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Expert opinions: Current pricing and revenue management practice across U.S. industries

Laurie Garrow*, Mark Ferguson, Pinar Keskinocak and Julie Swann
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*Georgia Institute of Technology, School of Civil and Environmental Engineering, 790 Atlantic Drive, Atlanta, GA 30322-0355, USA
Tel: +1 404 385 6634; Fax: +1 404 894 2278; E-mail: laurie.garrow@ce.gatech.edu

Laurie Garrow *is an Assistant Professor of Civil and Environmental Engineering. Her research interests include travel behaviour modelling and development of advanced discrete choice models. She currently serves as the Vice-Chair of the Urban Transportation Special Interest Group of INFORMS and co-chair of the AGIFORS Scheduling and Strategic Planning Group. Prior to joining the faculty, she worked for five years in the research and development revenue management group for United Airlines and for one year in customer science at Mercer Management Consulting.*

Mark Ferguson *is an Assistant Professor in the College of Management and coordinator for the Pricing and Revenue Management Initiative at Georgia Tech. He served as a board member for the Pricing and Revenue Management subdivision of INFORMS and has consulted with a number of companies on price optimization. Two of his papers have won best paper awards at POM conferences. Before joining the faculty, he worked for five years as an inventory manager at IBM.*

Pinar Keskinocak *is an Associate Professor in the School of Industrial and Systems Engineering. She has published several scholarly papers on pricing and lead time decisions including a review article that appeared in Management Science. She served as the cluster-chair for the Supply Chain Management and the Manufacturing and Service Operations Management tracks at INFORMS. Before joining the faculty at Georgia Tech, she worked at IBM T.J. Watson Research Center. She received the NSF Career Award in 2001 and the Daniel H. Wagner Prize for Operations Research Practice in 1998.*

Julie Swann *is an Assistant Professor in the School of Industrial and Systems Engineering. In addition to her university experience, she participated in several research projects at General Motors and IBM, focusing on pricing in different industries. She is currently focused on the modelling and analysis of problems in supply chain management and revenue management. Other research interests include applications of economics and optimization to healthcare policy. She received the Doctoral Dissertation Award from the Council of Logistics Management in 2002, an NSF Career Award in 2004, and was a finalist in the IBM Best Paper competition at POMS 2006.*

Abstract

KEYWORDS: dynamic pricing, revenue management, internet, applications

On May 18, 2006, the second annual Revenue Management and Price Optimization conference was held at the Georgia Institute of Technology. The theme of the conference was on how the Internet is changing traditional revenue management and pricing practices. The conference brought together experts and *thought leaders from more than 30 companies spanning airlines, hotels, car rentals, cruise lines, apartment rentals, aircraft manufacturing, retailing, distribution, e-mail marketing, on-line travel, logistics, sports, performing arts, software providers, and others. This paper summarises the key discussions from this conference and synthesises experts' perspectives on near-term opportunities and challenges facing their industries.*

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INTRODUCTION

The second annual conference on Revenue Management and Price Optimization was held at the Georgia Institute of Technology on May 18, 2006. The primary goals of this annual conference are to foster academic and industry research collaboration and to seek out lessons, similarities, and differences between the various applications of revenue management and price optimisation. This year, more than 30 panelists representing a diverse set of industries were invited to share their best practices, experiences, and challenges in implementing pricing and revenue management solutions. The panelists represent a mix of profit and non-profit companies as well as a mix of established and new users of revenue management. The theme of the conference was on understanding if and how the Internet is changing traditional revenue management and pricing applications.

The conference included eight panel discussions and two invited presentations. The panel discussions included representatives from airlines, hotels, car rentals, cruise lines, apartment rentals, aircraft manufacturing, retailing, distribution, e-mail marketing, on-line travel, logistics, sports, performing arts, software providers, etc. The two invited speakers were Robert Cross,[1] chairman and CEO of Revenue Analytics, who presented opening remarks, and Nell Williams,[2] vice president of Marriott's Global Revenue Management Organization, who delivered the keynote address. The names, titles, and companies of all panelists who participated in the conference are included in alphabetical order as references and the agenda from the conference is included in the Appendix A.

