Meeting Summary, May 20, 2015
Tactical Operations Committee (TOC)

The ninth meeting of the Tactical Operations Committee (TOC), held on February 5, 2015, convened at 11:00 a.m. The meeting discussions are summarized below. The following attachments are referenced:

Attachment 1 – List of Attendees
Attachment 2 – Presentations for the Committee (containing detailed content of the meeting)
Attachment 3 – Summary of the February 5, 2015 TOC Meeting
Attachment 4 – FAA Response to TOC Recommendations on VOR MON Waterfall Schedule
Attachment 5 – Modification to the GPS Adjacent Band Compatibility Task Group Terms of Reference
Attachment 6 – Terms of Reference for Airport Construction Task Group

Welcome and Introductions

Committee Co-Chairs, Mr. Jim Bowman, Vice President of Flight Operations at FedEx Express, and Mr. Dale Wright, Director of Safety and Technology at NATCA, called the meeting to order and welcomed the TOC members and others in attendance. All TOC members and attendees from the public were asked to introduce themselves (TOC members and General Public Attendees are identified in Attachment 1).

Mr. Bowman and Mr. Wright reviewed the agenda and began the proceedings of the meeting.

Designated Federal Official Statement

Ms. Elizabeth “Lynn” Ray, Vice President of Mission Support for the Air Traffic Organization (ATO), and the Designated Federal Official of the TOC, read the Federal Advisory Committee Act notice governing the open meeting.

Approval of February 5, 2015 Meeting Summary

The Chairs asked for and received approval of the written Summary for the February 5, 2015 meeting (Attachment 3).
**Briefing on the National Special Activity Airspace Program (NSAAP)**

Mr. Rob Hunt, Manager of the Technical Analysis and Operational Requirements Group (AJV-73), provided an overview briefing to the TOC on the National Special Activity Airspace Program (NSAAP). (Briefing charts are included in Attachment 2.) Mr. Hunt reviewed the overall approach of NSAAP, what has been completed to date and planned future development and timing.

There were comments from multiple TOC members regarding the schedule for NSAAP. Some Committee members had interest in when dynamic information in NSAAP would be available. There was discussion that NSAAP is a “win-win” for industry and the FAA and if there were any opportunities to move the schedule forward, they should be pursued. The last investment milestone, which relates to dynamic information in NSAAP, is currently planned for 2019, implying that the capability would be available in the 2020/2021 timeframe. Some operators expressed disappointment with the planned timing.

Mr. Hunt informed the TOC that the FAA recognized the benefits and priority for NSAAP. However, he reminded the group that budgets were limited and NSAAP was competing against many other priorities for financial and human resources. Finally, a TOC member inquired if there were any studies on the end-state benefits of NSAAP available for review. Mr. Hunt noted that MITRE had done a study and that he would investigate what was available to share with the Committee.

**FAA Response to VOR MON**

Mr. Dale Courtney, FAA’s National Resource Engineer for Navigation, presented the FAA’s response to the VOR MON Recommendation on the Waterfall Schedule. The FAA’s response letter is included as Attachment 4. Mr. Courtney noted that the FAA currently had a list of 308 VORs slated for decommissioning but that the order was not yet final. He stated that the relationship of these VORs to procedures was a key factor. Mr. Courtney also indicated that the FAA planned to publish a notice in the Federal Register for the first 100 VORs shortly.

Mr. Courtney expressed thanks and agreement with the TOC’s recommendations on the VOR MON Waterfall. Ms. Ray echoed those thanks to the task team that worked on the recommendations.

**Discussion on GPS ABC Tasking**

Mr. Bruce DeCleene, Manager, Flight Technologies and Procedures Division, next briefed the TOC with respect to the GPS Adjacent Band Compatibility tasking. He informed the TOC that the Federal Government has concern with how to best utilize the spectrum adjacent to GPS. He noted that the FAA was interested in whether the proposed cylindrical Exclusion Zones around transmitters radiating on spectrum adjacent to GPS would have any safety or operational impact in the National Airspace System. Mr. DeCleene also requested the TOC to ask, if the zones as proposed were not acceptable, what would be. Finally, he pointed out that this effort within the FAA was a general effort in
consideration of use of spectrum adjacent to GPS and it was not a task specific to any specific proposed use of the adjacent band.

One TOC member noted during the discussion that operational scenarios that depict the impact of the proposed Exclusion Zones would be critical to evaluating their safety and operational impacts.

The GPS ABC Task Group proposed a slight modification to the language of the originally approved Terms of Reference, noting that the group was to examine only the Exclusion Zones proposed in the FAA’s original study. The TOC approved these modified TORs. (This is included as Attachment 5)

**Airport Construction**

Mr. Chris Oswald, Airports Council International-North America, gave a brief presentation to the TOC about the approach the Airport Construction Task Group was pursuing with respect to its tasking. He informed the TOC that the Task Group was currently in a stage of data gathering and foundation building through evaluating construction case studies and gathering information on current tools and processes. Mr. Oswald noted that later in the year the group would deliberate based on this data to answer questions such as what the construction process should be and what additional tools or data are required. Mr. Oswald proposed Terms of Reference for the Airport Construction Task Group and these were approved by the TOC. (This is included as Attachment 6.)

**Status of Ongoing Tasks**

Next, Mr. Trin Mitra, RTCA, gave a brief overview of other existing tasks for the TOC. Mr. Mitra informed the TOC that the National Procedure Assessment Task Group had formed and that its first meeting was scheduled in June 2015. He also told the TOC members that three other groups were on target for delivering recommendations at the next TOC meeting on July 21st: the Class B Task Group, the Eastern Regional Task Group (on Caribbean operations) and the NOTAM Task Group.

**Adjourn**

Chairman Wright ended the meeting of the Committee at 12:30 p.m.

**Next Meeting**

The next meeting of the TOC is July 21, 2015 in Washington, DC.
Attendees:
May 20, 2015 Meeting of the Tactical Operations Committee
Washington, DC

<table>
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<tr>
<th>Name</th>
<th>Company</th>
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Committee member names appear in italics.
RTCA Tactical Operations Committee

Ninth Meeting
May 20, 2015
Hosted by NBAA

Welcome and Introduction

Co-Chairs:
Jim Bowman, FedEx Express
Dale Wright, NATCA
Topical Agenda

- GPS Adjacent Band Compatibility Task
- FAA Response to Final VOR MON Recommendation
- National Special Activity Airspace Program
- Ongoing Tasks
  - Airport Construction Terms of Reference
  - National Procedure Assessment Leadership
  - Updates on Class B, Caribbean, NOTAMs
- Preparation for July 21st TOC Meeting

PUBLIC MEETING ANNOUNCEMENT
Read by: Designated Federal Official Elizabeth Ray
Tactical Operations Committee (TOC)
May 20, 2015

In accordance with the Federal Advisory Committee Act, this Advisory Committee meeting is OPEN TO THE PUBLIC.
Notice of the meeting was published in the Federal Register on:
April 21, 2015
Members of the public may address the committee with PRIOR APPROVAL of the chairman. This should be arranged in advance.
Only appointed members of the Advisory Committee may vote on any matter brought to a vote by the Chairman.
The public may present written material to the Advisory Committee at any time.
Review and Approval of:

February 5, 2015 Meeting Summary

GPS Adjacent Band Compatibility
Task: FAA Guidance

Bruce Declene, FAA
Background: GPS Adjacent Band Compatibility Study Exclusion Zones

- The original FAA assessment approximated critical areas where GPS must be protected for both current and future instrument procedures at established airports and heliports.

