

ICAO/IFPP Committee Report

Meeting 06-02

Mr. Eric Secretan, NACG, provided the following briefing. The Obstacle Clearance Panel (OCP) has created a charting working group to deal with charting issues that may not be considered by other parts of the International Civil Aviation Organization (ICAO). The working group met in Frankfurt Germany where they focused on procedural related issues.

The highlights of the meeting were:

RNAV Holding: ICAO is considering replacing the use of DME or time with a RNAV distance for a RNAV holding pattern. The U.S. had previously adopted this recommendation. Mr. Secretan commented that ICAO is catching up with the U.S. on some issues and on other issues they are pressing ahead.

Stepdown Fix: France has proposed that every stepdown fix on an instrument approach procedure be named. In addition, segment mileages, and total distances be charted between all fixes in the approach chart profile view.

Waypoint Identifiers: There is a proposal to use alphanumeric waypoint identifiers for procedural waypoints. The proposal is to use two letters associated with an airport identifier and three numbers. These numbers will be sequential which will enable the pilot to 'count down'. The identifiers will not be unique waypoint identifiers, which may result in database duplication. However, the intent is that they will only be used in coding of terminal procedures. Mr. Secretan commented that this might cause conflict with our grid system in the future.

Magnetic Variation: France is also recommending that True course be provided on RNAV procedures. Their current recommendation is that both true and magnetic be shown however, they are laying the groundwork for exclusive use of True for all terminal procedures.

Procedure Identification: There is a proposal to add IGS (Instrument Guidance System) as a procedure type. The IGS replaces the current SDF (Simplified Directional Facility) with glideslope procedure. SDF procedures can be coded in a database; however an SDF with glideslope cannot be coded. The IGS provides vertical guidance information and can be coded in a database.

Fly-by Waypoints: There has been some progress on the ACF recommendation to chart all RNAV holding pattern waypoints as fly-by waypoints although they are coded as fly-over.

Hierarchy Concept: The ACF hierarchy concept is making progress. Where any fix on a chart will be charted using the same symbol on all chart products. The concept also redefines the triangle from an air traffic control reporting point to indicate a ground based

intersection. Any waypoint, intersection, or NAVAID could be treated as a reporting point, both compulsory and on request.

Minimum En route Altitudes: The FAA proposed that ICAO adopt the use of GPS/GNSS MEAs (Minimum En route Altitude), MAAs (Maximum Authorized Altitude), MCAs (Minimum Crossing Altitude), and MRAs (Minimum Reception Altitude). The OCP Working Group supported the GPS/GNSS MEAs and MAA concepts. However, the MCAs and MRAs were not accepted. Procedure Sequencing: A proposal was discussed to sequence approach procedure charts for each airport by runway number, lowest to highest runway number, then by procedure type. Mr. Secretan stated that if this is an ICAO recommendation the U.S. should consider it. This recommendation might make finding procedures easier.

Ms. Valerie Watson, Cartographic Standards, inquired when the hierarchy concept would be accepted. Mr. Secretan responded that the OPS Panel has agreed to the concept, now it is a matter of documentation. The hierarchy concept should get formal acceptance at the OCP meeting next summer.

ACTION: Mr. Eric Secretan will report on the ICAO/OCP Committee at the next forum.

Meeting 07-01

Mr. Eric Secretan, NACO, briefed on the issues being discussed in the ICAO Instrument Flight Procedures Panel (IFPP) and the Charting Working Group. The IFPP was previously known as the Obstacle Clearance Panel (OCP). The Charting Working Group is currently looking at how charting guidance material and the ICAO Annex 4 have to be updated to reflect/respond to IFPP decisions. One of the highest priorities right now is Performance Based Navigation. The IFPP is also looking at possibly providing two different leg lengths on RNAV holding, leg distance for automated systems and leg-distance for non-automated systems. There are some people who feel that you need both distances or timing on a holding pattern fix and that it could be a human factors issue on when you begin your inbound turn.

Mr. Tom Schneider, AFS-420, commented that AFS-440 is currently undergoing an extensive study for holding patterns and holding pattern analysis in the Instrument Procedures Group. Once their study, which will include looking at timing as opposed to using the outbound distance leg, is complete on July 2, 2007, they may consider bringing it to the IFPP. .