This paper describes three themes that emerged from the conference. First, common pricing practices and pricing trends across industries are synthesised. Next, impacts of the Internet on traditional revenue management and pricing are outlined. Finally, integration opportunities between pricing and revenue management and between demand and supply chain management are presented.

PRICING PRACTICES

While there is a large variation in pricing practices across industries, several panelists mentioned a recent focus on centralising pricing decisions. Alignment of sales incentives with corporate revenue, pricing, and profit goals was also mentioned as a key driver of success. According to AMR Research, companies on the leading edge of price management achieve their success by a centralised pricing function and the adjustment of sales incentives to include margin, not just volume (Preslan and Newmark, 2004).Panelists also emphasised important distinctions in pricing practices between industries that are able to 'price the experience' and industries that sell commodity-like products. Bundling (or packages) is generally viewed as an important future component of successful pricing, but there are diverse opinions and applications envisioned for how best to use bundling.

Centralisation of pricing decisions and alignment with sales compensation

While certain industries such as airlines have a history of setting prices centrally, a trend towards centralised pricing based on data analytics and software support was mentioned by several, less traditional users of revenue management, companies including Coca-Cola Enterprise, UPS, BlueLinx (building product distributor that handles 40 per cent of sales by phone), Archstone-Smith (apartment rental), and the InterContinental Hotels Group. For example, Coca-Cola Enterprise recently transferred the pricing decision authority from individual divisions (totalling more than 20) to headquarters. Divisions have the ability to override rate increase recommendations by interacting directly with headquarters and presenting a business case based on their knowledge of local market conditions. They also have plans to align sales compensation to the new centralised pricing goals (Hal Kravitz[3] and Shawn McMillian,[4] Coca-Cola Enterprise).

UPS and BlueLinx also set prices centrally, but provide a range of acceptable prices from which sales agents may choose. Monitoring is done to ensure that individual sales representatives are complying with system recommendations and not always quoting the lowest price in the recommended range. Monitoring also helps in (at least partially) aligning the compensation of sales representatives with pricing goals (Joe Kniple,[5] UPS). Even when the incentive systems are not aligned, monitoring and performance reports allow the pricing department to influence the action of sales agents (Bill Dudziak,[6] BlueLinx).

Archstone-Smith recently transitioned from having individual apartment buildings set rental rates to determining these rates centrally. They also use compliance reports to monitor whether property managers are following the recommended rates. However, unlike UPS, they do not tie compensation of property managers directly to compliance reports. Instead, they emphasize that compliance helps them to better protect themselves against fair housing lawsuits (Donald Davidoff,[7] Archstone-Smith). When pricing is done by a centralised software package, the company is less likely to price-discriminate against a renter based on race, gender, or appearance.

In addition to the companies above who have actively transitioned to centralised pricing, several other panelists, including Apo Demirtas, vice president at InterContinental Hotels Group (IHG), mentioned the desire to have centralised price optimisation. However, the relationship between IHG and the individual hotels that carry their name depends on the ownership structure and whether the hotel is owned, managed, or franchised. As Sharon Duffy, vice president at Hilton Hotels, states, ‘when it comes to the owned and managed hotels, we can do a lot more…dictating behavior…‘we want you to do this, we want you to price this way, these are our rules.’ When it comes to franchise hotels, it’s a lot more of ‘these our best practices, and it is in your best interests to adopt these.’ In cases where prices for hotels can be set centrally, executives like Nell Williams of Marriott perceive ‘huge opportunities in aligning compensation’ of the sales representatives to profit versus volume.

In summary, while several panelist mentioned the trend towards centralised pricing and the desire not to ‘farm out pricing’ (Rajeeve Kaul,[8] AutoZone), successful implementation was viewed as critically dependent on adoption by the user community, which often involves aligning sales compensation and pricing objectives.

