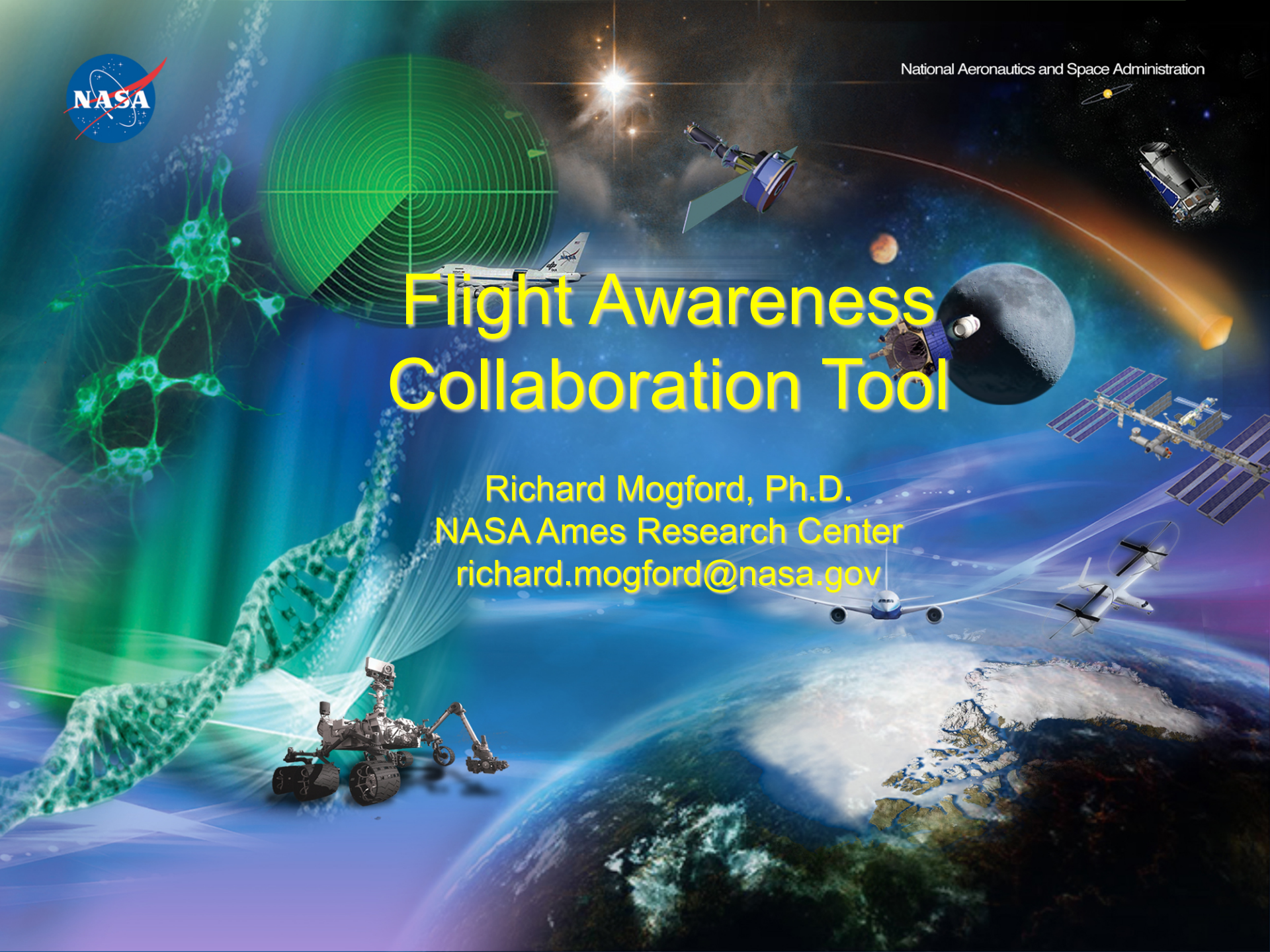




Flight Awareness Collaboration Tool

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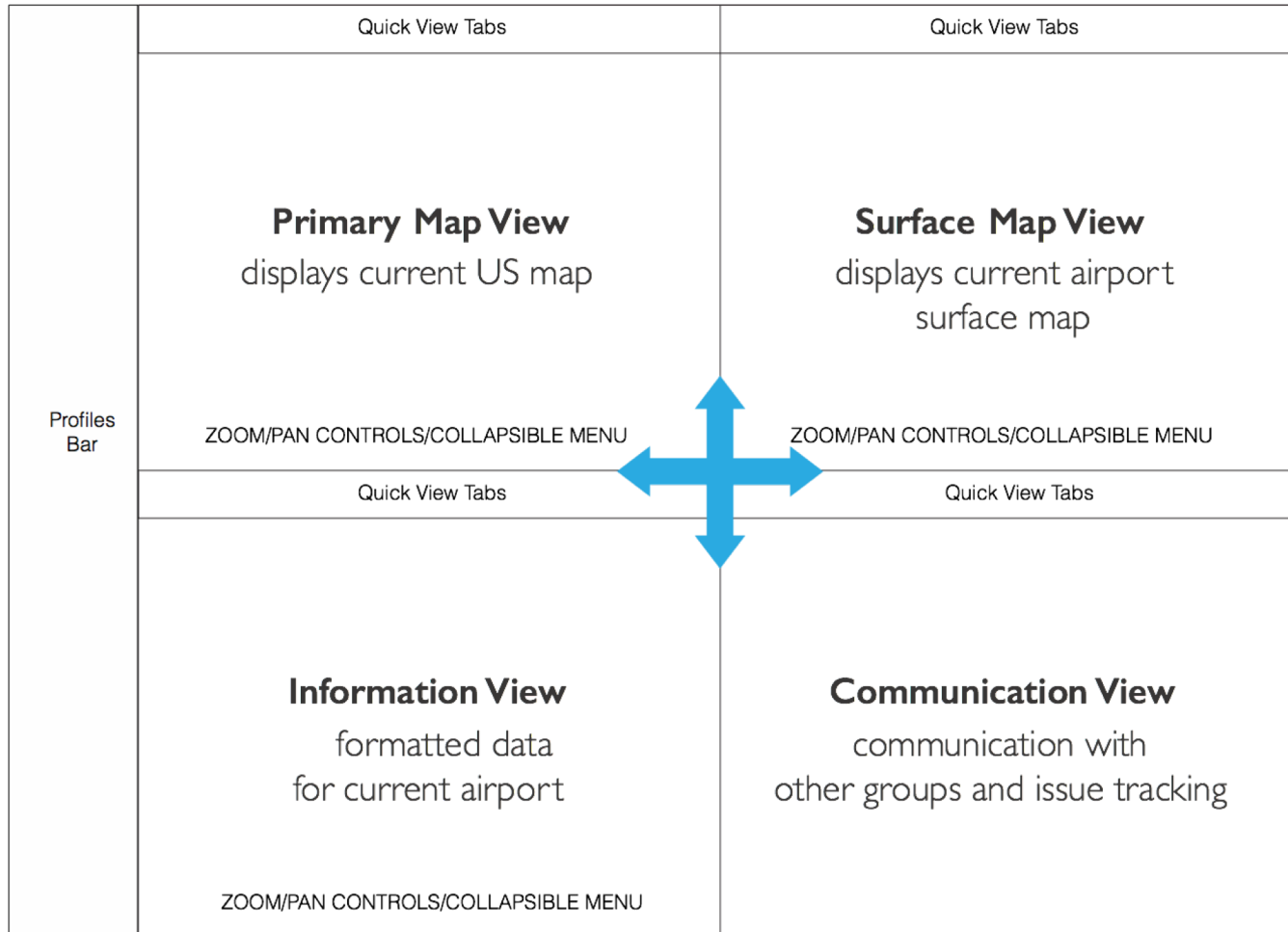


Flight Awareness Collaboration Tool



- Created the “Flight Awareness Collaboration Tool” (FACT)
- Concentrates information about winter weather events on one display
- Supports collaboration between airline operations center, air traffic control, airport authority, and de-icing operators
- Web-based application
- Includes:
 - Weather status and forecasts
 - FAA data from the System Wide Information Management system
 - Reporting of runway closures for snow/ice treatment
 - Airport runway configuration (capacity)
 - De-icing operations
 - FAA actions (e.g., ground stops, miles-in-trail, etc.)

FACT Design



FACT User Interface



The screenshot displays the FACT User Interface with three main sections:

- PRIMARY MAP:** A map of the United States with various airports labeled (e.g., SEA, PDX, SFO, LAS, PHX, DEN, MCO, ATL, BOS, LGA, JFK). A yellow arrow points from the BOS/LGA/JFK area to the Surface Map.
- SURFACE:** A detailed 3D-like view of an airport terminal and runways, colored in teal. A yellow arrow points from the Primary Map to this view.
- QUEUE:** A list of advisories for Wednesday, 06-10-2015. A yellow arrow points from the 'Send' button in the table to the Queue section.

