I. Opening Remarks

The Aeronautical Charting Forum (ACF) was hosted by Pragmatics, Inc. at their location in Reston, VA. Valerie Watson, AJV-553, opened the Charting Group portion of the forum on Wednesday, April 29. Valerie acknowledged ACF Co-chair Tom Schneider, AFS-420, who presided over the Instrument Procedures Group (IPG) portion of the Forum the previous day. Valerie also expressed appreciation to Pragmatics, Inc. and Pragmatics, Inc. representative Steven VanCamp for hosting the 15-01 ACF.

II. Review Minutes of Last Meeting, ACF 14-02

The minutes from ACF 14-02 meeting were distributed electronically last fall via the AeroNav ACF website: http://www.faa.gov/air_traffic/flight_info/aeronav/acf/. The minutes were accepted as submitted with no changes or corrections.

III. Agenda Approval

The agenda for the 15-01 meeting was accepted as presented.
IV. Presentations, ACF Working Group Reports and ACF Project Reports

ICAO/IFPP Committee Report

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.

PARC PBN Procedure Naming and Charting

Mike Webb, AFS-420, provided an update on the Performance Based Operations Aviation Rulemaking Committee (PARC) Performance Based Navigation (PBN) Procedure Naming Action Team activities since the last ACF. Mike reviewed the PARC recommendations that the Action Team agreed upon and have forwarded to the FAA. The recommendations state that PBN procedures in the U.S. will retain “RNAV” in the procedure title despite the fact that ICAO will be adopting “RNP” in the title. The recommendations also state that PBN procedures will only include a single navigation specification shown in parentheses in the procedure title. Every PBN procedures will also contain a PBN Requirements Box depicted in the briefing strip portion of the chart.

Mike then discussed the inclusion and make-up of the PBN Requirements Box for instrument approaches. The Action Team (AT) discussions regarding the PBN Requirements focused on where on an instrument approach chart the box would appear, the content and sequence of the content within the box, and recommended abbreviations and acronyms used within the box. Mike showed several examples of the recommended depiction (Slides 10, 12, 18 and 20).

Mike then discussed issues related to chart titling and use of different chart title parentheticals (Slides 23, 25 and 27).
John Collins, GA Pilot, inquired if such procedures would be expanded to the GA community to utilize. Mike replied that training will be needed by the GA community as a whole in order to be able to utilize such procedures. John then inquired as to when the aviation community can anticipate seeing the first charts with PBN requirement boxes. Mike replied that the goal is to have everything in place by 2022.

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

**Airport GIS**

Dr. Mike McNerney, AAS-100, provided an update on the progress made on the FAA Airports GIS program. Since the last ACF, several new developments have taken place *(See Slides 5 – 7 for complete details)*:

- The Surface Analysis and Visualization Tool (Airport 20:1 Tool) is now live to all Service Centers. Education efforts are ongoing via Webinar to all centers on how to utilize the 20:1 Tool.
- The Airports GIS web site (URL: [www.airports-gis.info](http://www.airports-gis.info)) is now live and updates are provided quarterly.
- The Airports GIS Cloud server is live and includes aerial photography with the goal of 1000 airports by September. 1600 legacy ALP files have been uploaded to the cloud server.
- Part 139 airport signage diagrams have been uploaded to the cloud server.
- Airports can do self-analysis of data uploaded to the cloud service, enabling a more pro-active means to providing and insuring accurate data.

John Collins, GA Pilot, inquired as to whether the public and interested airport stakeholders could access the airport data. Dr. McNerney replied that AAS-100 can only release information to the FAA and Government agencies. He explained that AJV-5 would be responsible for release of the data and added that currently individual airports have the means to give permission to individuals to access their specific airport data. Several members of the audience expressed their displeasure at the lack of public accessibility. Dr. McNerney said that he would look into the possibility of public access to some of the airport GIS data.

Dr. McNerney stated that FAA Airport Planners were unsatisfied with the systems inability to print out detailed Airport Layout Plans (ALPs). He reported that this issue is being worked on and that six of the eight standard sheets of the ALP set should be available via print by June 2015 and the remaining two would be available via print in FY 2016.

Dr. McNerney stated that it is still the intent of the FAA to establish the Airports GIS to become the authoritative source for airport data by 30 September 2015. However, this date is only the initial operating capability. There will be a period of additional testing until April 2016 before it goes into production.

Delta Air Lines expressed their desire to have access to the airport GIS data to enable their engineering teams to develop and maintain engine out procedures. Others in the audience echoed Delta’s desire to have access to the data. Dr. McNerney acknowledged the need for such access for engine out procedures and stated that there has been some work on trying to establish a tool specifically for engine out procedures, but reiterated that the Office of Airports is not authorized to publicly disseminate the data.
Dr. McNerney commented on several new Documents that were officially released since last ACF (See Slide #11).

Justin Nahlik, NGA, inquired if Surface Movement Guidance Control System (SMGCS) data would be collected and stored in Airports GIS. Dr. McNerney stated that SMGCS data would be collected and the Airports GIS Database would eventually serve as the central repository for the data.

**ACTION:** AAS-100, will provide an update at the next ACF.

**Discontinuation of VOR Services**

Leonixa Salcedo, AJM-324, briefed the issue. Leonixa gave an overview of the VOR MON program and a status report since the last ACF. She reviewed the progress made to date on identifying VORs that may be decommissioned. She pointed out to the audience a significant change in the number of VORs expected to be decommissioned. Previously, it had been reported that approximately 50% of all the VORs in the NAS would be decommissioned. That estimation has been readjusted to just over 33% (approximately 308).

Leonixa stated that since the last ACF, the criteria for decommissioning VORs has been developed by the FAA and MITRE. Discussions have also taken place between the FAA and the DoD, during which the military emphasized that their operational requirements within the NAS require that fewer VORs be decommissioned.

Leonixa explained that the VOR MON program will be on a 10 year timeline of two phases, with the decommissioning of approximately 308 VORs total. The first phase goes from 2016-2020 and removes 100 VORs. The second phase goes from 2021-2025 and removes the remaining 208 VORs. In the short term, Leonixa stated that a list of VORs initially selected for decommissioning will be released to the public sometime in 2015.

John Collins, GA Pilot, inquired about flight testing the 77 NM Standard Service Volume (SSV) for VORs. Dale Courtney, AJW-292, commented that the initial testing data and feedback is promising.

John Moore, Jeppesen, asked how many airports would be designated as MON Airports. Leonixa stated that the plan is for 145 MON Airports. (See New Topic: RD 15-01-295, Charting of Airports in the MON)

Rich Boll, NBAA, asked how the discontinuation of VOR services would impact Class II Navigation capabilities along the coast of the U.S. Leonixa stated that there would be some impact, but more often than not, VOR services along the coast would see an improvement with the higher SSV. Rich emphasized that NBAA remains concerned about any loss of Class II Navigation along the coast.

