



ProfitLine/Yield *Dynamic Price Engine*

The intelligent way to real-time O&D optimization

ProfitLine/Yield *Dynamic Price Engine* creates value

- Optimizes O&D revenues dynamically
- Maintains optimal revenues in face of low-fare competition
- Enhances flexibility through full support of mixed business models
- Covers all markets by empowering every type of distribution channel
- Optimizes distribution costs

The ProfitLine/Yield *Dynamic Price Engine* (DPE) is a new integrated revenue management and pricing concept, which is unique to the industry – an innovative tool for strategic O&D control and the successful management of low-fare markets. It has been especially designed for network carriers and those who are facing low-fare competition in sections of their network.

New major challenges

Today, overall load factors have already reached a high level. As a result, revenue management decisions need to focus even more on overall revenue in regard to traffic flows and passenger values. A dynamic and very precise O&D control mechanism to effectively manage and increase revenues is of increasing importance.

Faced with the competitive challenges presented by low-fare carriers, network carriers are increasingly forced to introduce low-fare concepts in addition to traditional fare concepts. Most pricing and revenue management systems in use today fall short in the management of this kind of mixed market. In terms of booking requests, they are unable

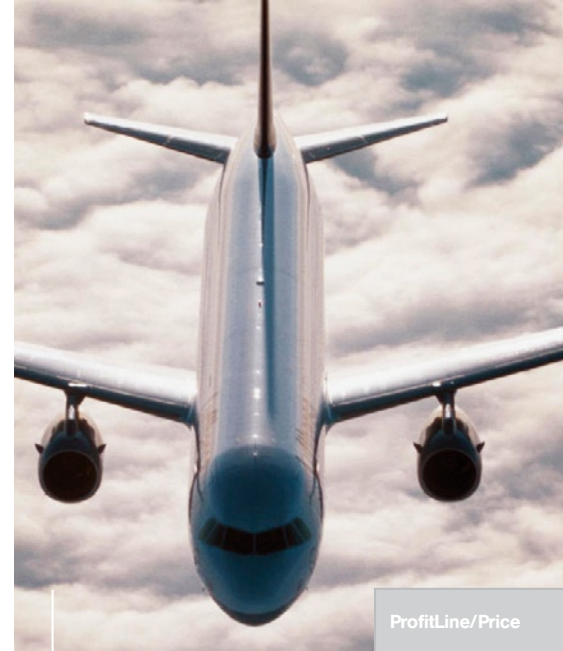
to distinguish between the different fare concepts. This leads to flawed optimization decisions, resulting in considerable spiral-down effects and serious yield erosion.

Breakthrough in business dynamics

Both challenges can be met head-on by responding quickly to booking or availability requests and evaluating each one prior to actual availability and current pricing. This is the key to distinguishing between passenger segment values in terms of booking requests, booking itineraries (O&D) and distribution channels, and in responding dynamically with the optimal price and/or availability.

Competitive edge

The ProfitLine/Yield *Dynamic Price Engine* is designed to improve your airline's competitiveness substantially: Value-driven, dynamic decisions, short time-to-market – rooted in a framework of strategic business rules. Based on solid architecture with outstanding performance and high reliability. The system pays for itself within a matter of weeks by generating additional revenue and reducing costs.



How DPE works

The DPE implements all revenue management and pricing-related business decisions that are fundamental to inventory control, allowing the application of individual business rules that are predefined by the airline. All individual requests (booking, cancellation, availability, price) transferred through all distribution channels are handled and resolved case-by-case in real time and in compliance with dynamic rules and revenue management principles. Static control parameters are replaced by dynamic control, reflecting the individual value of each request, as well as the actual market and competitive situation. To fulfill even the highest requirements, the system is capable of handling up to several million requests per day with very good performance and reliability.

Although the DPE works best when integrated with other ProfitLine components, it can of course be used in conjunction with other O&D-based revenue management systems too.

Applying strategic control levers to O&D management

The DPE features that optimize O&D demand extend well beyond the capabilities of traditional O&D control for network traffic. The system enables carriers to increase their competitiveness with dynamic and flexible pricing, as well as through specific control of individual O&Ds, individual points of sale, individual customer values and individual distribution channels.

Each booking request is evaluated in real-time mode (at time of request) and is resolved with data on individual availabilities,

generated dynamically on the basis of the request's value and underlying business rules. This results in prioritized availabilities relating to, for example, customer loyalty, high yield points of sale, O&Ds with a high network contribution, preferred sales agencies, and distribution channels with low distribution costs. On the other hand, availabilities can be suppressed or lowered, such as for high-cost distribution channels or non-performing travel agencies. This opens up a new dimension of O&D control applicable to the entire network.