Pricing the experience

During the conference, an important distinction emerged between non-profit organisations whose revenue depends critically on a loyal customer base and organisations that sell commodity-like products.

As an example, consider the Atlanta Symphony Orchestra (ASO), a non-profit organisation that depends critically on building long-term relationships with donors. Faced with decreasing revenues, ASO tried two different approaches for generating revenue. First, ASO started to aggressively promote its convenience packages that enable customers to attend multiple concerts at a discounted rate. Convenience packages differ from ‘series packages’ in the sense that specific concerts that are part of the package are not determined in advance by ASO, but rather by the consumer. However, as Charlie Wade,[9] vice president at ASO, describes, 'While convenience is king, convenience also has a certain corrosion effect for the institution. An orchestra which relies a great deal on contributed revenue really requires a certain level of loyalty and a certain level of commitment to the institution. And what we discovered was that these folks who bought the convenience packages really didn't want to invest much more. They didn't give as much in terms of donations, and they didn't buy additional single tickets.'

This discovery led to an alternative approach for generating revenue, which involved re-pricing seats to reflect the experience of attending the performance. Pricing was designed to segment two types of customers: those who are location-sensitive and those who are price-sensitive. As described by Anil Malhotra,[10] a strategy consultant for the performing arts, location-sensitive individuals want a good seat 'because they love the art form, they want to get the best experience that they can.' Consequently, ASO increased prices at prime locations (such as the left side of the stage near the piano) that sold out for almost every event and added additional price points on the main floor. A new minimum price of $10 was added to attract new price-sensitive customers. Also, distinct from the traditional revenue management practice, prices were changed dynamically based on booking pace versus booking availability. That is, although the number of seats for sale in a particular class $10 does not change, the price for the seats could be raised by $5 or another amount if the booking pace (which tends to be highly predictable for similar concerts) comes in strong. Thus, even though the entire concert may only fill 60 per cent of seating capacity, if the booking pace is strong, prices are raised. To accommodate dynamic pricing, price ranges for tickets were not posted in advance in print advertisements. Finally, performance metrics were changed to focus less on sales volume and more on revenue and attracting new customers.

The ability to price the experience and protect degradation in revenue streams from loyal customers was also mentioned by the Georgia Tech Athletic Association. The focus for this organisation is on recruiting and retaining loyal season ticket holders while leveraging pricing and marketing tools to attract new customers. As Director Scott McLaren[11] states, '... we're selling not just the game you're coming to, but everything around the event' which includes entertainment targeted at families that begins two-and-a-half hours before kickoff. His organisation is also creating a flexible pass plan this year that allows a consumer to purchase any three of the seven home games. In the past, the flex passes were created by bundling a popular game with two less popular games. The challenge moving forward is to balance the objective of converting flex packs to future season ticket holders with the need to prevent revenue leakage on the most popular games.

Pricing around the experience also occurs outside non-profit organisations such as Carnival Cruise Lines. The ability to 'price the experience' and create differentiated products across cruise line companies lead to very different pricing models. Specifically, competitor prices are not a direct input into revenue management and pricing decisions. In addition, even though Carnival Cruise Lines is a wholly owned subsidiary of Carnival Corporation, which owns multiple brands that can legally talk to each other about price, Vice President Brenda Yester[12] states 'we don't have a lot of time, and even if we did, I wouldn't be able to input it because my product is very different…it isn't a key input to my decision process.'

As observed by Kevin Geraghty,[13] principal of Revenue Research, the ability to price experience takes consumers' focus off price. However, it is not clear if this approach will work in industries such as the airlines. While Krishnan Saranathan,[14] director at United Airlines, views the ability to price individual components of an airline ticket as a potential direction (such as the strategy Air Canada is currently employing via menu pricing for preferred seating, preferred menu service, and other amenities), Bill Brunger,[15] former senior vice president at Continental Airlines, disagrees, pointing out that 'our products are too thin…and our jumps [in price] are pretty big.' Consequently, 'the value that the sum of the attributes of a radically commotized leisure product and the value of what a business passenger gets [is not rational].'