The IFPP is about ready to approve the use of State/Country issued alphanumeric waypoints for the terminal areas. These waypoints would not have any ATC or global function. Mr. Ted Thompson, Jeppesen, commented that the Australia Transportation Safety Board (ATSB) distributed a lengthy report concerning the use of a 3-letter airport identifier plus two trailing numeric-characters as a waypoint naming convention. . The report was critical in that pilots could lose situational awareness because they could confuse these fixes by using the two

trailing characters to key off of. The ATSB will be taking their report to Air Services so that they may revisit the naming convention for waypoints.

Mr. Secretan also noted that the IFPP will most likely adopt a position that all step-down fixes be named. This is not an ICAO requirement right now but will probably be adopted within a year. He added that perhaps the thing that is driving the naming of each and every fix are the avionics systems.

There is also some discussion within the IFPP as well as the PARC about creating some RNAV RNP procedures that are neither SAAAR nor AR. These would be a simplified version of the current RNP SAAAR type of procedure that would be open to anyone meeting the general requirements for flying those procedures.

There has been a IFPP proposal to add True course and headings to RNAV procedures in addition to Magnetic. He believes this to be the first step in order to get into a True course environment in RNAV. Mr. Frank Flood, Air Canada, was concerned that different systems have different embedded ways of getting the MAGVAR. Mr. Brad Rush, AVN-100, commented that the FMS is going to read a magnetic course based on either a set table in the FMS or something else and it won't match what they used for developing the procedure. Mr. Secretan replied that IFPP discussion has been consistent in saying that if you want to add True values you must also have Magnetic. The official reason for the proposal was as a way to not require immediate updating of charts because of a small MAGVAR change. A second unofficial or unstated reason was to try to drive toward a True course environment.

The Aeronautical Charting Forum issue of charting NAVAID, waypoint, fix hierarchy and charting of a symbol to indicate the base function of any fix is still making its way through ICAO. It has been looked at in various Panels, and so far everybody is pretty much in agreement. The proposal should be included in a ICAO State Letter in the near future.

There was a proposal to limit the amount that states could sub-divide their Minimum Sector Altitudes (MSA) mainly due to the fact that if they are divided too small you can't effectively depict them. In ICAO, the MSA is used the same as a TAA on an RNAV procedure in the U.S.

ICAO/IFPP looks like it will agree to the MEA-G (GNSS MEA) for a new type of MEA like we have here in the states.

The IFPP has agreed that all RNAV holds will use a Flyby waypoint symbol, the same as we agreed to here at the Charting Forum. If that waypoint has a flyover function for a different part of the procedure, then it will have a circle around it to indicate that separate flyover function.

ACTION: Mr. Eric Secretan will report on ICAO/IFPP activities at the next forum.

Meeting 07-02

Report on latest activities of the Instrument Flight Procedures Panel (IFPP, formerly Obstacle Clearance Panel or OCP). Eric Secretan, NACO, provided a summary of some of the changes

which will be included in an upcoming ICAO “State Letter”. The letter is a solicitation to member States for comments.

RNAV Holding Patterns: For systems not capable of auto-hold, there is a proposal to change the charted depiction of holding patterns to illustrate the fact that the holding distance limit applies to the end of the outbound leg.

GPS/GNSS MEA: The panel is moving toward adoption of the GPS MEA depiction using the “G” suffix (e.g. 7300G). An exception is that the ICAO application does not specify the use of the G suffix when the MEA applies to a GPS-only route. The G suffix would be used only in combination with a conventional MEA on a conventional route.

Procedure Titles: Procedure titles will indicate the primary NAVAID only. Also, ICAO will change the use of capital letters for Aircraft Categories (A, B, C, D) and also Duplicate Procedure Suffix Codes (X, Y, Z) to use lower case letters verses upper case letters.

RF Legs on RNAV RNAP SID, STAR and Approach Procedures: ICAO will allow the use of RF legs on all types of RNAV Flight Procedures, including Departures and Arrivals. An appropriate note would be included to indicate the “RF capability required.” Also, ICAO uses the term “AR” (Authorization Required) verses FAA’s SAAAR terminology.

Waypoint Naming: A matrix has been developed to aid in the establishment of waypoint names. The worldwide repository of pronounceable waypoint names is running low. Consideration has been given to waypoints used in ATC communications where pronounceable names are necessary. In some cases it will allow the use of non-pronounceable alpha-numeric waypoint identifiers, generally in local terminal environments. (Comment by Eric: The US HAR grid reference waypoints do not conform to the guidelines because they are not 5-letter pronounceable but are used in ATC clearances.)

