

PARC Member F2F Meeting Summary

July 18-19, 2005

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JPDO Overview and Status – Dorenda Baker/Doug Arbuckle

Two members (Dorenda Baker and Doug Arbuckle) from the Joint Program Development Office (JPDO) attended the meeting to present an overview of the JPDO mission and status. The presentation is posted on the PARC member Face-To-Face Meeting KSN site, along with speaker notes for more detail. The JPDO is developing the vision for what the National Airspace System (NAS) looks like in the year 2025. The concept is “*Airport curb-to-Airport curb*”. Performance-based services and network-enabled information access (DoD refers to this as network centric) are the foundation of the vision. The work is in progress and will evolve as the integrated product teams (IPTs) are able to do more. Nick Sabatini stated that the greatest challenge we have is the vast differences of opinion that all the stakeholders have. The JPDO will need to get these many different ideas and get them focused in the same direction. In that vein, the PARC can be a tremendous help in bridging the gap and in marketing the JPDO concepts.

Jerry Davis stated that every other advanced vision/concept has run into great difficulty in establishing a transition plan from today to the new concept. John McGraw noted that in light of that you need to not only consider the future, you need to consider the equipment and technology in use today.

Doug Arbuckle said that he would like at a minimum to have an intellectual framework for this concept in five years. He would love to see a complete definition and all definitions rewritten in the framework so research and development efforts and operational transitions can be more focused for the nation. Dave Nakamura stated that he would like to get the sense of what they’re really trying to solve. It’s difficult when the operational requirements are vague. He liked the idea of having a five-year target, but also wanted to see how we’re going to make it work (bigger picture). This group (PARC) is not going to be able to do it all, just some pieces for guidance or ops performance but there has to be another body of work to mature it in the concept of implementation.

Doug Arbuckle asked that the PARC provide him the level of detail needed to accomplish the necessary actions. Nick Sabatini stated he was pleased the discussion was taking place. Nick is a strong supporter of JPDO. The JPDO needs to proactively describe the change or people won’t understand it. They need to address the culture of air traffic controllers and industry. He wished them

all the luck in the world, and pointed out that their challenge is significant, and the idea is to be able to describe a picture of exactly what is needed.

Doug Arbuckle stated that's the kind of feedback he needed to get from the PARC, and he'd like to work closer with this group or at least some people from this group. Nick Sabatini invited Doug to attend every PARC meeting. "This is critically important for us, the US. We need to be the world leaders in advancing these future concepts." The JPDO is developing a capability migration roadmap. They would like to present the draft roadmap to the PARC for review and feedback.

The JPDO representatives stated that industry hasn't been a participant up to this point in this effort. The Next Generation Air Transport System (NGATS) institute was formed under AIA. All the major aviation stakeholders are involved. Dale Goodrich is the Executive Director. Each JPDO IPT is to submit a request for private sector members to join the team. JPDO would like to see a 50/50 ratio of industry and FAA. MITRE and Lincoln labs are already engaged.

Dorenda Baker covered the safety management work within the JPDO. There is redundant effort across the several agencies that the JPDO is trying to focus so each organization can gain the benefit of what has already been done or is currently in process. MITRE CAASD has been instrumental in this work to date.

Nick Sabatini thanked Dorenda and Doug for coming and invited them to participate in PARC telcons and meetings to gain from everyone's experience within the PARC. He affirmed that this was critical for the leadership of the USA. Dave Nakamura thanked JPDO reps for coming to share this information. He noted that PARC would try to get as much knowledge from JPDO as possible to be able to move forward.

AC90-RNPSAAAR – Vinnie Chirasello/Bruce DeCleene

The presentation is on the PARC member Face-To-Face Meeting KSN site. John McGraw opened the discussion with a short synopsis of the importance of the AC to the implementation of RNP SAAAR approaches, the goal to have it signed by September 30, 2005, and the critical importance of meeting that goal. The planned approval date has now moved to mid September.