- To accommodate transmitters mounted on towers or other structures, the FAA evaluated exclusion zones 500’ in radius & 100’ above obstacles in the (H)TAWS database.
  - Since helicopters generally avoid flying to obstacles identified in the HTAWS database, FAA assessed this exclusion zone was reasonable and that disruptions to GPS and HTAWS may be acceptable inside the exclusion zone.

- The FAA did not address Unmanned Aircraft Systems

Original Request

- The FAA desires to vet the exclusion zone assumptions with the users who might be impacted within the exclusion zones.

- Reasonable scenarios are essential to the compatibility assessment.

- What reasonably-sized exclusion zone precludes safety and operational issues:
  - For helicopter operations?
  - For UAS operations?
  - Recognizing that some applications require purposely flying close to obstacles that might be handled by exception.
2014 Methodology and Assumptions

Q4: Are the size and aggregated density of aircraft and helicopter exclusion zones where GPS-based TAWS/HTAWS alerts cannot be assured . . . sufficiently small so as to not impact flight safety? Alternatively, what TAWS/HTAWS exclusion zones parameters should be considered?

Q5: Comments are requested regarding the operational acceptability and safety implications for the proposed exclusions, operational limitations and safety considerations . . . including any alternative suggestions and supporting rationale.

Q6: . . . are there safety impacts and operational limitations that are unique to small Unmanned Aircraft Vehicles (UAVs) operations?
  - If yes, please identify the unique operational use case scenarios and any associated safety and operational issues.
  - Propose additional assumptions and “exclusion zones” for consideration that would preclude the identified safety and operational issues (if any).

GPS Adjacent Band Compatibility Task: Next Steps

Bob Lamond, NBAA
Paul McDuffee, Insitu
GPS ABC Task: Next Steps

- Adjust Terms of Reference to reflect FAA guidance on focus and July deadline for recommendation
- Reconvene Task Group and “pick up where we left off”
  - Draft deliverable in hand
  - In process on Final Resolution and Comment of the report

TOC Action

Consider and Approve Updated Terms of Reference:

**GPS Adjacent Band Compatibility Task Group**
FAA Response to Final VOR MON Recommendation (Task #3)

Dale Courtney, FAA
Update on National Special Activity Airspace Program

Rob Hunt, FAA
National Special Activity Airspace Project (NSAAP)
RTCA TOC Brief

Status Update
Presented to: RTCA, Tactical Operations Committee
By: AJV-7, Operational Concepts, Validation & Requirements
Date: 5/20/2015

Outline
• Phased Approach Overview
• NSAAP Completed Activities
• NSAAP On-Going and Future Activities
• NSAAP Going Forward
**NSAAP Phased Approach - Status**

<table>
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<th>SAA Policy/Procedures</th>
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<th>FY15</th>
<th>FY16-FY18</th>
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<td>Standardize Use of Existing SAMS</td>
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**SAA Schedule/Status Processing + Dissemination**

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<td>SAMs Tug and on eSAMS</td>
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<td>SAMS 51 FD (ACE)</td>
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<td>SAMs Displayed on TFMS</td>
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**SAA-ATM Integration**

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<td>Develop/Validate CONIDS for Integrating Additional ATM Systems</td>
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**SAA Use Metrics + Reporting**

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**NSAAP Activities Completed**

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<tr>
<td>Achieved AIMM S2 Final Investment Decision</td>
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<td>Award AIMM S2 Contract</td>
<td>11/2014</td>
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<td>Performed Initial Data Analysis between SAMS’s SAA schedule and ERAM’s SAA status</td>
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<td>Implemented the SWIM-based delivery of the SAMS Schedule to TFMS (TSD and NTML)</td>
<td>01/2015</td>
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<td>Implemented MADE/SAMS V5.6, DoD Web Service Interface V4.1</td>
<td>03/2015</td>
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<tr>
<td>Reviewed SAMS’s JIRA tickets &amp; recommended implementation priorities</td>
<td>04/2015</td>
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<tr>
<td>Performed Initial Metric Data Analysis</td>
<td>05/2015</td>
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<tr>
<td>Initiated lower-level ATM systems gap analysis between current and to-be state</td>
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NSAAP Future Activities

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<tr>
<td>Implement an SAA Schedule Conflict Detection Capability in SAMS</td>
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<td>Achieve AIMM S3 Concepts and Requirements Definition Readiness Decision (CRDRD)</td>
<td>03/2016</td>
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<td>Implement SAA schedule automatic dissemination capability in AIMM S2 Aeronautical Common Service (ACS)</td>
<td>09/2016</td>
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<td>Add RFMSS interface to SAMS/MADE</td>
<td>03/2017</td>
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<tr>
<td>Achieve AIMM S3 Investment Analysis Readiness Decision (IARD)</td>
<td>03/2017</td>
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<tr>
<td>Implement SAA legal description automatic dissemination capability in ACS</td>
<td>07/2017</td>
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<td>Continue SAA Metrics - Utilization Performance Analysis</td>
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<tr>
<td>Continue supporting requirements development for SAA integration with ATM automation programs/investments (e.g. E-IDS, ERAM Future Segments, Terminal WP1, ATOP WP1, etc.)</td>
<td>On-going</td>
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<tr>
<td>Coordinate Policies and Procedures changes, as needed</td>
<td>On-going</td>
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Going Forward…

- Continue engineering activities to develop and allocate requirements for eventual implementation; continue to look for opportunities to “accelerate” implementation and capture early benefits
- Collaborating with all stakeholders is the key to success; will continue to engage stakeholders to exchange information, coordinate activities, etc

Recent Accomplishments:
- Briefed Air Force on NSAAP activities and discussed the potential improvements in ATCAA scheduling on 1/22/15
- Attended Air Force National Airspace/Range West Regional Meeting on 3/25/15
Questions and Comments?