**ACTION:** Leonixa Salcedo, AJM-324, will provide an update the next ACF.
National Route Strategy / PBN Implementation Process FAA Order 7100.41

No update provided.

**ACTION:** Robert Novia, AJV-14, to provide an update at the next ACF.

VFR Chart Print Schedule Realignment and Synchronization

Rick Fecht, AJV-5223, briefed the issue. Rick stated that an internal study group was formed and is currently working on how to implement the change in print schedule. The study is due to be completed by the start of next fiscal year. Rick will provide an update on progress made at next ACF.

**ACTION:** Rick Fecht, AJV-5223, to provide an update at the next ACF.

NOTAM Briefing

Lynette Jamison, AJR-B11, briefed the issue. Lynette discussed the ongoing transition of the FAA NOTAM system to the Federal Notam System (FNS), an ICAO compliant NOTAM system. The goal is to harmonize the NOTAM system and for it to be fully converted to the ICAO based system by 2020. The NOTAM office is working with various stakeholders to gain feedback and input on the new system.

Lynette discussed how the budget of the NOTAM office is changing. The new model requires the proponent office in the FAA to fund their requested changes to the system. This change took place in January 2015.

Lynette will provide updates as warranted during the course of the transition of the NOTAM system.

Military Unmanned Aircraft Procedures

CW4 Mark Burrows, U.S. Army, provided a detailed brief on the testing and development work within the U.S. Department of Defense and the U.S. Army for establishment and integration of Military Unmanned Aircraft Vehicles (UAVs) flights into the NAS.

CW4 Burrows discussed the testing conducted by the military and presented several examples of UAV Instrument Approach Procedures produced by NGA for military use. After the simulator and live flight tests, they found that with standardized procedures that match manned aviation as much as possible, there was no significant impact on the NAS. In the end, the goal is for NGA to produce standardized UAV charts to be available in digital format and intended solely for military use.
EFAS/Flight Watch/Clearance Delivery Changes

No update provided.

**ACTION:** Steve Villanueva, AJR-B, to provide an update at the next ACF.
V. Outstanding Charting Topics

07-01-195 Charting & AFD Information Re: Class E Surface Areas

Paul Gallant, AJV-113, reviewed the issue. Paul stated that the Aeronautical Information Manual (AIM) Chapter 3 changes have been submitted and are scheduled for publication December 2015. Paul commented that the AIM guidance was expanded regarding the specifics of Class E airspace and associated extensions when an airport’s traffic control tower closes. Work continues to be done on the revision and updating of airspace legal descriptions. Paul will follow up and process revised airspace descriptions as they are received from the Service Areas.

STATUS: OPEN

ACTION: Paul Gallant, AJV-113, to report on publication of revised AIM guidance.

ACTION: Paul Gallant, AJV-113, to report back on the work done to update airspace legal descriptions.

09-01-214 Low Visibility Operations/SMGCS (LVO SMGCS) Taxi Charts (Previously title as SMGCS Taxi Charts)

Bruce McGray, AFS-410, reviewed the history of LVO SMGCS. Bruce stated that currently, the FAA is not charged with the production of SMGCS charts. He conceded that the FAA does have a responsibility to provide accurate and current SMGCS data, though he admitted that funding for collection & dissemination of the data is not yet available. Bruce added that the work being done by Airports GIS to database LVO/SMGCS information will hopefully help make the data available in the near future.

Bruce discussed the work currently being done to create a set of standardized symbols to be submitted to ICAO.

Valerie suggested that this issue can be closed in the ACF since the FAA does not currently have any plans to produce SMGCS charts.

Ted Thompson, Jeppesen, expressed his support of the efforts made by the FAA with regard to sourcing SMGCS data. He stated that he is fine with closing the issue until such time as the FAA plans to produce SMGCS charts.

Rich Boll, NBAA, requested a clarification of the FAA’s future plans to produce SMCGS charts. Valerie re-stated that there are currently no plans for the FAA to produce SMGCS charts, but that this may change in the future. Rich then expressed that if/when SMGCS operations fall under Part 135, NBAA would likely bring the issue of SMCGS charts back to the ACF-CG.

STATUS: CLOSED
**11-01-238 Aerobatic Area Symbols on VFR Sectional Chart**

Mike Wallin, AJV-5331, briefed the issue. Mike stated that AFS-800 has determined that there are 173 Aerobatic Training Areas (ATAs) that warrant publication on VFR charts. AFS-800 is still working to finalize the data and forward it to NFDC so that publication can begin. Mike also stated that since the last ACF, the VFR charting team has developed a symbol for the depiction of ATAs on VFR charts. The new symbol will be placed in the approximate center of the area where operations are conducted. It is planned that supporting detailed Aerobatic Training Area information will be published in the Notices section of the Airport/Facility Directories (AFD) as well as a standard note in the airport entry.

Valerie Watson, AJV-553, stated that the IACC Requirement Document for the proposed symbol has been prepared and is ready to be presented to the MPOC.

Mike stated that once the specification for the symbol is in place, an incremental implementation will begin. Mike is working with Bob Carlson, AJV-5641, and Rick Fecht, AJV-5223, on the implementation plan.

Ted Thompson, Jeppesen, inquired as to when this information will be databased in NASR. Mike stated that initially, the locations will be published in the NFDD as add-on pages. NASR is being updated to create a Miscellaneous Activity Area section that will house these areas, Ultralight Activity Areas, Glider Activity Areas, etc. Once this is complete, ATAs will be entered into NASR.

**STATUS: CLOSED**

**13-01-261 Alaska Ground Based Transceivers (GBT) Locations**

Valerie Watson, AJV-553, briefed the issue. Valerie stated that she has been in contact with Maureen Cummings-Spickler, AGC-520, the attorney in FAA General Counsel assigned to the ADS-B program. Ms. Cummings-Spickler informed Valerie that she is working both the ACF request and a Freedom of Information Act (FOIA) request for release of ADS-B locations. Valerie restated that there is no intent for the FAA to chart this information, however she will continue to try to obtain the release of the data and will report back at the next ACF.

Valerie and Bob Carlson, AJV-5641, have both reached out to the Alaska Regional Office on the potential of establishing ATS-B coverage graphics. A response has yet to be received.

Lynette Jamison, AJR-B11, commented that the NOTAM office is working with relevant offices within the FAA on generating a NOTAM process to inform pilots in the event of a GBT outage.

**STATUS: OPEN**

**ACTION:** Valerie Watson, AJV-553, to report back on her discussions with FAA Legal regarding the release of ADS-B tower locations.
**13-01-262 Airport Facility Directory (AFD) Depiction of Traffic Pattern Altitudes**

Valerie Watson, AJV-553, reviewed the issue. Mike Wallin, AJV-5331, stated that NFDC is still working this issue. Valerie asked Mike if there is a new policy to collect all Traffic Pattern Altitude (TPA) data, whether standard or not, and populate the information in NASR. Mike was not sure if that policy was in place and committed to looking into the issue further and reporting at the next ACF.