Definitions of Airspace Fixes and Symbology: Guidance on terminology and symbols for Intersections, Waypoints, Reporting Points and Significant Points. Incorporates the ‘hierarchy’ concept, on-request, and compulsory reporting status (solid fill).

A request was made to include Eric’s summary notes as part of the ACF meeting minutes so attendees would have an opportunity to review details. Eric will coordinate with Jim Grant and John Moore.

ACTION: Eric Secretan will report on ICAO/IFPP activities at the next forum.

Meeting 08-01

Report on latest activities of the Instrument Flight Procedures Panel (IFPP, formerly Obstacle Clearance Panel or OCP). Mr. John Moore, NACO, provided a summary of some of the

changes from a working paper provided by Mr. Eric Secretan, FAA/NACO. Some of the highlights included the development of charting and navigation data requirements to promote harmonization of charts, databases and avionics systems. ICAO has approved the hierarchy concept via a letter from ICAO to States, with implementation expected in 2009. These include symbolic depictions for compulsory/on-request reporting points and fly-over/fly-by status designation.

Additional topics in discussion: Standardized terminology for GLS; and, correction and update to miscellaneous references in ICAO Annex 4. Mr. Mike Webb, FAA/AFS-420, and U.S. member to the IFPP, reported some activity related to determining which ICAO committees are now responsible for certain topics. Expect that increased exposure and frequency of meetings will result in an increase of chart-related subjects.

ACTION: Eric Secretan will report on ICAO/IFPP activities at the next forum.

Meeting 08-02

Report on latest activities of the Instrument Flight Procedures Panel (IFPP, formerly Obstacle Clearance Panel or OCP). Mr. Eric Secretan, FAA/NACO, has assumed other duties and no longer will be participating in the IFPP. Mr. John Moore, FAA/NACO, will be working with the IFPP and he provided a summary of some of the issues being worked:

- Naming of Step-Down Fixes (Mr. Tom Schneider FAA/AFS-420, commented that all step down fixes in the U.S. will be named.)
- Track, Course and Heading definitions and Usage
- RNAV Data Transfer Integrity
- Portrayal of Altitudes on an IAC (Mr. Ted Thompson Jeppesen, commented that some countries have a different definition of MEAs than others.)
- RF Legs

The following issues were approved by the IFPP and will be forwarded to ICAO:

- RNAV Helicopter Point-in-Space (PinS) charting for “proceed visually” and “proceed VFR” procedures
- Charting of Helicopter Point-in-Space (PinS) Route Departures
- Charting of IF, IAF, FAF, and MAPt

ACTION: Mr. Moore will submit the approved issues as IACC Requirement Documents to Ms. Valerie Watson, FAA/NACO and will report on ICAO/IFPP activities at the next forum.

Meeting 09-01

Mr. John Moore, FAA/NACO, reported that the Integration Working Group (IWG) has Working Papers in progress concerning the following issues:

- Harmonized database resolutions between Annex 15 and ARINC 424
- State data required to support GLS
- RNAV route charting guidance
- RNP data block guidance (coordinating with PBN SG)
- RNAV IAC charting guidance
- Helicopter PinS maneuvering visual segments charting guidance
- Naming and coding of Stepdown Fixes
- Track, course and heading definitions for database coding purposes
- Fix guidance in Instrument Procedure Construction Manual (coordinating with QA WG)
- SID and STAR database identifiers
- Deletion of the descent fix

Future IWG work will include:

- Altitudes on Terminal Procedures (possible HF study)
- PBN SIDs, STARs, and IACs chart and database guidance (off-cycle meeting in July)
- PinS Departure Maneuvering Visual Segment

Mr. Moore emphasized the need for the FAA to exert international influence. He stated that ICAO and IACC coordination is very important.

(See Attachment #2 – ASD ICAO IWG Brief)

ACTION: Mr. Moore will report on ICAO/IFPP activities at the next forum.

