FACTSHEET
Information Exchange through Mobile Applications

ICN | INFO-CENTRIC NATIONAL AIRSPACE SYSTEM

The FAA is researching methods to streamline General Aviation (GA) Instrument Flight Rules (IFR) operations. We are currently investigating how mobile technology can help address the challenges and answer the associated research questions in the following three areas:

Pre-departure IFR Clearance Information Exchange

At towered airports where Pre-Departure Clearance (PDC) or Data Comm Departure Clearance (DCL) services are not available, Instrument Flight Rules (IFR) clearances must be issued verbally. At airports without an operating tower, clearance delivery, negotiating IFR release, and IFR cancellation must be accomplished verbally. Verbal methods are time-consuming for pilots and air traffic control (ATC), subject to read-back errors and incorrect interpretations. They can generate delays when ATC must tell aircraft to stand by while ATC performs higher-priority duties. How can GA pilots use a personal mobile device to receive IFR clearances, negotiate IFR release, and cancel IFR where other electronic services are unavailable?

1. Mobile Clearance Delivery (CD)

2. Mobile Departure Release (RLS)*

3. Mobile IFR Cancellation (CNCL)*

*Non-towered airports only

Departure Readiness Information Exchange

While many scheduled commercial operators provide departure readiness information to the National Airspace System (NAS) via established electronic means, most of the GA community does not have the means to submit the same information electronically. How can mobile technology be used by GA pilots to electronically submit departure readiness information to the appropriate FAA systems and receive informative data in return?

Departure Demand Information Awareness

Accurate "ready to taxi" times are critical for flight operators and the FAA to understand and plan for the demand at busy airports, especially during times of high demand, such as sporting events or routinely busy periods. GA pilots often lack a reliable method to obtain traffic management constraints that apply to their flights. How does making real-time departure demand information electronically available at busier airports allow GA pilots to make more-informed decisions?

Pacer is a prototype application for mobile devices that allows users to submit an intended departure time and view demand information for their departure airport.

The FAA's future vision is for flight operators to use commercial products (e.g., tablets, mobile phones) and commercial services (e.g., mobile app providers, mobile networks) to exchange data with the FAA and ATC while meeting safety and security requirements. The expectation is that these research capabilities will be transferred to commercial app providers for integration into existing flight planning apps.

For more information on Pacer, please visit https://sites.mitre.org/mobileaviationresearch/

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