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HITEC 2011

Special Report

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Social Media • Mobile
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HFTP Brings Together Industry Experts to Work Towards Industry Progress

One of HFTP's mandates is to proactively work towards bringing about industry progress. It does this by collaborating with allied associations, practitioners, academics and others involved with the hospitality industry to open discussions, offer education and enact research to keep up momentum.

This Special Issue is an example of just such a project. To help provide a complementary reference to HITEC, the HITEC Advisory Council and the new Executive Vendor Advisory Council has put together this publication to highlight the big trends that are dominating the industry. The councils selected these when they began planning the education program last fall, and they will also serve as the framework for the HITEC education sessions. A broad range of expert authors have provided you with their perspective on the industry and where it's headed. Hopefully these can provide you with insight on current and future practices.

Another way HFTP actively works towards industry progress is through specialized task forces charged with a specific assignment. These groups of experts collectively discuss and explore their topic, and develop a set of actions. Two current HFTP task forces are the PCI Roundtable and the Technology Task Force for the club industry.

The PCI Task force comprises industry professionals who are aiming to bring together all segments of the hospitality industry to enhance data security and discuss potential resolutions to the ongoing issue

of PCI compliance. The initiative will ultimately result in a best practices document that both industry professionals and credit card companies can use to better understand how PCI compliance is impacting the industry and bring about dialogue between all parties.

The group has had two meetings in May; and as a result, HFTP is offering a PCI Boot Camp and a Roundtable Update session at HITEC on Monday, June 20. For the Update, attendees are invited to give their thoughts towards the final document of best practices. There will also be a repository for PCI documents on the HFTP web site and a series of educational programs geared toward both PCI compliance and data security for industry staff personnel.

On the club side, HFTP and the National Club Association (NCA) have joined together to create a Technology Task Force. The group's mission is to provide a resource for club professionals to search for current and applicable information regarding technology trends, solutions and planning. The initial endeavor of the task force was a survey to determine the priorities of professionals within the club industry. Look for the results in an upcoming issue of *The Bottomline*.

One more initiative I'd like to mention is the Hospitality Technology Strategic Initiatives Council (HTSIC). The HTSIC, composed of senior-level industry leaders and related hospitality travel associations, addresses pressing industry needs as they relate to hospitality technology. The council works to identify industry initiatives,



Thomas G. Smith, CHAE

find the best possible homes for these initiatives and reduce duplicated efforts. You can learn more about the HTSIC participants at the HFTP booth at HITEC, or visit HTSIC.org.

These type of projects illustrate why a group like HFTP is so beneficial to the hospitality industry. It brings together the specialized expertise of multiple individuals to produce positive results for the industry. I want to suggest to you, that if you have a particular expertise, please don't keep it to yourself. Contact the HFTP Global office to learn what kind of volunteer opportunities are available that are the right fit for you.

A handwritten signature in black ink, reading "Thomas G. Smith". The signature is fluid and cursive, written in a professional style.

Explore the Most Current Trends for a Peek at Where the Industry is Heading

Every June, thousands gather at HITEC for an annual discussion on the most current trends and practices in the hospitality technology industry. Our core goals remain the same — to run efficient and profitable operations, while offering great customer service; but, how we achieve them continually changes with the tide of technology innovations. We used to reach customers through personalized e-mails, and now we are building relationships via social media. Once we were focusing on how many servers were needed onsite to accommodate our network, now we are looking to move data storage offsite via cloud computing. There was a period when we were converting our room key locks to accept key cards, and soon guests will be able to enter via a secure code from their smart phone. The opportunity to interact and explore all these possibilities — via the education program, in the exhibit hall, social events and everywhere in between — is what makes HITEC an important event.

Two years ago, the HITEC Advisory Council, thought it would help to focus discussion by naming the top industry trends. The idea was to spotlight these topics in the education program with special extended sessions — Super Sessions — along with complementary concurrent sessions. And to help build momentum for the show, it was decided to print a series of articles on these top trends. The reports focused on the direction the trends are heading and how they would impact the way we do business. Published in this magazine over three concurrent issues, the reports were put together in a final PDF to use as a reference.

This year we once again selected top trends. These trends were chosen by the HITEC Advisory Council along with the newly-formed Vendor Advisory Council. To offer a single reference as a companion piece to this year's show, we decided to publish the articles as one publication, as the *HITEC 2011 Special Report*. Within these pages you will find articles on the defined trends: Cloud Computing, Mobile, Virtualization, Social Media, Distribution, Green, High Speed Internet Access, Business Intelligence, Security and In-room Entertainment. We hope you will find this useful and thought-provoking; helping you get a picture of where technology is headed within our industry.

We'd like to thank both Advisory Councils for their assistance with this project, the authors who have volunteered to share their knowledge within these pages and the group of industry experts who reviewed the submissions. We are looking forward to making this an annual tradition.

Cindy Estis Green is CEO of the Estis Group. She is a frequent speaker at HITEC and author for industry publications. Estis Green is also an inductee in the HFTP International Hospitality Technology Hall of Fame. Allison Morris, CHTP is senior IT manager for Caesars Entertainment Inc. She is also a frequent speaker at HITEC.



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Accounting, Human Resources & Procurement

New BI Tools Show How Guest Comments Impact Property Performance

By Cam Troutman

Hotel review sites like TripAdvisor and Expedia have a major influence on hotel selection, affecting nearly every property's profitability. At the same time, the text format of reviews makes it difficult to collect, quantify and analyze the data. As a result, measuring their actual financial impact on profitability has been challenging. This is changing. The newest generation of true business intelligence (BI) tools can combine guest comments (or sentiments) with property performance metrics to give operators a valuable, analytical tool that improves profitability by matching sentiment with property performance.

Guest Reviews Influence Profitability

In recent years, studies by research firms have examined the impact online reviews have on bookings. A study done by The Kelsey Group and comScore Inc., with 2,078 respondents, revealed that 40 percent of hotel guests subsequently booked their stay based on reviews they read online. The study showed consumers were so trusting of online reviews, that they were willing to pay at least 20 percent, and up to 99 percent more, if a company was rated "excellent" or five-star, than if a business received a "good" or four-star rating.

In 2011 Market Metrix and TripAdvisor partnered to survey hotels registered on TripAdvisor in all segments. The report showed that hotel managers believe that review sites are important to operations. Results revealed that 90 percent of hotel managers say reviews are very important, and 81 percent say they visit review sites at least weekly.

In the past, manager's have been able to get a read on guest satisfaction via property guest satisfaction survey scores. These provide valuable information, but still absent is the *why* behind the scores and their relationship to property performance has been absent. Now with advances in text analytic technology, it is possible to convert written online ratings, comment card detail and other guest-satisfaction measures into quantifiable metrics. Linking these data points to property performance enables operators to use BI to see whether a booking decline was related to negative guest comments.

When operators match guest sentiment data with daily property and comp set performance, the result is actionable information that enables sound business decisions based on a global operational view. How can operators apply sentiment analytics to improve their operation?

