

TPAC Pairing

TPAC Pairing solves the problem of producing efficient patterns to crew a transport schedule.

Capabilities

TPAC Pairing can be used in several ways:

- ➔ Interactive pairing creation
- ➔ Just-in-time optimized pairing generation, repair & assignment
- ➔ Optimized pairing generation

Optimized pairing generation

Optimizers use the latest Operations Research technology to generate an entire solution, improve existing solutions or repair solutions after schedule changes. Standard features include:

- ➔ Optional optimization to maximize daily and weekly regularity
- ➔ Suitable for large problems (over 10000 legs)
- ➔ Variable crewing on each leg
- ➔ Handles ground travel between co-terminals and bases serving multiple ports
- ➔ Selectable limits for crew from each base for each leg

Rules

A broad range of configurable standard transport rules provide:

- ➔ Planning legality rules
- ➔ Operational legality rules
- ➔ Different rules for crew from different bases
- ➔ Hotel and ground transportation costs
- ➔ Selectable penalties to ensure robust solutions and equity between bases
- ➔ User-specified optimizer constraints to handle exceptions

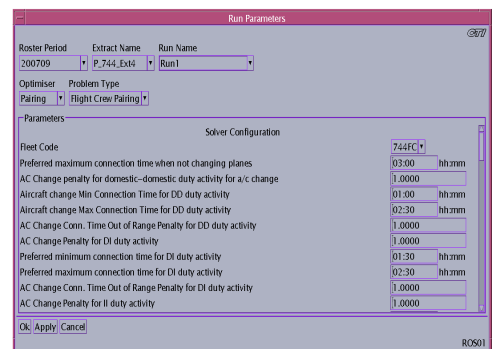
Just-In-Time crew pairing generation, repair and assignment

Just-in-time crew assignment is a way of coping with a situation where significant changes to schedules often occur after work days have been assigned to crew members.

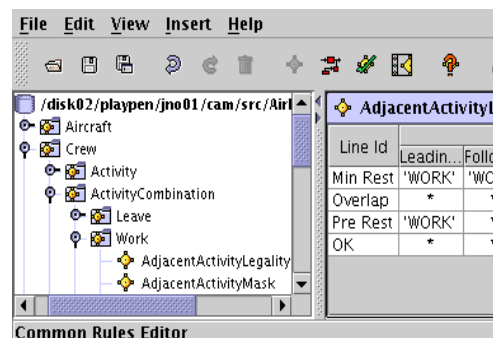
Crew members are assigned blocks of work days, but the actual legs operated by each crew member are only finalized a few days in advance of the start of the block. Optimizers assign patterns to individual crew members at the same time as patterns are generated, taking into account the crew member's preferences and work history.

Run parameter definition

Rule developers may specify, in TPAC Rules, the parameters to be entered for each run.



TPAC Rules editing



Reporting

A range of detailed and summary reports are provided by the system

