| NetLine/Plan | NetLine/Sched | NetLine/Ops | NetLine/Crew |

NetLine/Sched *Swapper*

The innovative revenue gain

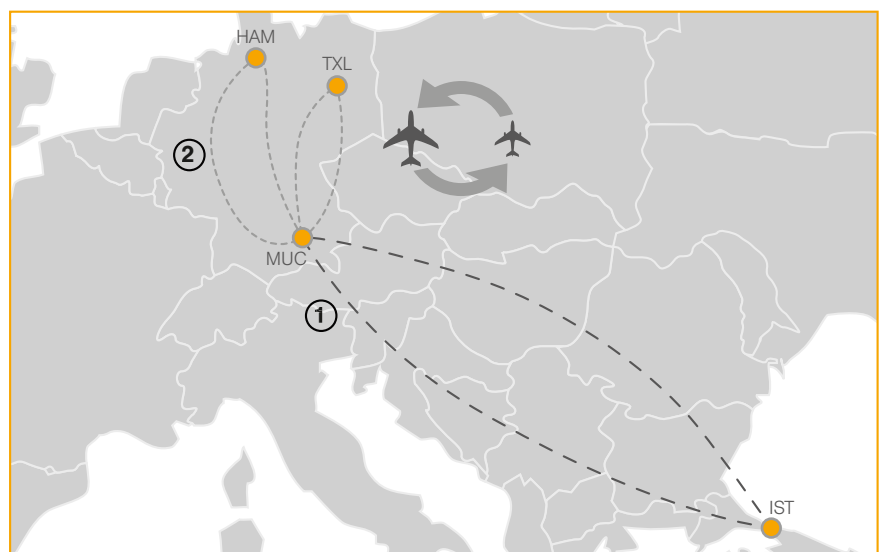## NetLine/Sched *Swapper* creates value

- Identification of new revenue potential
- Easy handling and improved benefits
- Short-term fleet assignment
- Minimum impact on crew and maintenance planning

Due to labor laws and maintenance reasons, flight schedules must be fixed up 4–6 weeks before the actual flight. This is far too early for economically-minded planners who want to ensure that the right planes with the optimal capacity are available for each route. As the date of a flight approaches, the anticipated capacity utilization can be forecast more precisely. However, flight schedulers cannot use this knowledge to optimize schedules which have already been finalized.

Lufthansa Systems has now introduced an innovative NetLine/Sched optimizer tool for fleet assignment, the NetLine/Sched *Swapper*. This solution allows existing schedules to be optimized at short notice, legally, and with minimal operational impact.

Planners must consider the impact of schedule changes on crew assignment and maintenance planning. *Swapper* evaluates scheduled flights based on firm bookings, passenger number forecasts, and other operational requirements and suggests schedule changes to increase overall profitability. After checking the recommended changes the scheduler decides whether or not to implement them.

The NetLine/Sched Swapper identifies opportunities for aircraft swaps to adapt aircraft size to expected demand. In this example rotation (1) and (2) are swapped.

Features and functions

The goal of NetLine/Sched *Swapper* is to improve the overall profitability of a given schedule by reducing the operating cost of a schedule and increasing the number of passengers and hence the revenue. To improve the profit of a given flight schedule *Swapper* finds possibilities to swap the aircraft type assignment of a limited number of flights while considering operational restrictions and user-defined constraints.

At the same time, *Swapper* tries to minimize the operational impact of the suggested changes in order to protect existing crew assignments and maintenance schedules. *Swapper* suggests changes which can be implemented immediately (and estimates the profitability potential of each change). To find these changes it searches for ways of swapping flights in order to increase the forecast profitability.

Swapper characteristics :
- greater profitability
- limited number of changes
- identifiability of separate changes
- choice of changes to be implemented

Swapper increases schedule profitability based on:
- passenger numbers (forecast or booked passengers)
- revenue (per passenger, compartment, flight number, origin, date)
- costs (fuel, ATC, catering, depreciation, crew, etc.)

There are restrictions which the user can choose to be applied to the optimization algorithm:
- standard and minimum ground times per station, aircraft owner, fleet type, service type, type of connection
- fleet sizes per aircraft owner, fleet type and period
- flying times by sector, aircraft owner and fleet type
- sector-subfleet restrictions and subfleet-station restrictions
- prevention of equipment changes on certain flight legs defined by flight number or service type

Swapper is fully integrated with NetLine/Sched thanks to its modular design. It offers the option of changing the schedule currently loaded in NetLine/Sched. Introduction of the module is easy if the core module is already in use at the airline.

Upgrading NetLine/Sched with *Swapper* does not require an upgrade of the core module. *Swapper* operates on NetLine/Sched using common base data.

System requirements
- UNIX server (HP-UX, AIX, Solaris, LINUX)
- Client OS: Windows XP/Vista, UNIX workstation
- LAN clients using a PC X Server (WRQ Reflection or Hummingbird Exceed for Windows clients or the respective X Server for UNIX workstation clients)
- WAN clients using a data centralization solution (Sun Secure Global Desktop or Citrix Presentation Server)
- Oracle database

NetLine

NetLine is one of the leading software solutions for the airline market worldwide. The integrated and modular product line provides optimal support for the entire process of planning and controlling airline resources.

NetLine products:
- NetLine/Plan
  The network planning solution
- NetLine/Sched
  The schedule management solution
- NetLine/Ops
  The operations control solution
- NetLine/Crew
  The crew management solution

Contact:

Lufthansa Systems GmbH & Co. KG
Corporate Marketing
Am Prime Parc 1
65479 Raunheim
Germany

Tel. +49(0)69-696 90000
marketing@LHsystems.com
www.LHsystems.com