Sentiment Data Analysis Improves Performance

If your operation uses BI, these three tips will help you leverage guest sentiment data to improve hotel performance.

Collect data.

Gather sentiment data from both social media sites like Trip Advisor and Expedia, and brand score-card information weekly. An efficient way to collect sentiment data from travel sites is with web crawlers and other scanning tools.

Also obtain written comments from brand surveys. Guests provide feedback via brand surveys and most brands make this data available to franchisees. Ask your brand contact for quantified weekly comments in a format your BI system can use. Renew the data from these sources each week.

Process the data. Blend both social media and brand data into a common structure. Put text from your sources through a natural language processing step in order to quantify and score the guest comments and convert text into sentiment.

You can use a natural language processing solution like Clarabridge to extract written speech prompts and quantify text sentiment data. Natural language processing converts clauses, tags and parts of speech, and assigns a value to a guest's review for analysis. Additionally, when used with a robust BI system, the data gathering system provides drill down capabilities so operators can see individual guest comments that make up the sentiment metrics.

Integrate sentiment data. Incorporate it into your BI system for analysis side-by-side with STR comp-set information, financial numbers and other operational data that give a total picture of all factors affecting performance. When sentiment data is integrated with a BI's property performance information, it is possible to match guest comment-related issues, both online and via scorecards, with fluctuations in occupancy and revenue. With the right BI tool, it would take only seconds to see if a guest's TripAdvisor comment about a leaky refrigerator corresponded with a drop in bookings for the usually busy Labor Day weekend.

With a solid BI system, managers can view a combination of performance metrics with guest comment data that can result in increased profitability. ■



Better Data, Better Decisions

By Bill Schlosser

Critical times demand smart decisions, and every manager knows that having the right data at your fingertips can mean the difference between a smart decision and a “what was I thinking?” decision. When you’re expected to make daily decisions about rates, demand, marketing, sales and a host of other mission critical factors in a market as volatile as the hospitality industry, you want a system that will give you real BI and not *BS*.

It’s been our experience that many resorts and hotels have some very sophisticated BI capabilities for their group business, but few have implemented similar BI sophistication for their leisure business. By properly leveraging BI for your leisure business, you will find that you have been leaving behind a lot of revenue. The good news is that it can be realized. To properly implement BI for the leisure side of your resort or hotel, it’s important to look at these three key areas: capturing data, analysis of data and communicating your analysis.

Capturing Important Data

It starts with capturing as much caller data as possible — from both guests and not-booked callers. This includes the complete address, e-mail, dates of interest, reason for stay and even the marketing campaign they are calling about. To accurately measure which campaigns are working and which aren’t, you should track both the online and offline sources of revenue.

Consider the data you are collecting, because the more information you capture, the clearer the picture. Are you automatically tracking abandoned calls, turndown reasons and reasons for stay? Do you capture caller demographics? Are you tracking the accurate call conversion of your agents, recording calls and scoring calls? This level of detail will reveal your guest demographics (who is booking and who is not) and will help you in the analysis stage.

“Previously, we were relying on our automated call distribution system for conversion data, which we have since realized had nothing to do with our actual conversion,” says Janice Edwards-Diaz, director of leisure sales and central reservations at Reunion Resort in Palm Coast, Fla. “With the accurate conversion data we now have, it has literally changed how we treat our reservations staff. We see them more as professional sales people, as opposed to order



takers, and we realize how much they can impact revenue. They are more competitive and they have more pride in what they do since they accurately know where they stand — a direct result of having the right data.”

Analysis. With the data collected, you need to consistently make a thorough review of the available information. To assist, have it readily available with a timely delivery. Other analysis tips include: review the original source of the revenue (online or offline); quantify the performance of your inbound and outbound sales efforts; measure your response times for e-mail leads and track follow up effectiveness; export your most actionable data to Excel for additional analysis.

Communication. As with any good BI system, the data is only good if it’s actionable and communicated on a timely basis to the people who can make things happen, which is where performance/process management comes in. Real-time dashboards, whether on individual screens or viewed via a departmental monitor, are a great way to distribute your analytics, as are spreadsheets. However, be cautious with your spreadsheets, as they can easily become a trap for errors that can spread bad analytics like a virus.

Measure Your Results

One key factor that comes through time and time again is that BI goes hand in hand with your processes. A good BI system provides you the data that will guide you to the proper strategic or tactical solution, but the only way to know if your strategy is working is to have good intelligence that measures the results. That way, you can know where to make your adjustments and start measuring again.

“We’ve developed a whole new way of seeing and measuring our reservations business,” said Bob Bauersachs, general manager of Singh Resorts in Key West, Fla. “We break down the components of the call center and marketing, and present the measured performance data in a way that can be processed. This in turn lays the foundation for efficient interpretation which triggers effective decision making use of the harvested data.”

The better your data, the better your decisions. ■

Direct Booking Links Take Advantage of Consumer Shopping Habits

By Cindy Estis Green

Hospitality distribution is fast approaching a tipping point. High costs, technical complexity and persistent changes in consumer behavior have converged as the factors driving an imminent transformation.

The costs of distribution have skyrocketed; in the early days, a high of 10 percent of revenue would be incurred if there were a travel agent commission involved. Some call centers can impose high fees, but it is usually a flat fee per reservation. So any stays over one night, or at reasonably high rates, bring it in below the standard commission rate on the full room revenue. While there is a wide variation on business mix by hotel, many hotels are now paying 20 – 30 percent of revenue for a large proportion of their business. The percentage of any hotel's business, for transient and group, sourced through a third party is large and growing. Although not always structured in the traditional retail format, the prominent merchant model commission rates can run from a minimum of 17 percent to a high of 35 percent. Adding in the pressure to frequently offer promotional rates well below the hotel's ADR target, a hotel may not even collect 50 percent of their anchor rate for third party business, and that is before the guest walks in the door. Of course, many hotels have a large share of business through substantially lower cost direct channels, so managing distribution costs comes down to channel mix and appropriate pricing.

Linking Consumers to Direct Bookings

This raises the issue of online consumer behavior and the corresponding complexity of technology emerging within the online distribution network. The fact that most travelers spend a significant part of their shopping and buying effort online is not news. However, the depth and breadth of content toward this end is growing exponentially. In the interest of creating more opportunities to drive the consumer to book directly, rather than paying the high commissions of online travel agencies and being pressured to feed the well-tended consumer appetite for ever-better deals, many of the sites designed to provide information or exchange opinions are now also providing the convenience of a link to a booking engine. If this link can point to a hotel's web site, incurring a fraction of the cost compared to an online travel



agency, the hotels will earn substantially more for the same booking, and the consumer will not pay any more.

While online travel agencies have successfully attracted large numbers of travel shoppers, these shoppers have branched out, visiting upwards of 10 – 12 sites before booking on either a travel agency or a hotel brand site. The consumers scan the Internet for travel opportunities, they read consumer reviews, look at photos, watch videos and compare rates. Responding to this behavior are hundreds of sites designed to facilitate this process. Given these common shopping practices, there is an army of technologists at work connecting reservation inventory and rates with many of these sites.

