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DYNAMIC PRICING UPDATE

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BACKGROUND

In 2015, ATPCO presented a white paper on how airlines viewed dynamic pricing and its dependence on NDC (New Distribution Capability) that challenged the perception that dynamic pricing cannot exist with “filed fares.” This white paper categorized dynamic pricing into four methods:

1. Dynamic Availability Using Fare Levels
2. Bundling/Unbundling
3. Personalization
4. Dynamic Fare Generation

The feedback received on this white paper from interviewing more than 25 airlines was that the first method has been fundamentally successful in achieving pricing segmentation but needs improvements to handle the growth of fares and overcome limitations of current systems that lead to suboptimal results.

This method has been augmented by the bundling/unbundling of Optional Services along with some personalization, providing even further customization of products to specific customer segments.

The fourth concept, Dynamic Fare Generation, was thought to be a major change from the current process, making it prohibitively expensive and time-intensive to implement.

At the same time, the need for New Distribution Capability (NDC) is growing. The IATA NDC initiative allows airlines to be in control of the creation of their offers and defines the standard on how airlines will communicate with external entities. The IATA NDC initiative has purposely avoided specifying how the airlines will create their offers.

The Dynamic Pricing Working Group, established by ATPCO in 2016, addresses how airlines will be able to create customized offers in both traditional and NDC environments. The most recent meeting in 2017 focused on determining business value, defining a minimum viable product, and establishing next steps toward piloting solutions for improving the process of Dynamic Availability using Fare Levels. Participants decided to address the Bundling/Unbundling and Personalization requirements in the Optional Services and Branded Fares Working Group. No airline was willing to jump to full Dynamic Fare Generation because of the huge complexity in creating the product attributes and having these fare products working in all processes.

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PROPOSED SOLUTIONS

The Dynamic Pricing Working Group focused on how to address airlines' needs to optimize the price points that they wish to offer along the demand curve. There were two possible approaches to enable this:

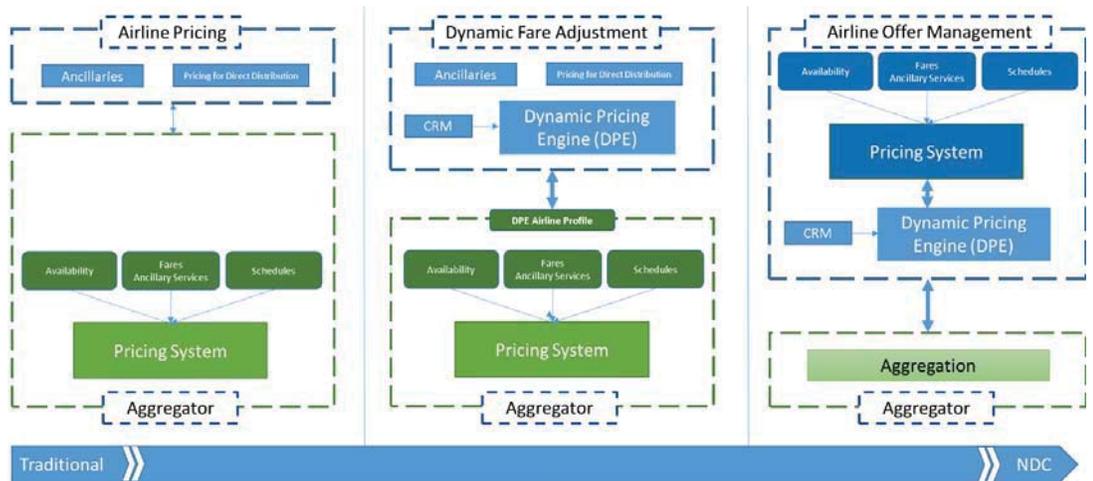
- Two-Character RBD – The expansion of the number of RBDs (Reservation Booking Designators) enabled through implementation of two-character RBDs provides the ability for expanded fare product segmentation while utilizing current methods and systems. Carriers would file fares as they do today, using existing pricing, availability, and schedules processes. With additional RBDs, carriers would be able to create more price points to meet segmentation needs. The current approach is to use a hierarchy that allows airlines to implement the changes for systems that can support the two-character RBD concept. Those that do not will continue to function the same as today; however, access to some fares enabled by two-character RBDs may be limited. Better access to inventory provides an incentive for system adoption.
- Dynamic Fare Adjustment –The introduction of a Dynamic Pricing Engine (DPE) will allow an airline to take a base published fare that has already been calculated based on journey characteristics and broad segmentation, and further adjust the fare after evaluating details about the traveler and current market conditions. A “Crawl, Walk, Run” approach was agreed to and the requirements for a “Crawl” phase using existing infrastructure was outlined and reviewed by the Working Group. By utilizing existing infrastructure, effects on downline processes such as revenue accounting and ticket reissues are minimized.

