

Stand Optimiser

Managing high traffic volume



Resolves stand-related airside disruptions

Benefits

- Enhances situational awareness through innovative Human Machine Interface (HMI) with georeferenced interconnected views
- Prevents airline service level agreement violations for airport cost savings
- Improves stand usage through dynamic, event-driven optimisation algorithm
- Reduces operator workload by up to 80%
- Supports Airport Collaborative Decision Making (A-CDM) by keeping flights at the stand during airside congestion

Large, capacity-constrained airports need strong, dynamic and on-the-day optimisation tools

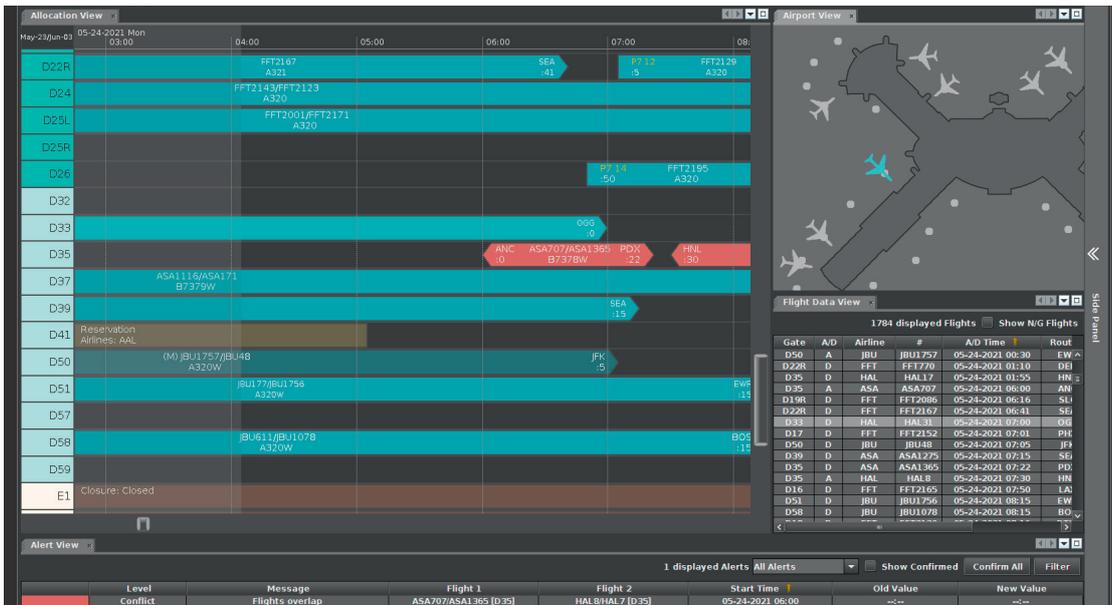
Stand Optimiser enhances stand management at high traffic volume airports that deviate frequently from planned schedules. It strategically and tactically optimises, monitors and re-optimises one of the airport's most limited and costly assets – the "aircraft stands" – taking into consideration dynamic airside and landside restrictions.

The solution creates a robust stand plan while balancing optimisation objectives like high stand-utilisation, compliance with airline preferences or fulfillment of a defined pier service level. The integration with other airport related operational systems continuously updates the existing robust stand plan right up to the day of operations. Together with the seamless internal handover of stand allocations from stand planning to daily stand management resources are dynamically optimised for effective aircraft turns. Stand conflicts are automatically identified and resolved by the application of user-defined business and stand rules and made visible in Stand Optimiser's intuitive HMI.

Stand Optimiser combines rules, pre-defined by the user, with dynamic, intelligent KPI-based optimisation strategies. The solution identifies and resolves stand conflicts thereby significantly reducing the need for human-in-the-loop interventions. In recognition of the need for transparency to airline stakeholders, Frequentis Orthogon offers unique automatic reporting and dashboards providing at-a-glance performance stats including intuitive heat maps, histograms, graphs and many pre-determined business KPIs.

Innovative and user-friendly

Stand Optimiser's HMI enables efficient user interactions and provides interconnected views for optimised stand management. The georeferenced Airport View displays the stand occupancy on an airport map, the time-referenced Allocation View illustrates stand allocations in a Gantt Chart style. Additional views provide supplemental flight and stand information with at-a-glance alerts. All built-in views support dynamic flight handling with drag-and drop functionality, enabling the system to be adjusted with ease.



Features

- **Scientific optimisation**
Algorithms balance the need for fast dynamic daily allocation with robust seasonal stand planning
- **Conflict detection**
Automated conflict detection and alert generation
- **One platform**
A single HMI for year-round planning cycles and traffic patterns
- **Extension packages**
Multiple views and added-value tools available
- **Configuration**
Intuitive configurable and adjustable business rules
- **Modular concept**
Integrates with other Frequentis ATC decision support and airport demand capacity planning tools

From strategic planning to operations allocation

Budgetary stand planning

- Indicates number of future required stands for a robust stand allocation
- Scenario analysis on projected movements
- Shows maximum movements per time interval

Pre-tactical stand planning

- D-180 up to D-1: Creates robust stand plan based on scheduled flight times
- Scenario analysis: Compare different user plans by week or day
- Tow planning
- User-triggered automatic stand optimisation

Tactical stand management

- Day of operations D0: Manages stand allocations based on real-time flight data updates
- Automatically transitions pre-tactical-stand planning for daily allocation
- Dynamically creates alerts and solves conflicts
- Ad-hoc tow generation
- Manual overruling of short-term optimisation decisions



The Stand Optimiser HMI is highly configurable and adaptable using Frequentis Orthogon's ODS™ Open Platform whose modular architecture enables easy HMI additions and functional modifications.

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