Hotels struggle for visibility in the noisy and crowded bazaar of the travel landscape; they work with general and travel-specific search engines, and with online travel agencies to bring qualified customers to their doors. Now they are being offered placement in many other web sites that specialize in all kinds of travel information. Since 9/11 and the explosive growth of the online travel agencies, the easy solution for a unit level management team was to hand over the job of generating consumer traffic to a third party who spends millions on marketing to attract the masses. And although these third parties succeeded, albeit at a high cost to hotels, the shopping habits of consumers are now evolving in a way that may threaten the online agencies. The list of sites consumers visit is diverse. They like the new social media sites, the convenience of booking widgets on Facebook and Google (Places), the trip planning and inspirational sites. They will seek sites with the best content that is most relevant to them and that provides the best user experience. And, in an attempt to lower distribution costs, hotels continue to try to connect the consumer directly to their own booking channels with as few intermediaries as possible.

Cindy Estis Green is CEO of the Estis Group. She is co-chair of the HITEC 2011 Advisory Council and a frequent speaker at HITEC. Estis Green is an inductee to the HFTP International Hospitality Technology Hall of Fame.

Visibility Spread Over Multiple Channels

While ringing the cash register is certainly the objective, it goes well beyond which booking engine gets selected. Participation in the shopping and sharing experience is just as crucial, as it influences the ultimate sales decision. Hotels have to cost-effectively manage the technology and the messaging in the hundreds of sites frequented by their consumers. Appearing in search results, delivering the content and exchanging appropriate dialogue requires a full complement of technology, and every connection incurs costs. While it may be simpler to depend on a few sources of heavy traffic, even when it means spending 20 – 30 percent of revenue, it is not a sustainable model, and it is certainly not the inevitable end game when the landscape finally settles into a more stable state.

In the one to three year time horizon, a hotel's distribution strategy must not only support profit growth, but also respond to the reality of heavy consumer traffic fragmented over a multitude of sites. Instead of hoping to draw consumers into a few popular sites, hotel technology is moving toward embedding search and booking capability on many sites. This way, a hotel's most compelling content can be visible in many places during the shopping phase of a consumer's travel purchase journey, and a reservation can be made wherever the consumer lands at the moment they are ready. The rapid deployment of mobile platforms over the next few years will add substantially to the complexity of

Top sites visited in the course of an online hotel shopping experience:

- › Facebook
- › YouTube
- › TripAdvisor
- › Kayak
- › Google Maps

the consumer's path. Getting the hotel content and booking capability at the right time and right place is an emerging challenge of the new online technology; offering relevant products and prices to consumers in each channel is the imperative for hotel marketers, and making it all affordable is the ultimate objective for hotel owners and management.

The high costs, the technology infrastructure needed to serve this complex environment and rapidly changing consumer behavior have converged to trigger a wake up call. This is not a time to fall back on habits established over the last decade or to assume that the status quo is the inevitable model for the future; it's a dynamic period that is a long way off from declaring any winners or losers. There will be many new third party intermediaries to consider going forward, and it is incumbent upon each hotel to develop a reliable method to systematically assess the costs and benefits of each channel, and take advantage of each for optimal profit to their operation. Hotels can take proactive steps to manage their channels of distribution, or they will risk ceding control over to the most valuable resource on which they depend for their very survival — consumer demand. ■

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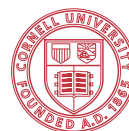
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Three Trends Improve the Customer Experience, But Add New Layers of Complexity

By Robert Cole

Not so long ago, hotels were generally able to categorize business into a small number of market segments booked by easily definable types of individuals, through a limited number of channels, either directly to a hotel or centrally through a brand. Times were simpler. Then the Internet, mash-ups, social computing and mobile platforms progressively changed everything. While traditional segments and channels persist, best available rate guarantees and pricing parity tactics have not been able to simplify an explosion of agency, merchant model, flash sale and non-transactional sites featuring hotel product.

The result is a hospitality distribution landscape littered with hotel, online agency, meta-search, itinerary management, user review and location-based service sites vying for the attention and loyalty of the hotel guest. Disloyal, brand agnostic consumers become increasingly inclined to rely on third parties for information as opposed to trusting hotel advertising and property web sites.

If this plethora of distribution channels was not sufficiently complex, over the next three to five years, dramatic changes will further alter the fabric of hotel distribution as travelers demand more sophisticated tools in their quest for the best available experience at the lowest possible cost. Advanced technology will help consumers become even more value driven, rewarding suppliers that exceed expectations with their wallets and personal endorsements, while punishing others that underperform. Three distinct catalytic trends will enable these changes: data granularity, walled gardens and hyper-personalization. Advancements in each of these areas will dramatically improve product transparency, process integration and customization of travel experiences — plus add new layers of complexity for the hotelier to manage.

Data Granularity

Deep web search, controlling and accessing the underlying data that powers web pages will be a key battleground for both suppliers and travel sellers desiring to differentiate themselves and create unique experiences for their customers. Access to unique, actionable source content that is not readily available to search engines or user generated content sites creates a competitive advantage.



For example, the site Room77 raises the stakes by increasing consumer awareness of specific room amenities, including views and décor. Menuism.com extends restaurant reviews down to the menu item level. Once exposed to this degree of product transparency, customer expectations for more complete information will grow.

As current hotel systems are ill suited to merchandising rooms and dining on this level, this degree of specificity presents a daunting challenge. However, organizations that are able to organize, present and control viewership of this enhanced level of detail, will have tremendous opportunities to better satisfy guest needs and capture higher yields for high demand product.

Walled Gardens

The promise of the Internet was that extensive information using a standard format was compatible across most computers and browsers. Smartphones and tablets, depending on the operating system, now display information and interact with users very differently than desktops. Google predicts that in 2013, more searches will be conducted on mobile devices than on desktops. This represents a monumental shift.

If divergent hardware/software environments weren't enough to contend with, social networks create similar walled gardens where logins prevent data from being shared universally. Suddenly, to integrate systems requiring social network access and to leverage new mobile technologies, specialized applications must be developed. This increases complexity and cost. Josh Bernoff of Forrester Research coined the term "Splinternet" to describe this new paradigm.

Hotels that previously envisioned providing an anytime, anywhere distribution presence, are now forced to prioritize

Robert Cole is founder of RockCheetah, which offers hospitality marketing strategy and travel technology management advisory services.

where they will be available, and the depth of integration required for that environment. It will be essential for hotels to not only understand who their customers are, but what sites, platforms and technologies guests prefer to use for various activities — and then provide a compelling, brand aligned experience for each of those specific distribution channels.

Hyper-personalization

To combat the prospect of much more specific information being demanded by consumers across multiple siloed distribution channels, hotels will also need to establish new processes to tailor product offerings based on a specific traveler's needs. However, relying solely on traditional frequent guest accounts will not be sufficient. This high degree of customization can only be attained if traveler profiles begin to segment itinerary-specific preferences. Additionally, enhanced degrees of guest engagement will be required to understand how to best help the traveler accomplish their personal objective for each particular visit.