Meeting 09-02

Mr. John Moore, FAA/AeroNav Services, provided an overview of topics being addressed in the ICAO IFPP group. FAA wants to minimize differences between FAA and ICAO. FAA's ICAO IFPP members intend to coordinate between the U.S. IACC and the ICAO IFPP to address issues of mutual concern and result in collaborative outcomes. Mr. Moore serves as Chair of the IFPP's Integration Working Group (IWG)(charts and database integration) and is also a Technical Advisor to the U.S. Member of the IFPP, Mr. Mike Webb, FAA/AFS-420. Mr. Moore reported that the IWG has Working Papers in progress concerning the following issues:

- GLS procedure publication
- PBN SID & STAR Procedure Titling
- Fixes Abeam Marker Beacons
- Naming of Step Down Fixes
- Terminology Used in PANS OPS & ARINC 424
- Procedure Design Construction Manual
- Altitudes on Terminal Procedures
- RNAV IAC Standardization
- SID & STAR Database Identification in AIP

- Check Altitudes on GLS Procedures
- Descent Fix Versus Step Down Fix
- Minimum Sector Altitude
- RF Leg Data In AIP & ARINC Coding
- Charting of RNAV Routes
- RNP Approach Identification

(See Attachment # 2 – ICAO IFPP Report)

ACTION: Mr. Moore will report on ICAO/IFPP activities at the next forum.

Meeting 10-01

Mr. John Moore, AeroNav Services, as chair of the ICAO/IWG, discussed the latest revision to ICAO Annex 4, Amendment 55, and the approved Working Papers. **See Attachment #2: ACF 10-01 ICAO IFPP IWG Report.** Mr. Moore mentioned that none of the Amendment 55 changes would impact IACC Specifications except *Latitude and Longitude to one (1) second resolution for Intersection and Waypoints.*

Mr. Mike Webb, FAA/AFS-420, as the U.S. member to ICAO/IFPP noted that ICAO is focused on the implementation of SBAS and Performance Based Navigation (PBN) Standards and Recommendation Practices (SARP's)

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

Meeting 10-02

Mr. John Moore, AeroNav Services, as Chair of the Integration Working Group, ICAO Instrument Flight Procedures Panel (IFPP), introduced Mr. Mike Webb, FAA/AFS-420, as the U.S. Member of the ICAO/IFPP. Mr. Webb noted that the focus of the ICAO/IFPP is moving towards Performance Based Navigation (PBN) implementation and identification of charting and aircraft systems requirements to support PBN.

Mr. John Moore provided an overview of the key topics of the recent ICAO/IFPP/Integration Working Group meeting. **See Attachment #1: ACF 10-02 ICAO IFPP Briefing.**

- IWG Working Papers submitted to the IFPP:
- *GLS Procedure Publication* – What gets published in the AIP and on the 8260
- *Minimum Sector Altitude* – Establishes reference point for RNAV procedures
- *SBAS (WAAS) Route Indicator Coding* – Harmonizes Route Indicator with chart title suffix
- *Helicopter Point in Space Approach Procedure* – Maneuvering Visual Segment procedure and definitions for helicopter crossing height & helicopter reference point

IWG Working Papers still in work:

- *RNP Navigation Accuracies* - aka RNP values
- *Magnetic Reference Bearing* - Applies U.S. practice to ICAO
- *Fixes w/in the Final Approach Segment* - Establishes name/location/coding
- *Procedure Altitudes and MOCAs* - Application and use of altitudes on IACs
- *RNAV Approach Chart Standardization* - Title, information required, format
- *SID/STAR Chart and Database* - Harmonization issues between chart and coding
- *Helicopter Point in Space Procedures* - Procedure design and chart requirements
- *SBAS Chart* - Title, information required, coding issues
- *Update of ICAO Aeronautical Chart Manual* - To reflect Annex 4 Standards & Recommended Practices
- *Future PBN Navigation Specifications* - Advanced RNP, 'More Advanced' RNP

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

Meeting 11-01

Mr. John Moore, FAA/AJV-3B, noted that Mr. Mike Webb, the U.S. Member to the ICAO IFPP, was unable to make the ACF to provide the report and so Mr. Moore provided an overview of the key topics of the recent ICAO/IFPP Integration Working Group (IWG) meeting.

IWG Working Papers submitted to the IFPP that have been approved:

Helicopter Point in Space Approach Procedure; Helicopter Point in Space Departure Procedure; Magnetic Reference Bearing

IWG Working Papers submitted to the IFPP:

GLS Procedure Publication; Minimum Sector Altitude; SBAS (WAAS) Route Indicator Coding; Helicopter Point in Space Approach Procedure

IWG Working Papers still in work:

RNP Navigation Accuracies; Fixes w/in the Final Approach Segment; Procedure Altitudes and MOCAs; RNAV Approach Chart Standardization; SID/STAR Chart and Database; Helicopter Point in Space Procedures; SBAS Chart; GLS Chart; Update of ICAO Aeronautical Chart Manual; Fixed Radius Transitions; Future PBN Navigation Specifications

ACTION: Mr. Mike Webb, FAA/AFS-420, will provide an update at the next forum.

