



Flight Awareness Collaboration Tool

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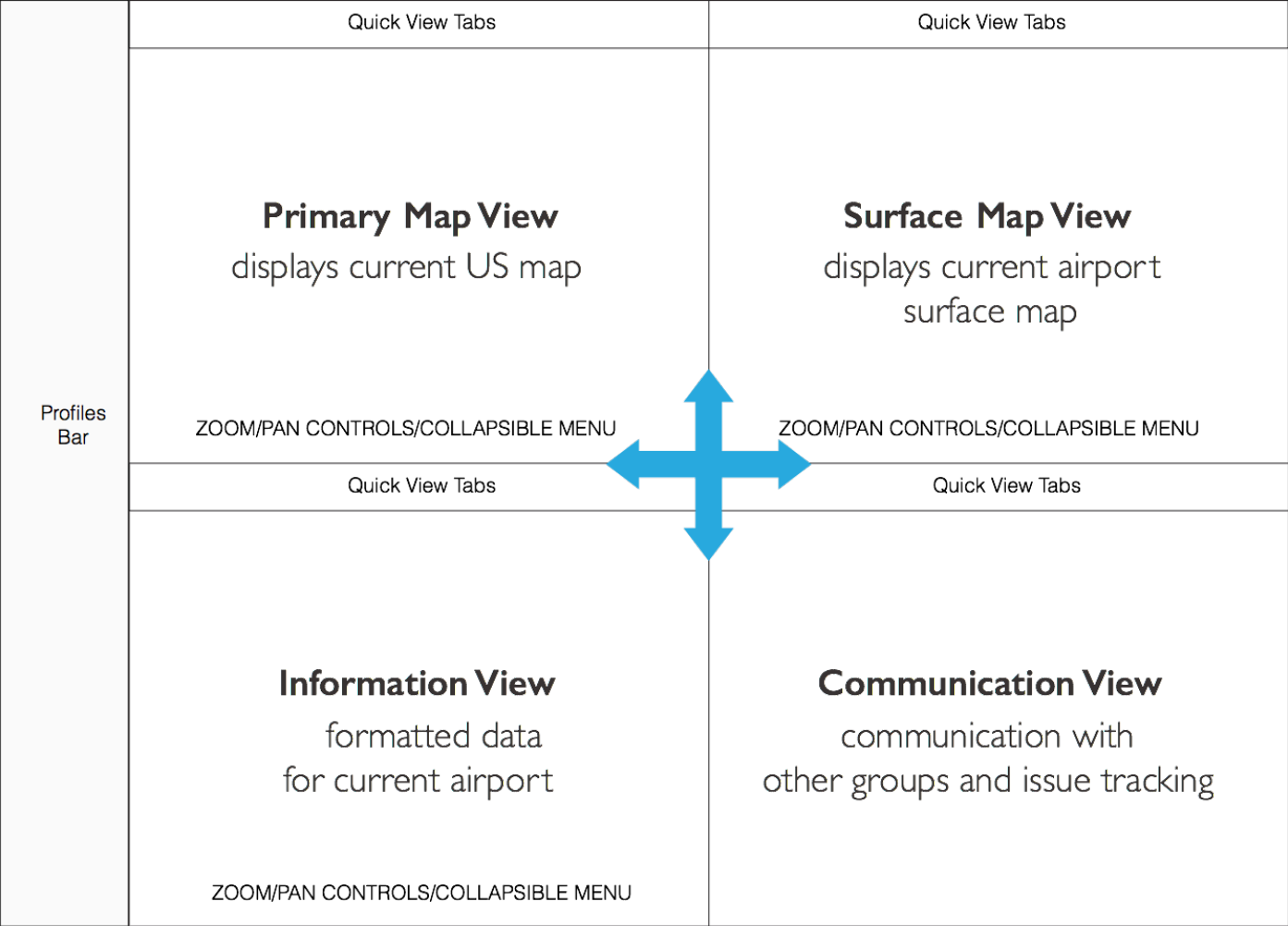