Bruce DeCleene opened with a statement stating that he needed PARC concurrence on how to proceed. He reviewed the status of the public comments and covered several issues that remain open, including: large and small aircraft designations, RNP Alerting, target level of safety of 10^{-7} , AC approval process, bank angle, TOGA alignment, and charting implications.

An interim solution has been reached on the aircraft size issue; the AC will be based upon the large aircraft criteria. Kathy Abbot and Bill Vaughn have been tasked to provide a plan and schedule for a long-term solution (see May 2005 PARC F2F meeting notes). PARC agreed with this. The RNP Alerting AT addressed the RNP Alerting issue (See below). Bruce proposed some rewording

of the AC appendixes to address the 10-7 issue (proposed revision is on slide 7 of the presentation), essentially the AC finds that Baro-VNAV and FMS-capable aircraft that meet the specified AC sections are considered to provide the requisite airspace containment. Other aircraft/systems that do not meet the AC criteria must show how they do. FAA will rewrite the AC and circulate for final review and approval. Jerry Davis suggested that RNP replace RNAV in the suggested rewrite. As other systems come for approval the resolution would be through the Operational Safety Assessment (OSA) process. PARC agreed with the near-term guidance in the AC and the continuation of activity for the longer-term solution via the OSA.

The main question trying to be answered with the rewriting is “What would I have to do to follow this guidance.” Any suggestions are welcome. There was some discussion on using “must” in an AC. It has certain implications when used in regulatory documents. Bruce DeCleene noted that “must” was defined in the AC.

FAA is facilitating the approval process. It was agreed that the OEMs would need to drive the RNP SAAAR approval process. The FAA is working with two OEMs to create a standard approval package that each operator can use for the AC approval process. A statement was added that other OEMs need to create a similar package and Bruce DeCleene responded that the FAA would facilitate that as each entity came forward. Bruce commented that this effort was completely consistent with the AC and reiterated that the approval was for public RNP SAAAR operations. John McGraw mentioned that AFS-400 would be working closely with the POI and would provide technical support in the process. John also said that it would eventually evolve into a flight manual.

The bank authority recommended by PARC was 25 degrees in procedure design giving a 5-degree margin over aircraft capability. The highest speed category aircraft drove this bank angle. There are lower-speed category aircraft that do not have a 5-degree margin when executing a 25-degree turn. Bruce DeCleene asked if the PARC should revisit bank limits. Mike Cramer noted that 5 degrees was extremely conservative and suggested that 3 degrees might be enough. For now the current criteria will be retained.

Action Item: Dave Nakamura suggested we go forward with the AC the way it is including the last agreed-to changes, with a proviso that we’ll have opportunity for changes to it at a later date, and will have them written down to review in detail. So this is the first cut at it with follow-on AT action to review it.

Bruce DeCleene indicated that the 15-second TOGA Alignment assumptions used by the PARC were less than required by Airbus and some Boeing aircraft when tight RNP values are required in the missed approach. Bruce stated that we could continue with the AC as is or create an AT. Jerry Davis supported an AT. Frank Alexander supported an AT on a short leash. Mike Cramer thought we should leave this alone and continue to work this issue separately at a later date. It was agreed that this is not urgent and will be a follow-on activity for an update to the AC.

Action Item: Go forward with AC publication and work TOGA Alignment assumptions in an AT later.

Bruce DeCleene stated that there might be some confusion on what capabilities are needed to fly an approach if the RNP value required for the missed approach is not shown on the charts. The charting issues were addresses by Pedro Rivas' Charting Action Team and will be presented later.

Critical Schedule and Program Review – Barbara Cassidy

Barbara Cassidy gave the status of the RNP program. The briefing is on the PARC Face-to-Face meeting KSN site. Barbara stated that with the 8260.52 and the AC 90-RNPSAAAR approved in FY05, FY06 will start the development of public SAAAR procedures in the NAS. In addition, the RPAT Notice has a target completion date in FY05. There was some discussion about RPAT implementation sand the need for RNP-2 in a radar environment to establish the containment envelop.