Meeting 11-02

Mr. Mike Webb, FAA/AFS-420 and U.S. Member of the ICAO Instrument Flight Procedures Panel (IFPP), [provided an update](#) on the ICAO/IFPP Committee activities and an overview of the key topics of the recent ICAO/IFPP Integration Working Group (IWG) meeting.

IWG Working Papers: *Publication and Charts for SBAS and GBAS; Depiction of RNP Accuracy Values; Consistent use of Final Approach Fix; HCH Data Quality Requirements; RNAV Route Magnetic Bearing Quality Requirements*

The following papers were submitted for review and comment: *Procedure Naming for Performance; DOC 8697 Charting for PinS Approach (Helicopter); DOC 8697 Charting for PinS Departure (Helicopter)*

Working papers in progress for presentation at future meetings: *SID and STAR Publication Guidance; RNAV Departures, Turning Departure Protection Area Construction; Procedure Design Construction Manual Update; Altitudes on Terminal Procedures; RNAV Charting Standardization; ARINC 424 Derived Charting*

Information papers awaiting conversion to working papers: *Fixes Radius Transition Requirements; Significant Point Publication Requirements; Step-down Fix Publication Requirements; CAT III Publication Requirements; ICAO Adoption of Transition Requirements; Helicopter LPV Chart and Publication Requirements*

Mr. Webb stated that the IFPP continued to work through the charting details related to RNP accuracy values (identifying different RNP values on legs). Mr. Ted Thompson, Jeppesen, inquired as to the intent of the IFPP regarding where RNP values would be published, terminal and/or enroute charts. Mr. Webb stated that the IFPP had initially looked only at charting RNP values on enroute charts, but the IFPP has expanded that to include Terminal.

ACTION: Mr. Mike Webb, FAA/AFS-420, will provide an update at the next forum.

Meeting 12-01

Mr. Mike Webb, FAA/AFS-420 and U.S. Member of the ICAO Instrument Flight Procedures Panel (IFPP), [provided an update](#) on the ICAO/IFPP Committee activities and an overview of the key topics of the recent ICAO/IFPP Integration Working Group (IWG) meeting.

Mr. Webb stated that since the last ACF, 29 papers have been presented to the Plenary, consisting of 7 working group reports, 2 new manuals and 13 papers with Amendments accepted. Mr. Webb provided a breakdown of accomplishments and future plans by work group.

Air Traffic Management Workgroup (ATM) Accomplishments: Completion of *Continuous Climb Operations Manual and Continuous Descent Operations Manual*.

ATM Plans: Review and make changes to ICAO Doc 4444 – *PANS-ATM*; Address RNAV Transitions; Address phraseology and termination restrictions.

Integration Workgroup (IWG) Accomplishments: Inclusion of 11 different charting examples within the ICAO Doc 8697 Attachment; Naming concepts for PBN Instrument Procedures; *Annex 4 Amendments for PinS Maneuvering Visual Segment Charting* (2 papers); *ICAO Doc 8697 Amendments for PinS Maneuvering Visual Segments* (2 papers); *PinS LPV Charting Concepts Paper*.

IWG Plans: *Depiction and Promulgation of RNP Accuracy Requirements; Mature Amendments for Charting of PinS LPV Procedures; Ad Hoc Group Results on Naming of PBN Procedures; Promulgation of SBAS LPV Lines of Minima; Best Industry Practices on Encoding the SBAS FAS Data Block*

MWG Workgroup Accomplishments: *MOC Reduction in a Turn; Implementation of the Visual Segment Surface; Temperature Compensation for MOCA; rewrite of Volume II Baro-VNAV Chapter; Approval of the removal of Simultaneous Parallel Approach Restrictive Language for SBAS and GBAS; Reduction of HL for Final Segments with Vertical Guidance; Adoption of Methodology of Calculated Obstacle Effects for Side Surfaces in Missed Approach for Vertically Guided Approaches.*

MWG Workgroup Plans: *completed redraft of Volume II Baro-VNAV Chapter; provide WP showing TERPS GQS Flexibility when compared with PANS OPS Visual Segment Surface; being Preparation of GBAS FAS Data Block Amendment for PANS OPS Volume II; introduce new task in response to IFPP/5 Paper.*

