

PRODUCT OVERVIEW

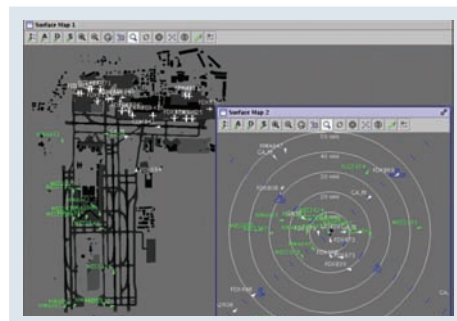
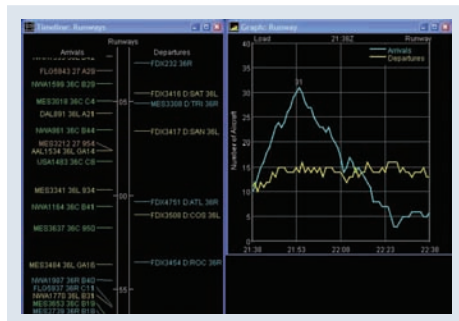
METRON SURFACE SURFACE OPERATIONS MANAGEMENT

OPTIMIZING SURFACE OPERATIONS WITH PREDICTIVE CAPABILITIES

Metron Surface, deployable as a stand-alone solution or as part of the Metron Harmony integrated Air Traffic Flow Management (ATFM) solution, provides airport stakeholders with surface operations management that maximizes surface utilization, minimizes delays and fuel burn, while enhancing safety. With Metron Surface, users can optimize all elements of airport airside operations. By integrating data from multiple sources, including flight plans, aircraft operator flight schedules, aircraft surveillance and gate assignments, Metron Surface provides users with a comprehensive view of surface activity. A predictive modeling capability uses current and forecasted airport surface demand to estimate congestion at resources such as runways, taxiways, ramp areas and gates. Metron Surface provides an airport-centric operational view of capacity and demand of resources associated with surface, departure and arrival operations at the airport.

OPTIMIZE CONSTRAINED AIRPORT RESOURCES THROUGH ADVANCED DECISION SUPPORT

The advanced predictive engine of Metron Surface, calculates forecasted operations on a per flight basis, including off block and in block times, runway times, spot times and taxi times. Using these predictions, Metron Surface provides a display of predicted runway queues along with the anticipated delays for each queue. Advanced features support not only tactical control



Metron Surface optimizes surface operations through shared and predictive situational awareness.

FEATURES

PREDICTIONS OF
SURFACE DEMAND

AIRPORT CDM SUPPORT

IDENTIFICATION OF
AIRPORT RESOURCE
CONFLICTS

SHARED SITUATIONAL
AWARENESS

TIMELINE AND LOAD
GRAPH DISPLAYS FOR
VISIBILITY



of surface operations, but also strategic surface planning with longer time-horizons and aggregate forecasts. Additional advanced decision support capabilities include:

- **Departure Planning** aids in the management of off block times by providing information about current restrictions that affect each flight, as well as the predicted delays at each departure fix or runway.
- **Ground Resource Planning** leverages takeoff and in block time predictions to arrange and schedule gate and airport resources such as the staff and equipment necessary for the unloading of planes. Predicted arrival times and taxi-in paths help an airport plan maintenance operations to minimize schedule disruption.
- **Operational Efficiencies** realized by tracking the number of operations by each taxiway and runway for an airport to determine when runway maintenance will be required. Improved shared situational awareness provides a quicker response time during emergencies, by showing the location of vehicles on the surface and in the terminal airspace.

SHARED SITUATIONAL AWARENESS FOR CURRENT AND PREDICTED AIRPORT OPERATIONS

The shared situational awareness capability displays real-time flight status information, reporting metrics and advisories in four different ways: timelines, load graphs, tables and maps.

- Timelines show when an aircraft occupies or is predicted to occupy a physical location (i.e., a runway threshold, spot or parking gate).
- Load graphs display the aggregate number of historical, current and forecasted flights for an airport resource.
- Flight tables provide detailed flight information with historical, current and forecasted flight-specific information.
- Map displays provide aircraft situational displays for the airport surface and terminal area.

ABOUT METRON HARMONY

Metron Harmony is an advanced, integrated Air Traffic Flow Management (ATFM) solution with capabilities that provide strategic, pre-tactical and tactical efficiency, post operations metrics and performance analysis of air traffic operations for Air Navigation Service Providers (ANSP), aircraft operators and airport authorities. With a focus on improving system efficiency and predictability while enhancing safety, Metron Harmony delivers the necessary information to stakeholders for the benefit of the entire air traffic system.

BENEFITS

REDUCES TAXI
CONGESTION DELAYS

ENABLES EFFICIENT
RUNWAY USAGE FOR
DEPARTURES AND
ARRIVALS

REDUCES FUEL BURN
AND EMISSIONS



THE SCIENCE OF HARMONIZING AIR TRAFFIC

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