Status of Ongoing Tasks
- Airport Construction
- National Procedure Assessment
- Class B Airspace
- Caribbean Operations
- NOTAMs
# Airport Construction Tasking

1. **Lessons Learned (Case Studies)**
   - Review select past airport construction projects and associated data and identify lessons learned and recommend best practices for future projects. This would include the review of available safety and efficiency data where construction issues were noted as a factor. Please recommend a mechanism to ensure we capture and share lessons learned from future projects.

2. **Evaluate FAA Planning Tools**
   - Identify and evaluate current strategic planning initiatives/tools used by FAA stakeholders at the Headquarters, Service Area/Region, and Service Delivery Point levels and provide recommendations on a best approach.

3. **Evaluate FAA Processes**
   - Assess the use of agency orders, advisory circulars, and internal processes currently being used to guide airport sponsors in their management of airport operations during construction and provide recommendations on a best approach.

4. **Understand Stakeholders**
   - Identify all stakeholders internal and external to the FAA needed and define their roles in the coordination and implementation processes.

5. **Outreach Strategies**
   - Describe needed outreach strategies associated with each stakeholder and include a recommended timeline for outreach for major, long term projects.

6. **Managing Safety Risk**
   - Identify a set of recommendations on how safety risk should be better managed for aircraft operations impacted by airport construction projects.

The FAA requests this task be completed by the 2nd Quarter, FY2016 TOC meeting – March 2016

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## Macro Approach to Task

### Build Foundation

- Case studies (#1)
  - Learn from specific sites
  - Learn from experience of sub groups on the TG (ACAC, airlines)
  - Lead by Towles/Siewert

- Gather info & document how things done today (process, tools, safety)
  - Process & Tools (#2/#3) – Pfingstler/Yamamoto
  - Stakeholders (#4) – Marcoux/Cardillo (will lag behind the case studies)

- Draft foundation story (current process, tools, case study synthesis) by July TOC meeting

### Deliberate and Define Future

- Define the future
  - What is the idealized process?
  - What are the gaps in the process?
  - What are gaps in tools and data?
  - What stakeholders required at various stages? What outreach?
  - What improvements in safety risk management are required?
TOC Action

Consider and Approve Terms of Reference:

Airport Construction Task Group

National Procedure Assessment Initiative

- National Procedures Assessment (NPA) Initiative
  - Establish a repeatable process and plan to cancel redundant or excess procedures and reduce the maintenance costs associated with them

- Two processes used for publication or cancelation of procedures:
  - (1) Regulatory, which includes airways, routes, and instrument flight procedures that require rulemaking
  - (2) Nonregulatory which includes SIDs and STARs and don’t require rulemaking
NPA Task Request

FAA Requests TOC to address following by 4th Quarter FY 2015:

1. **Review and validate current NPA Initiative** assumptions and criteria developed to date for regulatory and non-regulatory tracks

2. **Review proposed FAA implementation plans** for both tracks and provide feedback and recommendations as needed.

3. **Assess effectiveness of the outreach planned and accomplished** by FAA and recommendations for improvement.

4. Provide recommendations on what assumptions and criteria should be considered to **advance the NPA Initiative** beyond its current scope to encompass the remaining conventional and PBN routes and procedures.

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National Procedure Assessment Initiative

**Co Chairs**
- Michael Perrizo, Air Wisconsin
- Randy Burdette, State of Virginia

**FAA SMEs**
- Jose Alfonso, Federal Aviation Administration
- Robert Novia, Federal Aviation Administration

**Task Group Members**
- Michael Stromberg, Air Wisconsin
- Melissa Rudinger, Aircraft Owners and Pilots Association
- Brian Townsend, American Airlines, Inc.
- Bob Lamond Jr, National Business Aviation Association
- Perry Clausen, Southwest Airlines
- Gary McMullin, Southwest Airlines
- Glenn Morse, United Airlines, Inc.

**Any additional interest?**
Other Tasks

- Class B Airspace
  - On target for July 21st recommendation

- Caribbean Operations
  - On target for July 21st recommendation

- NOTAM Improvement Panel
  - Reviewed Phase 2 Implementation of NOTAM Search and will bring recommendation to July 21st meeting

Next Meeting: July 21st

- Reviewing 4 recommendations
  - NOTAM Search Phase 2 Implementation
  - GPS ABC Exclusion Zones
  - Criteria for Establishment and Design of Class B Airspace
    - Improving Operations in the Caribbean

- Expecting update from Airport Construction
  - Debrief on case studies, construction process and materials in use today
RTCA Symposium

Congratulations to the Leadership of the NOTAM Task Group who will be the first TOC recipients of an Outstanding Leadership award at the RTCA Symposium

Closing Comments

Co-Chairs:
Jim Bowman, FedEx Express
Dale Wright, NATCA

Designated Federal Official:
Lynn Ray, Federal Aviation Administration
Next Meetings:

July 21, 2015

November 2015

Washington, DC

Adjournment
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Attachment 4 – NOTAM Search Phase 1 Implementation
Attachment 5 – FAA Response to VOR MON Recommendation on Outreach and Modifications
Attachment 6 – Recommendation on VOR MON Waterfall and PBN Route Concept of Operations
Attachment 7 – Tasking Letter for GPS Adjacent Band Compatibility Task
Attachment 8 – Terms of Reference for GPS Adjacent Band Compatibility Task
Attachment 9 – Tasking Letter for National Procedure Assessment Initiative Task

Welcome and Introductions
Committee Co-Chairs, Mr. Jim Bowman, Vice President of Flight Operations at FedEx Express, and Mr. Dale Wright, Director of Safety and Technology at NATCA, called the meeting to order and welcomed the TOC members and others in attendance. All TOC members and attendees from the public were asked to introduce themselves (TOC members and General Public Attendees are identified in Attachment 1).

Mr. Bowman and Mr. Wright reviewed the agenda and began the proceedings of the meeting.

Designated Federal Official Statement
Ms. Elizabeth “Lynn” Ray, Vice President of Mission Support for the Air Traffic Organization (ATO), and the Designated Federal Official of the TOC, read the Federal Advisory Committee Act notice governing the open meeting.

Approval of November 20, 2014 Meeting Summary
The Chairs asked for and received approval of the written Summary for the November 20, 2014 meeting (Attachment 3).

**FAA Report**

**Organizational Changes**

Ms. Ray then provided the FAA Report. She first addressed a series of organizational changes that had recently taken place in the FAA’s Air Traffic Organization (ATO). Ms. Ray noted that both the Vice President and Deputy in Management Services had recently retired and that TOC Member Nancy Kalinowski would be stepping in as the Acting Vice President of Management Services. Dan Smiley, previously Deputy Vice President of System Operations, would become Acting Vice President in Kalinowski’s place and also take the position on the TOC. Ms. Ray also said that the Director of System Operations position was open.