**STATUS: OPEN**

**ACTION:** Mike Wallin, AJV-5331, to report on progress in population of all Traffic Pattern Altitudes in NASR.

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**13-01-266 Standardized Depiction of Altitude Restrictions on Bottom, Top and Maintain Altitudes on Standard Terminal Arrival (STAR) and Standard Instrument Departures (SIDs)**

Tom Schneider, AFS-420, briefed the issue. Tom stated that the interim guidance for publication of Top Altitudes on Standard Instrument Departures (SIDs) has been published via memo until FAA Order 8260.46F is released. The publication of Top Altitudes on SIDs is being implemented.

Tom reported that the issue of publication of Bottom Altitudes on Arrivals is still being worked in the Climb/Descend Via Workgroup. Tom reported that there are some complicated aspects to bottom altitudes, both with the overall policy and with individual procedures – these issues are being worked. It has been determined that there will be no limit on the number of Bottom Altitudes that can be depicted on a STAR procedure. Bottom Altitudes may be related to transitions, airports, aircraft type, direction or runway. Also see new agenda item 15-01-293, STAR Terminus Point Standardization.

Tom also reported that the Bottom Altitude language has been incorporated into Draft FAA Order 8260.19G, and that AFS-400 is in the process of resolving comments received.

**STATUS: OPEN**

**ACTION:** Tom Schneider, AFS-420, to provide an update on the Bottom Altitude guidance in FAA Order 8260.19G.

**ACTION:** Valerie Watson, AJV-553, to draft an IACC Requirement Document to support the charting of Bottom Altitudes on STARs and to create prototype STAR charts.
13-01-267 Addition of ATC Radar Telephone Number in FAA AFD

Gary Fiske, AJV-82, reviewed the issue and stated that there is still no consensus in ATC to publish phone numbers. Gary expressed ATC’s concern that allowing public access to the numbers could potentially lead to the numbers being used inappropriately.

Valerie Watson, AJV-553, commented that since the last ACF, a few CLNC DEL phone numbers have appeared in the AFD airport entry in the COMM/NAV/WEATHER REMARKS section. These numbers were submitted by individual facilities to NFDC, published in NASR & pulled into the AFD. This suggests that at least some ATC facilities are willing to release their own information, but does not constitute an overall ATC policy. Gary stated that if ATC senior management decides to establish a consensus policy against the publication of phone numbers, this information may need to be removed from the AFD.

Rich Boll, NBAA, emphasized the complexity and time sensitive issues for pilots obtaining clearances, especially in busy and complex airspace like Chicago. Rich voiced that obtaining a clearance directly from the controller by phone can save time for both the pilot and for ATC.

There was consensus to close the topic given ATC’s unwillingness at this time to do a wholesale release of phone numbers. Gary stated that with the upcoming Flight Service responsibility/services changes, it may be that ATC will adopt a phone number release endeavor, but that is yet to be known.

Rich stated that given the consensus to close the item, NBAA will work directly with each Center to request that they provide telephone numbers to NFDC for ultimate publication in the AFD.

STATUS: CLOSED

13-01-268 Making Alternate Missed Approach Text Accessible to ATC

Gary Fiske, AJV-82, provided an update on actions taken since last ACF. Gray stated that after taking the suggestion of Brad Rush, AJV-54, at the last ACF, he tried to use the suggested website to look up procedure source documents. It was found that the website was difficult to navigate, the documents not easily accessible and therefore is not seen as a viable solution for ATC to access alternate missed approach information. Gary stated that either the ACF needs to go back to the original recommendation that the Alternate Missed Approach text be published in the front matter of the TPP or this issue should be closed.

Valerie Watson, AJV-553, stated that Aeronautical Information Services (AIS), will not publish the Alternate Missed Approach text in the front matter of the TPPs.

Tom Schneider, AFS-420, asked if the FAA Form 8260-3 is being distributed per the guidelines in FAA Order 8260.19F. It was not clear if the guidelines were being followed, and if they were being followed, who within the different ATC facilities was getting the information. Valerie agreed to investigate the whether the distribution process is being followed. It will then be up to the facility to ensure the controllers have that information readily available.
It was decided to close the item for now given that there is no charting solution. NBAA stated that they will likely revisit the topic after further consultation with ATC and other entities within the FAA.

**STATUS: CLOSED**

**13-01-270 Stepdown Fix Chart Notes**

Kevin Bridges, AIR-131, provided an update. Kevin stated that activity on this topic is ongoing within the US-IFPP and that they will determine whether the guidance needs to be revised or expanded. Current policy regarding the publication/charting of stepdown fix notes remains unchanged until further notice.

**STATUS: OPEN**

**ACTION:** Kevin Bridges, AIR-131, will report at the next ACF.

**14-01-274 Solar Power Plant Ocular Hazard Symbol on Aeronautical Charts**

Valerie Watson, AJV-553, reviewed the topic. Rick Fecht, AJV-5223, showed the new, more prominent charting depiction of Ocular Hazards on FAA VFR charts. The revised depiction was well received by the audience.

Valerie asked about the source of the ocular hazard data. Rick stated that the requests to date have come in via special request from the Western Service Center and the areas are not currently databased in NASR.

Ted Thompson, Jeppesen, stated that if these hazards are not sourced through NASR, they will not appear on any commercial charts.

Mike Wallin, AJV-5331, stated that he would look into how Ocular Hazards could be databased in NASR. In the short term, they can be published as a NFDD add-on page.

**STATUS: OPEN**

**ACTION:** Mike Wallin, AJV-5331, will investigate the databasing of Ocular Hazards in NASR.

**14-01-276 Removal of Non-Alaska Facility Information from Alaska Supplement**

Valerie Watson, AJV-553, reviewed the issue. Bob Carlson, AJV-5641, reported that his team is close to completing the task of resolving the AFD/AK Supplement discrepancies forwarded to his team by Lynette Jamison, AJR-B1, following the previous ACF.

Mike York, AAL-03, commented that in his discussions with Alaskan aviation groups, including AOPA, they decided that they would like to see the majority of the non-Alaskan information in the Supplement removed. Mike stated that of the 129 non-Alaskan airports listed in the Supplement, only 17 airports should
remain. He also said that the non-Alaska military information would remain in the supplement. Mike will send the proposed list of non-Alaskan information slated for removal to Bob Carlson, but no action will be taken.

Valerie pointed out that at the last ACF, AOPA voiced strong support for retaining the current non-Alaskan information in the Supplement. AOPA was not in attendance at the current ACF.

**STATUS: OPEN**

**ACTION:** Mike York, AAL-03, to supply non-Alaskan material identified for removal to Bob Carlson, AJV-5461.

**ACTION:** AOPA will be provided an opportunity to non-concur with Mike York’s proposal at the next ACF.

14-01-277 Discontinuation of World Aeronautical Charts

Rick Fecht, AJV-5223, reviewed the topic. Rick reported that the Federal Register Notice to address the proposal to discontinue the WACs has yet to be released. The Notice is still under review by FAA Legal, but it is anticipated that it will be released soon. Until the Federal Register Notice is published and comments are received, disposition of the WAC charts remains on hold.