The good news is that opportunities to establish closer, more highly-engaged relationships with travelers will exist. The challenge is that to establish and sustain these relationships, hotel management and brands will need to work smarter, often in real time, across platforms and interact with a much greater population of guests on a much more personalized basis. The hotel company that masters managing relevant customer interactions with this new level of detail, will have an opportunity to build guest loyalty and shift share from competitive hotel brands and online travel sellers.

Dramatic Changes Create Unique Opportunities

In order to adapt to these significant changes that will redefine the rules of customer engagement and hotel distribution, technological changes are required. These new technologies will also require new management strategies to be employed by the individuals tasked with overseeing distribution.

Data granularity will need to be addressed as hotel property management and central reservation systems are virtualized and migrated to cloud computing platforms. Greater flexibility promised by cloud-based platforms will allow for current databases to be extended to organize more specific content that would be impossible under current client-server scenarios.

Walled gardens will need to be breached through a combination of access agreements with the hardware providers, mobile networks and/or social networks. These should have third-party, cross-referencing technologies that allow hoteliers to gain a permission-based, 360-degree view of guest needs, interests and social graphs.

Hyper-personalization demands will also need to be addressed as customer relationship management systems are

Three Trends Altering Distribution

Three distinct catalytic trends will enable travelers to use more sophisticated tools in their quest for the best available experience at the lowest possible cost.

Data Granularity

Sites are differentiating themselves by providing access to unique, actionable source content that is not readily available to search engines or user-generated content sites. Example: Specific room amenities or restaurant menus.

Walled Gardens

Smartphones and tablets, now display information and interact with users very differently than desktops, thus creating divergent environments. It will be essential for hotels to understand what platforms and technologies guests prefer to use for various activities.

Hyper-personalization

To combat the prospect of much more specific information being demanded by consumers across multiple siloed distribution channels, hotels will also need to establish new processes to tailor product offerings based on a specific traveler's needs.

migrated to the cloud. As with the PMS and CRS, new CRM capabilities may be leveraged in virtualized operations. The integration of semantic-search capabilities into the distribution ecosystem will be essential to accurately pair both definitive and inferred guest needs with appropriate products and experiences.

To effectively apply and integrate these new technologies, distribution management professionals will need to communicate effectively with both marketing and IT personnel to successfully bridge business objectives and technology initiatives. This role is most efficiently positioned at the brand or management company level with programs rolled out at the corporate level or on a regional/cluster basis.

Ultimately, while big changes in distribution methods and associated management strategies may have a highly disruptive impact on the industry, the result will be increased opportunities for innovation. Creative applications of technology will lead to more timely and relevant customer interaction. If established players fail to meet the challenge, the gap will be filled by new entrants seeking to profit on improved guest engagement and build long-term loyalty. ■

Dynamic Packaging Promotes Additional Revenue Streams

By Valyn Perini

Successful hotel distribution strategy is moving beyond just offering inventory on electronic channels to offering varying products and services by channel. Merchandising, roughly defined as providing appropriate product on appropriate channels, has long been practiced in the retail industries, and is being embraced by the airline industry. Effective merchandising allows hotels to offer value to different guest audiences by combining both on-site products and services, and off-site products and services on the right channel in the right combination at the right price.

To effectively merchandise, hotels will need to accomplish two things. The first is to break down the elements of their inventory — guest rooms, dining facilities, services, recreational facilities, etc. — into individual components that can be packaged and booked internally and, depending on commercial terms and agreements, by their online trading partners.

The second step is to find those trading partners that provide relevant services to complement (but not compete with) hotel offerings. Traditional travel service providers like rental cars and ground transportation are obvious choices, but as distribution technology matures and gets less expensive, “long tail” suppliers — such as day tours, golf, local activities, spas and travel insurance providers — will be part of the online value chain and can provide hotel guests with compelling reasons to book your property.

Dynamic Packaging Promotes Ancillary Revenues

Booking onsite services like spa or restaurant reservations ahead of stay allows for better labor forecasting, more accurate purchasing and higher per-guest revenue. Commercial agreements with off-site partners can turn into much-needed ancillary revenues via commission or affiliation agreements.

For example, a hotel located in Manhattan could offer on its own web site the option to have a guest not only book a room and perhaps a facial in the hotel spa, but also the opportunity to book a bus tour of the city, tickets to a show and maybe a subway pass. They can choose these from either a pre-packaged offering (a static package) or creating the package from a menu of offerings (a dynamic package). In either case, the package is booked in real-time from live

Traditionally, hotels have only offered static packages and pricing, but with the widespread support of XML connectivity it has become easier to connect to inventory of local providers in real time. This enables true dynamic packaging and effective merchandising of both hotel inventory and partner inventory to create not just a hotel stay, but a rich travel experience.

inventory, saving the guest time, providing personalized service and allowing the hotel to keep a greater share of the guest wallet and build customer loyalty.

Traditionally, hotels have only offered static packages and pricing, but with the widespread support of XML connectivity in property management and central reservations systems, and the use of XML connectivity by providers in the long tail segment, it has become easier to connect to inventory of local providers in real time. This enables true dynamic packaging and effective merchandising of both hotel inventory and partner inventory to create not just a hotel stay, but a rich travel experience.

So how can a hotel get started merchandising its products to drive additional revenue? Start with your guests and their reasons for travel. If your primary market is corporate business, services like premium Internet access, portable printers and rooms with work stations would be appropriate hotel products to offer, along with external products like limo rental or business services. If your primary market is families, hotel services and products like baby-sitting, game boxes, cribs and rollaway beds would be ideal, along with external products like tours and activities, tickets to shows or amusement parks, and local coupon packs.

Look within your market for companies that offer attractive products and services to your guests, and start up a conversation to see if there might be an opportunity to start offering your market greater value for their travel dollars, to drive both revenue and guest satisfaction. ■

Valyn Perini is executive director of OpenTravel Alliance. She is also a member of the HITEC 2011 Advisory Council and frequent speaker at HITEC.



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Wall to Wall Web Is Here, Five Basics to Guide You

By Tim Peter

Every year, some guru suggests that *this year, really*, will be the year of social. Or mobile. Or some other technology that sounds sexy, but fails to deliver value to your business' bottom line. Is this year any different?

The answer, unequivocally, is yes.

Why?

We've finally entered the era of "wall-to-wall web," the integration of social, local and mobile into a cohesive whole. Some call it "ubiquitous computing." Some call it "the mobile web." But, regardless of what you call it, integration matters.