Within Mission Support Services, Ms. Ray informed the TOC that previous Director of Airspace Services, Dennis Roberts, was moving to a new position within the FAA and that the Directorate was open. Finally, she mentioned that Aviation Information Management (AIM) and Aeronav were merging into a new Directorate, Aeronav Services (AJV-5).

**Metroplex**

Ms. Ray then discussed the status of Metroplex activities in the NAS. She informed the TOC that there were eleven active projects in various stages of maturity. Most current efforts are being pursued in a staged manner and the recent implementations of Houston and North Texas Metropoles were the only “big bang” projects, intended to shift to many new procedures at one time.

Ms. Ray noted that Houston was currently in post implementation and a report was due out approximately one month later. She said that FAA, MITRE and operators were working to reconcile and analyze a significant amount of operational data. All project were scheduled out into 2017 with post implementation efforts into 2018. One TOC member requested if there was a requirement to utilize metering as Metroplex implementations go into place. Ms. Ray answered that the work of Metroplex and Time Based Flow Metering (TBFM) were tied together.

Finally, she provided a series of specific updates on Northern California, Southern California, Phoenix, Denver, Cleveland, Detroit, Washington DC, Charlotte, Atlanta and South Florida.

**Performance Based Navigation (PBN)**

Ms. Ray then spoke about PBN. She mentioned that the TOC may expect task requests in PBN in the future but that for now such efforts were within the auspices of the NextGen Advisory Committee (NAC). She said the FAA was at a “tipping point” in the numbers of procedures but dealing with challenges on utilization of the existing PBN procedures. The overarching question the FAA is considering is what it will take to evolve the NAS to where the primary procedure advertised, for example, on the Automatic Terminal Information Service (ATIS) System is the PBN procedure. She
noted that there is still significant work required for supporting Decision Support Tools (DSTs) as well as environmental challenges.

**NOTAM Improvement Panel Recommendation on Phase 1 Implementation of NOTAM Search**

Mr. Mark Cardwell, FedEx Express and Co-Chair of the NOTAM Task Group of the TOC, briefed the TOC on the NOTAM Task Group’s recommendation regarding the Phase 1 Implementation of NOTAM Search. The FAA implemented the first phase of the NOTAM Search website in November 2014 and requested the NOTAM Improvement Panel to provide feedback on the implementation. The Task Group met in December 2014 and drafted the recommendation titled “NOTAM Search Phase 1 Implementation.” This is included as Attachment 4 to this summary.

Mr. Cardwell described that the group’s feedback focused on three primary categories:

1. Broad considerations for new functionality
2. Input on user interface
3. Specific fixes for website

For the first category, Broad considerations for new functionality, the recommendation offered a set of specific recommendations. The group recommended that NOTAM Search include functionality for the following:

- Select VFR vs IFR flight option
- How to train users beyond user guide; videos?
- Downloading content to use/sort/filter while offline
- Any mobile version replicate functionality of www.faa.gov/mobile
- Question of whether printing should be standard sequence or based on user sorting

Next, Mr. Cardwell reviewed a series of requests regarding the User Interface for NOTAM Search. The full set of recommendations is included in Attachment 4. Some examples include:

- Space and not comma separated route string
- Placement of specific labels
- Providing description of categories
- Clear guidance of what is/is not accepted in the route string (such as SIDs/STARs not accepted)

Finally, Mr. Cardwell discussed the Task Group’s recommendations for specific fixes to the NOTAM Search website. Again, the full set is included in Attachment 4. Some example fixes include:

- Change specific icon that is confusing
- Including specific headers in PDF export
- Changing label “Help” to state “User Guide”
- Fixing date format differences between browsers
- Clarifying UTC in the time filter
Mr. Cardwell concluded by informing the TOC that the next implementation phase of NOTAM Search was expected in March 2015 and the Task Group would meet again after that time.

**Committee Action:** The Committee agreed by consensus to approve the NOTAM Recommendations on NOTAM Search Phase 1 Implementation (Attachment 4).

**FedEx Briefing on NOTAM Filtering and Sorting**

Mr. Cardwell of FedEx Express provided a second briefing, this one focusing on a NOTAM improvement experience FedEx had over the previous two years. Mr. Cardwell’s briefing is included in Attachment 2. He relayed that FedEx had learned through its experience that sorting NOTAMs by runway was an effective method to manage the volume of NOTAMs and make the appropriate set of NOTAMs accessible to a pilot at the right time.

**FAA Response to VOR MON Recommendation on Outreach and Modifications**

Mr. Dale Courtney, FAA’s National Resource Engineer for Navigation, presented the FAA’s response to the VOR MON Recommendation on Outreach and Modifications. This is included as Attachment 5. Mr. Courtney said that prior to the Program being formalized as policy, the FAA would look for opportunities to announce the policy. Generally, the FAA stated that it agreed with the recommendations of the VOR MON Task Group. One TOC member asked when the information on the proposed VORs scheduled for shutdown would be published. The member noted that without any list published from the FAA, lists of VORs are being generated by unknown sources and communities are beginning “calls to action” to fight potential shut down. This underscored the need for the FAA to provide the list as soon as practical.

**VOR MON Recommendation on VOR MON Waterfall and PBN Route Concept of Operations**

The Co-Chairs of the VOR MON Task Group, Mr. Bob Lamond (NBAA) and Mr. Don Dillman (FedEx Express) next presented a recommendation on the VOR MON. The recommendation addressed the VOR MON Waterfall and PBN Route Concept of Operations (included as Attachment 6). Mr. Lamond and Mr. Dillman began by informing the TOC that the target for the VOR MON had been scaled back recently. While the original plans were to decommission 500 VORs by 2020, the plan now was to decommission about 100 VORs by 2020 and an additional 200 by 2025. The Final Investment Decision (FID) for the VOR MON Phase 1 for the first 100 VORs was expected in September 2015.

Next, Mr. Lamond and Mr. Dillman informed the TOC that the current recommendation addresses four areas:

- Waterfall for VOR MON
- Publishing List of Phase 1 VORs
- Feedback on PBN Route CONOPs
• Relationship between VOR MON and PBN Route CONOPs

Waterfall for VOR MON

The recommendation suggested that since the original goal of decommissioning 500 VORs by 2020 had been scaled back, the need for TOC input on the Waterfall had been greatly reduced. The VOR MON Task Group noted that the FAA’s stated criteria for selecting Phase 1 VORs would be for those VORs with the least impact on route structure of the NAS. The Task Group supported this approach.