PATH TO NDC

Airlines have confirmed the need to work within a distribution landscape where both traditional and NDC channels are supported at the same time for many years. They have also confirmed that they intend to continue to support the “three pillars” of revenue management (network planning, yield management, and pricing) and that these pillars need to be able to support all distribution models.

The Two-Character RBD method would use existing pricing and inventory systems and extend to allow more segmentation possibilities.

Dynamic Fare Adjustment through a Dynamic Pricing Engine (DPE) is envisioned as using an airline's existing pricing and inventory system, with a new adjustment system as a component of an offer management system. This structure creates a natural step into NDC. The following diagram shows how the introduction of a dynamic pricing engine can provide an interim step to transforming from traditional pricing distribution to full NDC offer management:



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BENEFITS AND COSTS EVALUATION

ATPCO has taken a three-pronged approach to determining the potential benefits and thus the sustainability of the various solutions:

- ATPCO Fare Compression Analysis (Multiple fare products booked in the same RBD)
- MIT PODS Economic Modeling
- Piloting of various approaches

FARE COMPRESSION

ATPCO research on Fare Compression indicates it is a real and tangible issue for airlines driven by an increasing number of brands and products vying for a limited number of RBDs. The following chart indicates the extent of the issue:

Cabin	Actual RBD Count (Avg.)	Products Filed Per Cabin (Avg.)	Additional RBDs needed (Avg.)	% Increase in RBDs Needed (Avg.)
Business	2.6	14.6	12.1	472%
Economy	10.5	35.3	24.9	238%
First	2.6	14.7	12.1	469%
TOTAL	15.6	64.7	49.1	314%

Note: Averages are based on public fares. This data does not include private, constructed, or Fare By Rule fares.

Fare compression is expected to increase as even more products are introduced into the market to support fare families and additional products.

PODS RESEARCH

As a participating member of the Dynamic Pricing Working Group, PODS has contributed analysis of the possible economic impacts of both additional RBDs and dynamic pricing.

- Additional RBDs – While basic economic theory would suggest that the addition of RBDs should provide increased revenue, the research proved that adding more RBDs did not guarantee more revenue. The PODS simulator was used to run experiments in a simplified environment where two airlines compete on a single route and various revenue management (RM) systems were applied. Where the best-of-breed RM system was implemented, revenues did increase as the result of additional RBDs, but where a simplified RM system was used, the results were dilutionary for the airline. These results are preliminary since there was only one competitive route in the simulation. Updated results will be available in June 2017.

In another scenario, each fare class was assigned its own RBD. Less restrictive fares performed worse because there is greater reliance on forecasting willingness to pay, requiring more sophisticated Revenue Management systems to result in revenue gains.