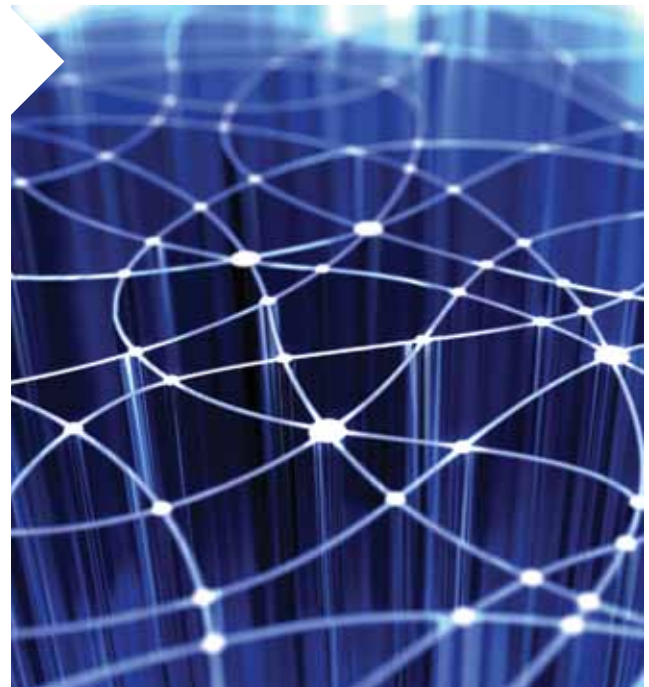
As noted above, the rise of mobile and social, in particular, have been touted for at least a few years with little to show for it. But the reason that each has failed to engage your guests — until now — is the lack of a "killer app." Just as no one needed a PC until the launch of spreadsheet software, and no one needed the Internet until e-mail came along, no one needed social or mobile or "ubiquitous computing" by themselves.

What differs, though, is that the killer app is not one thing. Instead it's the integration of these technologies in support of one another that makes the difference. Sure, mobile gave us the potential for ubiquitous computing. But that wasn't enough. However, when you pair mobile devices with social media, still and video cameras, and local search, ubiquitous computing suddenly matters. A lot.

Let's Look at the Numbers

There's no denying that usage is ubiquitous: 200 million Facebook users log-in to the social service from a mobile device every day; social networking site usage among Baby Boomers grew from 9 percent in 2009 to 43 percent in 2010; half of all local searches come from mobile devices; Facebook expects over 100 million photos to be uploaded each month this coming summer, most of those from mobile; and 35 percent of travelers interact with travel companies on social networks.

Google's recent integration of social streams into its search results and the launch of its "+1" feature signal how important social is to the search giant. Facebook's Places feature — to say nothing of the growth of Foursquare,



GoWalla and SCVNGR — signals how important location is for social, too. AT&T paid \$39 billion for T-Mobile largely to acquire wireless capacity in key markets to cope with its 8,000 percent growth in mobile data traffic (That's not a typo. Mobile data usage on AT&T's network grew 8,000 percent in the past four years). All of which is great, for them.

The Real Question Is, How Can You Benefit?

Going forward, here are five basics of the "wall-to-wall web" to guide you:

Think content, not platform. Your company's online marketing must meet the needs of multiple platforms, whether accessed via desktops, tablets or handheld devices. Think in terms of what content can be shared and how to share it, rather than where it lives. Look for opportunities to distribute your static data, photos, videos — even rates and inventory — across platforms wherever possible.

Share and share a "Like." Marketing strategist Steve Rubel notes, "The Like is the new link." Your brand's web site must integrate with social platforms, allowing guests to easily "Like" or share content. Allow your guests to see their friends' social data on your platforms. And post your content on the appropriate social sites to extend brand reach.

Repeat after me, "Customers own their data." Be very aware of privacy. When in doubt, err on the side of protecting your guests' data — and their friends' data, too.

Tim Peter is an e-commerce and marketing executive, focusing on e-commerce and Web marketing strategy. He is also a speaker at HITEC 2011.

Marketing and privacy concerns sometimes conflict. Don't let that conflict stop you short. But give customers control and state explicitly what you plan to use the data for.

Remember that integration means "multi-channel." Your customer will use the device that is most convenient for the task at hand. Your sales and marketing must work across those devices, as well as across channels. That doesn't mean that all features must work on all devices. But, you should allow consumers to accomplish reasonable goals regardless of platform.

Fish where the fishing's good. Facebook and Google are the top two visited sites online, with over 60 percent social site and search market share, respectively. Test with smaller platforms, but concentrate your efforts where most consumers congregate.

Wall-to-Wall Web is Here to Stay

Online marketing continues to change as consumers' habits change. The integration of local, social and mobile will influence consumer behavior in ways we're only beginning to see. But, a recent Travelport study suggested that 56 percent of business travelers have booked hotels via their mobile device. And several technology providers and distribution services companies are now offering booking

...The integration of local, social and mobile gives you a view into the future of online marketing. And, more to the point, it also provides serious revenue opportunities for companies that take advantage of integration today to fill their guests' needs.

engines integrated into Facebook. While integration is far from complete, "wait and see" is no longer a valid approach.

The fact remains, that regardless of whether you want to call it ubiquitous computing, the mobile web, the wall-to-wall web or something else altogether, the integration of local, social and mobile gives you a view into the future of online marketing. And, more to the point, it also provides serious revenue opportunities for companies that take advantage of integration today to fill their guests' needs. ■

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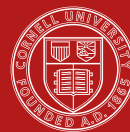
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Top 10 Strategies to Promote Hotels on Social Media Channels

By Anil Aggarwal

Social media continues to grow in importance. It has not only become a critical tool to interact with customers, but is also a key element that impacts organic search rankings for your hotel. Hotels that take advantage of this hot trend are seeing significant benefits in terms of online placement and revenue.

The most common question asked in the hospitality industry is why hotels should be concerned about social media and how will they benefit from social media elements? An essential follow-up question is how do you optimize for social media and measure ROI? To build an effective campaign, hoteliers can undertake key initiatives to maximize the gain on social media channels.

Social Media Marketing: Create, Manage and Monitor

All the efforts that a hotel puts into social media marketing can be bundled into three categories: create, manage and monitor. Broken down under these categories are 10 practical promotion tips to use via social media channels.

Create

1. Create and upload custom Facebook tabs. Facebook allows hotels and businesses to customize their tabs to fit their specific hotel or business. Some best practices to follow while creating a Facebook page are to integrate reservation widgets, have an Events tab and create custom tabs to highlight hotel-specific items such as meetings and conferences, things to do, etc.

Example: www.facebook.com/LibertyHotelBoston

2. Create/promote destination blogs showcasing local events, news and specials. Information posted on the blog gets indexed right away.

Example: blog.nickhotel.com

3. Build image and video content. Creating and posting media is an effective way to capitalize on different search traffic.

Search Optimized Video — Create and promote a search optimized video about the hotel's destination and local attractions, then upload it on video search engines such as YouTube. YouTube is the second largest search engine and drives significant traffic.

Example: www.youtube.com/watch?v=HraOliqdIn4/



Photo Sharing — Create a channel or an account on photo sharing sites such as Flickr and Picasa, then post hotel and destination photos on the sites. Tag the pictures with relevant keyword phrases. Pictures about the destination that illustrate information to potential guests are more likely to produce better results.

Example: www.flickr.com/photos/8209088@N07/

4. Maintain a Twitter stream. Create a custom Twitter profile with the hotel's phone number and web site address in the background.