ATCSCC ADVISORIES FOR WEDNESDAY, 06-10-2015

#	Control Element	Date	Brief Title	Send
004	FCAA16	06/10/2015	CDM Airspace Flow Program CNX	06/10/15 00:18
003	ATL/ZTL	06/10/2015	CDM Ground Delay Program	06/10/15 00:14
002	LGA/ZNY	06/10/2015	CDM Ground Delay Program CNX	06/10/15 00:13
001	DCC	06/10/2015	Reroute Cancellation	06/10/15 00:05

ATCSCC ADVISORIES FOR WEDNESDAY, 06-10-2015

#	Control Element	Date	Brief Title
161	DCC	06/09/2015	Reroute Cancellation
160	DCC	06/09/2015	ATCSCC ADVZY 160 DCC 06/09/15 Routes RQD /FL ame: FLA_TO_NYMETROS

QUEUE:

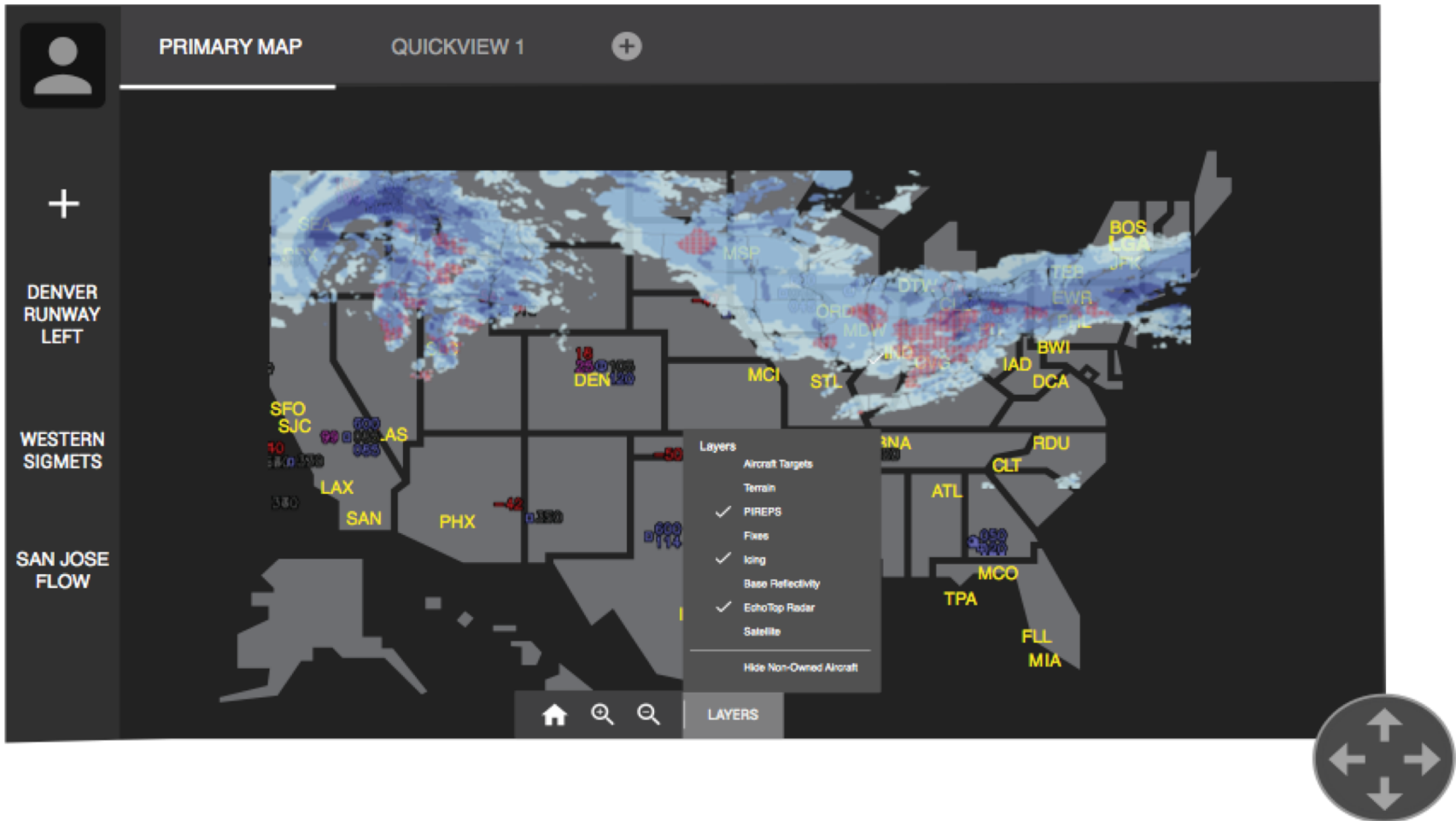
- LGA: Too many aircraft in de-icing area.** (15:30:02) AUTHOR: mmogford. Actions: RESOLVE, SHARE, DELETE.
- JFK: UAL 3740 stall in de-icing area. Expect a 20 min delay.** (11:18:16) AUTHOR: dpeknik. Actions: RESOLVE, SHARE, DELETE.

