot would need to scramble to locate the fix on the enroute chart. Mr. Hammett stated that the final decision of the forum was the alternate missed approach holding instruction would not be charted, but the alternate missed approach holding pattern would be charted on the IAPs.

Providing the information on the IAPs increases the pilot's ability to easily understand, identify and locate the alternate missed approach holding fix and pattern. Mr. Ted Thompson, Jeppesen commented that there is more to this issue than charting; there are also database coding issues. Coding multiple holding patterns is a problem. Charting the alternate missed approach holding pattern is only one piece of the puzzle; you still need the means to get to this point. Mr. Thompson recommended that all/or none of the information be shown. Charting partial information is creating more problems than it solves. Mr. Hammett responded if the alternate missed approach holding is on the 8260, then it must be charted.

The group discussed when the alternate missed approach procedures are flown. Alternate missed approach holding is used during NAVAID outages, and during practice approaches. Jeppesen currently charts alternate missed approach holding patterns as a planview inset labeled 'Alternate Missed Approach Fix'. Mr. Secretan stated that he agreed that the charting of the information could be a human factors issue. However, the shaded gray color should differentiate the missed approach from the alternate missed approach holding. The alternate missed approach holding would be charted as an inset box when it's outside the planview and labeled 'Alternate Missed Approach Fix'.

Mr. Hammett expressed his concerns over the use of the inset box stating sometimes the missed approach holding and sometime the alternate missed approach holding is charted as an inset box. This is more of a human factors issue than the shading. Mr. Secretan commented that NACG would also consider always labeling the alternate missed approach holding pattern. Mr. Brad Rush, NFPO, informed the group that the policy for creating an alternate missed approach holding is anytime the final approach course facility and the missed approach course facility differ then you will develop an alternate missed approach. Any ILS procedure will get an alternate missed approach,; if a VOR approach goes to a NDB it will have an alternate missed approach and, if the NDB approach goes to a VOR it will have an alternate missed approach. Therefore, approximately 80 percent of the conventional procedures will have an alternate missed approach.

Mr. Rush explained that the issue is a charting problem with the way the information is portrayed that could cause a human factors issue. However, the basic reasoning behind the charting of the information is extremely sound. An airport could have numerous procedures (ILS, VOR, NDB, and ASR) where all the missed approach procedures go to the VOR for holding. If the VOR goes down you not only lose the VOR approach, you lose all the procedures, resulting in a VFR airport. Mr. Rush stated that both the missed approach and the alternate missed approach holding are flight checked. Mr. Moore commented that according to the 8260.19C policy the alternate missed approach holding pattern, when established, would be charted. The issue remains how to chart the information. From a NACG perspective we need to insure that all required alternate missed approach holding patterns are charted. However, the information needs to be standardized.

The NACG could create additional prototypes based on the participant's comments. Lt. Col. Yates requested a human factors study before they would support the issue. Mr. Hammett agreed to coordinate the human factors study with AFS-400. Mr. Rush requested that the study be expanded to include the impact to the pilot if the information was not charted. Mr. Hammett requested that the NACG provide the minutes from the original submission. This history data will be included in the request for human factors study. Mr. Secretan stated that this is a DoD and general aviation issue and therefore should be addressed at the IACC. He recommended that prototypes of the IACC recommendation and the human factors study results be presented at the next ACF. Mr. Mark Ingram, ALPA, stated from a general aviation position he liked the second prototype using the graying of the STL VORTAC and associated information.

STATUS: OPEN

ACTION: NACG will provide additional prototype to the IACC for final recommendation and report at the next ACF.

ACTION: NACG will research the original submission.

ACTION: Bill Hammett will coordinate the human factors issue and report at the next ACF.

06-01-183 ICAO Location Indicators on Visual and Enroute Charts

Mr. Eric Secretan, NACG, submitted this issue and provided the following briefing. This issue stems from other ICAO Location Indicator briefings from as early as 1998. These historical ACF minutes reflect the ACF consensus that ICAO location indicators established outside the contiguous United States should be charted. Those facilities within the contiguous United States have a universal 'K' prefix added to the FAA identifiers for use as ICAO location indicators and the 'K' is not charted. With the advancements in onboard databases this issue has become critical to the aviation community at facilities outside the contiguous United States. Recommendation is made to add the ICAO location indicator to the airport data block on the Visual and Enroute charts. This will result in the charting of both the State (FAA) identifier and ICAO location indicator, where available, outside of the contiguous United States. In addition, the ICAO location indicators for Puerto Rico and the Virgin Islands should be added to the Airport/Facility Directory.