- Dynamic Pricing – PODS analyzed a model that is dynamic in a limited sense, applying fixed adjustments on two passenger segments (business and leisure). Two types of adjustment strategies were considered.
- Business passenger increments, leisure passenger discounts
- Business passenger discounts, leisure passenger discounts

The simulations included four airlines in a large network. When all four airlines applied the same strategy using the same willingness to pay estimates, there are simulations where the results are revenue-positive for the industry. However, when competitors use different strategies and various estimates of willingness to pay, the most aggressive discounter has the best performance taking revenue and market share from competitors. Again, the sophistication of the RM system is a significant factor in obtaining value from this form of dynamic pricing.

PILOTS

A call for pilot participants has received a positive response, with airlines and systems indicating interest in participating in at least one pilot.

ATPCO plans to run the pilots through the year with an immediate goal of sharing pilot results and learnings at the 2017 Global Conference. A second Dynamic Pricing Working Group will be held late in 2017 to discuss pilot results and possible deployment of the Two-Character RBD and Dynamic Pricing Engine solutions in the marketplace.

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NEXT STEPS AND OPEN QUESTIONS

ATPCO plans to continue to identify the business value and economic model of dynamic pricing, looking further into the cost and impact of the solutions through additional research and pilot results. Evaluation of the solutions take into consideration how airlines plan to move forward.

To support our additional research, please provide responses to the following questions:

GOAL OF DYNAMIC PRICING AND NDC

A. What is your goal with dynamic pricing and NDC?

1. Is it your airlines' goal to drive channel shift by using preferred pricing for direct bookings?
2. At what percentages do you foresee using dynamic pricing to achieve personalized (to an individual) pricing versus customized (to a segmented group) pricing?
3. Do you plan to be fully NDC in the future?
4. Is there a preferred approach to becoming NDC, with or without dynamic pricing, and how do you see a progression toward your goal?
5. Do you plan to be NDC-capable across all transactions, or focus on a subset of transactions (e.g. market based, identified traveler, fares only, Optional Services only)?
6. Given your plans for dynamic pricing and NDC, what impact do you foresee on your volume of fares and rules over the next three years? Do your requirements for fares and rules change in any way?

B. Approach to Dynamic Pricing

1. What is your planned/preferred approach for dynamically pricing?
 - Two-Character RBD: Increase the number of fare products in the market through two-character RBDs, targeting customization rather than personalization
 - Dynamic Bundling: Pricing driven primarily by the Optional Services included and the pricing of the Optional Services (fares remain "as published")
 - Dynamic Fare Adjustment: Adjustment of a published base fare using a Dynamic Pricing Engine (DPE)
 - Dynamic Fare Generation: Fare is dynamically created in real-time

C. Dynamic Fare Generation

1. What are your requirements for competitive monitoring in a dynamic pricing/NDC environment, and how important are they?
2. Are you currently evaluating systems to license or planning to build any systems that would create or support Dynamic Fare Generation?

FARE GROWTH

To help with our capacity and system management, please share your view on your fare volume growth.

1. Do you expect to implement or expand the market usage of ATPCO Branded Fares within the next three years?
2. Over the next three years, what volume of public fares do you expect to publish via ATPCO?

No fares
(fewer)

Same as today

Double the fares
(more)

3. Over the next three years, what volume of private fares do you expect to publish via ATPCO?

No fares
(fewer)

Same as today

Double the fares
(more)

4. What is your desired target timeframe for implementing two-character RBD?
5. What percentage of increase in fares and RBDs do you expect to occur with a two-character RBD?
6. What is your desired target timeframe to implement dynamic fare adjustments?
7. Do you expect to take a phased approach in implementing dynamic fare adjustments?
8. What percentage of your fares do you expect to move to dynamically adjusted amounts during (if using a phased approach) and after implementation?
9. Do you currently have an API connected to sellers/aggregators?
10. What percentage of your sales are currently going through this channel?
11. Do you plan to increase this percentage?
12. How many different schemas do you currently have in use?
13. What is your desired target timeframe to implement NDC?
14. What percentage of your sales are expected to move to NDC at that time?

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