Thus, while certain industries have had initial success in 'pricing for the experience,' it remains to be seen if this practice will work in other industries. It is plausible that other supporting factors, such as a rational price structure employed by ASO, are needed to guarantee success.

Bundling

The discussion of flex passes relates closely to the concept of bundling, which is 'the practice of joining related products together for the purpose of selling them as a single unit' (http://www.investorwords.com/620/bundling.html). Bundling is often used when two or more products and services have 'synergies,' that is, they appeal to consumers more as a package than as individual offerings (eg, phone and DSL service). In general, it is less expensive to buy the products and services as a bundle than separately. Bundling is also often used to create a larger market for relatively low value products by combining them with a higher value product, for example, selling a high-valued Notre Dame football ticket only if it is purchased as a bundle with a less popular football game.

While the traditional uses of bundling were mentioned by several organisations, including the Atlanta Symphony Orchestra and Georgia Tech Athletic Association, several panelists also mentioned the importance of bundling in other contexts. For example, Richard Lonsdale,[16] regional director at Boeing Commercial Airplanes, states that bundling is often used when selling commercial aircraft to help shift the focus from price and make it more difficult for airline customers to know exactly 'what the metal' sold for. Common bundling tactics include adding maintenance or pilot training and/or combining the price of two different aircraft.

Several panelists, particularly those in the travel industry, also mentioned the ability to protect brand value while effectively selling off distressed inventory as motivation for working with on-line travel agents such as Travelocity, Expedia, Orbitz, Priceline, or Hotwire. The ability to maintain an opaque price differs across these on-line travel agents. Consistent with the bundling model, hotels may offer highly discounted rates to Travelocity, Expedia, or Orbitz for use in creating travel packages. However, in the case of Priceline or Hotwire, hotel rooms are generally not bundled with other products, but offered at a substantial discount to consumers who offer bids for rooms meeting certain criteria. Lee Jones, vice president at Marriott, states that, in general, the experience with Priceline and Hotwire has been positive and has generated incremental revenue because they see more price-sensitive customers who do not normally stay at Marriott come though these channels. However, Jones also views this as a very low volume, niche market. Apo Demirtas, vice president at the InterContinental Hotels Group (IHG), also mentioned that he likes the ability to have an opaque price 'as long as the product and price is truly opaque.' He notes that there have been instances in which hotels are not truly opaque to customers (eg, they are the only four-star hotel in the consideration set returned by a search engine) and that monitoring has become important in ensuring the price remains opaque to consumers in these channels.

Another use of bundling was mentioned by Travelocity. Rich Saleh, director at Travelocity, states that he expects to see larger, more customised bundling (or packaging) in the future as on-line data is effectively mined and cross-selling opportunities can be better identified. Beju Rao, senior principal at Sabre

Holdings, which works with Travelocity, states that the use of packages by on-line agencies could also be used to build loyalty.

While the use of bundling, particularly in on-line channels, is expected to play a larger role in future pricing practices (Craig Eister,[17] InterContinental Hotels Group; Darren Arrington,[18] Dollar Thrifty Automotive Group; Rich Saleh,[19] Travelocity, etc), business motivations will likely be driven by factors other than price, such as the ability to attract loyal customers and create cross-selling opportunities.

IMPACT OF THE INTERNET

While experts sometimes disagree about how the Internet is driving customer behaviour, none deny that, in certain industries, the growth of the Internet as an on-line channel has been explosive. As Nell Williams reports, when the Marriott.com site was launched in 1996, it took on average one reservation per hour; today it processes an average of 1,480 reservations per hour. In 1996, 0.03 per cent of all reservations for Marriott lodging representing \$1.5 million in revenue was generated by on-line reservations; today 15 per cent of reservations representing a daily revenue of \$11 million and 85 per cent of all on-line revenues are made through Marriott.com. Further, as volume has increased on Marriott.com, the channel has become reflective of the overall 'Marriott customer,' that is, there is no difference in price sensitivities between the customers who purchase from the Marriott website versus via phone reservation agents (Lee Jones,[20] Marriott).