Example: twitter.com/vallartagv

5. Promote within your community. Hyperlocal content is typically intended for residents of a particular community, region, city, town, village or neighborhood. Hyperlocal channels are ideal platforms for rewarding users for connecting and engaging with the hotel. To participate, claim, clean and enhance listings on hyperlocal channels such as Foursquare, Gowalla, Facebook Places, etc. Also, use these channels to offer special incentives such as coupons and hot deals.

Example: foursquare.com/venue/271672

Anil Aggarwal is CEO at Milestone Internet Marketing, which provides Internet marketing solutions for the lodging industry. Aggarwal is also a frequent speaker at industry events.

Manage and Promote

6. Integrate and cross-link channels. Once channels are set up, it is crucial to integrate and cross network all these channels. Make sure that the social media icons are displayed clearly on the hotel's web site so that consumers can get to those channels. Cross-link Flickr, Twitter and YouTube to the hotel's Facebook account. Integrating and cross-linking the channels will help with optimization, keeping the information fresh and expanding the network. Bring live feeds from social media channels into the hotel's web site.

Example: www.nickhotel.com/html/social-media.asp

7. Grow your fanbase. Build your social media communities on multiple outlets.

- *Facebook* — Become friends with organizations that are most important for your hotel/business
- *Promote Facebook profile page* — Ask hotel guests/customers and business associates to become a fan on Facebook (use your e-mail lists)
- Convert friends on Facebook by offering time sensitive specials
- Network with local organizations and grow fan base
- *Twitter follow* — Stay connected and current by finding relevant businesses in the hotel's area/market and follow them

8. Send out press releases and articles. Use online news channels such as Business Wire and PR Web to release articles and news to enhance search engine optimization.

Monitor

9. Create a social media reviews platform on the hotel's site. Providing this type of platform encourages users to upload content to the site where you have control.

Example: www.nickhotel.com/guestreviews/orlando-hotel-guest-reviews.aspx

10. Monitor social media channels and review sites.

It's recommended that hotels actively monitor social media channels and review sites. The success of social media efforts can be measured in many different ways:

- *Awareness:*
 - 】 Number of friends and followers
 - 】 Social media mentions
 - 】 New relevant links
- *Conversion:*
 - 】 Promo code tracking
 - 】 Google Analytics
- *Relationships*
 - 】 Rate of interaction
 - 】 Who initiates the dialogue

10 Social Media Strategies

1. Create and upload custom Facebook tabs.
2. Promote destination blogs showcasing local events, news and specials.
3. Build image and video content.
4. Maintain a Twitter stream.
5. Promote within your community.
6. Integrate and cross-link channels.
7. Grow your fanbase.
8. Send out press releases and articles.
9. Create a social media reviews platform on the hotel's web site
10. Monitor social media channels and review site.

- Engagement
 - 】 Unique visitors
 - 】 Time on site
 - 】 Frequency of visit

There are many options available for hoteliers to monitor social media activity. One avenue is Google Analytics, where hotels can integrate Google Analytics codes on Facebook pages, blog pages, etc. and track the activity on these channels. In addition, YouTube and Flickr provide reporting tools that can help you gauge activity on those channels.

Sophisticated social media and reputation management software such as eBuzz Connect™, tell you what people are saying about your property on different channels, video views, photo views, etc. This will help you benchmark your performance month-over-month to determine whether the social media strategies are effective. These tools also help in proactively responding to negative /positive reviews and minimize the risk of not knowing what people are saying about your hotel online.

Maintain an Ongoing Connection

Social Media is an integral part of the real-time search algorithm. Social media creates real connection between companies and customers, and that connection equals purchase intent. Ongoing connection and relationship with your customers will eventually turn them into a volunteer marketing army. Make sure that social media is an integral part of your overall marketing plan. If you are limited on budget and resources, still keep monitoring the social media domain and do the best you can. Hoteliers who want to be ahead of the curve, should invest today in the media that is fast emerging as the future of Internet marketing. ■

Individualizing the Online Experience

By Jeff Gurtman

It all started with a simple question: “Sir, do you want mayo?” In March 2011, it was reported that Subway had surpassed McDonald’s to become the largest restaurant chain on the planet. At the end of 2010, Subway had 33,749 restaurants worldwide, compared to McDonald’s’ 32,737.

Sure, \$5 footlongs, favorable franchise agreements and “Jared” may be mostly responsible for the expansion, but I contend that customers simply love having a tailor-made meal. They love that the brand allows them to create their own experience and dictate just how much mayo they get on their sandwich. This level of personalization pervades the customer’s psyche and plays a dominant role in how marketers effectively reach customers both online and off.

This trend is most evident in the digital world. When consumers visit Amazon or Google, they are viewing and interacting with Web experiences created just for them — based on their preferences, purchases and search history. No two people receive the same Google search results or land on the same Amazon homepage.

The best online brand marketers are constantly updating algorithms and tweaking code to ensure that consumers are served the most relevant ads and content. Borders did a poor job of personalizing their online experience in 2008 and, in 2011, filed for Chapter 11. Add in the social Web, and there is an entirely new set of personal data to interpret and address.

Travelers, in particular, increasingly demand to be treated as individuals — ones who are listened to and have their needs, wants and desires addressed. Although this trend could be considered a threat to brands that try to dictate exactly how guests should experience and interact with their products and services, savvy marketers see this trend as an opportunity to garner new customers and position themselves for future growth.

According to a 2010 Amadeus-commissioned survey, “Hotels 2020: Beyond Segmentation,” 86 percent of respondents believe that by 2020, “customers will have the ability to choose the size of room, type of bed, amenities, audiovisual facilities, business equipment, etc., on booking and pay accordingly.” This is already being seen, as some marketers move away from standard hotel packages to a highly fragmented à la carte set of choices. The good news is that hotel brands have the opportunity to go from being “a hotel” to “my hotel.”

Social Media and Personalization

Nowhere else but in social media has the opportunity for brands to learn about and engage with customers been more

It is crucial that brands listen to their customers and challenge themselves to think of innovative ways their brand message and experience can be personalized to attract new customers and retain existing ones.

prevalent. Social media tools have allowed brands to connect with customers one on one. Facebook and Twitter allow marketers to learn from and interact with their customers like never before. (Well, that is not exactly true — while the means of communication have shifted to bits and bytes, the brand/customer relationship is becoming more like it was in small-town shops circa 1950.) Knowing and respecting your customers and doing something with this information is key to achieving brand success.

Years ago, marketers thought that inserting a customer’s name into the body of a promotional e-mail constituted relationship building. Even though brands know more about their customers’ behavior than ever before, some marketers still employ similar brute-force tactics. But like everything in the hospitality business, it’s the personal touch that wows the guest and keeps them coming back.

Brilliant cases such as KLM Royal Dutch Airline’s Surprise Campaign and Spanair’s Christmas Campaign delighted passengers with personal little gifts delivered to them while they waited for their flight or collected their luggage. Four Seasons Hotels and Resorts has received praise in the blogosphere for its monitoring of Twitter and proactive delivery of handwritten notes and personalized “presents” based on guests’ online activity. These cases illustrate how relevant personal information gathered from social media sites can surprise, delight and reverberate across the Web.

