ASP/ATDE

Airport Slot Planner and Air Traffic Data Explorer

APPLICATIONS

- Fully automated initial coordination by modern optimization algorithms
- Interactive data exploration and analysis based on new visualization techniques

FEATURES

- Data import/export interfaces
- Interactive RUNWAY, APRON, PAX utilization diagrams (supporting rolling periods)
- Flexible configuration of all related parameters (Times, Limits)
- Automatic flight series computation
- Configure priority parameters and rules to influence/guide automatic planning process
- Easy modifications of existing flight schedules
- Multiple interactive visual dashboards (In-depth analysis of solution fragmentation, delta time, historic analysis of flights, etc.)
- Visual data selection (Airlines, Slots, etc.) for feedback to optimization

BENEFITS

- Improve flexibility of slot schedule w.r.t. potential further requests
- Reduce time deviations of assignments to requests, and therefore customer satisfaction
- Get deeper understanding of utilization structure and potential future bottlenecks, as well as congestion situations in peak hours
- Detect unexpected data quality issues such as missing values in the source data efficiently
- Increase decision confidence by an effective analysis of the data from all perspectives: time, slot, day, flight series, airlines, destination,…
- Present data to stakeholders and customers quicker and more flexible
- Reduce routine tasks of data preparation and ad-hoc reporting