**STATUS: OPEN**

**ACTION:** Rick Fecht, AJV-5223, will report back on the Federal Register Notice at next ACF.

14-01-278 Alaska Designated Common Traffic Advisory Frequency Area Chart Depictions

Rick Fecht, AJV-5223, reviewed the topic. Rick presented examples of the revised charting of the Alaskan CTAF areas on the Anchorage chart inset. The sectional chart now includes a text box to direct users to the CTAF area inset.

Mike York, AAL-03, praised the work done by the Visual Charting team. Mike reported that the response he has received back from chart users in Alaska has been positive.

**STATUS: CLOSED**

14-01-279 Naming of FAA Certified, National Disseminated AWOS-3 Systems on Private Use Airports

Valerie Watson, AJV-553, reviewed the issue. There was no update available on the progress made on the publishing of FAA Order 7350.9.

Valerie asked Tom Schneider, AFS-420, if the 8260.19 policy needs to be changed to support use of stand-alone AWOS location identifiers in remote weather system notes on IAPs. Valerie presented an example of
the note as it is currently published. Tom agreed that he will have to look into revising the guidance when establishment & publication of stand-alone automated weather systems has been finalized.

Ted Thompson, Jeppesen, asked how stand-alone weather systems will be published. Mike Wallin, AJV-5331, will look into the publication of these systems and report at the next ACF. It was noted that Stand Alone AWOS-3 systems are already in use and are currently published in the AFD.

**STATUS: OPEN**

**ACTION:** Mike Wallin, AJV-5331, to report back on incorporation of stand-alone weather systems in FAA Order 7350.9.

**ACTION:** Mike Wallin, AJV-5331, to investigate how and when stand-alone weather systems will be published in NASR.

**14-02-280 MEA Usage on SIDs**

Tom Schneider, AFS-420, provided an update. Tom stated that he has written guidance for Draft FAA Order 8260.46F that will ensure that MEAs will not be raised to support ATC altitudes. The Order is currently in draft form and internal coordination has begun.

John Collins, General Aviation Pilot, asked Tom if the same revision will be applied to the STAR order. Tom stated that he would look at placing the same type of guidance in Draft Order 8260.19G for STAR application.

**STATUS: OPEN**

**ACTION:** Tom Schneider, AFS-420, to report on proposed revision of the FAA Order 8260.46 guidance on the use of MEAs on Departures and to review the STAR Order 8260.19G to see if the same revision should be applied to Arrivals.

**14-02-281 Publish Electronic Form of MVA Charts**

Valerie Watson, AJV-553, briefed the topic. Valerie stated that since the last ACF, AIS has established a new public website where MVA charts are published as non-geo-referenced PDFs.


Ted Thompson, Jeppesen, commented that the pilot community would prefer to see the MVA charts as a geo-referenced overlay on an electronic chart. Rich Boll, NBAA, echoed Ted’s comments and inquired as to when the geographic coordinate data for the shape files would be made available.

Valerie responded that the FAA was pursuing the publication of geo-referenced graphics but that no specific timeline had been established. She reiterated that line files, admittedly difficult to work with, of the
geographic coordinates are still available and may be procured by contacting Fred Milburn, AJV-56, via email at Fred.Milburn@faa.gov.

ACF consensus was to close the agenda item and move it to a briefing topic. A representative from AIS, Air Traffic Support Team will provide a briefing at the next ACF to update the progress on the release of geo-referenced graphics.

STATUS: CLOSED

14-02-282 VASI PAPI Differences

Valerie Watson, AJV-553, briefed the issue. Valerie stated that Brad Rush, AJV-54, had taken the issue to the FAA office of Lighting Systems, which is responsible for Order 6850.2B governing Visual Guidance Lighting Systems. That office responded that changing the PAPI distance to 4 NM would be very costly because it would require that all existing PAPIs be resurveyed for compliance. Brad asked if the VASI could be changed to 4 SM. The Lighting Systems Office responded that they would have to do some research to look at the impacts of this change.

STATUS: OPEN

ACTION: Brad Rush, AJV-54, to report on his continued discussions with the Lighting Systems Office.

14-02-283 Charting of Transmission Lines on VFR Charts

Rick Fecht, AJV-5223, provided an update on the actions taken by Visual Charting since last ACF. Rick stated that the VFR Charting team evaluated the impact of changing the transmission line depiction. He reported that it would take over 10,000 man-hours to manually change the transmission line depiction on all VFR charts. Rick emphasized to the audience that the current charting process is manual and such a large change is not feasible at this time.

LCDR Brian McLaughlin, USCG, restated his opinion that the current FAA transmission line depiction should be revised to enable pilots to more readily discern transmission lines from other items charted. It is his belief that if the depiction on the charts was easier to discern and interpret, pilots would be more likely to identify & avoid the hazard.

Valerie Watson, AJV-553, stated that utilizing the current manual charting process, the Visual Charting team does not have resources available to make the requested change to the charts. Valerie added that the FAA will reconsider the issue once the Visual Charts have been fully automated. Valerie stated that a business case for changing the symbology is difficult to defend as no data has been submitted to AIS to support the claim that the depiction of the lines have been a causal factor in this or similar accidents. She pointed out that the Coast Guard Investigative Report of the accident that precipitated this recommendation stated 16 causal factors for the incident, none of which were related to chart depiction of the transmission lines. Among the listed contributing factors for the subject incident were: “failure to comply with established
altitude restrictions and policy regarding low-level flight”; “lack of adequate aeronautical hazard marking on the power transmission lines” (meaning the markers on the wires, not the charts); “apparent decision of the PIC to divert CG 6017 from its flight path to overfly a Coast Guard surface asset at a low altitude”. The report stated “The Sanctuary altitude restriction is reflected in the Seattle Visual Flight Rules (VFR) Sectional Chart.” and “The power transmission lines were appropriately depicted on the Seattle VFR Sectional Chart”. The representatives from the USCG acknowledged the FAA’s position. LCDR McLaughlin responded that the USCG would conduct research to find if there is concrete data linking the FAA chart depiction of transmission lines to accidents of this type. This issue remains open pending LCDR McLaughlin’s findings.

**STATUS: OPEN**

**ACTION:** LCDR McLaughlin, USCG, to provide accident/incident report findings linking transmission line chart symbology to accident incidence.

### 14-02-284 DME Facilities – Charting and MAGVAR Issues

Dale Courtney, AJW-292 and Chair of the DME Workgroup, [briefed the topic](#). He stated that the initial DME Workgroup meeting has taken place and a number of issues were discussed. Dale stated that the scope of the VOR MON program is to decommission an estimated 308 VORs by 2025. The program will also investigate the addition of DMEs for RNAV use to fill in coverage gaps. Dale reported that NASR can accommodate DMEs in the database as a NAVAID type, but that they will not be published as such until charting standards are established.