Recommendations on Publishing List of Phase 1 VORs

Next, the Co-Chairs noted that funding to decommission the first 100 VORs was expected to be approved in September and received in October. The VOR MON Task Group re-emphasized previous recommendations to allow public to see proposed list of VORs as early as possible. Mr. Lamond and Mr. Dillman quoted the September 2014 Task Group recommendation which stated:

“The Task Group strongly recommends that the FAA publish a list of all VORs planned for decommissioning at the beginning of the notification process. It is paramount to publish the full list upfront so there are no surprises to the public later in the process about which VORs are being shut down.”

The recommendation suggested that not providing advance notification of full list of Phase 1 VORs risked a negative public response.

Recommendations on PBN Route Concept of Operations

The VOR MON Task Group gave high commendation for PBN Route Concept of Operations and suggested that, if implemented, it would deliver many of the anticipated operational benefits suggested in the study. The group recommended the FAA to aggressively implement the CONOPs but also recognized it was currently unfunded. The report recommended the FAA address this to ensure a robust national PBN route network is developed.

The Task Group offered no specific input on routes in the future network, instead noting that development of such a network would require multiple regional/national Work Groups.

Recommendation on Relationship Between VOR MON and PBN CONOPs

Mr. Lamond and Mr. Dillman concluded with the recommendation that the PBN Route Structure should be developed based on operational needs of NAS and not constrained by the VOR network of the past. The FAA should not link VOR MON and future PBN Route Structure. They did note that there would some required integration between the VOR MON and the PBN Route structure; this would be synchronizing decommissioning of VORs and implementing PBN routes to backfill routes impacted by VORs. Finally, they informed the TOC that failing to fund the PBN Route effort suggested the ultimate route structure would be incremental effort to plug gaps created by the implementation of the VOR MON program.

Finally, Mr. Lamond and Mr. Dillman informed the TOC that this task completed the final task of the group and suggested the TOC sunset the VOR MON Task Group.
During the ensuing discussion, Mr. Ray informed the TOC that the FAA was aware of the emphasis on publishing the list of proposed VORs to be shut down as soon as possible. TOC members noted that in lieu of an official list, unofficial lists or rumors would arise. Ms. Ray stated that the FAA was working on an approach to explain the MON, the process around developing the MON as well as an approach to inform the public of the collaborative work involving the TOC. One TOC member suggested that membership associations were interested to utilize their Communications organizations to share this message to their members.

Another TOC member inquired about the status of funding for the PBN Route Concept of Operations. Ms. Ray answered that funding through standard processes would not be available for this until 2017.

Committee Action: The Committee agreed by consensus to approve the VOR MON Recommendations on Waterfall and PBN Search Phase 1 Implementation (Attachment 6) and Sunset the VOR MON Task Group.

Discussion of TOC Areas of Interest

The TOC next reviewed a series of topics of interest:

National Special Activity Airspace Program (NSAAP)

Mr. Bob Lamond, NBAA, next lead a TOC discussion on NSAAP. He noted that NSAAP was a “win-win” for both FAA and industry, and he questioned why funding for the program was so difficult. Ms. Ray noted, similar to many other topics of interest, that NSAAP was in competition with numerous other ideas and Programs and ideas for future funding. Mr. Lamond reemphasized the extend of the benefit the Program would have for the National Airspace System (NAS). He stated that the next steps of NSAAP would be to identify the operational and policy details of how NSAAP would operate on a day-to-day basis. This type of work would likely be under Collaborative Decision Making (CDM).

Time Based Flow Management (TBFM)

Mr. Mark Hopkins, Delta Airlines, spoke next regarding TBFM. He inquired about the plans for sharing data with TBFM. Mr. Hopkins noted that there was an impact of TBFM on airline customers that operators could not predict and were only visible to the operator after pushback and call for taxi. He noted that TBFM data was now available via System Wide Information Management (SWIM) but there was further work to be done on visibility of the operational data.

Mr. Hopkins also spoke about the need for further work on post-operational analytical data to review performance and impact of TBFM. He mentioned that operational use of TBFM by different facilities had variation with some metering all the time, some metering to a freeze horizon and others to the runway. Mr. Hopkins noted that operators are experience good results in the airspace with less holding and vectoring but there was still concern and questions as to whether the benefits were achieved from gate to gate.

Remote Towers
Mr. Dale Wright, National Air Traffic Controllers Association (NATCA), next discussed Remote Towers. He informed the TOC that remote towers were in process of being implemented at Leesburg Airport which had multiple safety incidents in recent years. He informed the TOC that airports like Leesburg would benefit financially; a recent tower in Frederick, MD, cost approximately $6 million while the Remote Tower effort in Leesburg was approximately $1.5 million. Mr. Wright raised the concern that there were no efforts in the US to examine remote towers and how they would work operationally. He mentioned that remote towers in operation in Europe had only about 10 operations a day and airports like Leesburg may have up to 10 operations in the terminal area at any one time.

Unmanned Aerial Systems (UAS)

Finally, Ms. Ray spoke about UAS. She informed the TOC that the UAS Program Office under the direction of Jim Williams served as the official voice of the FAA on UAS. She had also stood up an ATO/UAS Integration Team under Dan Williams so act as the facilitator of all UAS activities within the ATO. Within this organization was a Permanent “Article 48” employee, Steve Widener. She told the TOC that the Notice of Proposed Rulemaking (NPRM) on small UAS was expected “any day” in the Federal Register. She also spoke about the emphasis on event reporting, “Section 333” exemptions and other exception agreements with news organizations that were ongoing.

New Task: GPS Adjacent Band Compatibility Study

Mr. Paul McDuffee, Insitue Inc., next introduced a new task, the GPS Adjacent Band Compatibility (ABC) Study (Tasking Letter included as Attachment 7). Mr. McDuffee informed the TOC that in January 2012, the Departments of Transportation (DOT) and Defense (DOD) planned to evaluate new GPS spectrum interference standards to inform future proposals for non-space, commercial uses in the bands adjacent to the GPS signals. In October 2014, the FAA published the GPS Adjacent-Band Compatibility Study and asked RTCA to review the study and answer 6 specific questions. Three of these questions were given to RTCA Special Committee 159 and three were being request of the TOC. The critical question of the TOC task on the GPS ABC study was about the possible impact of deploying networks of ground based transmitters radiating near GPS frequencies and the effect on aviation interests. Mr. McDuffee informed the TOC that the GPS ABC study proposed “Exclusion Zones” where GPS would be consider unreliable based on transmissions on the GPS adjacent band. The TOC was being asked to evaluate the operational and safety impacts of these exclusion zones. Specifically, the TOC was being requested to evaluate the impact to helicopter operators, UAS operators as well as other fixed wing operators.