PBN-NC Workgroup Accomplishments: *Amendment to PANS OPS Permitting SBAS LPV use of ILS Obstacle Clearance Surface - ILS CAT I OAS and CRM Accepted; Acceptance of Amendment to PANS OPS to Provide Consistency with Annex 10 Amendment 85; Acceptance of SBAS LP Criteria Amendment; rewrite of PANS OPS RnP Criteria in progress; adoption of DMAS Calculation for Missed Approach RNP < 1.0.*

PBN Workgroup Accomplishments: *RF Leg to FAF Criteria (2 items); Instrument Procedures (3 items)*

PBN Workgroup Plans: *prepare text to populated ICAO Doc 8168 Volume II, Part III, Section 1, Chapter 6 – GBAS; collaborate with EUROCONTROL and US NSP Member on APV Terminology; Completion of RF leg to FAF Criteria and Missed Approach Criteria; Prepare SBAS LPV ICAO Doc 8168 Volume I material.*

Helicopter Workgroup (HWG) Accomplishments: *PinS LPV Criteria from IFPP/9 (Editorials); DOC 8697 Charting for PinS Approach Maneuvering Visual Segments; DOC 8697 Charting for PinS Departure Maneuvering Visual Segments; Introduction of Helicopter PinS LPV Charting Concepts.*

HWG Plans: *Collaborate with IWG and finalize Helicopter PinS LPV Charting and Promulgation Amendments; review RNP 0.3 Criteria for applicability to all helicopter phases of flight.*

ACTION: Mr. Mike Webb, FAA/AFS-420, will provide an update at the next forum.

Meeting 12-02

Mike Webb, FAA/AFS-420 and U.S. Member of the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the recent ICAO/IFPP Integration Working Group (IWG) meeting.

Mike stated that one of the major outcomes from the September 2012 meeting is a White Paper, currently in draft form, to be part of a State Letter regarding PBN naming conventions.

Mike added that there had been two meetings of the Integration Work Group and discussed a number of the tasks being discussed by the group ([see slide #3; complete list of IWG tasks can be found on slides 4 and 5](#)).

Mike provided a detailed update on the progress made regarding ICAO Naming Concepts for PBN Instrument Procedures. Mike stated that the proposed use of parentheses in procedure titles is currently supported by ICAO Member States and the group is looking into how use of the parentheses can be expanded in the future naming of PBN procedures. He discussed the meaning of the various parentheses (or lack thereof) with regard to specific lines of minima ([see Slides #9 and #10](#)).

Mike also briefed the group regarding the group's discussions regarding the Approach PBN Requirements Box ([see slide #11](#)) and Arrival/Departure Requirements Box ([see slide #12](#)). Various chart concepts were shown as part of the briefing, [see slides 13 – 15](#).

When asked about procedures using both conventional & RNAV components, Mike stated that those cases were still being looked into.

ACTION: Mike Webb, FAA/AFS-420, will provide an update at the next ACF.

Meeting 13-01

Mike Webb, AFS-420 and U.S. Member of the ICAO Instrument Flight Procedures Panel (IFPP), [provided an update](#) on the ICAO/IFPP Committee activities and an overview of the key topics of the recent ICAO/IFPP Integration Working Group (IWG) meeting.

Mike stated that since the last ACF, a meeting was held in Hong Kong to work on the drafting of the next State Letter regarding Performance Based Navigation (PBN) procedure naming conventions. The meeting included discussions related to said naming conventions, charting proposals for helicopter procedures and new charting requirements to support PBN (a PBN Requirement Box).

Mike voiced that there is some controversy around certain sections of the State Letter related to the implementation date for equipment manufacturers and for States to be in compliance. The recommendation had been for compliance to be met by 2028, but Mike reported that a number of parties in attendance feel that the date needs to be sooner. An ad-hoc working group, focused on settling a date for compliance is scheduled to convene in the fall of 2013.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

Meeting 13-02

Mike Webb, AFS-420 and U.S. Member of the ICAO Instrument Flight Procedures Panel (IFPP), [provided an update](#) on actions taken since the last ACF. Mike commented that both the

sequestration and the closing of the Government in October impacted activities to the extent that he was unable to attend the October ICAO meeting.

Mike acknowledged the efforts and support received from John Moore, Jeppesen, during the Government closure, stating that John was able to attend the October ICAO meeting as an advisor.