Comments:

- 13:30:45 **dpeknik:** There seems to be a stall in the de-icing area. Can we set a delay? "I'll do the calls if needed. [attachment](#) [@](#) [REPLY](#)
- 13:42:34 **eleong:** I say go for it.
- 13:42:34 **mmogford:** Let me check and see what our next crew roster says. [REPLY](#)



FACT Primary Map View





FACT Surface Map View

The screenshot displays the FACT Surface Map View interface. At the top, there are tabs for "SURFACE" and "QUICKVIEW 1". Below the tabs, a navigation bar shows "ARR: 28L/ R, DEP: 1L/ R" and a plus sign icon. The main map area shows a teal-colored airport layout with several aircraft icons (white and green) and a yellow truck icon. A "6500" label is visible on the map. In the top right corner, there is a small inset graph titled "CLT ISR" with the subtitle "Last Update: 1215 04/17". The graph shows a line plot with values ranging from 0 to 60 on the y-axis and time from 0900 to 1200 on the x-axis. A "Layers" menu is open in the center-right, listing the following options: "De-Icing Areas" (checked), "Airport Configurations" (checked), "Runway Closure Status" (checked), "Braking Action", and "RVR" (checked). Below the layers menu, there is a "Filter Non-Owned Aircraft" option. At the bottom left, there is a circular navigation pad with four directional arrows. At the bottom center, there are icons for home, search, and zoom, along with a "LAYERS" button.

FACT Information View (Text)



PLANNING CHARTS QUICKVIEW 1 +

Search

ATCSCC ADVISORIES FOR WEDNESDAY, 06-10-2015

#	Control Element	↓ Date	Brief Title	Send Time
004	FCAA16	06/10/2015	CDM Airspace Flow Program CNX	06/10/15 00:18
003	ATL/ZTL	06/10/2015	CDM Ground Delay Program	06/10/15 00:14
002	LGA/ZNY	06/10/2015	CDM Airspace Flow Program CNX	06/10/15 00:13
001	DCC	06/10/2015		06/10/15 00:05

ATCSCC ADVISORIES FOR WEDNESDAY, 06-10-2015

#	Control Element	Date	Brief Title
161	DCC	06/10/2015	
160	DCC	06/10/2015	DCC 06/09/15 Route RQD /FL

Quicklinks

- FAA OIS
- ✓ Aviation Weather Center
- FAA NOTAMs
- WWACM

Quicklinks

Name: FLA_TO_NYMETROS
Constrained area: ZJX/ZMA

FACT Communication View



MY QUEUE FACT CHAT +

ADD QUEUE ITEM PRINT REPORT Search

LGA: Too many aircraft in de-icing area. ✎ MORE ▾
AUTHOR: **rmogford**
15:30:02 RESOLVE SHARE DELETE

JFK: UAL 3740 stall in de-icing area. Expect a 20 min delay. ✎ LESS ▲
AUTHOR: **dpeknik**
11:18:16 SHARED WITH:
RESOLVE SHARE DELETE

Comments:

13:30:45 **dpeknik:** Not sure how to deal with this one, any suggestions?
Here's the procedure. **attachment** 📎 REPLY