Leo Eldridge, Contract Support, AJM-324, stated that approximately 2000 VOR/DME procedures will be impacted. Leo asked if the remaining DME would be charted on those amended procedures after the VOR has been decommissioned. Dale responded that yes, those DMEs would still be charted if still utilized as part of the procedure. Dale acknowledged that more work is needed to understand the full impact on VOR/DME procedures.

Vince Massimini, MITRE, asked if DMEs would be charted if they were not being used as part of an approach or as a part of establishing a fix or waypoint? Vince added that pilots will want to be able to compare what they are seeing in their FMS to the charted procedure. Dale stated that DMEs that support conventional uses will be charted because their use will be identified on FAA Form 8260-2. DMEs that only support RNAV use will not be charted, but will be databased in NASR. Valerie Watson, AJV-553, added that DME facilities used as waypoints on RNAV procedures will be charted as DMEs as per the existing charting hierarchy principle.

John Collins, GA Pilot, stated that if some DMEs are only in the database, then pilots will not able to call up individual, uncharted DMEs to use as a means of triangulating distances to establish positions. He asked that if the DME is there, why can’t it be charted? Valerie stated that any DME used as a make-up of an enroute fix would be charted, but that those only used for RNAV backup would likely not be charted because they would be of limited use to a limited number of pilots. Chart clutter concerns regarding depiction of all DMEs were voiced by a number of audience participants. Dale mentioned the possibility of a “don’t chart” flag in the database to ensure the intent is clear.
It was identified that there needs to be a discussion with avionic manufacturers to ensure that the presence in the FMS and lack of chart depiction of DMEs doesn’t have any detrimental impact. Kevin Bridges, AIR-131, will investigate.

The DME Workgroup is made up of the following individuals:

<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>Dale Courtney (WG Chair)</td>
<td><a href="mailto:Dale.courtney@faa.gov">Dale.courtney@faa.gov</a></td>
<td>202-267-4537</td>
</tr>
<tr>
<td>Leo Eldridge</td>
<td><a href="mailto:Leo.eldredge@tetratech.com">Leo.eldredge@tetratech.com</a></td>
<td>571-350-0053</td>
</tr>
<tr>
<td>Valerie Watson</td>
<td><a href="mailto:Valerie.s.watson@faa.gov">Valerie.s.watson@faa.gov</a></td>
<td>301-427-5155</td>
</tr>
<tr>
<td>Ted Thompson</td>
<td><a href="mailto:Ted.thompson@jeppesen.com">Ted.thompson@jeppesen.com</a></td>
<td>303-328-4456</td>
</tr>
<tr>
<td>John Collins</td>
<td><a href="mailto:johncollins@carolina.rr.com">johncollins@carolina.rr.com</a></td>
<td>704-576-3561</td>
</tr>
<tr>
<td>Vince Massimini</td>
<td><a href="mailto:svm@mitre.org">svm@mitre.org</a></td>
<td>703-883-5893</td>
</tr>
<tr>
<td>Josh Fenwick</td>
<td><a href="mailto:josh@aeronavdata.com">josh@aeronavdata.com</a></td>
<td>618-281-8986</td>
</tr>
<tr>
<td>Lynnette Jamison</td>
<td><a href="mailto:Lynette.m.jamison@faa.gov">Lynette.m.jamison@faa.gov</a></td>
<td>540-422-4761</td>
</tr>
<tr>
<td>Lance Christian</td>
<td><a href="mailto:Lance.d.christian@nga.mil">Lance.d.christian@nga.mil</a></td>
<td>571-557-3870</td>
</tr>
<tr>
<td>Ernie Bilotto</td>
<td><a href="mailto:Ernie.bilotto@faa.gov">Ernie.bilotto@faa.gov</a></td>
<td>202-267-3551</td>
</tr>
<tr>
<td>Steve Broman</td>
<td><a href="mailto:Steven.broman@faa.gov">Steven.broman@faa.gov</a></td>
<td>202-267-6529</td>
</tr>
<tr>
<td>Al Herndon</td>
<td><a href="mailto:Aherndon@mitre.org">Aherndon@mitre.org</a></td>
<td>703-983-6465</td>
</tr>
<tr>
<td>Alex Rushton</td>
<td><a href="mailto:Alex.ctr.rushton@faa.gov">Alex.ctr.rushton@faa.gov</a></td>
<td>301-427-5186</td>
</tr>
<tr>
<td>Sally Froidge</td>
<td><a href="mailto:Sally.frodge@faa.gov">Sally.frodge@faa.gov</a></td>
<td>202-267-7040</td>
</tr>
<tr>
<td>Brad Rush</td>
<td><a href="mailto:Brad.w.rush@faa.gov">Brad.w.rush@faa.gov</a></td>
<td>405-954-0188</td>
</tr>
<tr>
<td>Jennifer Hendi</td>
<td><a href="mailto:Jennifer.hendi@faa.gov">Jennifer.hendi@faa.gov</a></td>
<td>301-427-4816</td>
</tr>
<tr>
<td>Ken Ward</td>
<td><a href="mailto:Kc3ye@aol.com">Kc3ye@aol.com</a></td>
<td>703-927-6243</td>
</tr>
<tr>
<td>Kevin Bridges</td>
<td><a href="mailto:Kevin.bridges@faa.gov">Kevin.bridges@faa.gov</a></td>
<td>202-385-4627</td>
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**STATUS: OPEN**

**ACTION:** The DME Workgroup will continue to meet to discuss the issues and Dale Courtney, AJW-292, will report.

**14-02-286 Airport Diagram Symbol for Non-Standard Runway Holding Position Marking in Conjunction with a Hot Spot**

Valerie Watson, AJV-553, reviewed the history of the issue and provided an update of actions taken since last ACF. Valerie stated that the charting specifications have been updated to allow a non-typical runway hold location in conjunction with a hot spot to be depicted on airport diagrams.

**STATUS: CLOSED**
VI. New Charting Topics

15-01-289 Adding “CPDLC” Information to Airport Diagram and Terminal Procedures and Updating the AFD

Greg Anderson, AJM-34, briefed the topic. The FAA has recently begun implementing Controller Pilot Data Link Communication (CPDLC) into the NAS. CPDLC provides a digital communication between pilots and ATC for clearances, instructions and traffic flow management. Over the next two years, CPDLC will be rolled out to 56 towers. Greg provided a detailed presentation on how the system works.

Greg reviewed the ACF recommendation which proposes that CPDLC services be indicated with the airports communication information on the airport diagram, IAPs, and in the AFD. Valerie Watson, AJV-553, asked if CPDLC was still in test phase or certified for use? Greg responded that currently, the system is in test phase at Memphis and Newark, but will soon be active at the two test airports. Soon thereafter, the system will be incrementally implemented to more airports and will be fully commissioned and functional.