From the ability to research a room’s view prior to booking, to more flexible ways to spend loyalty points, hospitality brands are at the forefront of providing guests with choices. With emphasis placed on the social Web, travelers are going to rely more on recommendations by trusted friends, family and colleagues, as opposed to anonymous web sites and unknown reviewers. As a result, it is crucial that brands listen to their customers and challenge themselves to think of innovative ways their brand message and experience can be personalized to attract new customers and retain existing ones. ■

Jeff Gurtman is vice president of strategy for Dana Communications.

Travelers Move to Mobile Reliance, Is Your Business Ready?

By Warren Dehan

Travelers who rely on mobile devices like Androids, Blackberries and iPhones are changing the way hotels do business. Hotel operators that do not have an effective mobile marketing strategy and online technology platform will lose market share and revenue to those that do. The data is clear:

- Mobile web access from smartphones will surpass traditional PCs by 2013 (*Gartner Research*)
- Google reports the number of searches in the travel category via a mobile device is up 1,200 percent this year
- Hotel searches on Google Maps have grown 3,000 percent
- Hotels.com tripled mobile booking during Q4 2010
- Mobile bookings are expected to exceed \$160 million during 2011 (*PhoCusWright*)

At the recent PhoCusWright's online event, "Truth, Myth and Pith: PhoCusWright's 2011 Travel Industry Trends," the company's analysts announced their picks for this year's top 10 travel trends. The 500+ attendees, representing travel companies and press, weighed in on which trends they thought would be most impactful. The winner was mobile.

Brand leaders Marriott and Starwood have added mobile web sites for BlackBerry and iPhone to accept rate access codes for booking corporate rates. Omni Hotel customers now receive an e-mail, inviting them to check in before arriving by using iPhone/BlackBerry apps or going online. About a quarter of customers do, says Kerry Kennedy, Omni's vice president of e-commerce.

Today guests are increasingly mobile-ready, and as this number grows, hotel operators must engage guests and give them mobile tools to quickly find their properties, provide compelling marketing information and graphics, and have an efficient reservation engine.

Top Ways to Convert the Mobile Trend Into Revenue

The implications for operators are easy to see. To be competitive in the coming 12 – 24 months, hotels must become mobile savvy. There are three things operators can do to leverage the mobile communication boom.

Give mobile users what they want. Attract shoppers to your hotel's site by providing mobile users with an easy-to-use micro web site that delivers information in just a few pages to simplify their mobile experience. Operators



must work with qualified tech providers to create mobile-optimized micro sites that load quickly, enable users to navigate to property information instantly and include graphics that help make a hotel stay decision in one viewing.

Deliver mobile-ready marketing materials, local information and a booking engine. The goal of a well-designed mobile web page is to drive reservations from handheld users. The best mobile site should have three to five pages of property descriptions and images, provide geolocating/GPS capability and have a booking engine that enables users to instantly reserve a room from their handheld.

Text marketing is personal and effective. Mobile users are also SMS text message users. Text-message marketing opportunities for mobile communication are far more guest-intimate than either phone or PC interaction. Most smartphone users have closer relationships with their handhelds than they ever had with their computers. Operators who obtain opt-in guest cell phone number permission and master the art of SMS text marketing have an opportunity to build a very close relationship with mobile users that creates guest loyalty and generates room nights.

Marketing is more complicated for hotel operators today. Hoteliers must employ multiple strategic initiatives to reach their guests, and mobile is quickly becoming a dominant aspect of all hoteliers' technology marketing strategies. ■

Key Elements to a Mobile Marketing Strategy

By Steve Gurley

2008 ushered in a new era of mobile communications. Apple's concurrent launch of their 3G iPhone and iTunes App Store were instrumental in creating a new, game-changing mobile ecosystem and model. This new model spawned unprecedented consumer access to mobile content, mobile applications and mobile commerce.

A key enabler of the new mobile model was the Apple iPhone. The iPhone represented a new generation of smartphone that could deliver a broad range of easy-to-use functions that were made possible by an extensive library of easy-to-access applications. Prior to the iPhone, smartphone adoption was limited and use was generally confined to mobile e-mail and web browsing. Once introduced, the pace at which consumers adopted this new model was so profound that industry titans such as Google, Research in Motion (RIM) and Microsoft started pursuing Apple-like models of their own.

As more device manufacturers, wireless carriers and consumers embrace the new mobile era, the next 36 months will likely produce a fundamental change in how the hospitality industry interacts with their guests. This looming change demands that hoteliers develop a comprehensive strategy for dealing with mobile.

Strategy Building Blocks

What are the key elements of a mobile strategy? First, a hotel's mobile strategy needs to be based on the idea that consumers will increasingly turn to their smartphones for personal shopping, convenience, security/safety, navigation, communications, entertainment and information. The strategy will then need to be designed around the goal of creating a seamless mobile experience for each guest. In the new mobile era, achieving this goal is critical, as it can be logically assumed that guests might forego a property that doesn't accommodate such an experience.

A hotel's mobile strategy will need to support a plan for supplying ubiquitous access to high-speed wireless bandwidth. Current trends indicate that consumers are using their new mobile devices to consume, and even create, unprecedented amounts of multi-media digital content. Mobile consumption of video alone is growing at a quick rate and this rate is projected to accelerate even more. Guests who experience slow content downloads/uploads, interrupted video streams or spotty coverage will look to do business with a different property or brand.

Part of the plan is to define how to let guests know that the property supports a mobile ecosystem, the scope of the ecosystem and how to engage with the ecosystem.

A hotel's mobile strategy will also need to include a plan for integrating mobile into their operating infrastructure. As more consumers adopt this new breed of smartphone, they will increasingly rely upon their devices to initiate transactions, manage their environment and control their travel experience. Within the next 36 months, hotel guests will almost universally want to use their smartphones to book their reservations, check into their room, gain access to their room, control their room amenities, order/reserve services, pay for purchases and communicate with staff. A hotel's mobile strategy will need to include plans for selecting infrastructure providers who can support the new mobile experience.

A New Perspective on Marketing

A mobile strategy will also need to consider a new and different method for marketing to and communicating with prospective guests. As consumers have adopted this new breed of mobile technologies, they characteristically experienced a newfound sense of satisfaction and delight that comes from being able to do things that were unimaginable prior to the era of mobility. An effective mobile strategy includes capitalizing on this delight with a new approach for marketing to the mobile consumer. Hotel marketing personnel need to become versed in mobile marketing, learn new techniques for reaching these consumers and employ tools to engage these consumers.

A hotel's mobile strategy will need to include a plan for promoting the mobile experience among its guests. Part of the plan is to define how to let guests know that the property supports a mobile ecosystem, the scope of the ecosystem and how to engage with the ecosystem. A tool to achieve this objective is digital signage, which can deliver messages via electronic displays. Hotel guests who see a digital message about interacting with the property's mobile communications will easily know that the option is available.