Ms. Valerie Watson, Cartographic Standards, inquired about charting both identifiers on the TPPs. Mr. Secretan responded that depicting this information would be a major resource impact on the NACG Instrument Approach Procedures Sub-Team. The initial thought was for database support; the ICAO indicators are critical in the en route environment. ACF participants reported that ICAO indicators are universally used for meteorological reports. However, the NOTAM system still uses the three letter identifier. Mr. Secretan stated charting both the location identifier and the location indicator is a compromise. The Alaska Supplement and the Pacific Chart Supplement currently chart both.

Recommendation from the ACF is to also provide both the ICAO location indicator and the FAA location identifier on the TPPs. To reduce the resource impacts on the NACG the information could be phased-in. Mr. Brad Rush, NFPO, recommend that Mr. Gary Bobik, ATO-R, be notified of the issue. Ms. Watson stated that the ICAO location indicators remain an issue for the Oasis systems. Mr. Secretan commented that in the future the hope is to only chart the ICAO location indicators. He also stated that there is a small wrinkle in this process. Adding the prefix 'K' to the location identifiers in the United States does not provide an official ICAO location indicator. Only airports of entry are assigned ICAO location indicators.

Mr. Ted Thompson, Jeppesen, reported that about 15 years ago Jeppesen began charting both the identifier and ICAO location indicator. To alleviate the terminology problem in the United States Jeppesen called these indicators 'Navigation Database Identifiers'. The group discussed the problems associated with the alphanumeric identifiers. Ms. Watson reported that the ICAO field in NASR is suppressed. NFDC will clean up the ICAO location indicators currently published in NASR.

STATUS: OPEN

ACTION: The MPOC will modify the RD to include the TPPs and report at the next meeting.

ACTION: Ms. Watson will report on the NASR cleanup at the next forum.

06-01-184 Missed Approach Leg Length and Direction

Mr. Eric Secretan, NACG, submitted this issue and provided the following briefing. Historically the missed approach on conventional procedures was extremely short and usually involved climbing turns to a NAVAID for holding. However, with RNAV procedures, the missed approach procedure legs are described in terms of distance. Current specifications do not require the depiction of headings or distance information. The recommendation is on those procedures, to depict course and distance information along segments of the missed approach procedure, in the same manner as terminal routes, using the information provided on the 8260 procedure source. The altitude information in the examples provided by the NACG is in error and should not be shown.

Mr. Secretan reported that this issue was submitted from a recommendation from the last ACF. Mr. Brad Rush, NFPO, concurred with the basic concept as long as the altitude information is not shown. Mr. Rush recommended that AFS-410 comment on the issue. Mr. James Spencer, NAVFIG, inquired if inset boxes or mileage breaks would be used. Mr. Secretan responded that each procedure would need to be analyzed, both inset boxes and mileage breaks could be used. Mr. Rush questioned the computation of courses for CF legs used in some RNAV procedures stating a magnetic facility must be used. Mr. Ted Thompson, Jeppesen, stated that these magnetic values are only a reference.

STATUS: OPEN

ACTION: The RD will be modified to delete the depiction of altitude information. The RD will be submitted to the MPOC for coordination. The MPOC will report at the next ACF.

06-01-185 RNAV-1 and RNAV-2 Descriptors for DPs, STARs and Routes

Mr. Mark Steinbicker, AFS-410, submitted this issue. Mr. Frank Alexander, Northwest Airlines, provided the following briefing. Several flight crews have reported that the current Type A/Type B equipment notes published on RNAV SIDs and STARs are confusing. Advisory Circular (AC) 90-100, US Terminal and Enroute Area Navigation (RNAV) Operations will be revised to eliminate all reference to RNP. The standard Type A and B procedure chart notes on approximately 190 RNAV DP and 22 RNAV STAR procedures will be replaced with new performance definitions. These new terms will be defined as RNAV-1 and RNAV-2 and will conform to ICAO standards:

RNAV-1 (+/- 1nm 95%)
RNAV-2 (+/- 2nm 95%)

All RNAV terminal procedures will be flown as RNAV-1. Mr. Alexander reported that the final draft of the AC would be submitted to the Performance Based Aviation Operation Rulemaking Committee (PARC) in June or July 2006. The proposed publication date of the revised AC will be February 2007. Mr. Brad Rush, NFPO, stated that February is a change notice date for the chart cycle. Therefore, the date will need to be pushed forward to March or back to January. Mr. Alexander recommended coordinating the effective date with Mr. Steinbicker and Mr. Vincent Chirasello, AFS-410.

