

### 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.)

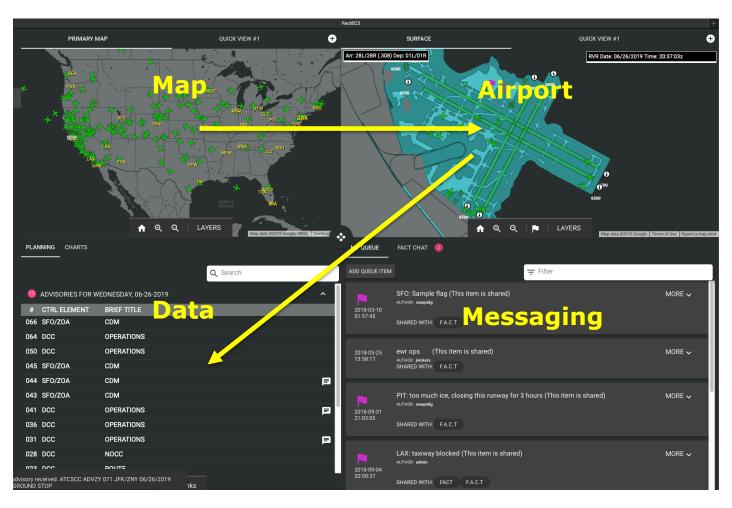
### **FACT Information Architecture**



	Quick View Tabs	Quick View Tabs	
	<b>Primary Map View</b> displays current US map	<b>Surface Map View</b> displays current airport surface map	
Profiles Bar	ZOOM/PAN CONTROLS/COLLAPSIBLE MENU	ZOOM/PAN CONTROLS/COLLAPSIBLE MENU	
	Quick View Tabs	Quick View Tabs	
	Information View formatted data for current airport zoom/pan controls/collapsible menu	Communication View communication with other groups and issue tracking	