Greg stated that initially, users will log in to the system using the subject airport’s ICAO location identifier (“KMEM”). In the later phase of deployment, access to CPDLC will be through the identifier “KUSA” for all airports. This will be explained in AIM guidance.

Valerie also asked Greg if the subscription service needed to utilize CPDLC was free or a paid service. Greg responded that the CPDLC service is free. He stated that in order for aircraft to be able to access and utilize CPDLC service, the aircraft have to be outfitted with the appropriate FANS 1/A capable equipment.

Discussion ensued as to how these and other digital communication services are currently published on the charts, e.g., D-ATIS, and how they should be depicted in the future. The question was raised if there should be a listing of digital services available at a given airport and on which products they would best be published. Valerie stated that she would look into how D-ATIS is currently being charted. She queried the audience as to where and on what charts this information should be published. Consensus was that the presence of CPDLC should be shown in the comm data block of charts on which CLNC DEL is currently published and that the details of specific services (DCL, D-TAXI, D-HZWXR) should be listed in the AFDs. She inquired of Greg that since the logon would be explained in AIM guidance, does the location identifier need to appear on the chart. Greg agreed that it did not need to be on the charts, but that in the initial phases it might be helpful to add it to the AFD entries. Once the logon for all services at all airports is KUSA, the individual logon ids can be removed.

Valerie stated that she will work on charting specifications for publication of CPDLC, but that the data must be sourced through conventional means (NASR). NFDC needs to investigate how to incorporate digital communications into NASR. Mike Wallin, AJV-5223, agreed to look into both a short term NASR solution (possibly referenced remarks “CPDLC: DCL LOGON KMEM” in the comm data resource) and a long term solution (a separate digital comm data resource with specific dropdown services). Greg stated that the Data Link office, AJM-34, can provide D-ATIS, PDC, and CPDLC data to NFDC for entry into NASR. Valerie made clear that only commissioned systems (NOT test or those in trial phase) should be submitted to NFDC for publication. Rich Boll questioned whether Terminal Weather Information for Pilots (TWIP) services should also be included in this list.
The question was raised as to whether CPDLC services could be announced via NOTAM as a means to help announce establishment of CPDLC services at an airport until the information is published on the charts and in the supplements. Lynette Jamison, AJR-B11, said yes, the establishment of a new CPDLC system could be announced via NOTAM. Greg stated that AJM-34 can send a list of commissioned systems to the NOTAM office.

**STATUS: OPEN**

**ACTION:** Mike Wallin, AJV-5331, will investigate how NFDC can publish the digital communication information in the short term and also look into the long term solution of adding a digital communications field to the NASR database.

**ACTION:** Greg Anderson, AJM-34, will supply a list of commissioned D-ATIS, PDC, and CPDLC systems to NFDC.

**ACTION:** Greg Anderson, AJM-34, will work with Lynette Jamison, AJR-B11, on the release NOTAMs for commissioned CPDLC locations.

**ACTION:** Valerie Watson, AJV-553, will draft an IACC Requirement Document for the depiction of CPDLC on all applicable charts.

**ACTION:** Rich Boll, NBAA, to investigate the use of TWIP to determine if it should be charted along with the other digital communications.

**15-01-290 VFR Charting of Airport Symbol – Services Availability**

Rich Fecht, AJV-5223, briefed the issue. Rick reviewed the Recommendation Document on behalf of the proponent who is requesting a revision of the definition of the charted VFR airport symbol that indicates services are available at a given airport. The current practice is to use tick marks around the airport symbol to indicate that fuel is available and the field attended Monday through Friday from 10h00 to 16h00, local time. Today, many airports have self-service fuel so there is no longer a need for an attendant to be present. The proponent recommends that the minimum requirement for services available should be changed to fuel is available (self-service or via attendant) 24 hours/day.

John Moore, Jeppesen, asked the pilots in the audience if General Aviation pilots go to the airport for services other than fuel that require someone to be in attendance at the airport. The response was yes, pilots go to airports for maintenance but that the item of key interest to them was whether an airport has fuel available.

A general consensus from the ACF attendees was that since fuel availability is the primary concern, the FAA should revise the criteria as per the recommendation. It was agreed that the proposed new requirement for showing the ticks should be that fuel is available Monday through Friday, 10 AM to 4 PM and that airport attendance no longer be a requirement.
Lynette Jamison, AJR-B11, stated that the proponent of this item should reach out to the state inspectors to let airports know how they can get fuel availability shown at their airport.

**STATUS: OPEN**

**ACTION:** Valerie Watson, AJV-553, to reach out to AOPA regarding the proposed change to the definition of airport symbols with tick marks on VFR charts.

**ACTION:** Rick Fecht, AJV-5223, to contact the proponent and recommend that he reach out to the state inspectors to let airports know how they can get fuel availability shown at their airport.

**ACTION:** Valerie Watson, AJV-553, and Rick Fecht, AJV-5223, to draft an IACC specification change regarding the proposed change to the definition of airport symbols with tick marks on VFR charts.

15-01-291 Charting and Evaluation of Climb Gradient

Gary McMullin, Southwest Airlines, presented the new Recommendation to the ACF. Gary reviewed the request, stating that pilots find it difficult to determine if they can meet the climb gradients required on specific departure procedures. It is proposed that a maximum climb gradient be published on the chart based on an ATC restriction or a TERPS requirement. He also proposes that all climb gradients that exceed 500 ft/NM should be evaluated.

Gary reviewed multiple examples of older SIDs where a climb gradient was explicitly provided and a newer SID that requires the pilot to evaluate and calculate a climb gradient for each segment of the departure route. He pointed out that the process is time consuming and is potentially hazardous if the pilot calculates a segment climb gradient incorrectly. Gary pointed out in his examples instances where the climb gradient on a given segment exceeds 500ft/nm, which depending upon aircraft weight and air temperature, some aircraft are able to fly.

Discussion shifted to whether this is currently a charting issue or an issue pertaining to criteria. Valerie Watson, AJV-553, stated that the Terminal Charting Team is not authorized to conduct calculations and publish the gradients and can only publish what is provided on the FAA Form 8260-15B source document. She stated that if climb gradients are specified for charting on the source document, they will be charted.

Rich Boll, NBAA, stated that NBAA had previously shared their concerns on climb gradients during the last review of FAA Order 8260.46. Rich stated that he believes that there does need to be some type of scrutiny of ATC altitude restrictions. He suggested that maybe this could be pursued through the PARC or the TAPP.

Gary voiced his opinion that something should be done in the interim while these issues are being worked out. He suggested that a hold be placed on the establishment of any Departure with a climb gradient over 500 ft/NM and the reevaluation of those already established.
Tom Schneider, AFS-420, stated that these ATC driven crossing altitude restrictions must be analyzed for feasibility during the initial SID development stage. Working collaboratively with the local ATC facility, local operators, and lead carriers, pre-publication coordination should catch these issues well beforehand to prevent unrealistic ATC driven crossing altitudes from ever being published.