The software suite is an innovative toolkit to support airport slot coordination authorities in maintaining, planning and visualizing airport slots and related processes and data. It helps to get a deeper understanding of mutual capacity dependencies and enables fully automated initial coordination planning by means of mathematical optimization algorithms.
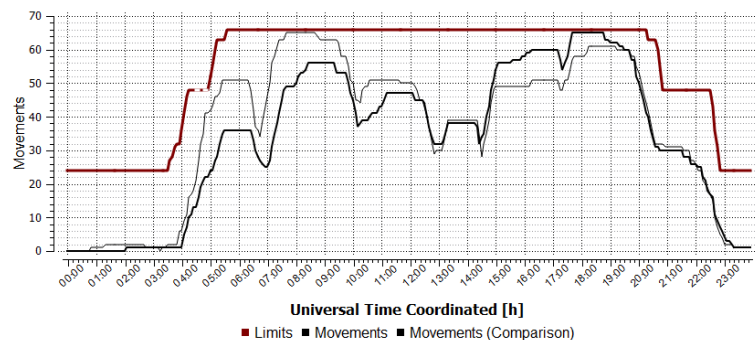
By using the software the airport slot coordinator can resolve capacity bottlenecks, particularly in congested peak hours, more efficiently. Strategic goals like homogeneity or low-gap confirmation of requests can be configured and achieved in a best possible way. Interactive visualizations enable to explore the data for increasing the decision confidence and understanding potential problems in depth.
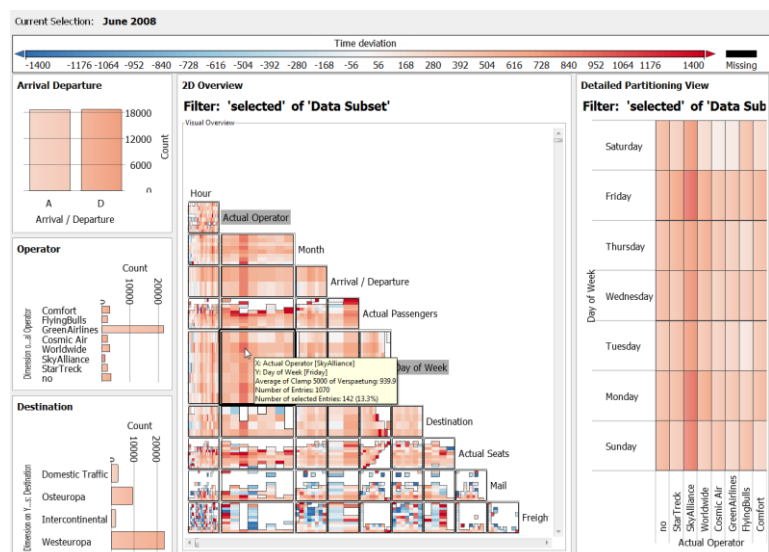
Analysis of time deviation by numerous factors
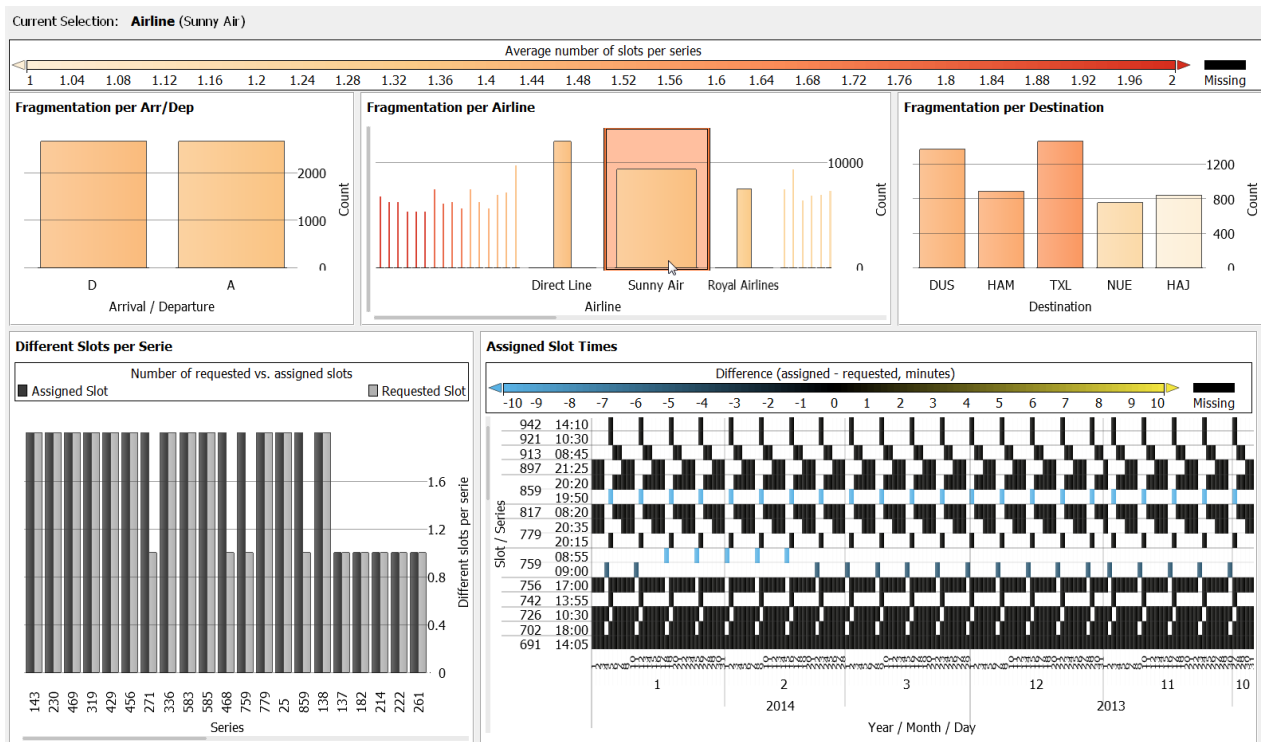
Interactive analysis of an optimization solution regarding the fragmentation of the airport slot schedule

Changes of, e.g., runway or terminal capacities can be simulated in advance. The software is compliant to the IATA WSG (worldwide slot guidelines), but also permits to configure the underlying priorities (based on historic status codes and further properties of the requested series) flexibly. Works as a complete airport slot management solution for smaller to medium size airports, or as a value-adding extension for existing airport slot management software systems!

"With this software we can coordinate and analyze airport slot schedules far more effectively. The automated planning yields high quality schedules quickly and allows for a better resolving of difficult situations in congested peak hours. The interactive visualization provides a deep understanding of the data within minutes and enables us to feed back relevant information to the optimization."

Schedule Coordination Austria, Austrian slot coordinator and development partner

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