The PARC actions needed to support the RNP Roadmap near-term objectives were presented. There was a disconnect in the action to develop a long-term plan for addressing the Type A/B issue. The minutes from the May F2F were read. "Mark Steinbecker, Flight Standards, briefed the current state of Type A/B based upon the recent ACF and PARC discussions. Mark reviewed the noted that are intended to be included with the chart along with the additional information that would be included with the charts briefing information. Specifically, the plan is the addition of notes that indicate Type A or B, the necessary sensors and what RNP value would be necessary for an RNP system. There was significant concern with not only the terminology but it's understandability on charts, for dispatch, and crew procedures. Following a side meeting, it was agreed that the current schedule needs to be protected and that the notes would be placed at a less prominent part of the charting notes. The added information would be included on the charts briefing information. And follow on work will continue to move toward a better set of terms." Action was "PARC will coordinate with the ATA FMS Task Force to continue to work this area in developing a longer-term solution. Action is to Kathy Abbott and Bill Vaughn to define the plan and schedule for this activity".

There was a comment that maybe the 90-100A needed to be revisited (RNP routes vs. Q routes). Frank expressed his concern about the Q-Routes. Pedro Rivas raised an issue of working everything at once, and the limited resources available to the PARC. Items need to be prioritized.

Regarding implementation, Barbara noted that the Newark runway 29 activity has been suspended due to the late addition of an environmental impact study. For Philadelphia, the benefits look OK with approach but not with departures. Now SCIA and RPAT discussions are underway. RPAT at SFO is anticipated in September.

Action Item: Kathy will get together with Tann to make changes in the Human Factors PARC Product and will clarify what needs to be done for the Type A/B issue and the due date.

Meeting action was taken by Tann and Olga to give paper copies of this schedule and distribute it to the meeting attendees to review discuss on the second day. That was accomplished and inputs/comments were received and will be coordinated with the FAA and closed. Dave Nakamura added he would keep the schedule as a discussion item on our future telcons.

Critical Decisions WG Progress and key discussion issues for PARC action – Jerry Davis

Jerry Davis recapped the consensus from the last PARC meeting, i.e. the recommendations for RNAV, RNP and RNP SAAAR. He has not received any comments and there were no comments or questions during the meeting. PARC approved all of the recommendations presented by the WG at the 25 May and 18 July F2F meetings.

Next meeting: August 4 1pm-end noon Friday, August 5 at Northwest Airlines in Minneapolis.

Roadmap Update – Hassan Shahidi

Roadmap WG meeting was held on Wednesday, July 20, at RAA. Those unable to attend will receive the notes from this meeting. The December publication date indicates that we need to solidify any International Harmonization issues by November.

Communications Working Group Roadmap – Tom Kraft/Ann Tedford

The Communications working group (CWG) is currently developing two main products, the RCP and the data link roadmaps. At the next meeting they will discuss the need for regulatory criteria and guidance material to implement RCP operations, and what rule changes may be necessary to support performance-based communications.

The RCP roadmap is scheduled for completion in February 2006. Relevant pieces of the roadmap are expected to be available in September to support the data link roadmap delivery schedule. The CWG is looking at RCP criteria for all communications up to the NGATS, i.e., 2025. The CWG is reviewing several issues/topic areas, including

- a) Defining RCP criteria based on airspace characteristics, operational capability and assumed CNS/ATM performance, determining the relationship of RCP criteria to air navigation service provider (ANSP) interface requirements, allocations to the communication service and avionics, and human factors;
- b) Handling differences between voice and data, different communication means required by the procedure, and dependencies across communications means;
- c) Validating a suitable range of RCP types, definitions for each RCP type, and allocations to the communication service and avionics;

- d) Determining the need for alerting criteria and the ability to predict communication performance; and
- e) Developing the regulatory criteria and guidance material for RCP operations.