Rich then shifted the discussion to his presentation from the TAPP Working Group. Rich stated that the TAPP is working on issues related to compliance with climb gradients. The TAPP has created a draft Information for Operators (InFO). The purpose of the InFO is to be able to provide aircraft operators and pilots information on how to comply with the climb gradients on SIDS, ODPs and missed approach procedures. The language of the InFO is still under discussion, but the TAPP Group is anticipating its release in the coming months.

Consensus was to close this item in the Charting Group and work it in the PARC VNAV Action Team. In the future, it can be brought back to the IPG for recommended changes to Order 8260.46.

STATUS: CLOSED

15-01-292 Removal of Grid Variation from U.S. IAP Charts

Tom Schneider, AFS-420, briefed the issue on behalf of the submitter, Steve Jackson. Tom stated that there is currently a requirement to chart both magnetic and grid variation on approach procedures above 67 degrees North latitude. Tom pointed out that the USAF and USN no longer teach grid variation in their instrument pilot training and that the Canadians do not use grid variation on their instrument charting products. Ted Thompson, Jeppesen, also noted that Jeppesen does not show grid variation on any of their products.

Tom recommends that the requirement to chart grid variation be removed from the FAA charting specifications. Tom asked the audience if they use grid variation or know of any pilots who do. No one in the audience claimed to use grid variation.

Kevin Bridges, AIR-131, stated the proposal was circulated around the Alaskan Airman’s Association, Alaskan Air Carriers Association, PBFA, and the DoD Policy Board on Federal Aviation. Kevin recommended that the ACF hold off on making a decision until those groups have a chance to respond to the proposal. Mike York, AAL-03, offered to also reach out to the Center and give them the opportunity to respond.

TSgt Sarah O’Brien, USAF – AFFSA, voiced that she would like to see the charting guidance remain in the IACC specifications in case the military needs to utilize it. Valerie responded that the IACC specifications are standardized guidance for the construction of FAA charts. If the requirement for grid charting on FAA approaches is no longer necessary, the guidance must be removed from IACC 4, though of course the military is free to retain the information in their version of the specification.

STATUS: OPEN

ACTION: Kevin Bridges, AIR-131, to report back on the feedback from Alaskan associations and groups.
**ACTION:** Mike York, AAL-03, to reach out to Anchorage Center and report back.

**15-01-293 STAR Terminus Point Standardization**

Lev Prichard, APA, **briefed the issue.** Lev described complications encountered when Standard Terminal Arrivals (STARS) do not terminate smoothly into an instrument approach. One of the complications is when the Arrival terminus fix altitude does not agree with that of the Approach IAF, IF or feeder altitude. Lev reviewed several examples where an altitude discrepancy exists between an Arrival procedure and the subsequent Approach. Lev recommended that criteria needs to be revised to ensure the altitudes coincide.

Lev also recommended that runway identifiers be added in the planview of Arrival charts in proximity to the terminal fix to which they apply. Valerie Watson, AJV-553, commented that runway identifiers associated with transitions/terminal fixes are published in the note form taken directly from the procedure source document. She commented that if runway identifiers were specified for charting at given terminus points on the source document, they would be charted there, but cautioned that on many charts significant congestion may occur due to the limited size of the pre-composed paper charts. Valerie then stated that for these charting changes to happen, changes would first have to be made to the procedure source documents. The runway identifiers are currently identified in note form on the source and so are shown that way on the charts.

Delta Air Lines representatives asked that if Approach IAFs were added to each STAR that link to an approach, wouldn’t that also add chart clutter? Lev replied that it would actually add less clutter to a STAR and it would aid the pilot in insuring that he/she understood the clearance limit issued by ATC.

Tom Schneider, AFS-420, stated that there is new guidance in the draft FAA Order 8260.19G for STARS, soon to be in internal coordination. Tom added that part of that revision included new language regarding lost comm and on connecting the STAR terminus altitudes to the coinciding altitudes on IAPs. Orders 8260.3C and 8260.58A also have portions of this criteria issue and will soon be going out for comment. Some of this new guidance was recommended by the PARC and by the Climb/Descend Via WG.

Ted Thompson, Jeppesen, commented that it appeared to him that the continuity issue between the STAR and IAP pertains to a huge database coding issue. Ted added, if the information on the source document were improved to indicate the connection between the STAR and associated approaches, the FMS process would be better. Ted also agrees that with regard to the runway labels, the procedure source document needs to spell out what should be charted.

Valerie summarized that the bulk of this issue is related to procedure design and criteria. She stated that the runway label charting piece of this item will remain on the Charting Group agenda. Valerie will create prototype STAR charts with runway identifiers in the planview to determine the level of difficulty of fitting this information into an already cluttered chart. She will also work up suggested text to be documented on the source document that will support the runway ident charting at the terminus points.
For the policy aspects of this recommendation, it was determined that industry (APA, NBAA and others) will review the new criteria in the draft Orders and submit comments through the normal coordination process. This item will not be added as an agenda item with the ACF-IPG because the transfer of STAR policy and criteria to FAA Orders 8260.3C, 8260.19G, and 8260.58A and the changes therein are still a work in progress. If industry is not satisfied with the outcome of their submitted comments to the draft policy, any specific issues may be introduced to the ACF-IPG at a future date.

**STATUS: OPEN**

**ACTION:** Valerie Watson, AJV-553, to create prototype STAR charts depicting terminus runway idents and the suggested procedure source text that would support charting them.

**ACTION:** Tom Schneider, AFS-420, will provide an update on the status of FAA Orders 8260.3C, 8260.19G, and 8260.58A.

**15-01-294 Charting Maximum Assessed Holding Altitude and Associate Speed**

Tom Schneider, AFS-420, briefed the new recommendation document on behalf of submitter, Steve Jackson. Tom stated that the proponent is recommending that maximum assessed holding altitudes and associated airspeeds be depicted on all charts.

Michael Stromberg, Air Wisconsin, commented that ATC should know the limits of a holding area and this information should not be on the charts.

Ted Thompson, Jeppesen, pointed out that adding this information to all holding patterns on all charts would have a significant impact on chart congestion.

Valerie Watson, AJV-553, stated that there is a mechanism in place to require speed restrictions charted on specifically designated locations on both Enroute and Terminal charts. Perhaps it would be preferable to show only these exceptions when deemed necessary, as is the current practice, rather than to show all. Gary Fiske, AJV-82, agreed that it should only be charted if it is outside the norm. He also expressed that depicting all of the holding pattern details on every chart may cause the pilots to unnecessarily question ATC. Tom commented that the FAA Order 7210.3 does require that holding pattern information be available to the controllers at an ATC facility.