Mr. John Moore, NACG, inquired about changes to the chart title. Mr. Alexander responded that all the procedures would be RNAV-1. Is it necessary to depict this as part of the chart title or could the information be added to the AIM. He stated that in his opinion the less extraneous information on the chart the better. The performance expectations could be published in the AIM. However, the group would make the final decision.

The participants asked since the ICAO standard is to no longer use RNP, would the term RNP still be used on the charts? Mr. Alexander responded that is to be determined. Mr. Rush stated that this change will likely only affect RNAV SIDs and STARs; the RNAV RNP procedures will not be affected. Mr. Ted Thompson, Jeppesen, inquired if the RNAV RNP related notes would be removed from all 200+ procedures in one cycle. Mr. Rush responded yes and proposed that the issue be coordinated through the AISWG. The changes will be provided via an Excel spreadsheet to the NFDC and published as an add-on page to the NFDD. Mr. Thompson requested clarification on the note issue.

Mr. Rush responded currently there are three possible notes that could be published on the procedures for Type A and three separate notes for Type B. Of these three notes the equipment note (for Type A) 'DME/DME, DME/DME/IRU, or GPS required' will remain. The other two notes 'Pilots of RNP-capable aircraft, use RNP...' and the Type A (or Type B) note will be removed. The PARC will determine if a RNAV-1 note will be added to the charts. Mr. Moore and Mr. Rush both recommended that the RNAV-1 note not be charted. Mr. Rush commented that the issue could not be implemented until the AC is approved. The RNAV-1 and RNAV-2 briefing is not available for review at this time. The briefing will be added to the NACG website upon receipt from AFS-410.

STATUS: OPEN

ACTION: Mr. Steinbicker will report the PARC recommendation at the next forum.

ACTION: Mr. Steinbicker, and Mr. Chirasello will coordinate the effective date with the PARC and AISWG.

ACTION: Mr. Rush will forward the issue to the AISWG.

06-01-186 STAR Procedures and their Terminations

Mr. Brian Townsend, ALPA, submitted this issue and [provided the following briefing](#). A Continental crew flying into Cleveland, Ohio brought this issue to the attention of the Air Traffic Procedures Advisory Committee (ATPAC) approximately three years ago. The group discussed several STAR procedures at Cleveland Hopkins Intl and Las Vegas McCarran Intl revealing two common themes regarding the terminating fix. The procedure either ends at the terminus fix or ends at the terminus fix followed by a specified heading. Without a published heading, it may be somewhat confusing as to what heading should be flown in the event ATC does not issue a heading upon crossing the terminus fix or if the aircraft has lost communications. This is a gray area for both the pilot and controllers. Procedures that end with a specified

heading prevent unpredictable flight tracks in the event of lost communications, blocked frequencies, and busy controllers. ALPA recommendations are:

- STAR Order should reflect more precise guidance regarding the terminus fix and lost communications.
- Published headings should follow the terminus fix, if not tied to an instrument approach.
- Each facility should consider the most efficient heading to use at the terminus, based on airspace and terrain.
- All STARs should contain standard formatted Lost Communication Procedures information boxes to include specific guidance.
- Emphasis should be placed on the enhanced safety benefits of the proposed changes
 - Consistent charting
 - Clear and consistent guidance to pilots at the terminus fix of the procedure
 - Unambiguous lost communication direction
 - Enhanced predictability for ATC in the event of blocked or lost communication after the terminus fix.

The ATPAC recommendations:

- Published headings should follow the terminus fix.
- All STARs should contain standard-formatted Lost Communication Procedure information boxes.

Mr. Townsend inquired if the ACF supports establishing a standard format for Lost Communications Procedures for STARs. If so, what would that format look like? Mr. Townsend recommends the Jeppesen format that has been established at Las Vegas. Mr. Townsend requested ACF support for the ATPAC recommendations and requested the ACF to develop a Lost Communication format. ATPAC should coordinate the necessary changes to 7100.9 (and .65 if necessary) prior to implementation.

Mr. John Moore, NACG, commented that from an ACF perspective you are asking the ACF participants to determine if a standard format for lost communications is required and if so what that format would be. The heading depiction would be part of the STAR order. The NACG currently depicts lost communications information on its procedures in a box. The information is not shown in a separate standalone box as on the Jeppesen procedures. Mr. Moore asked since the information is currently charted, what type of standardization is required? Mr. Townsend responded that the main thing is to insure that this information is published on all STAR procedures. Jeppesen and NACG both chart the lost communications procedures when it is sourced. Mr. Moore stated that the STAR order should be modified to indicate that lost communications procedures would be published on all procedures. Mr. Kevin Comstock, ALPA, commented that ATPAC requested that the issue be reviewed by the ACF. They are looking for ACF concurrence on the concept of adding the lost communication procedures to all STAR procedures. Mr. Comstock suggested that Jeppesen and NACG provide current charting specifications and examples of current STAR procedures depicting the lost communication information. Changes to the STAR order will be submitted from the ATPAC. Mr. Moore agreed to provide an example of the lost communication procedures.

