



**Approved by the Tactical Operations
Committee November 2015**

Review of Phases 3 and 4 of NOTAM Search Implementation

*Report of the Tactical Operations Committee in Response to Tasking from
The Federal Aviation Administration*

November 2015

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Background/Introduction

The Federal Aviation Administration (FAA) is required under Section 3(c) of Public Law 112-153, also known as the 2012 Pilot's Bill of Rights ("PBoR"), to "establish a NOTAM Improvement Panel, which shall be comprised of representatives of relevant nonprofit and not-for-profit general aviation pilot groups, to advise the Administrator in carrying out the goals of the NOTAM Improvement Program." The FAA would like to build on the progress already derived from previously established efforts to digitize NOTAMs to comply with the provisions of this law.¹

The Tactical Operations Committee (TOC) serves as the NOTAM Improvement Panel to further assist the Administration in crafting specific goals and priorities to meet the law's intent and make needed enhancements to the NOTAM program. In this capacity, the TOC is relying on the NOTAM Task Group (TG) to provide specific recommendations on issues related to the NOTAM program.

The work of the panel will yield an increasing amount of standardized digital NOTAMs that can be more easily filtered, sorted, and prioritized. This should result in a significant reduction in the volume of NOTAMs pilots must currently review and allow pilots to focus only on those NOTAMs relevant to their flight plan/path. As a result, pilots will be more confident in the quality and accuracy of this focused NOTAM information, and the safety of the National Airspace System (NAS) will be improved.

Task and Approach

In previous FAA responses to NOTAM Improvement Panel recommendations, the FAA requested "working meeting[s] between the members of the Task Group and the Federal NOTAM System (FNS) engineering and development teams to define stakeholder requirements for some of the specific requests." The Task Group Leadership engaged directly with the FNS team previously and provided clarification of search and filter terms, prioritization of search and filter options and other specific inputs. Much of the input of the NOTAM Task Group formed the NOTAM Search implementation plan for the FAA.

Building upon these interactions, the FAA requested the NOTAM Improvement Panel continue to provide feedback to the FAA after NOTAM Search implementation. The FAA crafted a four phase plan and the NOTAM Task Group agreed to provide feedback after each phase of implementation.

The NOTAM Task Group evaluated Phases 3 and 4 of Implementation of NOTAM Search during October and November 2015 and compiled feedback. The summary of that feedback forms the body of this recommendation document. This report is the final task of the NOTAM Task Group and completes the groups' work.

¹ Letter from Elizabeth L. Ray (Vice President, Mission Support Services) to Margaret Jenny (RTCA President) dated July 10, 2013.

Recommendations for Phases 3 and 4 of NOTAM Search Implementation

The following items are recommendations the NOTAM Task Group identified in its review of phases 3 and 4 of NOTAM Search:

“Bugs” in NOTAM Search

1. In the Flight Path search, when buffer distances around a flight path and buffer around departure/arrival airports are set to be equal, a red X appears adjacent to the "Depart/Arrive Buffer". This bug should be fixed to present a green checkmark when the two buffer distances are equal.
2. When a user ‘mouses’ over the Field Conditions (FICON) special icon, the text that appears reads “Snow”. This text should read “FICON”.

Passwords

3. The password policy utilized for NOTAM Search requires 8 characters, one letter, one Upper case letter, one number and one special character. The password functionality is intended to enable users to set account preferences and does not enable access to sensitive information. This password policy appears too strict, and the group recommends less restrictive criteria be used. The group also understands that the current criteria are FAA minimum criteria for an FAA system and use of anything less restrictive may require a waiver.
4. Currently NOTAM Search locks a user out for 15 minutes after five failed attempts to access the user profile. Users of NOTAM Search may not be accessing the site at a home or office computer but instead could be using NOTAM Search while at a Fixed Based Operator (FBO) or other external location. Given the challenges of complex passwords noted above, users may find themselves locked out of NOTAM Search while planning operations at an FBO. Business aviation operators, in particular, may have last minute destination changes that require quick changes in information and for a user to get locked out of the system at such a time could delay operations. The group recommends decreasing the lockout period from 15 to 5 minutes and increasing the number of attempts from 5 to 10 before a user is locked out. Finally, the group recommends the FAA consider utilizing security questions to allow users to reset a password within NOTAM Search directly.
5. Remembering complex passwords for NOTAM Search is challenging. The group recommends the FAA investigate using “cookies” to store usernames and passwords on a users’ machine.

Mapping Functionality

6. The mapping functions in NOTAM Search do not extend to most NOTAMs outside of the U.S. The group understands this is due to the fact that the underlying geographic data to which NOTAMs relate are restricted to US Flight Information Region (FIR) boundaries. Given this, the group recommends that, when applicable, there be a note to the user that the map cannot display outside the United States. This will be particularly useful and avoid confusion when a user is searching for NOTAMs exclusively outside of the US and the map display is black.
7. On the map view, the webpage is split into two side-by-side tiled windows, one for the map view and the other for the NOTAMs. It is not possible to show the entire NOTAM text in the NOTAM window, even in full-screen mode. A user must click on the individual NOTAM to view it in its

entirety. The group recommends implementation of a horizontal scroll bar to permit viewing the entire NOTAM. Additionally, the group recommends permitting a movable vertical bar separating the two windows that will permit re-sizing the map window and the NOTAM window. This may enable viewing the NOTAM text in its entirety.