Flight Awareness Collaboration Tool



- 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 Information Architecture



FACT User Interface



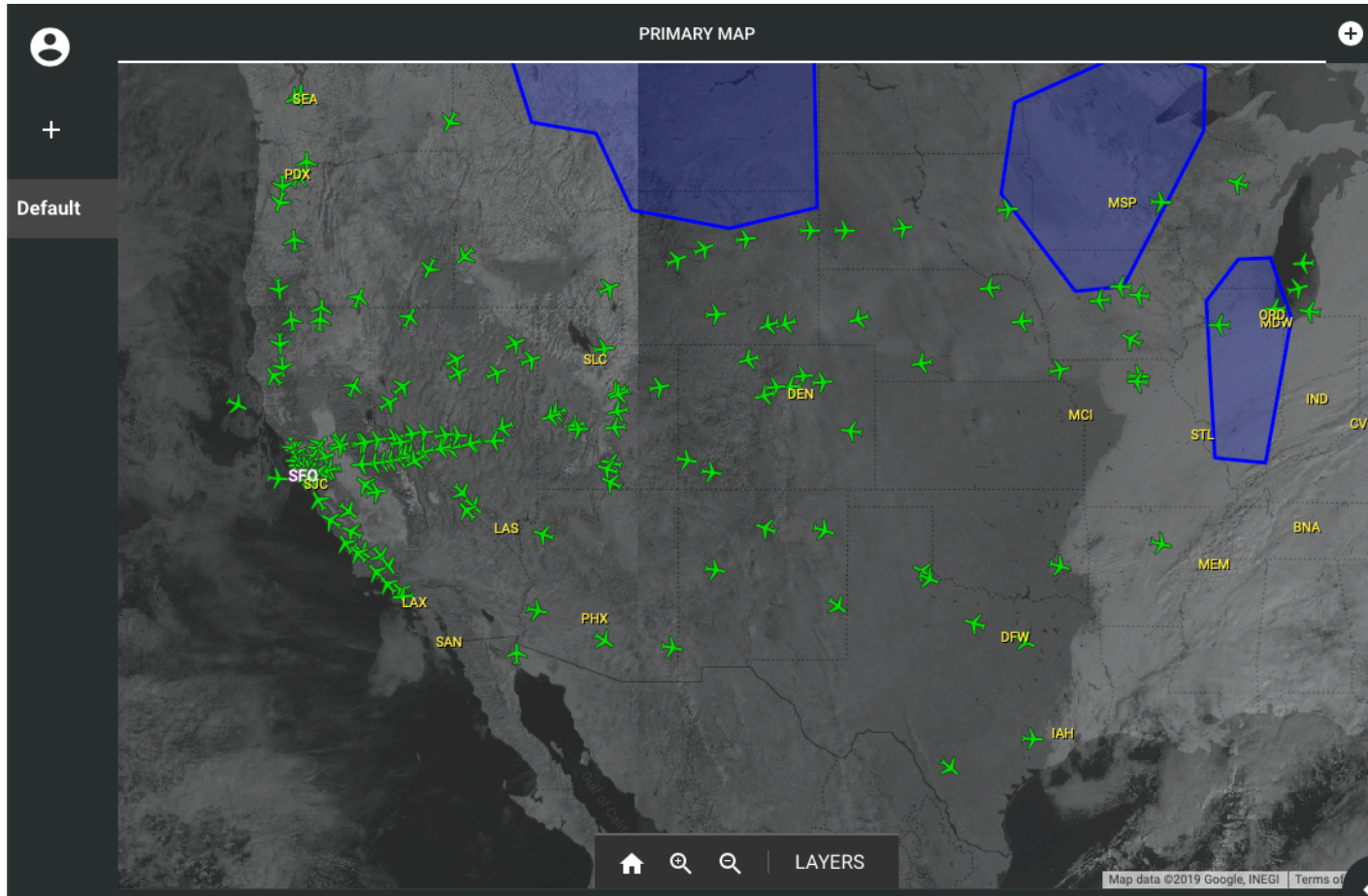
The screenshot displays the FACT User Interface with four main sections highlighted by yellow arrows and labels:

- Map:** A primary map of the United States showing various airports and flight paths.
- Airport:** A detailed view of an airport terminal and runways.
- Data:** A table listing advisories for Wednesday, 06-26-2019.
- Messaging:** A list of messages and advisories, including "SFO: Sample flag", "ewf oops", "PIT: too much ice", and "LAX: taxiway blocked".

