

Questions/Answers of the Federal Aviation Administration (FAA) System Wide Information Management (SWIM) Industry Collaboration Workshop and Full SWIM Industry-FAA Team (SWIFT) Meeting #12

November 19th, 2020

Zoom Conferencing System Virtual Event

1. Ops Issue Focus Group Update: Chris Gottlieb - JetBlue)

1.1. Audience Questions & Answers:

1.1.1. *JetBlue is using SWIM data to plan out their flights coming back. Which SWIM data specifically?*

1.1.1.1. *Chris: Typically when we fly JFK to FLL we block 4 hours. So, we look at actual flight time taxi gate returns / diversions (and strip this out) and shorten up the block times to add more aircraft. This does affect our D0 (Departed on or before schedule) and A14 (Arrived within 15 mins of schedule). JetBlue used a formula to see what their current normal and new norm would be.*

1.1.2. *Are you and/or the other airlines mentioned using artificial intelligence to extract insights and/or assist in making predictions using the data received from SWIM? If not, is this something you are considering?*

1.1.2.1. *Chris: JetBlue is starting to analyze data and draw conclusions. We are getting the automation to detect this to remove human element. We struggled with AI since it's a "black box" (we're interested in what's actually driving this algorithm) and want to explain our decision-making. At JetBlue we look at Advance analytics, Distributed analytics, Experimental frameworks, and Advance statistics. Customer loyalty this is what we're focused on. We're going a little bit past AI.*

2. Widget Case Study: Honeycomb with NAS Common Reference (NCR) (Chris Gottlieb - JetBlue)

2.1. Audience Questions & Answers:

2.1.1. *Deviations are typically triggered by convective weather. Are there plans for developing methods for convective weather analysis and route deviations?*

2.1.1.1. *Chris: yes, we'll develop this for a future concept with Honeycomb.*

2.1.2. *How are you calculating the capacity of a fix?*

2.1.2.1. *Chris: through deductive reasoning really. If you have a queue and it builds up, and you take the average taxi and you look at the fix you can deduce it. We learned from the historical events on estimating the fix capacity.*

2.1.3. *Are there any future plans to hold another Developer Day (perhaps virtually) to continue innovating on similar ideas with the community?*

2.1.3.1. *Stefanie Calabrese: yes, we can, bring forward ideas and welcome feedback.*

2.1.3.2. *Josh Gustin: we'll talk about this, it's worthwhile but takes time to work through it.*

2.1.4. *Is there something here (an Operational Problem) that we can look at? Combining NCR and Honeycomb?*

2.1.4.1. *Attendee: there are some good things here that would evolve the NBAA case study done at a past SWIFT.*

3. NAS Program Terminal Flight Data Manager (TFDM) Update: (Doug Swol - FAA), Steven Lent – Mosaic)

3.1. Audience Questions & Answers:

- 3.1.1. *From these services, can one get the taxiing time (from gate departure to wheels up) for a particular flight at an airport?*
- 3.1.1.1. *Steven: Yes, the times for events are calculated from gate to movement area. ETOT for example. This would be useful for the local control.*
- 3.1.2. *When will TFDM start publishing predicted surface times for a given flight? As early as 24h before IGTD just as TFMS does for en route predictions?*
- 3.1.2.1. *Steven: We'll take an action to follow-up. It's an adaptable parameter (prediction horizon). Expectation is about 8h for now where we are starting.*
- 3.1.3. *When will the test bed environment be ready and what kind of scenarios, will we be able to test, if messages won't be published until CLT deployment?*
- 3.1.3.1. *Doug: the test bed ready in Jan 2021 at CLT will be able to push scenario data. Anyone who connects to this can consume this data. We want to talk to operators on receiving or sending data since our goal is to help industry, 3rd party providers and vendors get an early look into TFDM and consume data so that benefits can be realized sooner.*
- 3.1.4. *Has the STBO R&D program ended?*
- 3.1.4.1. *The NASA ATD-2 research at CLT has ended and has shifted to FAA sustainment. The NASA ATD-2 Phase 3 research at D10 with scheduling to the terminal boundary and the use of TOS is still on-going.*
- 3.1.5. *Is there any data related to flight holding and expected clearance time given to the pilot?*
- 3.1.5.1. *Steven: the key control time for SMP, is Target Movement Area Time (TMAT). We provide Target off Block Time (TOBT which is more informational.*
- 3.1.6. *Are SMP Adjustment messages continual...like ongoing compression? Or manual based on some specific action(s)?*
- 3.1.6.1. *Steven: TFDM recommends it but need to confirm it is manual or auto-affirm.*
- 3.1.7. *Are the flight date updates referenced (to reflect actual aircraft movement) synonymous with the flight updates that would be typically be made by airlines with their real-time flight updates?*
- 3.1.7.1. *The flight date updates can be based on multiple things -- off block times will be a result of airline messages. Movement area entry time is based on strip movement. Queue entry time is based on surveillance. Off/on times can be based on strip movement, surveillance, etc.*