Mr. McDuffee informed the TOC that a TOC GPS ABC Task Group had begun to inform and he presented proposed Terms of Reference for the effort (included as Attachment 8).

Committee Action: The Committee agreed by consensus to approve the Terms of Reference for the GPS Adjacent Band Compatibility Task Group.
**Update on Existing Tasks**

**Eastern Regional Task Group: Caribbean Operations**

Mr. Joe Bertapelle, JetBlue, gave an update to the TOC on the existing task under the Eastern Regional Task Group on Caribbean operations. He informed the TOC that the task had kicked off in January with 25 in person and 5 remote attendees for the first meeting. The group had scheduled future monthly meetings and anticipated delivering its final report at the July 2015 TOC meeting. Mr. Bertapelle informed the TOC that next steps were for the FAA’s operating facilities in the region to identify “wish lists” for operational improvements and status of existing infrastructure projects.

One TOC member noted that this region will continue to grow and this effort was very important for the future of Caribbean operations and growth.

**Class B Designation and Design**

Ms. Melissa McCaffrey, Aircraft Owners and Pilots Association (AOPA), provided an update on the Class B Task Group. Ms. McCaffrey informed the TOC that the previous week, the Class B group had its initial kickoff meeting in which it discussed the history of Class B airspace and current processes for airspace change. She noted some initial observations that there were new data sources available that may better inform Class B designation and that no process existed for revoking Class B. Ms. McCaffrey informed the TOC that the group had scheduled a series of monthly meeting and intended to deliver its final recommendation at the July TOC meeting.

**Airport Construction**

Mr. Mark Hopkins, Delta, and Mr. Chris Oswald, ACI-NA, Co Chairs of the Airport Construction Task Group next gave an update on this effort. They noted that the group was in its very early stages of activity. Some initial thinking was to evaluate construction in context of equipment and navaids as well as runways/taxiways. Additionally, the group was considering evaluating the task in distinct phases of construction – Planning and Design (3 year to 18 months), Start of Construction Planning (18 months out), During Construction and Post Event Assessment. Mr. Hopkins and Mr. Oswald were considering dividing the efforting into sub tasks and were evaluating whether to do sub tasks in parallel or linearly.

**New Task: National Procedure Assessment**

Next, Ms. Ray introduced a new task for the TOC regarding the National Procedure Assessment Initiative (Tasking Letter included as Attachment 9). She informed the TOC that the FAA was interested in the best approach to cancelling VOR/NDB procedures (regulatory) and Standard Instrument Departure (SID) and Standard Terminal Arrival Routes (STARs) (non-regulatory) that were not required in the NAS. Already the FAA has a proposed removal of 732 VOR and NDB Instrument Approach Procedures that was part of a process that had begun 5 years ago. The FAA was interested in gathering additional TOC feedback on the processes in place for both the regulatory and non-regulatory procedures.
Mr. Mitra informed the TOC that RTCA would be seeking interested participants for this task in the near future.

**RTCA-IATA Partnership**

Ms. Jennifer Iverson, RTCA, provided an overview of a new IATA-RTCA partnership to the TOC. She informed the TOC that the partnership was intended to promote a seamless air transportation system for operators around the world. The initial region of focus was South America.

**Anticipated issues for TOC consideration and action at the next meeting**

Mr. Mitra informed the TOC that the Committee may anticipated an additional virtual meeting in May 2015 to consider a report from the GPS ABC task as well as to review Terms of Reference for the Airport Construction and National Procedure Assessment tasks.

Additionally, Mr. Mitra advised TOC members to anticipate multiple recommendations at the July TOC meeting. All of the following reports are anticipated at that meeting:

- NOTAM Feedback Phase 2 Implementation
- Interim report from Airport Construction
- Class B Airspace Criteria
- Eastern Regional Task Group – Caribbean Operations

**Other business**

No other business was raised.

**Adjourn**

Ms. Ray offered closing comments. She offered her gratitude to the work of the VOR MON Task Group noting that work provided critical recommendations to the FAA. She also thanked the NOTAM Task Group for its recommendation and observed that the level of collaboration and engagement between industry and the AIM organization had been very strong. Finally, she noted that the TOC had many tasks on its plate and she was willing to adjust timing for the new NPA task given the number of other tasks going on.

Chairmans Bowman and Wright ended the meeting of the Committee at 3:30 p.m.

**Next Meeting**

The next meeting of the TOC is May 20, 2015 in Washington, DC.
APR 13 2015

Ms. Margaret T. Jenny
President
RTCA, Inc.
1150 18th Street, NW
Suite 910
Washington, DC 20036

Dear Ms. Jenny:

The Federal Aviation Administration (FAA) appreciates the assistance and recommendations received from RTCA in support of the Very High Frequency Omni-Directional Range (VOR) Minimum Operational Network (MON). Continued coordination and support is not only critical to the success of the program but also to the FAA in supporting the safety and throughput of the National Airspace System.

To date, the RTCA’s Tactical Operations Committee (TOC) has responded to all tasks with respect to the VOR MON Program. Below is a summary of all tasks submitted to the RTCA and their respective completion dates.

- Task 1 (Review and Validate Selection Criteria) – Completed November, 2013
- Task 2 (Review and Validate draft MON list) – Completed February, 2014
- Task 3 (Recommendations to Waterfall Schedule) – Completed February, 2015
- Task 4 (Recommendations on Outreach and Education) – Completed September, 2014

In February, 2015, the TOC provided us with a report in response to Task 3 of the VOR MON tasking. The goal of this task was to review implementation planning to date and make recommendations to the preliminary waterfall schedule developed by us. The RTCA TOC responses were in four areas: Waterfall for VOR MON, publishing list of Phase 1 VORs, feedback on Performance Based Navigation (PBN) Route Concept of Operations (CONOPs) and the relationship between VOR MON and PBN Route CONOPs.

Recommendations on developing a waterfall Schedule for VOR MON Implementation

1) “The need for Task Group input on the Waterfall was clear when the goal was decommissioning 500 VORs in five years. However, the number of VORs to decommission has been reduced and spread out over time. Hence, it is not as critical to solicit Task Group input on the Waterfall today, especially considering 30 of the initial 100 VORs are already offline. The FAA stated that its initial focus on selecting VORs for Phase 1 decommissioning will be on those with the least impact on route structure. The Task Group believes this is a logical approach to begin implementation of the MON.”

The FAA agrees with the recommendation and plans to proceed with the two phased implementation of the MON.
Publishing a list of Phase 1 VORs

1) Recommendation to publish the draft list of candidate Phase 1 VORs as early as practical during Calendar Year 2015.