Slide 7 of the presentation provided an overview of RCP criteria for oceanic and domestic en route airspace. The group intends to provide similar presentations for terminal area airspace, considering arrival/departures, approach/landing/takeoff phases, and surface operations. The tables at the bottom are intended to show the intent to define allocations for the communication service and the avionics for each RCP type. There was a lot of discussion on this chart. Questions related to understanding the chart and how operational scenarios for how RCP types are used operationally might help with understanding. Jerry Davis suggested predicting communication performance along the intended route of flight. He noted that it may be necessary to consider communications capabilities and wondered if characterization of the performance would be sufficient. It was recognized that most of what was presented were things we are already doing or are about to do. It was noted that RNP started this way as well. It allows a better understanding of how it would work. Frank Alexander suggested taking some examples of alternative technologies like use of Iridium and see how they would fit into the RCP operation. Dave Nakamura concluded the discussion indicating that this group has made a lot of progress, but recognizes that there is still more work to do to evolve RCP operations into something that is understandable in a number of ways – It has to be meaningful to the flight crew, the controller, the engineer, etc. The PARC concluded that the RCP work seemed to be on the right track and was getting closer, but more work needed to be done.

The data link roadmap is scheduled for delivery to the FAA in September 2005. To achieve this, the CWG is planning to deliver a draft roadmap to PARC by August 5. A PARC endorsement is requested by August 30, 2005. The data link roadmap is expected to be approximately 20 pages. Ann stressed the importance of getting a data link roadmap to the FAA by Sep 30 so FAA can start looking at what industry is thinking.

More participation is needed from operators, airlines and the GA community to develop specific recommendations for data link implementation and in the RCP work. The CWG needs to do a better job at negotiating joint industry/FAA financial commitments to realize data link implementation. Ann and Tom solicit and continue to solicit more input through the ATA Task Force and AOPA representatives serving the PARC.

Frank Alexander referred to the in trail procedure (in trail climb/descent) and commented that only one airline wanted this. He suggested that PARC recommendations should represent more than just one airline.

The CWG announced its meeting schedule through the end of the year. The next meeting will be on August 2-4, 2005 in Washington, DC, 400 Virginia Ave, at SAIC on the 8th Floor, starting at 9:00 am.

The PARC discussed the flight plan issue paper prepared by the CWG at their last meeting. Ken Speir suggested nothing could be done until after the initial release of ERAM (2011). The CWG can probably start to sort out operational requirements early.

Action Item: The issue described in the flight plan issue paper was passed on to an existing Flight Plan Suffix Action Team, although this action team has been quiescent for some time and will need to include participation from the CWG.

AOC Recommendation – RTCA/PARC Coordination - This CWG paper was not discussed at the PARC F2F meeting.

19 July

Navigation Infrastructure Roadmap – Harry Kane/Sally Frodge

Please see presentation on the PARC Member Face-to-Face Meeting site.

John McGraw introduced Harry Kane and Sally Frodge from ATO-W to the PARC, and thanked them for taking their time to come in and present at this meeting.

ATO-W is currently working on a navigation divestment plan for NDB, VOR, and ILS systems in the NAS. They have a Navigation Evolution WG under Harry Kane with Sally Frodge as the principal engineer. This group will soon have ATO-R (Jeff Williams) as their official customer. Harry offered to add any one from the PARC to the group's KSN site. Anyone interested needs to email Harry or Sally (sally.frodge@faa.gov or harry.kane@faa.gov). If there are any questions about the briefing or items on the KSN site, please contact Harry or Sally.

The group is beginning internal coordination and expects to brief industry after that is completed. There was a discussion about what divestment meant to the FAA. Harry indicated it could range from a complete navaid decommissioning to merely decommissioning instrument approaches using the navaid. The plan for FY06 is to develop the divestment plan. Harry indicated the navaids to be decommissioned have not been selected. He said that VORs are very old technology that is expensive to maintain. One thing they are reviewing is the need to initiate a VOR development program. Harry gave examples of possible decommissioning as high altitude VORs where coverage would be minimally affected and ILSs at some airports where satellite navigation could provide precision approach capability much cheaper. If high altitude VORs are reduced, the remaining systems may be replaced with newer VORs using high-powered DMEs. Harry stated that what the FAA has failed to add into their investment decisions through the years is the burden new systems add to operations costs. His group is reviewing that and will fold those life cycle costs into their analysis. Another issue they are concerned with is redundancy and continuity of service. In the near-term Harry stated that they anticipate some growth in ILSs due to congressional mandates.