13:42:34 **eleong:** That's an old document I believe,

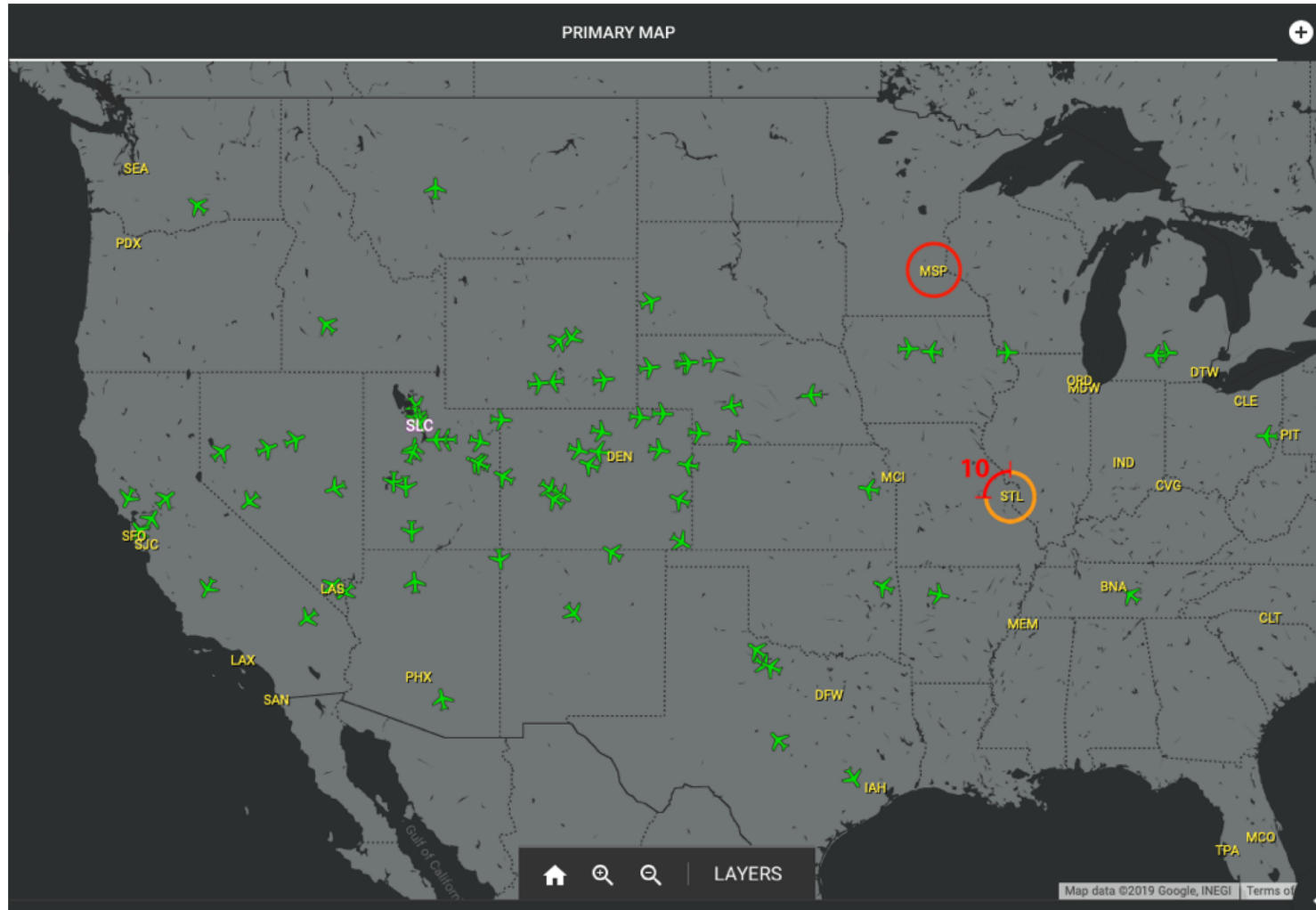
13:42:34 **rmogford:** I'll update and send a new document to the team. REPLY



FACT Automation

- As a winter storm develops, the dispatcher must monitor airport conditions in the path of the weather
- Needs to be aware of upcoming holds and evaluate the need for diversions
 - Fuel reserves must be adequate for the situation
- One measure of imminent airport problems is traffic movement at the target airport
 - Comparison of arrival and departure rates compared to normal airport configuration
 - Assessment of traffic movement on the surface
- FACT will monitor this activity and alert the dispatcher about degrading airport conditions
- Dispatcher can contact the aircraft concerned to make plans for holds or diverts
- Will use the features of FACT to learn more about the problems at the airport

Airport Alerting





Current Status

- Patented on March 12, 2019
- Available for licensing from NASA
- Working on predictive algorithms