Mike briefed that an ICAO state letter regarding chart naming was released in the Spring of 2013. Mike reviewed the current work being done by the ICAO Integration Work Group (IWG), stating that unfortunately, little progress was made due to the lack of the U.S. participation

Mike reviewed details of the contents of the ICAO state letter, highlighting those parts that the U.S. was in agreement or disagreement with. Mike stated that the U.S. disagreed with changing RNAV to RNP in procedure titles. The U.S. does not see significant benefit to changing the name and is not in support of the large financial impact associated with such a change. Mike suggested that it is possible the Europeans are also not in support of this aspect of the proposed name changes. The ICAO response to U.S. comments is pending.

Mike commented that 2022 is the proposed date for implementation of the PBN charting items.

Mike commented that the next meeting of the Performance Based Operations Aviation Rulemaking Committee (PARC) PBN Charting Action Team is scheduled in November 2013.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

Meeting 14-01

Mike Webb, AFS-420 and U.S. member of the ICAO Instrument Flight Procedures Panel (IFPP), [provided an update](#) on the ICAO/IFPP Committee activities and an overview of the key topics of the recent spring meeting of the ICAO/IFPP Integration Working Group (IWG) held in Dubai, UAE.

Mike reported that there has been resolution of the ICAO State letter regarding Performance Based Navigation (PBN) procedure naming conventions. ICAO will change the PBN procedure title from RNAV to RNP by 2022. The US is going to retain RNAV in future PBN procedure titles. That is the only difference that the US will file and plans are to adopt all other ICAO PBN charting recommendations.

George Bland, USAF, asked if the ICAO Aeronautical Charting Manual Doc 8697 will be updated with the PBN charting standards by 2022. Mike stated that the manual will not be updated until all of the PBN details have been finalized.

Mike then presented an overview of Performance Based Operations Aviation Rulemaking Committee (PARC) PBN Procedure Naming Action Team activities since the last ACF. The team focus is on determining recommendations to present to the PARC regarding an implementation strategy. In order to do this, the group has come up with several prototype approach plates showing the myriad of possibilities with regard to showing a single NAVSPEC vs multiple NAVSPECS on a single procedure. The prototypes also depict a PBN requirements box presented in different ways and in different locations on the chart that are still under consideration by the Action Team. A sampling of prototypes was presented to the group.

Kevin Bridges, AIR-131, stated that if multiple NAVSPECS are going to be used on a single procedure, the whole procedure could be removed from the pilot's database if unable to comply with any part of the PBN requirements for that procedure. Martin Zillig, Lido, stated that if portions of the procedure are unusable, the FMS may be able to remove just the transitions that are not compatible.

Rob Goodson, NGA, asked if other chart producers will have to comply with the charting requirements for PBN. Ted Thompson, Jeppesen, stated that the PBN information that is on the source document will be charted, however, the details of *how* the information is presented on the chart could differ.

Mike stated that by the next ACF he expects the PARC to have a set of recommendations ready to present to the FAA.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

Meeting 14-02

Mike Webb, AFS-420 and advisor to the U.S. Delegation to the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the recent summer meeting of the ICAO/IFPP Integration Working Group (IWG).

Mike announced that Robbie Myers, AFS-420, replaced Mike as the U.S. representative member on the ICAO IFPP. Mike will now serve as an advisor.

A complete list of work done regarding IFPP/12 is provided on [slide #3 of PowerPoint](#) presented at the ACF. The papers related to these items are in the final stages of being prepared for endorsement. Future tasks for IFPP/13 are listed on [slide #4](#).

ACTION: Mike Web, AFS-420, will provide an update at the next ACF.

MEETING 15-01:

Mike Webb, AFS-420 and advisor to the U.S. Delegation to the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the ICAO/IFPP Integration Working Group (IWG), [see Slide #3](#).

Mike discussed the ongoing debate regarding the titling of procedures based on GBAS ([See Slide #4](#)). Six States, including the U.S., title GBAS procedures GLS, and 1 state, Spain, titles their procedures GBAS. Various GBAS charting examples were shown ([See Slides 5-6](#)). Mike then reviewed the actions taken to address GBAS terminology ([See slides 7 – 9](#)). The U.S. delegation is looking into how the U.S. can align GBAS terminology with the GLS definition, including the possibility of renaming of GLS procedures GBAS.

Mike briefly discussed Fixed Radius Transitions (FRT) and the work being done to amend ICAO Annexes 4, 11 and 15. The FAA is not planning on implementing FRT.

Mike then discussed the charting issues related to the use of conventional NAVAIDs on PBN procedures. Work is being done to standardize the depiction of information shown when NAVAIDs are utilized as waypoints.

