

Altitude Pairing



With multiple flights and constant schedule changes, effective pairing planning becomes an extremely complex and essential task. To remain competitive, airlines must build complete and cost-effective crew pairings that take all costs (per diem, hotel, deadheads, etc.) into consideration, while respecting collective agreements, regulations, and business objectives. To add to the challenge, airlines require a pairing system that not only generates cost effective solutions, but is easily operable with the capacity to quickly react to changes.

A Complete Approach to the Entire Planning Process

Altitude Pairing, a core solution of the AD OPT solutions suite, is a dynamic and flexible system that builds cost-effective “crew friendly” pairings, maintaining full compliance with company rules, operational requirements, company cultures, specific sets of activities, contract agreements and government regulations. An operations management solution that automates the development of crew pairings within single, multi-domicile or multi-base contexts, Altitude Pairing assists planners in their daily tasks while improving their short-term and long-term planning capabilities.

Altitude Pairing provides airlines with a robust, customized solution designed to seamlessly integrate within any airline operation and enhance operational efficiency.

Proactively Plan for Modifications

In an effort to meet deadlines, planners must also forecast and plan for future occurrences. Altitude Pairing’s extensive “what-if” capabilities allow planners to focus on developing long-term strategies, including whether to explore new scenarios, such as opening a new base, or to analyze the effects of union negotiations.

Altitude Pairing can be configured using customized scripts in accordance with your pairing generation strategies, so you can promptly react to changes. If additional changes to the schedule occur, the solution can automatically be repaired or re-optimized according to the new schedule, providing your organization with a proactive approach and making the planning department more efficient.

Advanced Pairing Tools

Altitude Pairing provides a large set of planning functions that help planners create operationally robust solutions. Altitude Pairing’s core functionality was designed with flexibility in mind, knowing that in the “real world,” disturbances often occur – even after pairings are published. To help alleviate such events, Altitude Pairing provides:

- **Connection time by time of day or by sector pairs:** planners can use the feedback from operations to plan for possible delays at specific problem stations
- **“Line Friendly” constraints:** from daily crew availability to trip mix, planners can create pairing solutions that can easily be built into lines/rosters while providing operational efficiency and cost
- **Automatic cockpit crew augmentation for long haul problems**
- **Templates:** Dynamic templates guide results by allowing planners to **restrict, impose,** and/or **suggest** flight combinations or station restrictions to fit operational needs

Scripting For Success

Through the Optimizer Control Language (OCL), planners can automate the manner in which the system is used. The OCL incorporated within the Altitude Pairing system is a powerful and flexible high-level scripting language that gives planners full control over the Altitude optimizer, enabling users to create powerful optimization strategies.

Built using simple instructions, pairing generation scripts can easily be created or modified. Planners can even develop their own scripts that will fine-tune optimization strategies, according to each stage of the planning process. And because the OCL was created with planners in mind, it is relatively simple to use with little or no programming knowledge required to take full advantage of the power provided by the scripts.

Key Components For Optimal Pairing Efficiency

- Using the feature rich, user-friendly Graphical Interface, planners can create pairings, generate duty periods, and filter trips and legs based on a wide range of criteria.
- The Solver automatically generates the most efficient pairings, taking hotel costs, per diem rates, deadheads, as well as business and contractual rules into consideration, providing optimal pairings in a reasonable timeframe.
- The Solver can create a monthly solution directly without the use of the traditional daily/weekly approach, providing for better robustness and cost savings.
- A complete audit trail system stores all modifications to all data items, along with user comments, allowing for any type of post-production audit to take place.
- Because all changes are automatically saved and easily managed, a previous state can be recovered at any time allowing for comparisons between various outcomes to evaluate the best possible solution.
- GENCOL, a proprietary optimizer, is a state-of-the-art column-generation technology that uses a global approach to generate schedules. This approach considers the entire set of flight legs over the entire planning horizon, delivering optimal, cost-effective pairings.

A trusted and recognized pairing solution, Altitude Pairing is based on advanced optimization technology that seamlessly integrates with existing systems to provide airlines with an immediate and sustainable ROI.

THE AD OPT SOLUTIONS SUITE

AD OPT a comprehensive crew planning solutions provider, delivers powerful insight for result-driven airlines. With AD OPT, airlines can link their crew planning activities to strategic objectives in order to determine what is impacting productivity, profitability, and crew satisfaction – then take decisive action to achieve operational excellence.

The AD OPT solutions suite delivers enhanced operational flexibility and cost control. It enables you to automate and optimize your flight operations processes as they relate to strategic planning, fleet and flight planning, and manpower planning.



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of People and Business™

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