Consistent with findings reported in the literature, the majority of panelists agree the Internet has increased price transparency for consumers and has blurred traditional segmentation lines. While new trends, such as ensuring pricing parity across channels, was mentioned by many panelists, there was little convergence in opinions regarding best practices for working with on-line travel agents. Particularly within the hotel industry where margins on hotel room rates tend to be higher, coexisting with on-line travel agents has led to 'awkward' relationships (see footnote 19, Travelocity) and both are 'still in the learning process' (Beju Rao,[21] Sabre Holdings) and looking for ways to build a loyal customer base. Panelists envision a broad range of future applications that leverage the unique characteristics of on-line data.

Pricing parity and tension with on-line travel agents

The desire to provide a clear message to consumers via maintaining pricing parity across distribution channels was expressed by several panelists. Brenda Yester, vice president at Carnival Cruise Lines, states that the recent transition to this price policy has 'really helped.' Specifically, after September 11, Carnival Cruise Lines introduced select agent pricing. This led to limited control on what travel agencies were selling and different mark-ups on products ensued. Subsequently, select agent rates were eliminated and common retail prices were instituted. However, pricing parity from the consumer perspective was not achieved until September 2004 when Carnival created an 'advertised price policy.' Under this policy, Carnival dictates the price that can be advertised such that consumers see the same price through all channels and print media. Agents can still offer different prices if consumers contact them directly, but consumer expectations for cruise prices are set directly by Carnival.

While Carnival obtains less than 1 per cent of its revenue at Carnival.com, other industries, such as hotels, depend more heavily on (and indeed are encouraging) the use of the Internet as a distribution channel. Similar to Carnival, the institution of pricing parity was motivated by a desire to instill confidence in consumers and reassure them that the rate they see on the hotel website will not be undercut. However, as John Kaufman, vice president at Starwood Hotels, states, another underlying motivation of the best rate guarantees instituted by the hotels was to stem volume going through third-party channels (such as Travelocity, Expedia, and Orbitz). This is another reason why Starwood has established a policy that customers do not get preferred guest points for their stays if they book through third-party channels, which 'has been a very effective way to encourage loyal customers to come to our site to book their stays.' Needless to say, this has led to much debate and tension with the third-party on-line travel agents, particularly in the hotel industry where margins on hotel room rates tend to be substantially higher than in other travel industries, such as airlines or car rentals. This is best seen in quotes from the hotel panelists and on-line travel agents:

'We all have discussions and debates about how big you want to play in third party channels and things like that, but I think the fact of the matter is that if you don't play, people don't see you when you need to be out there and visible' (John Kaufman,[22] Starwood).

'I view commoditization as the biggest threat to our business…and [third party channels] create an environment that is non-conformist.…IHG took a very bullish move pulling out of Expedia and hotels.com. A lot of people questioned if it was the right strategy…but an opportunity cost analysis showed that in not even one hotel, not even once, did pulling out of these channels create a dent in topline revenues or the revpar [revenues per available room] index. This confirms our latest studies that consumers usually shop on-line and use on-line channels, but at the end of the day they go back to the hotel or supplier site to make bookings' (Apo Demirtas,[23] InterContinental).

'I disagree [with Apo]. I agree with John. There are so many customers on those channels, that if you're not there, there is market share you're losing' (Sharon Duffy,[24] Hilton).

'Many times people will shop an on-line travel agency but then go and purchase direct. We have an awkward relationship when the supplier lures customers back in with award points; we tolerate it, but we try to forge relationships that are win-win and try to do best by our customers and best by our suppliers' (see footnote 19, Travelocity).