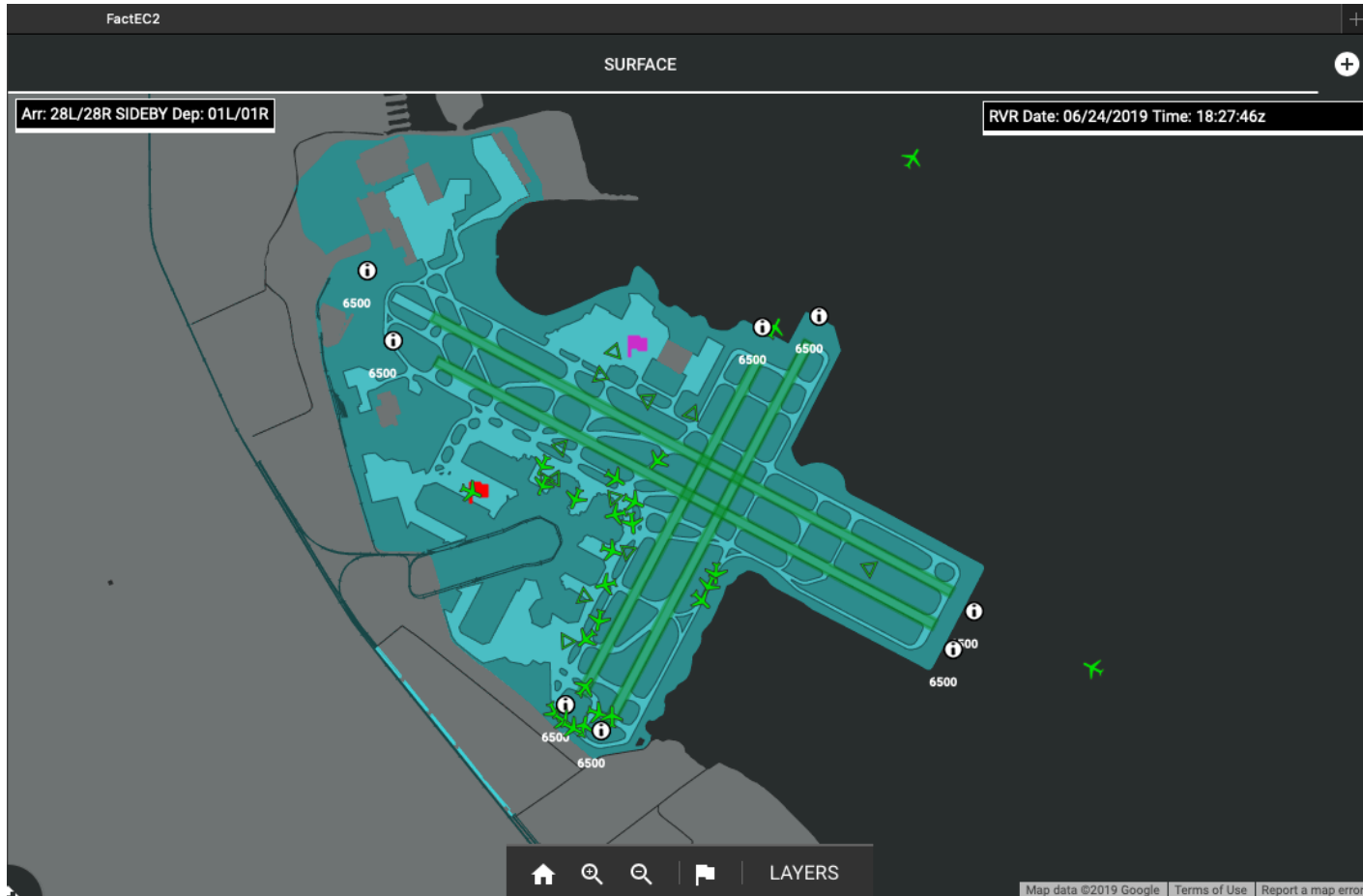
#	CTRL ELEMENT	BRIEF TITLE
066	SFO/ZOA	CDM
064	DCC	OPERATIONS
050	DCC	OPERATIONS
045	SFO/ZOA	CDM
044	SFO/ZOA	CDM
043	SFO/ZOA	CDM
041	DCC	OPERATIONS
036	DCC	OPERATIONS
031	DCC	OPERATIONS
028	DCC	NOCC
022	DCC	PLATE

