

January 27, 2010

Ms. Margaret Gilligan
Associate Administrator for Aviation Safety
Federal Aviation Administration
800 Independence Avenue,
S.W. Washington, D.C. 20591

Dear Peggy:

Under the FAA's Flight Plan, two of its stated goals are to achieve greater levels of capacity and increase current levels of safety. The industry is a strong advocate of these initiatives and has been very supportive of your efforts. One of the original objectives of the Flight Plan was to accelerate the production of terminal instrument and approach procedures based on the concept of Performance Based Navigation. Toward this end the FAA has been very successful in producing substantial numbers of terminal RNAV arrival and departure procedures (STARs and SIDs), WAAS-based LPV, RNAV (GPS) and RNP/RNP SAAAR instrument approach procedures.

Many of these new procedures are welcome by the user community and are serving to provide substantial benefits. Some terminal and en route procedures however have taken the form of overlays of existing conventional procedures, and some of the instrument approach procedures also overlay existing RNAV or ILS procedures and provide negligible reductions in ceiling or visibility minima.

While the large number of procedures that have and will continue to be developed will increase the availability of PBN-based procedures and allow us to utilize our current fleets of RNAV and RNP capable aircraft, we would like to offer some recommendations to further refine the goals of the Flight Plan to put more emphasis on the utility and benefit of these procedures. This recommendation is supported by the RTCA Task Force 5 report that recommends under paragraph 4.3.1: Optimize and increase the use of RNAV operations, institute tiger teams that focus on quality at each location (Operational Capabilities 32a, 29).

To assist the FAA establishing guidelines for improving the decision process for continued growth and value of RNAV and RNP procedures, the PARC created an Action Team led by Frank Alexander that was charged with developing recommendations to improve the process of site selection and also to help identify issues that could affect the development of these procedures and acted on early in the process to help make the process more efficient. We also believe that this could serve to support the recommendations 29 and 32a of the Task Force 5 report that call for the creation of "tiger teams to focus on quality at each location."

We hope that after reviewing the attached paper, you will give it your support so that we can continue to expand the PBN environment in a manner that serves the needs of the

community and helps the FAA meet its goals for implementation. We appreciate your continued support of PARC activities and invite you to join us to discuss these recommendations and how we can continue to work with your organization to help resolve any issues. Please call me if you have any questions or would like to set up a briefing on the subject.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Nakamura". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dave Nakamura
Chairman
Performance-based operations
Aviation Rulemaking Committee

Cc: J. McGraw
J. Hickey
H. Krakowski
S. Dickson
J. McCarthy
L. Smith
B. DeCleene

RNAV/RNP Process Procedure Paper

December 17, 2009

Introduction

The National Airspace System is moving to a performance based navigation environment. To accelerate this process, the FAA has implemented a plan to produce numerous RNAV and RNP procedures in the NAS. Much of this work has been generated from within the FAA's Flight Plan and has been supported by the work of the PARC and the PARC's RNP Benefits Action Team. With the release of the RTCA NextGen Mid-Term Task Force Report, the need for an improved process to develop beneficial RNAV and RNP procedures takes on even greater importance. Both industry and FAA agree that the procedure development process needs to be examined to insure that the needs of the industry are met and the resources of the FAA are best utilized to serve those needs.

Problem Statement

The process used by the FAA to determine when and where to produce RNAV and RNP instrument flight procedures has not always provided for the most effective use of FAA resources and in some cases has not provided the expected benefit to the user community. This is due in part to an earlier commitment to meeting the goals of the FAA's Flight Plan where priority is heavily weighed in favor of the quantity of procedures developed versus the utility to the user. Some of the factors affecting this process include the following:

- Producing procedures where there is no clear need or benefit but supports the numerical goals of the Flight Plan
- RNAV Terminal procedures that overlay existing conventional procedures without significant benefits gained
- Instrument approach procedures that are not connected to either existing conventional or RNAV/RNP terminal arrival procedures
- The percentage of users, properly equipped and desiring an RNAV or RNP instrument procedure at the facility
- Currently there are multiple processes that exist to support the development of RNAV and RNP procedures. This often results in extended time frames for the development and introduction of procedures.

It should be noted that the issues identified above are not intended to criticize the existing process but to make the reader aware of the industry's desire to effect changes that would enable procedures to be developed that not only better serve the needs of the users, but also to allow the FAA to better utilize its existing resources to help meet that goal.

Discussion:

The FAA's Performance Based Aviation Rulemaking Committee (PARC) took an action to study the current process and provide a set of recommendations that are intended to make the development process more efficient as well as allow production of procedures that provide greater value to the user community.

The scope of the activity was to establish an end-to-end process where the priority is the value of the procedure to the operators and the system, insure adequate justification and have checkpoints along the development phase that will allow the FAA to identify factors that have not been addressed or will require additional work and thus delay the implementation.

Recommendations:

1. Guidelines be established to insure that prior to beginning any procedure development, it is established that the procedure will provide benefit in one or more of the following areas for the majority of operations at the location and/or the FAA:
 - Safety
 - Capacity
 - Operating Efficiency
 - Environmental
 - Financial

This benefit or combination of benefits should be substantiated to the extent possible prior to beginning the development process to ensure that the results have a reasonable expectation of being realized. The proponent should also commit to remaining engaged throughout the development process and to keep other operators desiring to use the procedure informed of the procedure development. Similar analysis should be conducted prior to modifying existing RNAV/RNP procedures to provide additional benefits or new capabilities.

2. Insert in the development process, checkpoints to identify procedures in the initial or early or stages of development that may not provide the expected tangible benefit(s). This would include such things as environmental impact studies or site surveys that could cause extensive delay of that as well as other procedures in the queue. Examples of this would include:
 - Approach procedures that do not provide 50 feet DA or 1/4 mile minima improvement over existing RNAV (LNAV/VNAV) approaches
 - Developing multiple RNP approach procedures at airports that already have RNAV and ILS approach procedures to all of the runways.
 - Runways that do not have adequate surveys to support the development of an RNP approach. These need to be identified prior to scheduling production to allow the RNP office to justify and plan for the surveys.
 - Runways that will require new flight tracks or modified tracks near noise sensitive areas should be identified at the initial request or shortly thereafter to insure that the appropriate environmental work can be completed prior to procedure design and development
 - ATC procedure or airspace issues that need resolution to help insure their willingness to utilize the procedure.
 - Addition of track mileage unless it can be determined that by doing so, will provide the users with an operational or efficiency benefit
 - Review the current or future terminal airspace design for other RNAV/RNP procedures that might be tied together with the new procedure

- Establish a joint industry/FAA team to meet periodically to monitor the process and recommend changes if necessary.
3. Establish a revised format for the application or request for a procedure and in conjunction with that review the existing process (18 step) to determine what needs to be changed to both eliminate non-essential elements and add those elements to provide the proper justification for procedures as well as capture the justifications for the procedure.
 4. Establish a review process to evaluate each application to determine level of priority. This should be a joint industry/FAA activity to make sure that all of the elements described in the recommendations above. This process could be established through the existing regional RAPT teams by including selected industry representation from operators in the individual regions including representation from the the operator community (airlines, business and general aviation and the military)
 5. . These participants would serve as standing members of the RAPT teams.
 6. Establish within the FAA or some other location, a repository for tracking procedures and procedure status that would be available to all interested parties that would provide an updated status of each procedure. If this exists, review its current methodology and revise it if necessary to meet the recommendations of this paper.
 7. Create a short term activity for the purpose of developing a set of matrices to measure the success of implementation.
 8. Evaluate the current processes and procedures used to develop and implement procedures and explore ways to make that process more efficient and economical