The FAA agrees with the recommendation and is working internally to develop an, “Interim” Federal Register Notice (FRN) for public distribution prior to the end of Fiscal Year 2015. A final FRN will be developed once Final Investment Decision is received.

Feedback on PBN Route CONOPs

1) Recommendation to continue development of the PBN Route Structure CONOPS for the FAA to fund the development of the program.

“The Task Group is aware that the effort is currently unfunded and recommends the FAA rapidly address this to ensure a robust national PBN route network is developed.”

The FAA recognizes the need for the PBN Route Structure and is working to address this recommendation.

2) RTCA is not offering input with respect to a PBN Route CONOPS and agrees with the assessment of the FAA CONOPs Team, that development of the work will involve multiple overarching regional and national groups.

The FAA agrees with this response.

Relationship between VOR MON and PBN Route CONOPs

1) Recommendation to only link the VOR MON Program and future PBN Route Structure together where necessary, and to ensure that PBN routes are available to backfill any Jet or Victor routes that are removed from the decommissioning of VORs.

The FAA agrees with this recommendation. Replacement of Victor Airways and Jet Routes with PBN Routes, where needed, will be accomplished.

If you have any questions please contact Leonixa Salcedo at (202) 267-9901 or Dale Courtney at (202) 267-4537.

Sincerely,

Elizabeth L. Ray
Vice President, Mission Support Services
Air Traffic Organization
TERMS OF REFERENCE

GPS Adjacent Band Capability Task Group

Tactical Operations Committee

Committee Leadership:

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<thead>
<tr>
<th>Position</th>
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<th>Organization</th>
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Background:

In the January 13, 2012 National Space-Based Positioning, Navigation, and Timing (PNT) Executive Committee (EXCOM) letter to the National Telecommunications and Information Administration (NTIA), Deputy Secretary of Transportation John D. Porcari and Deputy Secretary of Defense Ashton B. Carter proposed to develop new Global Positioning System (GPS) spectrum interference standards to help inform future proposals for non-space, commercial uses in the bands adjacent to the GPS signals. To accomplish this task, GPS adjacent-band transmitter power limit criteria will be developed; defining new adjacent-band applications that would be compatible with GPS, and perhaps forming the basis for GPS spectrum interference standards.

The Federal Aviation Administration (FAA) and the Research and Innovative Technology Administration (RITA), both operating Administrations of the Department of Transportation (DOT), developed a GPS Adjacent-Band Compatibility Study Plan to provide the framework for definition of the processes and assumptions that will form the basis for development of the GPS adjacent-band compatibility for GPS civil applications. That Plan identifies the processes to (a) derive adjacent-band transmitter power limit criteria for assumed new applications necessary to ensure continued operation of GPS services, and (b) determine similar levels for future GPS receivers utilizing modernized GPS and interoperable Global Navigation Satellite System (GNSS) signals.

The key question is what the possible impact is of deploying networks of ground based transmitters radiating near GPS frequencies and the effect on aviation interests. The Tactical Operations Committee has been asked to comment on three specific questions that relate to exclusion zones. The GPS Adjacent Band Capability study assumes aircraft operating relative to ground transmitter would have an aircraft exclusion zone.

Ancillary Terrestrial Component Transmissions in the 1526-1536 MHz Band with Certified Aviation GPS Receivers. One key part of that assessment was the determination of where aircraft would operate relative to the LightSquared transmitter locations. In particular, the study introduced assumptions regarding effective aircraft “exclusion zones” including:

For fixed wing aircraft: In order to accommodate LightSquared transmitters that are mounted on towers where the tower may be included in the TAWS obstacle database, an exclusion zone is permissible as follows:

a. For transmitters within 7.5 NM of an airport, if they are mounted on an obstacle that is taller than 100’ AGL, then an exclusion zone that is the intersection of a cylinder centered on the obstacle (500’ in radius and extending 100’ above the top of the obstacle) and the region below the obstacle clearance surfaces (as defined by the FAA 8260 series orders) for all instrument procedures. The exclusion zone extends down to the minimum altitude where coverage would be required by paragraph 1c, d, or e above. The FAA must also retain the ability to publish new instrument procedures and establish new airports without undue constraints.

b. For transmitters more than 7.5 NM away from any airport, if they are mounted on an obstacle that is taller than 200’ AGL, then an exclusion zone that is a cylinder centered on the transmitter (500’ in radius and 100’ above the top of the obstacle), but not above 1000’ AGL (including effects of falling terrain). The exclusion zone extends down to the minimum altitude where coverage would be required by paragraph 1c, d, or e above.”

For helicopters: In order to accommodate LightSquared transmitters that are mounted on towers where the tower is included in the HTAWS obstacle database, an exclusion zone is permissible. If they are mounted on an obstacle that is taller than 100’ AGL, then an exclusion zone is defined that is the intersection of a cylinder centered on the obstacle (500’ in radius and extending 100’ above the obstacle) and the region below the obstacle clearance surfaces (as defined by the FAA 8260 series orders) for all instrument procedures. The exclusion zone extends down to 100’ AGL. The FAA must also retain the ability to publish new instrument procedures or establish new heliports without undue constraints.”

Appendix A of the January 20, 2012 report provides additional detail, including operations not addressed in this excerpt. This annex should be consulted and additional comments provided as appropriate.

**Deliverables:**

The TOC will deliver a report addressing three specific questions posed in the GPS Adjacent Band Capability Study. These questions are:

Question #4 to RTCA: (c) Are the size and aggregated density of aircraft and helicopter exclusion zones where GPS-based TAWS/HTAWS alerts cannot be assured (Appendix C, section above, and reference [4]) sufficiently small so as to not impact flight safety? (d) Alternatively, what TAWS/HTAWS exclusion zones parameters should be considered?

Question #5 to RTCA: Comments are requested regarding the operational acceptability and safety implications for the proposed exclusions, operational limitations and safety

Question #6 to RTCA: (a) Considering the proposed fixed and rotary wing aircraft assumptions, exclusions, and limitations, are there safety impacts and operational limitations that are unique to small Unmanned Aircraft Vehicles (UAVs) operations? (b) If yes, please identify the unique operational use case scenarios and any associated safety and operational issues. (c) Propose additional assumptions and “exclusion zones” for consideration that would preclude the identified safety and operational issues (if any).

Please note that non-TSO compliant GPS equipment interference susceptibility may be substantially greater, or less than TSO approved receivers and antenna. Non-TSO GPS/GNSS equipment is used for UAV navigation, positioning, attitude control and payload systems; electronic flight bags, installed equipment for situational awareness, experimental and Light Sport Aircraft. Susceptibility needs to be characterized for each make, model and antenna pair. Operators, manufacturers and GPS suppliers should participate in the parallel DOT Volpe center GPS Adjacent-Band Compatibility activities to ensure any unique operational use cases are considered and their GPS equipment susceptibility is characterized.