In summary, while the relationship between on-line travel agents and hotels is still in transition, both have ideas for how to use on-line channels to create value for customers. For example, both Travelocity and Expedia view customised packages as a future direction (see footnote 19, Travelocity; Utpal Kaul,[25] Expedia) while hotels view the Internet as an opportunity to provide richer information about their products and better differentiate themselves from competitors. In addition, it is worth noting that while the hotel representatives on the panel have a strong brand presence (and thus may not need to rely heavily on on-line travel agents to be in a consumer's consideration choice set), other industries such as Dollar Thrifty Automotive Group feel that the Internet has helped them get in front of consumers and compete against other brands (see footnote 18). Thus, relative benefits for merchants and on-line travel agents may likely differ by the merchant's brand presence.

Long-term opportunities

Several other opportunities provided by the Internet related to customisation of offers, screen presentation, or prices were mentioned by panelists including NCR, Revenue Analytics, Dollar Thrifty Automotive Group, the InterContinental Hotels Group, and Manugistics. For example, in the area of e-mail marketing, Sundeep Kapur, director at NCR, reports that when Overstock.com initially set prices, they did so with little feedback from consumers and felt that they may not be charging an appropriate price. To help address this issue, they created a first responders club where individuals pay to learn about sales before other consumers. Overstock.com selectively uses this club to test prices for a subset of its products. Specifically, small batches of e-mails are sent out starting at 6 a.m. in the morning. The price in each subsequent batch of e-mails is raised until the 'best' price is determined. Typically, this price is set by 10 a.m.

in the morning and distributed to the larger customer base. In the future, it is envisioned that e-mail marketing will become more customised to individual consumers' needs (Sundeep Kapur,[26] NCR). A second advantage of e-mail marketing is the ability to price experiment, something retailers found very difficult to do during the days when the only communications with customers were through catalogues and print ads.

The ability to set price appropriately depends partly on the ability to monitor sales in real time and quickly link a significant number of purchase sales to price offerings. Within the broader perspective, the ability to further customise offers, screen presentations, prices, etc to individual consumers will be driven by the ability to analyse click-stream data. As Robert Cross, chairman and CEO of Revenue Analytics, states, 'the thing that I love most about the potential of the Internet is the ability to use data from the Internet to read the customers' minds and get inside their head as they are making their purchase decision…One of the big frontiers we all have to look at…comes in the area of click-stream analysis.' While click-stream analysis has been used extensively in traffic analysis to aid in website design, Cross feels 'the huge breakthrough for us is going to be using click-stream analysis for revenue analysis.'

The potential of click-stream analysis is seen by others as well, primarily in the travel industries. For example, as Beju Rao of Sabre Holdings states, based on his experience in working with Travelocity, on-line channels have a lot of data from click-streams that they have been using to study the buying and shopping patterns of customers. A lot of this data is unique to the on-line travel agents and not available to merchants such as airlines. Consequently, as Andy Boyd[27] of PROS points out, there is information gathering that Travelocity can provide back to airlines. Rao confirms that marketing of the click-stream data is currently part of the negotiations with merchants, but that a 'lot of learning is happening in this space' as future uses of the data are explored.

Additional insights are offered by Paul Campbell,[28] vice president of travel solutions at QL2 Software, a company that helps clients extract unstructured data from the Internet (eg perform 'screen scraping'). Clients of QL2 Software include traditional travel industries in addition to pharmaceutical, life sciences, financial services, retail, catalogue, office suppliers, etc. Campbell notes that while revenue management comes naturally to airlines and other travel providers, as 'you go outside of travel, it is not very natural, and a lot of it has to do with the fact that the data really hasn't been available in these other industries and the Internet has brought in all this data and turned everything transparent. They are all chomping at the bit to get the data, but now they're getting to the point that…they don't know what to do with it.' Campbell sees these industries focusing first on understanding their own prices in the market (because it tends to be decentralised), and then expanding out to think about how to incorporate competitor information. While incorporation of competitor information was mentioned as a current area of research by both the InterContinental Hotels Group (see footnote 23) and Dollar Thrifty Automotive Group (see footnote 18), in the retail space it was noted that although 'there is a ton of opportunity [in click-stream analysis], I don't see retailers thinking about it' (Douglas LaPointe,[29] Manugistics).