Other charting topics currently being discussed by the working group are listed on [slides 13-15](#).

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

MEETING 15-02:

Mike Webb, AFS-420 and advisor to the U.S. Delegation to the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the ICAO/IFPP Integration Working Group (IWG), [see Slide #2](#).

Mike provided a brief on the meeting held in Montreal this past September. Mike discussed the ongoing debate regarding the titling of procedures based on GBAS. The U.S. delegation is looking into how the U.S. can align GBAS terminology with the GLS definition, including the possibility of renaming of GLS procedures GBAS.

Next Mike discussed several subjects that are currently under discussion within the ICAO/IFPP Committee. He touched on updates being done to Helicopter Point-in-Space criteria, work being done internationally on specifications for Hybrid Procedures, topics related to the Relocation and Renaming of Significant Points, and work being done on the Classification of ATS Routes. More information on these topics is included in [Mike's presentation slides](#).

Ron Renk, United Airlines, stated that procedure name of GLS approaches is of huge concern to industry. He stated that the naming needs to be consistent or it can cause confusion in the cockpit. Lev Prichard, APA, agreed that the chart naming is a huge issue, especially with regards to training. Mike stated that the equipment manufacturers are asking for a reevaluation of the chart naming of RNAV and GLS due to these recognized issues.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

MEETING 16-01:

Mike Webb, FAA/AFS-420 and advisor to the U.S. Delegation to the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the ICAO/IFPP Integration Working Group (IWG), [see Slide #3](#).

Mike also spoke to several other charting topics that are being discussed in working groups in preparation for the IFPP 13th Panel Meeting in September 2016. He touched on issues related to a revision to the RNP AR Procedure Design Manual, the charting of procedure design magnetic variation, and the restructuring of PANS OPS Volumes I and II. More information on these topics is included in Mike's [presentation slides](#).

ACTION: Mike Webb, FAA/AFS-420, will provide an update at the next ACF.

MEETING 16-02:

Mike Webb, FAA/AFS-420 and advisor to the U.S. Delegation to the International Civil Aviation Organization (ICAO) Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the ICAO/IFPP Integration Working Group (IWG), see [Slide #3](#).

Mike briefed revisions to several documents supporting performance based navigation (PBN) implementation that will be submitted to ICAO. Detailed information on the specific documents being revised is included in Mike's [presentation slides](#).

One topic Mike discussed that generated discussion was the charting of conventional NAVAIDs on PBN procedures. Brian Townsend, American Airlines, asked if there is a requirement for the charting of latitude and longitude on waypoints. Mike replied that to date, there is no such requirement. Ted Thompson, Jeppesen, stated that his charting offices are in the process of removing charted coordinates for waypoints on SIDs and STARs and plan to retain coordinates only on NAVAIDs and unnamed turn points. Brian voiced support for this decision.

Valerie Watson, FAA/AJV-553, commented that she sees two items in Mike's discussions that will impact the FAA. The first is in regards to the depiction of NAVAIDs. Currently, RNAV procedures in the U.S. only show the name and identifier of a NAVAID used as a waypoint. Frequency, channel, Morse code and geographic coordinates are not charted for these NAVAIDs and a revision to chart all of this data on RNAV procedures would have a huge impact. Mike stated that this topic was newly introduced, has not yet been decided upon and will continue to evolve. The second issue of concern is in regards to the requirement to depict all obstacle penetrations to the runway visual surface. Valerie stated that the U.S. has filed a difference to ICAO Annex 4 because there are too many obstacle penetrations to show them all on the charts. She explained that early attempts to depict all of these obstacles rendered the runway environment undecipherable at the current chart scale. Valerie stated that the FAA cannot comply with that requirement at this time.

Ted Thompson, Jeppesen, provided some considerations for Mike to share with ICAO regarding chart complexity on SIDs and STARs. He stated that multiple transitions per procedure are common in the U.S. The result is fewer charts, but more congestion and chart complexity. In Europe, only one transition per chart is depicted. The result is less complexity but many more charts. Ted stated that his hope is that, with future of data driven charts, only one transition will be shown and the charts will be simpler.

John Moore, Jeppesen, stated these types of conversations are very helpful when providing U.S. input to ICAO. He recommended the formation of a workgroup that he would chair to talk about these issues. Individuals interested in participating in the ICAO workgroup should contact John Moore (john.moore@jeppesen.com).

ACTION: Mike Webb, FAA/AFS-420, will provide an update at the next ACF.