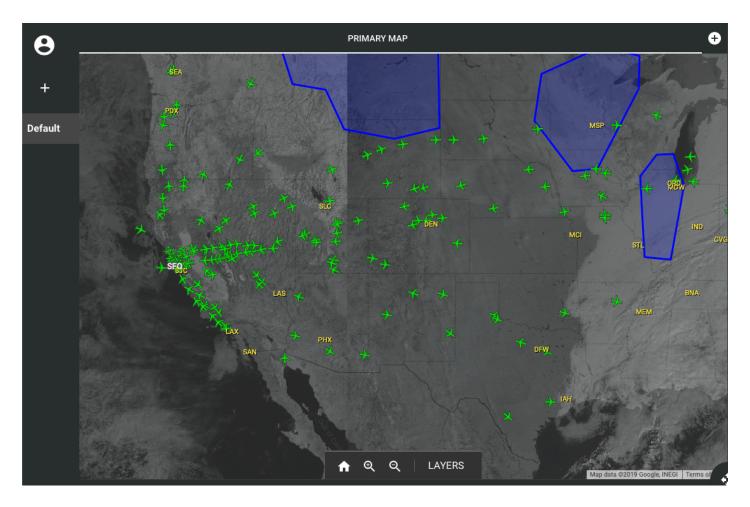
### **FACT User Interface**





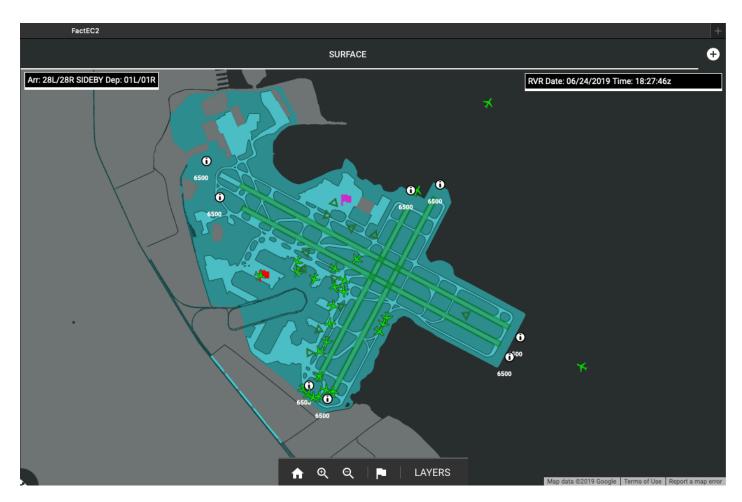
# **FACT Primary Map View**





## **FACT Surface Map View**





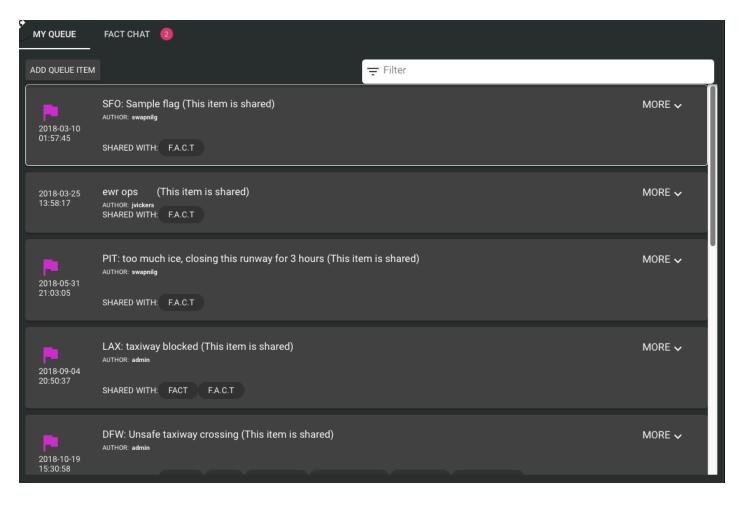
# FACT Information View (Webscraped)



	PLANNING CHARTS					
					Q Search	
	4	4 ADVISORIES FOR MONDAY, 06-24-2019			^	
	#	CTRL ELEMENT	BRIEF TITLE			
	074	SFO/ZOA	CDM			
071 DCC OPERATIONS						
	068	SFO/ZOA	CDM		<b>□</b>	
		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					
	SA	LT LAKE CITY, UT SLO	RWY 16L/34R MOY/SLC LOC/GS 0	✓ Advisories		
	LA	S VEGAS, NV LAS RW	/Y 01L CUA LOC/GS 07001300Z	✓ FAA NOTAMs		
	SA	N FRANCISCO, CA SF	FO RWY 28R GWQ LOC/GS 07001300	✓ METARs/TAFs		
New advis	New advisory received. ATCSCC ADVZY 037 DCC 06/24/19 ROUTE FYI			Quicklinks		

### **FACT Communication View**





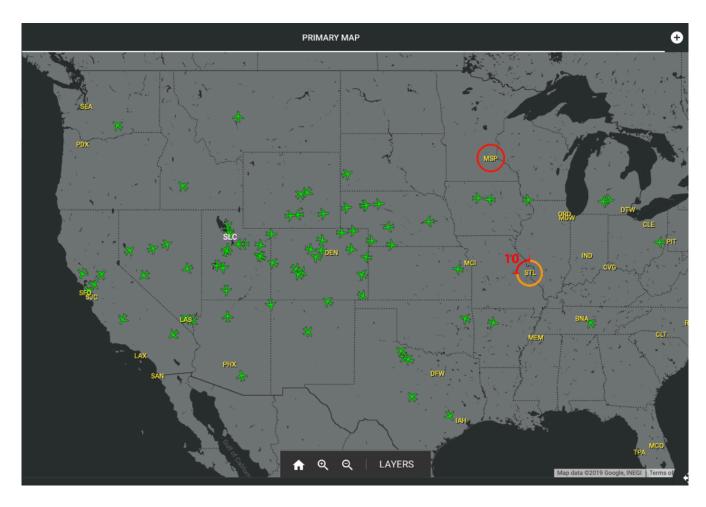
#### **FACT Automation**



- 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

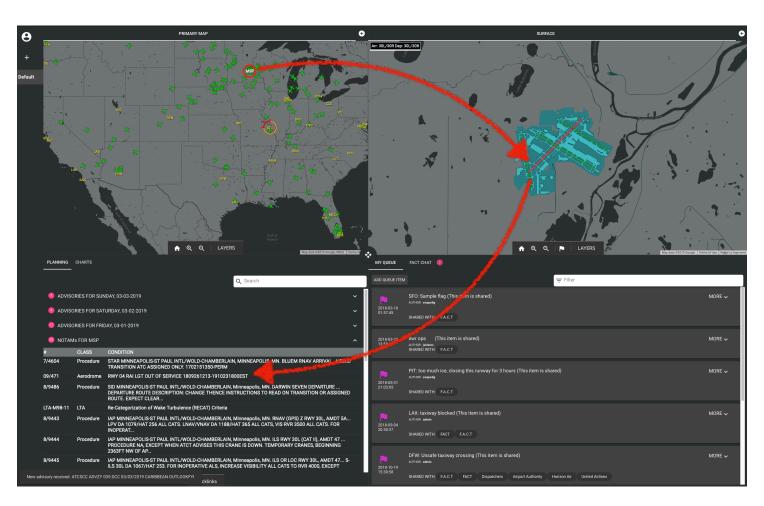
# **Airport Alerting**





## **Airport Alerting**





#### **Current Status**



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