While the analysis of click-stream data is seen as offering many new opportunities, it appears that innovations in this area will be led first by traditional users of revenue management, such as those in the travel industry.

INTEGRATION OPPORTUNITIES

Aside from the Internet, other factors and trends that affect the state of the practice were also reported by software providers. The first trend that clearly emerged was the integration of demand with the supply chain, particularly in the retail space. As Molham Aref of Predictix states, 'we are trying to crack the nut that I think a lot of people are interested in cracking, which is…how do you manage the demand side and supply side in a cohesive way.' Over the last year, tremendous consolidation has occurred in the software provider market with JDA buying Manugistics, SAP buying Khimetrics, and Oracle buying Retek and Profit-Logic (see footnote 29, Manugistics). One of the key goals of this consolidation is to make the supply chain more efficient (see footnote 29, Maugistics; Jeff Moore,[30] SAP-Khimetrics). For example, one of the common requests from consumer goods companies centres on how best to incorporate new point of sale and customer data that can measure customer response when these companies have historically based their forecasts and supply chain decisions on shipment-level data. Both Manugistics and SAP-Khimetrics expressed interest in exploring whether the best way to address this integration issue is to directly model retail response and forward-buying effects, or to measure at the consumption level and apply conversions to convert actual consumption to shipment level information.

The second integration thrust is seen in the travel industries where pricing and inventory allocation decisions have historically been separated. As Andy Boyd of PROS states, while the revenue management language is consistent across industries, 'specific areas of pricing have not solidified in terms of modeling … and the core components [of pricing] are not yet defined.' Paul Campbell of QL-2 Solutions concurs, stating that with the ability to view price and availability simultaneously, he expects to see the integration of pricing of revenue management, something 'that's been talked about for 20 years' but which has not yet been successful.

An important consideration that emerged across panels was the best way to make integrated models, which tend to be inherently more complex, simple to understand and accepted by the user community. Perceived complexity was viewed as an obstacle to successful implementation (Molham Aref,[31] Predictix; see footnote 29, Manugistics). Fundamentally, adoption is linked to clients' trust in system recommendations and the ability of users to understand how to interact with (and in some cases override) the system (eg, Tammy Farley,[32] Raimaker; see footnote 31, Predictix). However, while the tendency of the technical community may be to provide a wealth of information, Donald Davidoff of Archstone-Smith notes that when they first implemented automated pricing for apartment rentals, they 'learned quickly that it was too much information' they were presenting to system users and dramatically reduced the amount of technical material presented in training. Tammy Farley of Rainmaker also notes that acceptance of new systems can be gained by performing post-implementation analysis to demonstrate that system recommendations were accurate. Lessons may also be learned from USP and BlueLinx who, rather than force the setting of prices in their organisations from an automated system, use their systems to offer recommendations to sales representatives and then track their performance, which allows users to gain confidence in the system over time.

Thus, while integration trends differ across industries, experts agree that successful adoption depends on the ability to build confidence in system recommendations. Various strategies were proposed for how best to build this confidence.

CONCLUSIONS

This paper summarises industry perspectives on current revenue management and pricing practice that were brought up in a recent conference at the Georgia Institute of Technology. Several trends were noted, including the recent centralisation of pricing decisions, interest in bundled pricing, and consolidation of demand and supply software providers. Current research directions include finding ways to leverage the unique characteristics of click-stream data and the wealth of customer information to support revenue analysis.