The TOC will work with Special Committee 159 (SC 159) to compile answers its to the questions above with an additional set of questions on this study that SC 159 is addressing. The TOC will complete this work by May 15, 2015 July 21, 2015.

Scope:

The TOC’s effort will only address the three specific questions posed to the group in the GPS Adjacent Band Compatibility Study. Additionally, the TOC will focus its response only on the Exclusion Zones defined in the ABC Study.

Envisioned Use of Deliverables:

The TOC expects that the FAA will utilize the response to these questions to further mature the concept of exclusion zones around transmitters radiating near GPS frequencies.

Specific Guidance:

The TOC will work with Special Committee 159 to request Subject Matter Expertise from the FAA where necessary.

Termination:

Activities of the Task Group will terminate with approval by the TOC of the committee’s final report.
TERMS OF REFERENCE

Airport Construction Task Group
Tactical Operations Committee

Committee Leadership:

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<tr>
<th>Position</th>
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Background:

Construction projects of various sizes are going on all the time in the National Airspace System (NAS). Construction activities can range from major, long-term projects such as adding or improving runways or taxiways to relatively minor, short-term projects such as EMAS maintenance projects. Efficiency is usually most obviously impacted as Air Traffic adjusts arrival and departure rates to accommodate reduced available capacity or taxi in/out times increase. A more subtle impact involves introducing short term safety risk when a project takes a procedure with vertical guidance out of service for a period of time or increases pilot and/or controller workload complexity.

The FAA Office of Airports, Flight Standards, Regional Administrators, and the Air Traffic Organization work together with local airport authorities and aviation stakeholders at the Service Area, regional, and local levels during airport construction. While some impacts may be unavoidable, we can minimize unnecessary disruption and safety risk if risk identification and risk mitigation through planning, design and early collaboration and coordination are done effectively. The key to minimizing the impact of airport construction activities is ensuring the following:

- The right stakeholders are involved.
- Stakeholders understand risks and mitigations.
- There is a clear understanding among stakeholders of project roles and responsibilities to maintain safe airport operations during construction.
- There is a sharing and use of best practices and lessons learned.
- There is a transparent process to coordinate, track approvals, and implementation details.
There are many examples of projects where implementation went very well. However, there are other examples where coordination and collaboration could have been improved. Airports and the FAA organizations take different approaches to manage and mitigate construction safety risks and efficiency impacts. Best practices and lessons learned for each project may not be well understood or shared across projects or with stakeholders. The roles of the various FAA entities involved may differ or may not be clear enough to all stakeholders. Local airport authorities may not engage to the extent needed or early enough in the process. Aircraft operators may also not be included early enough in the process. Finally, we may not effectively engage the surrounding community to explain temporary shifts in aircraft noise or frequency. Incomplete or untimely coordination or involvement by key stakeholders may preclude the identification and implementation of effective mitigations to reduce safety risk and efficiency impacts.

**Deliverables:**

To help the FAA address the issues noted above, the TOC is requested to provide recommendations in several key areas related to airport construction coordination and implementation. They include:

1. **Review select past airport construction projects and associated data and identify lessons learned and recommend best practices for future projects.** This would include the review of available safety and efficiency data where construction issues were noted as a factor. Please recommend a mechanism to ensure we capture and share lessons learned from future projects.

2. **Identify and evaluate current strategic planning initiatives/tools used by FAA stakeholders at the Headquarter, Service Area/Region, and Service Delivery Point levels and provide recommendations on a best approach.**

3. **Assess the use of agency orders, advisory circulars, and internal processes currently being used to guide airport sponsors in their management of airport operations during construction and provide recommendations on a best approach.**

4. **Identity all stakeholders internal and external to the FAA needed and define their roles in the coordination and implementation processes.**

5. **Describe needed outreach strategies associated with each stakeholder and include a recommended timeline for outreach for major, long term projects.**

6. **Identify a set of recommendations on how safety risk should be better managed for aircraft operations impacted by airport construction projects.**

The FAA requests this tasking be completed by the 2nd Quarter, FY2016 TOC meeting.
**Scope:**

There are already several forms of guidance today in airport construction. This task will focus on not recreating existing materials but instead look for opportunities to integrate and improve upon what already exists.

The task relates to both safety and efficiency impacts of airport construction.

The task is relevant to both large hub as well as secondary airports.

**Task Group Approach:**

The following diagram provides an overview of the approach the Task Group will take in working on this tasking. The first half of the effort focuses on building the group’s foundational knowledge on all dimensions of airport construction (different phases, different disciplines, etc.). This will be done through hearing Case Studies, gathering existing information on Processes and Tools and documenting various stakeholder perspectives. There will be three sub-teams with the following leads in this “Build Foundation” stage:

- **Case Studies** – Dave Siewert (JFK Tower/ACAC) and Justin Towles (AAAE)
- **Gather Info on Process and Tools** – Susan Pfingstler (FAA) and Greg Yamamoto (FAA)
- **Document Stakeholder Perspectives** – Jim Marcoux (Delta) and Vincent Cardillo (Massport)

The Task Group intends to provide a report on its Build Foundation work at the July 2015 TOC meeting. The second stage will focus on Deliberating and Defining the Future. The sub-teams, if any, for this stage will be formulated after the foundational work is completed.

---

**Build Foundation**

Now until July TOC Meeting

- Case studies (#1)
  - Learn from specific sites
  - Learn from experience of sub groups on the TG (ACAC, airlines)
  - Lead by Towles/Siewert

- Gather info & document how things done today (process, tools, safety)
  - Process & Tools (#2/#3) – Pfingstler/Yamamoto
  - Stakeholders (#4) – Marcoux/Cardillo *(will lag behind the case studies)*

- Draft foundation story (current process, tools, case study synthesis) by July TOC meeting

**Deliberate and Define Future**

August to Early 2016

- Define the future
  - What is the idealized process?
  - What are the gaps in the process?
  - What are gaps in tools and data?
  - What stakeholders required at various stages? What outreach?
  - What improvements in safety risk management are required?
Envisioned Use of Deliverables:

The FAA will utilize the deliverables to further improve and possibly streamline processes associated with management of airport construction in the NAS.

Specific Guidance:

The FAA will work with the Task Group leadership to provide a list of past airport construction projects as discussed in Sub-Task #1 above to help the task group identify projects to review. The FAA will also provide safety and efficiency data as requested as well as orders and other documentation. Subject Matter Experts from various FAA lines of business will be available.

Termination:

Activities of the Task Group will terminate with approval by the TOC of the committee’s final report.