Additional text at the bottom left: advisory received. ATCSCC ADVZY 071 JFK/ZNY 06/26/2019 GROUND STOP

FACT Primary Map View



FACT Surface Map View



FACT Information View (Webscraped)



PLANNING CHARTS

Search

4 ADVISORIES FOR MONDAY, 06-24-2019

#	CTRL ELEMENT	BRIEF TITLE
074	SFO/ZOA	CDM
071	DCC	OPERATIONS
068	SFO/ZOA	CDM
010	DCC	NOCC

EVENT TIME 24/0115 24/1115
NOCC 06/24/19 SCHEDULED FACILITY OUTAGES

PICO DEL ESTE, PR QJQ ATCRB 12002000Z

DALFT WORTH, TX DFW RWY 18R/36L VYN/BXN LOC/GS 04001100Z

DALFT WORTH, TX DFW RWY 18R VYN ALS 04001100Z

SALT LAKE CITY, UT SLC RWY 16L/34R MOY/SLC LOC/GS 07001300Z

LAS VEGAS, NV LAS RWY 01L CUA LOC/GS 07001300Z

SAN FRANCISCO, CA SFO RWY 28R GWQ LOC/GS 07001300Z

- ✓ Advisories
- ✓ FAA NOTAMs
- ✓ METARs/TAFs

New advisory received. ATCSCC ADVZY 037 DCC 06/24/19 ROUTE FYI





Quicklinks

FACT Communication View



MY QUEUE FACT CHAT 2

ADD QUEUE ITEM Filter

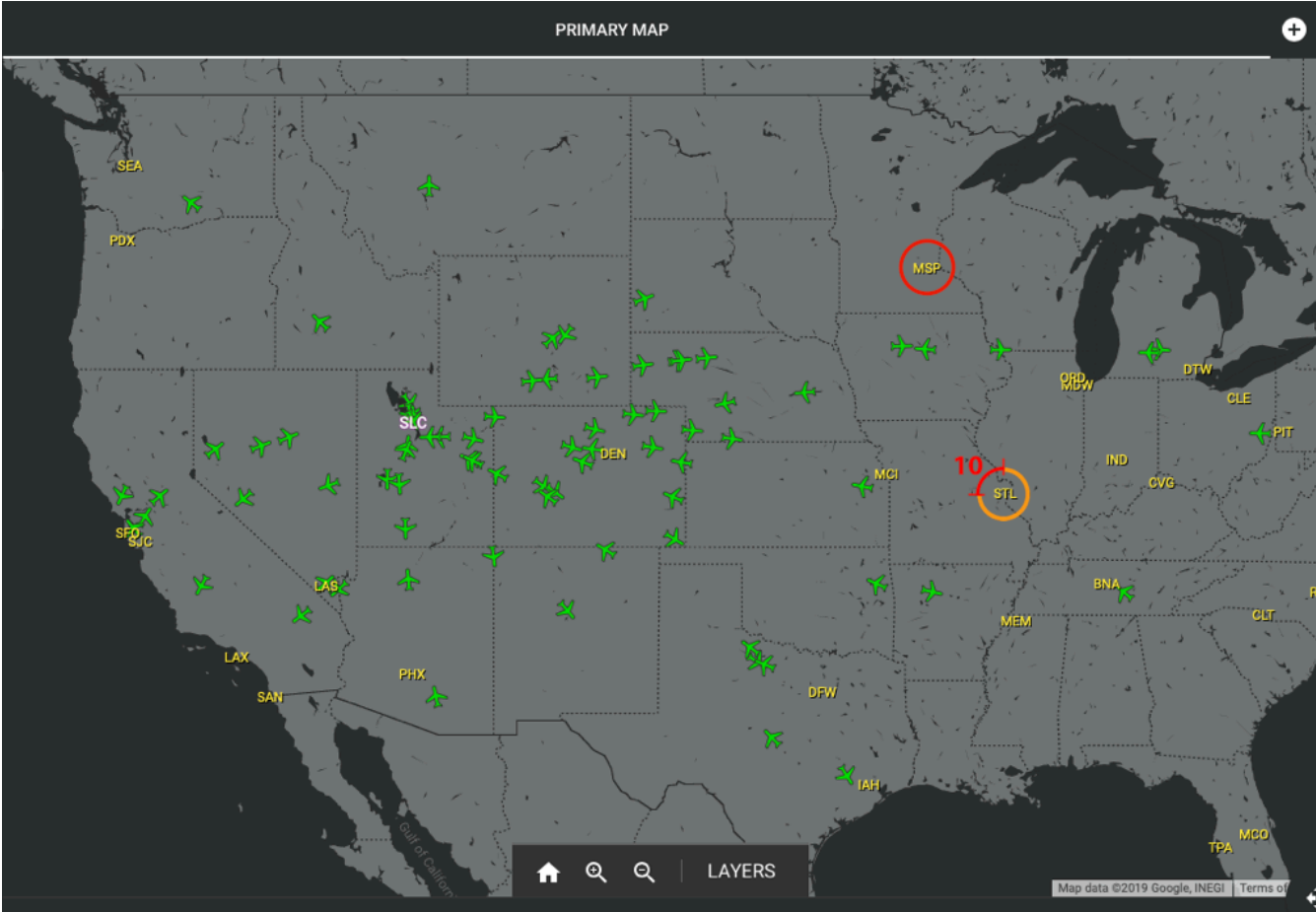
-  **SFO: Sample flag (This item is shared)** MORE ▾
AUTHOR: *swapnilg*
2018-03-10 01:57:45
SHARED WITH: **F.A.C.T**
- ewr ops (This item is shared)** MORE ▾
AUTHOR: *jvickers*
2018-03-25 13:58:17
SHARED WITH: **F.A.C.T**
-  **PIT: too much ice, closing this runway for 3 hours (This item is shared)** MORE ▾
AUTHOR: *swapnilg*
2018-05-31 21:03:05
SHARED WITH: **F.A.C.T**
-  **LAX: taxiway blocked (This item is shared)** MORE ▾
AUTHOR: *admin*
2018-09-04 20:50:37
SHARED WITH: **FACT** **F.A.C.T**
-  **DFW: Unsafe taxiway crossing (This item is shared)** MORE ▾
AUTHOR: *admin*
2018-10-19 15:30:58

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



Airport Alerting



The interface is divided into several sections:

- PRIMARY MAP:** A map of the United States with various airports marked by green stars. A red circle highlights the Minneapolis (MSP) area.
- SURFACE:** A detailed view of the airport terminal and runways, with a red arrow pointing to a specific area.
- PLANNING CHARTS:** A sidebar on the left with a search bar and a list of advisories for Sunday, Saturday, and Friday, 03-01-2019, and NOTAMs for MSP.
- MY QUEUE:** A list of alerts on the right, including:
 - SFO: Sample flag (This item is shared)
 - ewr ops (This item is shared)
 - PIT: too much ice, closing this runway for 3 hours (This item is shared)
 - LAX: taxiway blocked (This item is shared)
 - DFW: Unsafe taxiway crossing (This item is shared)

Current Status



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