NOTES

1. Cross, Robert. Chairman and CEO of Revenue Analytics. Retail moderator and invited speaker for introductory remarks.
2. Williams, Nell. Vice president in Marriott's Global Revenue Management Organization. Keynote speaker.
3. Kravitz, Hal. Vice president of business development and chief officer of Coca-Cola Enterprises, Inc. Panelist in retail.
4. McMillian, Shawn. Vice president in Coca-Cola Enterprise's revenue growth management organization. Panelist in retail.
5. Kniple, Joe. Director of pricing strategy and solutions at UPS. Panelist in non-traditional industries.
6. Dudziak, Bill. Senior manager in the planning and analysis group of BlueLinx. Panelist in non-traditional industries.
7. Davidoff, Donald. Group vice president of pricing and revenue management for Archstone-Smith. Panelist in non-traditional industries.
8. Kaul, Rajeeve. Director of price and product optimization at AutoZone. Panelist in retail.
9. Wade, Charlie. Vice president for marketing and concert promotions at the Atlanta Symphony Orchestra. Panelist in special events.
10. Malhotra, Anil. Strategy consultant for the performing arts. Panelist in special events.
11. McLaren, Scott. Director of sales, marketing, and ticket operations at the Georgia Tech Athletic Association. Panelist in special events.
12. Yester, Brenda. Vice president of revenue management for Carnival Cruise Lines. Panelist in travel industry.
13. Geraghty, Kevin. Principal of Revenue Research. Panelist in on-line travel.
14. Saranathan, Krishnan. Director of enterprise optimization for United Airlines. Panelist in airlines.
15. Brunger, Bill. Former senior vice president of network at Continental Airlines. Panelist in airlines.
16. Lonsdale, Richard. Regional director in the passenger revenue analysis and fleet revenue management group within the marketing department of Boeing Commercial Airplanes. Panelist in travel industry.
17. Eister, Craig. Director of pricing in the global revenue management department at the InterContinental Hotels Group. Panelist in travel industry.
18. Arrington, Darren. Director of science in the revenue management department at Dollar Thrifty Automotive Group. Panelist in travel industry.
19. Saleh, Rich. Director of pricing and revenue planning at Travelocity. Panelist in on-line travel.
20. Jones, Lee. Vice president of global revenue management, pricing strategy, and analysis for Marriott International, Inc. Panelist in hotels.
21. Rao, Beju. Senior principal at Sabre Holdings. Panelist in airlines.
22. Kaufman, John. Vice president of global revenue management for Starwood Hotels and Resorts Worldwide, Inc. Panelist in hotels.
23. Demirtas, Apo. Vice president of market strategy for the InterContinental Hotels Group. Panelist in hotels.
24. Duffy, Sharon. Vice president of revenue management at Hilton Hotels Corporation. Panelist in hotels.
25. Kaul, Utpal. Regional director of market management for Expedia, Inc. Panelist in on-line travel.
26. Kapur, Sundeep. Director of strategic marketing for NCR Corporation. Panelist in non-traditional industries.
27. Boyd, Andy. Chief scientist and senior vice president of science and research at PROS. Airline moderator and panelist in software providers.
28. Campbell, Paul. Vice president of travel solutions at QL2 Software. Panelist in software providers.
29. LaPointe, Douglas. Director of consulting services for Manugistics. Panelist in software providers.
30. Moore, Jeff. Senior research scientist at SAP-Khimetrics. Panelist in software providers.
31. Aref, Molham. CEO of Predictix, LLC. Panelist in software providers.
32. Farley, Tammy. Executive vice president and co-founder of The Rainmaker Group. Panelist in software providers.

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APPENDIX A

Conference Agenda:

Time	Event	
0830–0900	Registration	
0900–0945	Welcome/Opening Bob Cross (Revenue Analytics)	
0945–1045	Special Events Julie Swann (GA Tech)	Hotels Steve Swope (Rubicon)
1045–1100	Break	
1100–1200	Non-Traditional Industries Mark Ferguson (GA Tech)	Airlines Andy Boyd (PROS)
1200–1330	Lunch	
1330–1430	Software Providers Paul Griffin (GA Tech)	Travel Industry Laurie Garrow (GA Tech)
1430–1500	Break	
1500–1600	Retail Bob Cross (Revenue Analytics)	On-Line Travel Jon Higbie (Manugistics)
1600–1615	Break	
1615–1645	Georgia Tech Research	
1645–1700	Break	
1700–1800	Keynote Speaker Nell Williams (Marriott)	
1800–1900	Cocktails (The Globe)	

References

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