Managing mixed markets ...

The DPE also allows for intelligent control of low-fare traffic, avoiding negative effects on network traffic. As each individual availability or booking request is analyzed and evaluated in real-time mode, the specifics of the request are identified and responded to accordingly using two different logics.

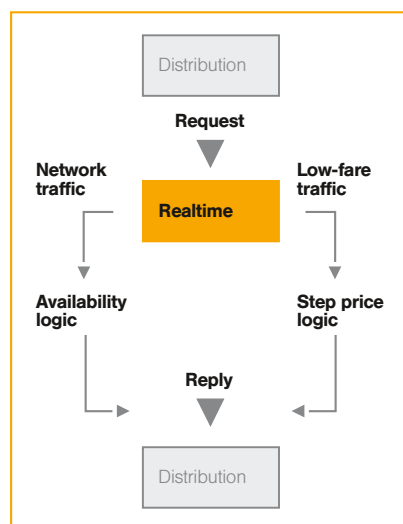
Step price logic

If the incoming request concerns a low-fare segment, the step price logic is applied. To be compatible to a GDS availability display the applicable price level (according to current revenue management parameters) is mapped to a booking class and individual availability is resolved accordingly.

Availability logic

If the request concerns segments with traditional, differentiating fare concepts (based on rules and restrictions), the availability logic is used. A bid price calculation measures the value of the booking request against the sum of calculated minimum fares applicable to each sector of its itinerary – based on applicable revenue management parameters. The individual booking class availability is resolved and assigned accordingly.

This fully flexible approach, separating the two different types of fare concepts and applying individual logics, allows for the optimal coordination and control of the two market variants without negative reciprocal impacts. This is especially beneficial for network carriers wanting to maintain classical pricing structures over their network while in parallel introducing undifferentiated low-fare modules on sections of their routes.



Market determination



- ProfitLine/
Yield**
- Demand Forecaster
- Network Optimizer
- Network Intelligence Manager
- Group Manager
- PNR No-Show Forecaster
- Demand Forecaster Plus
- Network Optimizer Plus
- Dynamic Price Engine
- Dynamic Price Engine Plus

ProfitLine/Yield Dynamic Price Engine: control panel

... and more

The combined package of powerful functionalities is rounded off by two particular important features for optimizing low-fare revenues:

- The *Competition Broker* enables airlines to automatically adjust the published price in low-fare markets within seconds, reflecting business rules, actual market conditions and competitor price levels.
- The *APEX Rule Control* panel removes advanced purchase conditions from the foreground, allowing the system rather than fare restrictions to take control based on business rules and down to the level of individual O&D combination.

O&D value determination

Provides the most precise calculation of O&D basic values of individual availability requests.

Calculation algorithms include:

- itinerary and booked segments
- hierarchical search
- fare construction rules
- interlining and special prorate agreements (SPAs)

Strategic O&D control levers

O&D control extends far beyond current possibilities. Availabilities are calculated and modified in real time, based on parameters predefined in accordance with the airline's business rules. Levers are independently applicable to:

- distribution channels (considering distribution cost variations)
- point-of-sale (down to a single location)
- agencies (down to office level)
- customers (down to customer tier level)

Low-fare market control

Optimal revenues in mixed markets through real-time identification of market segments:

- separate optimization logic for different fare concepts.
- low-fare optimal price mapped to booking classes.



Connecting to the world of distribution

The DPE intelligently handles booking and availability requests. To make use of it, it must be properly connected to all distribution systems. This can ideally be performed using the availability management (DPE Plus), which is available in connection with the DPE.

The DPE Plus is a special distribution interface. It handles all communication to the distribution systems in real-time mode. Moreover, it relieves the airline inventory in the processing of all availability requests, which are handled directly by the DPE Plus connecting to the DPE. This option is ideal for airlines not yet operating an O&D system. With DPE Plus, there is no need to invest in inventory upgrades to deal with seamless availability. Also for carriers already oper-

ating an O&D system, this solution can be beneficial through savings on mainframe operational and communication costs.

ProfitLine/Yield Dynamic Price Engine benefits

Making use of DPE, airlines can increase their revenues and manage their distribution costs effectively. The system generates additional revenues:

- by dynamically controlling O&D revenues based on real-time value assessment and strategic business rules.
- by avoiding negative revenue effects on network traffic through the use of separate control logics for low-fare markets.
- by increasing competitiveness through dynamic adjustment of price levels based on current market conditions.

Cost management is performed more effectively by considering the distribution cost variations of different channels in real-time availability calculations. In addition, customer perception is enhanced by increasing fare transparency, removing advanced purchase from the foreground.



ProfitLine/Yield Dynamic Price Engine: system overview

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