Operational Safety Assessment – Hassan Shahidi

Wally Fearar gave this presentation for Hassan Shahidi. Please see this briefing on the PARC Member Face-to-Face Meeting Site. Wally provided some background information on the group's work, their starting point, their current tasks and near-term objectives. Kathy Abbott noted that an important factor and expertise missing from this initiative as the human factors element. Wally agreed. The Safety Management System (SMS) process is an integration of quantitative and qualitative analysis, and the key is consensus building. It is thorough but had one spot where the guidance could be enhanced. The OSA WG will use the 18-step procedure development process to enhance the guidelines and thus will integrate the two processes better. Eventually there will be an international harmonization element. Wally covered the OSA expectations and stated that there have been several working sessions with ALPA and NATCA.

The WG next steps include a telcon in August, a F2F in September, and a final report to PARC in the fall. The WG will brief the FMS taskforce in August.

Jim Dyckman took a moment to inform the group of the status of NATCA representatives on programs. Due to budgetary concerns the NATCA reps are being returned to their facilities on August 1st. The FAA is working on how to perform the coordination function in their absence.

RNP Charting – Pedro Rivas

Please see briefing on the PARC Member Face-to-Face Meeting site. Pedro provided a briefing summary from the June Charting WG meeting in Oklahoma City. PARC members have already received this summary following the meeting. Pedro specifically thanked John Moore of NACO for his support in this effort. Frank Alexander mentioned that temperature limits on the chart need to be reworked. Pedro accepted it as something that needs to be discussed. Frank Alexander and Bruce DeCleene raised the procedure NA issue (for aircraft with wingspan greater than 136 ft., and when below -5C (23F). Pedro accepted these comments, however this is work in progress, so these issues will be addressed at a later date. Jerry Davis stated that FTE is related to the turn radius. Mike Cramer disagreed. Jerry and Mike will take this discussion off-line. Frank Alexander brought up a radar altimeter question, and missed approach (MA) requiring RNP. Bruce DeCleene said that the current solution has an RNP value stated for the approach and none for the MA. This can lead the pilot to believe that the same RNP value is required for MA, which may not be true. The group accepted the need to identify the MA RNP value and it will be stated on the charts. Pedro stated the WG task was to address the immediate RNP charting concerns and that and they were on a timeline to satisfy the DCA RNP SAAAR schedule. Other issues would need to be worked through the normal charting forum process.

Following this the Approach suffix problem was covered. Dave Nakamura said this could either be discussed in the PARC or through another group. There was much discussion. Ted Demosthenes suggested that we look at this problem in a different way, and create an AT for this. Mike Cramer suggested not fixing avionics aspects, but pilot and operations aspects. Pedro mentioned that Rich

Wagner from Jeppesen suggested that ARINC 424 needed to be reviewed as part of this effort. Pedro clarified that RNP SAAAR is always going to be a separate chart. Brad Rush stated that this is a legal issue and AVN has been directed to use suffixes on all procedures. After the discussion it was decided to not initiate an AT.

The AT is finished with the task. Dave noted that Pedro and his group have done a great job.

Human Factors WG – Kathy Abbott/Karol Kerns

The presentation is posted on the PARC member Face-to-Face Meeting KSN site. There will be a HF WG meeting July 20-22. Kathy expressed her thanks to those members who were able to stay and provide their expertise. Kathy covered the agenda for the meeting. Bruce Tarbert expressed the need to resolve WG issues quickly due to a tight timeline. Whatever comes out of the group will be posted immediately and everyone will have one week to review and comment. There were no questions or comments.