Discussion then shifted to the criteria governing holding patterns and the charting of them. Valerie stated that FAA Order 8260.19 supports annotation of the procedure source document to both indicate what holding pattern(s) should be charted on a given procedure and that if the holding pattern requires a specific (non-standard) speed restriction. When the speed restriction is annotated on the 8260 procedure source document, it is charted.
There was a general consensus within the ACF audience that there is no need to chart the maximum assessed altitude and associated speed for holding patterns unless it is outside of standard and indicated for charting on the 8260 form. It was agreed to close the issue.

**STATUS: CLOSED**

**15-01-295 Charting of Airports for the MON**

Leo Eldredge, Contract Support, AJM-324, briefed the audience on the background of the issue. Leo stated that there are currently 145 airports that will be designated as MON airports that support instrument approaches independent of GPS.

Vince Massimini, MITRE, showed a presentation on how the proposed VOR discontinuance would impact instrument flight procedures, VOR-based routes within the enroute network, and the availability of VORs within the NAS. The graphics helped illustrate how a NAS with fewer VORs would impact many airports and would subsequently impact the total number of procedures available at those airports that are dependent upon those VORs.

Vince stated that VOR airway segments will be cancelled and replaced with RNAV routes as necessary. Gary McMullin, Southwest Airlines, inquired if the FAA, in their planning for the MON, had a means to see how often/frequently air routes are currently utilized in today’s NAS. Vince replied that yes, the FAA does have the data to be able to see route utilization and is taking that data into account.

Discussion then shifted to the basis of the Recommendation Document (RD), which is the identification of MON airports where instrument approach procedures would be available in the event of a GPS outage. Proposed chart symbology of an airport symbol with an M inside or above the airport symbol was shown to the audience for discussion of its possible depiction on enroute charts. It was also discussed that the MON airports might best be identified only in the AFDs.

The emphasis of the discussion focused on a quick and easy way for a pilot to readily identify airports that are MON Airports and where he could safely land in the event of a GPS outage. The discussion quickly broadened to other implications associated with identifying airports as MON Airports. Kevin Bridges inquired as to whether MON Airports would impact flight planning and filing for alternate airports for IFR Flights.

Michael Stromberg, Air Wisconsin, asked about the rate of GPS outages. Vince responded that there are several hundred outages during the year on a local basis, i.e. near military bases when vast military operations are taking place, however, for the GPS system overall, the chance of a complete GPS outage is virtually zero. WAAS has made the system more robust. The biggest threat is interference.

Dale Courtney, AJW-292, commented that the key is safety. The FAA needs to ensure that, should there be a catastrophic GPS failure, coupled with a loss of ATC, there is a means to get aircraft safely back on the ground.
Discussion shifted as to what was the best way to move forward. The consensus that prevailed was that a workgroup should be formed to research and resolve the multiple facets of implementation of the MON. Vince volunteered to chair the workgoup.

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<td><a href="mailto:Leo.eldredge@tetractech.com">Leo.eldredge@tetractech.com</a></td>
<td>571-359-0053</td>
</tr>
<tr>
<td>Valerie Watson</td>
<td><a href="mailto:Valerie.s.watson@faa.gov">Valerie.s.watson@faa.gov</a></td>
<td>301-427-5155</td>
</tr>
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<td>Ted Thompson</td>
<td><a href="mailto:Ted.thompson@jeppesen.com">Ted.thompson@jeppesen.com</a></td>
<td>303-328-4456</td>
</tr>
<tr>
<td>Leonixa Salcedo</td>
<td><a href="mailto:Leonixa.Salcedo@faa.gov">Leonixa.Salcedo@faa.gov</a></td>
<td>202-267-9901</td>
</tr>
<tr>
<td>Dale Courtney</td>
<td><a href="mailto:Dale.courtney@faa.gov">Dale.courtney@faa.gov</a></td>
<td>202-267-4537</td>
</tr>
<tr>
<td>John Moore</td>
<td><a href="mailto:John.moore@jeppesen.com">John.moore@jeppesen.com</a></td>
<td>703-505-0672</td>
</tr>
<tr>
<td>Jeff Gingras</td>
<td><a href="mailto:Jeffrey.gingras@jeppesen.com">Jeffrey.gingras@jeppesen.com</a></td>
<td>303-328-4489</td>
</tr>
<tr>
<td>Michael Wallin</td>
<td><a href="mailto:Michael.wallin@faa.gov">Michael.wallin@faa.gov</a></td>
<td>202-267-6494</td>
</tr>
<tr>
<td>John Kernaghan</td>
<td><a href="mailto:Jkernagh@its.jnj.com">Jkernagh@its.jnj.com</a></td>
<td>610-996-2977</td>
</tr>
<tr>
<td>Brad Rush</td>
<td><a href="mailto:Brad.w.rush@faa.gov">Brad.w.rush@faa.gov</a></td>
<td>405-954-0188</td>
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**STATUS: OPEN**

**ACTION:** The MON Workgroup will meet to discuss the issues and Vince Massimini, MITRE, will report back.
VII. Closing Remarks

Valerie Watson, AJV-553, thanked the attendees for their participation and voiced special appreciation to Steve VanCamp and Pragmatics, Inc. for hosting the ACF.

Notices of the official minutes will be announced via email and provided via the Internet. The two website addresses (CG and IPG) are provided below:

- Charting Group – http://www.faa.gov/air_traffic/flight_info/aeronav/acf/

Please note the attached Office of Primary Responsibility (OPR) listing for action items. It is requested that all OPRs be prepared to provide verbal input at the next Forum or provide the Chair, Valerie Watson (with an informational copy to Alex Rushton, Contract Support), a written status update. These status reports will be used to compile the minutes of the meeting and will serve as a documented statement of your presentation.

Appreciation to Jennifer Hendi, AJV-553, for presentation assistance for both the CG and IPG portions of the forum, conference support pre- and post-conference, and to Alex Rushton, Contract Support to AJV-553, for taking the minutes and conference support pre- and post-conference.

VIII. Post ACF Announcements

FAA 2015 NextGen Progress Report Published

FAA Headquarters released the 2015 NextGEN Progress Report which included status and additional information related to various topics discussed during the course of ACF 15-01. The report is available online at http://www.faa.gov/nextgen/media/NextGen_Implementation_Plan-2015.pdf.

AeroNav Products Name Migrating to Aeronautical Information Services (AIS)

AeroNav Products has reorganized and changed its name to Aeronautical Information Services (AIS) and its routing code to AJV-5. Any reference to AeroNav Products refers to AIS. In the coming months, the AeroNav Products home page address will change over to Aeronautical Information Services.

IX. Next Meeting

ACF 15-02 is scheduled to be held on October 27-29, 2015, hosted by Lockheed Martin at their Global Vision Center in Crystal City, VA.

ACF 16-01 is scheduled to be held on April 26-28, 2016, hosted by ALPA at their Herndon, VA location.

ACF 16-02 is scheduled to be held on October 25-27, 2016, location and host to be determined.
X. Attachments

a. 15-01 Attendee Roster
b. Office of Primary Responsibility (OPR)