Jeppesen and NACG will both use the same STAR procedure to show the minor differentiations between the two charts. For example on the Keatn Two Arrival at Cleveland Jeppesen charts a 340° heading on the chart while the NACG charts this information as part of the lost communication instructions. Mr. Townsend recommended that the NACG charts match the Jeppesen charts. He stated that narratives are great when you are on the ground but in the terminal environment you need an immediate picture. Mr. Moore commented that there seems to be support for the issue. However, the issue will require internal

coordination and coordination with Jeppesen. Mr. Danny Shelton, NGA/PVA requested that NGA be included in this coordination. The group continued to discuss STAR procedures and STARs servicing multiple airports. Mr. Townsend stated in the case of multiple airports, multiple lost communications notes would not be created. There will be only one general lost communication procedure note.

Mr. Rush informed the group that this would not be an issue for RNAV STARs. The 7100.9 indicates that RNAV STARs are airport specific; they do not service multiple airports. In the future, as the conventional procedures are reissued they will become airport specific. Mr. Rush recapped the issue for the ACF participants stating: ATPAC is working the STAR order issue with Air Traffic. One issue for ACF consideration is the lost communication procedures on STARs. ATPAC is requesting that Jeppesen and NACG standardize the depiction of this information. They are also requesting that a heading be shown for procedures that don't end at the IAF. The heading will only be shown when the information is provided in the source documentation. Mr. Moore requested a reading of the order to determine if the depiction of the track heading is required on the chart. Mr. Secretan commented that the IACC Specifications would need to be modified. Charting differences could be attributed to individual compiler's application of existing specifications. Written guidance will need to be provided. The [STAR Procedures briefing](#) and [the ATPAC Update](#) are attached to these minutes.

STATUS: OPEN

ACTION: The MPOC will review charting specifications and establish the requirements to depict the heading on the chart. The MPOC will report at the next meeting.

ACTION: Jeppesen, NGA, and NACG will coordinate standard depiction of the lost communication procedures and report at the next ACF.

ACTION: Mr. Moore will submit a formal response to the ATPAC.

Editor's note: After the ACF Mr. Kevin Comstock, ALPA, provided the following summary: The ATPAC recommendations were to remove the ambiguity/loop holes in the 7100.9D text that allow a STAR to end at a point in space without a heading and without charted lost comm procedures. Our AOC to ATPAC and the resultant ATPAC recommendation is intended to have ALL STARs that don't end at an IAF to end in a heading with charted lost comm procedures taking the aircraft to an approach or to the enroute structure, without exception. Other suggestions for revisions to the STAR Order are to:

1. Require hard altitudes at each waypoint rather than expect altitudes. In no case should there be no altitude specified. Most STARs, conventional and RNAV, are being flown using an FMS now days and hard altitudes get coded in the database, saving heads down time and fat finger errors by pilots having to enter altitudes as is the case if expect altitudes are used. It is even worse when there is no altitude depicted at all because then the pilot has no knowledge of what altitudes will be issued until shortly before reaching the fix, resulting in less time to enter it into the FMS, more heads down time in the terminal area and increased chance for errors.
2. Remove the textual descriptions of the procedure altogether and let the graphic stand on its own. Textual descriptions should no longer be published on the charts and notes that are still required should not be redundant with information in the graphical depiction.

VII. Closing Remarks

Mr. John Moore, NACG, again thanked AMTI and AMTI representative Mr. Tom Reiss for hosting the ACF. He thanked the ACF participants for attending the forum.

VIII. Next Meeting

The next meeting of the ACF is scheduled for October 17-19, 2006 and will be hosted by the National Aeronautical Charting Group at their facility in Silver Spring, MD. Dress will be casual. The following meeting will be held at the U.S. Geological Survey (USGS) facility in Reston, VA on May 1-3, 2007.

Please note the attached Office of Primary Responsibility (OPR) listing for action items. It is requested that all OPRs provide the Chair, John Moore, (with an information copy to Debbie Copeland) a written status update on open issues no later than September 30, 2006.

Note – These status reports will be used to compile the minutes of the meeting and will be the “for the record” statement of your presentation. A reminder notice will be provided.

IX. Attachments

1. Attendees/Mailing List
2. RNAV-1 and RNAV-2 Briefing (unavailable at this time)
3. OPR/Action Listing