Vertical Flight Working Group – Steve Hickok

Steve Hickok wanted to address the PARC and get marching orders. There has been a lack of vertical flight (VF) representation. Steve has recently been appointed to represent Helicopter Association International (HAI) in the PARC. He needs to understand what needs to be done for VF input. He said he'd been reviewing materials on the KSN site and sees some issues that need to be addressed but doesn't want to impede PARC progress. Helicopter TERPS as an example may require some change in the orders. Steve has envisioned identifying areas of concern and putting placeholders in the documents until we are able to address them. In this way we will have a blueprint for future work. Helicopters will have equipage issues. For example we don't have certification or departure criteria (coding, ARINC etc.). HAI has not been able to address these technical issues and would like to effectively interact with the PARC.

Dave Nakamura stated that the VFWG was formed so these issues could be addressed. It's appropriate to identify these issues, and then send PARC recommendations relative to helicopter criteria. When an order is being developed and the VF industry has comments the VF WG should capture them, present them to PARC and it will determine what the appropriate action will be.

RNP Alerting AT – Mike Cramer

Please see presentation on the PARC member face-to-face meeting ksn site.

Mike went over the past activity of the AT. In addressing its action, the group accepts that for the RNP SAAAR approaches GPS is one required part of the operation and is working to finalize a determination that inhibiting of DMEs is not a requirement. There was some confusion over the last chart numbers (see presentation.) It was decided to take it off-line. Bruce stated that there was a larger policy that had to be addressed with the interference issue. (Presidential policy about intentional and unintentional interference.) Having said that, Bruce

did not have an issue with the current recommendation. The decision was made to publish the AC ASAP, with the group recommendation needed by the first part of August.

Harmonization Activities

USA/Mexico/Canada – John McGraw

John McGraw and Barbara Cassidy covered this topic. The presentation is on the PARC member face-to-face KSN site. Bruce Tarbert made some comments about harmonization issues with Canada.

ICAO RNP SORSG – Barbara Cassidy

Dave Nakamura stated when the Performance-Based Operations white paper has been presented to this group that information was also shared with the ICAO study group. Examples of the concepts shared include RNP both default and scaleable, and performance based angular e.g. xLS. Bruce DeCleene gave kudos to everyone who worked on the ICAO RNAV effort, especially Lou Volchansky.

Frank Alexander requested a copy of the draft ICAO Standard. It will be provided. Frank will review it and provide comments.

Bruce Tarbert stated that the Type A/B review needed to consider ICAO RNAV1 and RNAV2.

ICAO OCP – Dave Nakamura

Dave shared the current plan of the WG is to take the current order and AC as the basis for the PANS Ops design. The OCP has a meeting in the Fall of 2005 with a plan to fast-track these recommendations for issuance to States next fall. AFS-400 is converting the 8260.52 into a PANS Ops version. Dave stated that from an efficiency standpoint this was the better way to go. Pedro raised a concern about ICAO creating a similar charting philosophy as what the RNP Charting AT just developed. He will follow up with Ted Thompson.

ATA FMS TF – Bill Vaughn – Bill was not available.

RTCA ATMAC R&P WG – Roger Wall/Ken Speir

Continued coordination with PARC is essential. It is needed to get alignment for usage of frequencies, etc. Aligning the technical and non-technical issues is the main goal. There has been a lot of discussion on NAV side with Human Factors issues and with an infrastructure of business case.

ICAO Ops Panel – Ted Demosthenes

Ted attended the last two meetings. The next one is in October. The significance of focusing on operations and not technology was the difference from the previous meetings. AWOHWG is moving toward JAA and IASA. GLS visual reference requirements were on the agenda of the AWOHWG. These were addressed briefly in the DA in a turn presentation. Harmonized minima were also on the AWOHWG agenda.

New Business/Future Meeting

FAA RNAV Criteria, Plan and Tentative Schedule – John McGraw

The FAA is planning on having the draft RNAV criteria (8260.RNAV) for PARC review in November 2005. Some clean up is being done now. John will keep the PARC informed at the telcons within the next few weeks (Tom Sorrell's group's recommendation will be addressed). This will be added to the PARC schedule.