8. The group recommends NOTAMs be overlayed on an aeronautical chart, preferably with options such as sectional and enroute low altitude. Adding the aeronautical base map option would further enhance the mapping functionality in NOTAM Search.
9. The group recommends showing Air Route Traffic Control Center (ARTCC) boundaries and ARTCC labels centered within its area. This will allow tagging ARTCC NOTAMs to this central location versus putting a pin at the city associated with the ARTCC name.

Presentation of Information

10. On some pages, such as Location Search, a four letter airport identifier is auto converted to a three letter (i.e. KMEM into MEM) yet on other pages like Flight Path the four letter identifier is not converted until the search results are presented. The group recommends the FAA evaluate whether these could function in a similar manner.
11. Some terms are defined in NOTAM Search, such as definitions for hard/soft/wet runways. When definitions are presented, the source of that definition should be referenced or there should be a link to the corresponding source information.
12. The "Military" special icon is not displaying for many military NOTAMs (an example is Andrews, ADW). In NOTAM Search, only one icon can be presented for each NOTAM and NOTAM Search's hierarchy places the "D", or Digital, first. Currently the Department of Defense (DoD) is moving towards roll out of NOTAM Manager at all of its bases, and this is expected to be completed by Summer 2016. This implies that by mid 2016, all Military NOTAMs will be labeled "D" and the Military icon will no longer be used. Between now and mid 2016, some Military NOTAMs may include the military icon and others will be labeled with the "D" icon. This may create confusion and the icon is not required for filtering or sorting information. The group recommends removing this icon from NOTAM Search.
13. The current NAVAID icon looks similar to images that convey radiation. The FAA should consider alternative icons, including those symbols specific to VORs, NDBs, etc.

Improving Accuracy and Completeness of Information in NOTAM Search

14. There is currently a lack of continuity regarding laser warnings (see ZDV 5/3044 and airports pointing to it) classification as either "procedure" or "airspace". This may relate to options in how the NOTAM is entered into the system in NOTAM Manager. The group recommends that the FAA ensure laser notices are being classified correctly by the system.
15. Shared identifiers (such as KDTS and KVPS in DINS NOTAM) are not working properly in NOTAM Search. For shared ICAO identifiers, both airports' NOTAMs should automatically be retrieved when

one of the identifiers is searched. These are tied together because of their proximity/safety. The FAA should ensure airports that share identifiers are pulling up all requisite NOTAMs.²

16. The group recommends future incorporation of Airport and Facility Notices from Notices to Airmen Publication (NTAP) (Part 4, Section 3) as the information is of similar value as LTAs and would be more accessible to users if pulled up when the airport identifier is searched. Additionally, the group recommends including notices regarding special events that are in NTAP if the corresponding geometries are available.

User Guide

17. The User Guide window is a fixed size and cannot be expanded to full screen. Additionally, there is currently no mechanism to search within the user guide window. Finally, the table of contents are not hyperlinked to the sections within the document. The group recommends making the user guide more interactive by including an ability to make full screen, search and hyperlinks to sections of the document.

² Additional airports known to have shared ICAO identifiers include KDTS and KVPS, KGPI and KFCA, K9L2 and KEDW, KNHK and KPXT, KABQ and KIKR, KHYE and KHEY, PHNL and PHIK, PGUM and PGZU, PGUA and PGZU, WRSJ and WARR, BKPR and LYPR, OAKB and OAKX. Note this may not be a complete list of all shared identifier airports.

Appendix A: Members of the NOTAM Task Group

Darrell Pennington, Air Line Pilots Association
Des Keany, American Airlines, Inc.
Jack Hurley, Delta Air Lines, Inc.
Fred Anderson, Federal Aviation Administration
Ernie Bilotto, Federal Aviation Administration
Gary Bobik, Federal Aviation Administration
Dave Bradshaw, Federal Aviation Administration
Jocelyn Cox, CNA
Trish Gay, Federal Aviation Administration
Steve Habicht, CNA
Shaelynn Hales, CNA
Brian Hint, Federal Aviation Administration
Lynette Jamison, Federal Aviation Administration
Scott Jerdan, Federal Aviation Administration
Bob McMullen, Federal Aviation Administration
Glenn Sigley, Federal Aviation Administration
Diana Young, Federal Aviation Administration
Mark Cardwell, FedEx Express
David von Rinteln, Hewlett Packard
Michael Williams, Hewlett Packard
Jeffrey Miller, International Air Transport Association
Jon Reisinger, Jeppesen
Aaron Wood, Jeppesen
Ashish Solanki, Maryland Aviation Administration
Mark Prestrude, National Air Traffic Controllers Association
Rich Boll, National Business Aviation Association
Bob Lamond Jr, National Business Aviation Association
Trin Mitra, RTCA, Inc.
David Newton, Southwest Airlines
Edwin Solley, Southwest Airlines
Adam Gerhardt, TASC, Inc.
Ezra Jallea, The MITRE Corporation
Jim Mills, U.S. Air Force
Christian Kast, United Parcel Service