DA In a Turn – Ted Demosthenes

Ted's presentation is on the PARC member face-to-face meeting KSN site. To date Ted has received no comments on his ToRs other than from Frank Alexander. He asked again if anyone had any comments. There was a lot of discussion on what form of group would be established (new WG, existing WG, or AT). John McGraw stated the need to work the issue in the context of a real situation or the decisions won't make sense. There was discussion on whether the group should address just the situation at JFK or the global DA in a turn/transition to visual issue. Pedro Rivas indicated he would like to see the specifics of the Jet Blue request for JFK addressed soon. Jerry Davis mentioned that lighting is the most expensive part of establishing any approach. Ken Speir asked if RPATs would require a DA in the turn.

The decision was made to establish a new DA in a turn WG (DAWG) and to involve the Approach and Landing WG for specific tasks. Vinnie Chirasello and Pat Zelechowski volunteered to be members. Others need to be identified ASAP.

The group agreed that for JFK, procedure development would continue using special criteria and the DA in the turn would be addressed operationally until the DAWG completes its work. The DAWG will need to prioritize the work to ensure they can provide guidance for JFK when needed. Dave Nakamura suggested a telcon to discuss this. Jerry Davis suggested the PARC accept the ToRs today. Ted will email to all members and then recommend to the FAA what the ToRs are.

Action Item: Ted will form the group and get the work started.

Comparison of Final Approach Criteria – Mike Cramer

Summary of the work to date, (please see PARC report on the PARC member face-to-face meeting ksn site. Mike walked the group through a few of them of his analyses. Weather impact needs to be folded into the current numbers.

Implementation Issues – Wally Roberts

Wally Roberts's presentations are on the PARC member face-to-face meeting KSN site.

NBAA Issue Paper To Increase RNP SAAAR VNAV Path Angles For Biz Jets

Wally described that some smaller business jets can have a higher glide slope (GS) angle than currently allowed. Frank Alexander had some discussion with

Bob Lamond on this subject. Frank can support a 4° GS angle but will have a problem supporting anything higher than that. He suggested a 2-tier angle. Wally agreed that anything more than 4° is not good. Pedro stated that he supports a max GS angle of 4° with a temperature limit, but there are two procedure designs there. Wally stated that NBAA only wanted one and agrees there will not be two paths. Ted Demosthenes stated it goes beyond these issues, is the airplane certified to do it? Wally responded that not all category C aircraft are created equal. Bruce DeCleene suggested AFS-440 do some analysis. Frank agreed that 4° is ok. It was suggested the PARC recommendation could be that AFS-440 take a look at it and come up with a recommendation. Pedro expressed his interest in participating in this discussion.

Action Item: 440 will do analysis and will come back with a recommendation.

NBAA Issue Paper to Include RF Overlay Legs Where Fly by Waypoints Are Used –Wally Roberts

Wally Roberts presented this topic. Wally clarified that he was suggesting a ghost RF leg in the turning area. There was some discussion of this pseudo RF leg. Pedro saw three parts. 1) If the computer tool is built correctly this can be easy. If it isn't the designer will have a hard time. 2) Ghosted RF leg would require a chart and data in the FMS with waypoints, CNF type points. There might be some issues with delivery of product by Jeppesen. 3) Central question is to understand how the systems work, before we move out to solving the problem in charts. Pedro would like to get more details, from Steve Bergner.

Action Item: Keep it open and request AFS-440 will take a look at it.

Tom Kraft addressed his action item from the June 22 telcon on equipment designations/suffixes on the approach plates. He had submitted a paper (e-mail was sent out) and received one comment that an AT be created. It was stated we have a Flight Plan Suffix AT that has been put on hold until Sept.

Action Item: This issue is assigned to the Flight Plan Suffix AT.

The next PAR F2F is planned for Nov 16 based upon certain products being available.