In conclusion, the hospitality industry stands to benefit from the new mobile model. The industry must create a strategy for doing so or risk losing its competitive advantage. ■

Steve Gurley is senior vice president of marketing for Symon Communications.

Bed, Bath, Breakfast and Bandwidth

By Jason Shane and JP Hebert

The hospitality sector has seen bandwidth requirements grow year over year as guests spend much more time online for both personal and professional needs. What's different now from three or four years ago? It's the content accessed by the guest. A significant amount of our online experience is now media-rich. YouTube, Netflix, Hulu, SlingBox, Skype, Boxee, Dailymotion and Vimeo are just a few providers of online video content, including HD content. Guests are on these systems every day, and with this flood of new traffic comes network congestion. The old adage was "bed, bath and breakfast," now hoteliers need to add bandwidth and make this a four "B" approach.

Cisco has an interesting prediction in their "Future of the Internet" white paper (available at Cisco's web site), where 91 percent of Internet traffic by 2014 will be video-based. This metric accounts for TV, video on demand, P2P and other sources. Cisco also expects 3D and HD video traffic will increase 23-fold by 2014.

The big change in guest behavior is the number of Internet-connected devices a guest will carry into a property. Only a few years ago, airports had only laptops as Wi-Fi users of their networks, but now 45 percent of that traffic, according to Boingo, is from smartphones. With the birth last year of slate computing with the Apple iPad and Android-based devices, guests are carrying upwards of three Internet-connected devices during their stay. Smartphones, tablets, laptops and gaming consoles are creating a whole new level of need for high-speed Internet access to the hospitality environment.

So how can the hospitality world keep up with growing demand? Most importantly, hoteliers are looking for ways to meet this demand while respecting budgets and still exceeding guest expectations.

Achieving Your Goal

There are many facets to achieving your goal. Applying per-guest traffic limits will provide some relief if you have deployed a quality HSIA gateway capable of performing this function. Setting a maximum threshold for bandwidth per device will certainly help control how much each device consumes, but expect this number to grow. Tiered-services



is a measure which many properties employ, providing basic service at no cost to guests, and upselling an enhanced service with more bandwidth or features. Where the brand allows, this two-tier approach provides a casual user free access, and simultaneously provides revenue to build and maintain an HSIA service that exceeds the expectations of the clientele that asks for it and is willing to pay.

Second, look towards low-cost asymmetrical carrier links to help improve the overall situation. Traditional carrier links such as T1s are still key, but are not enough for the guest HSIA segment of your network. These asymmetrical links (DSL, cable modems and SMB fiber like FiOS) offer a significant amount of low cost download capacity. In many cases they are offered at over 100 Mbps for only a few hundred dollars per month. The challenge is keeping up with growth. When these links are saturated by the guests, you simply add more, but your link aggregation/balancing device needs to be able to scale up with the total capacity.

Third, for larger properties, traffic-shaping for the application layer can be deployed to do more with what is in place or added in the future. A lot can be achieved by controlling traffic by type. For example, P2P traffic, which can take up a lot of bandwidth, can be controlled, leaving more bandwidth for more critical applications such as guest VPN access to their work places.

No magic bullet is available to tame the bandwidth ogre, but with some key technologies already available to the hospitality sector, combined with the right ISPs and policies, properties and hoteliers can deploy bandwidth management which won't break the bank and will make guests happy. ■

Tiered Access Helps Hotels Manage Costs and Serve Guests' Needs

By Tom Duke

The popularity of mobile connected devices combined with the proliferation of online streamed content and the way people consume information and entertainment are crippling the majority of hotel broadband networks. In February of this year, 170 million U.S. Internet users watched online video content and the total U.S. Internet audience engaged in more than 5 billion viewing sessions during the course of the month. By the year 2014, online video is expected to account for more than half of Internet traffic globally.

The way people consume all of this online content requires not only constant connectivity, but speed. The need for speed is propelling technology advances in fiber networks that are geared towards delivering broadband speeds of 100 Mbps to consumers at home which leaves hoteliers struggling to understand how to avoid getting caught in an endless cycle of adding bandwidth to deliver the speed guests require. The key to resolving the bandwidth issue and delivering a quality guest experience is understanding that the root of the problem is not always a lack of bandwidth, but also network congestion. It is critical for hoteliers to learn how both factors can be managed to meet varied guest Internet demands so that everyone walks away with a positive experience.

Bandwidth Congestion

Adding bandwidth is a short term, temporary solution that does not control escalating bandwidth usage and fails to address the increasing costs to the hotel. Consider the growth of YouTube over the last five years — from non-existent to 2 billion views per day (*YouTube*). Imagine having to add an additional T1 every year to accommodate the growth of just YouTube. Furthermore, properties that simply add more T1 lines may still experience significant problems during peak usage periods, because additional bandwidth will not necessarily relieve network congestion during times of heavy use.

Broadband networks are often explained in terms of using highways as an analogy. Highways must be designed to handle peak traffic, which in most cities is rush hour. When traffic grows, new lanes have to be built and new costs are added to the equation. Just like adding more lanes to the highways won't necessarily mitigate rush hour traffic, adding

Some guests will need only basic Internet for e-mailing, and others, like those who watch online movies or other streamed content, will have greater demands that require faster speeds.

more bandwidth to your property may not resolve your network congestion during peak hours, leaving many guests unsatisfied and complaining about slow Internet speeds.

While understanding that network congestion plays a key role in bandwidth problems, it must also be acknowledged that it is critical for hotels to establish bandwidth standards to provide adequate bandwidth levels based on specific property variables, such as the delivery infrastructure (i.e. T1, DS3, ADSL, cable, etc), the number of guestrooms and guest take rates.

Network congestion and bandwidth standards can both be dynamically managed through a tiered solution which is cost effective for hotels and meets guests' expectations. A tiered solution empowers the hotel to manage their costs and meet guests' requirements by controlling bandwidth usage on an individual level. The hotel can provide property-wide access to a standard level of Internet access suitable for basic uses like e-mail and surfing the Web. Additional paid tiers can be offered to accommodate guests that wish to use the Internet for more bandwidth intensive applications, like streaming media content. Today's business traveler knows what they want and they place a value upon it. According to the 2010 YPartnership iTraveller study, more than four out of 10 iTravellers would agree to variable pricing based on Internet speed, different prices for heavier broadband users, and higher Internet speeds for an additional, nominal fee. The addition of paid tiers not only allows the hotel to manage the guest experience, but it also creates a revenue stream to help offset the solutions cost.

Today's culture dictates that, for most people, we want what we want, when we want it, the way we want it. And, above all, we want it to work. Some guests will need only basic Internet for e-mailing and others, like those who watch online movies or other streamed content, will have greater demands that require faster speeds. In most cases, when there is an appropriate amount of bandwidth to begin with, a tiered management solution will provide the greatest amount of flexibility and scalability to both hotel properties, as well as their guests. ■

Tom Duke is CTO for iBAHN. He is also a member of the HITEC Executive Vendor Advisory Council and speaker at HITEC 2011.

Manage Internet Use With Tight Security and Deep Packet Inspection

By Sebastian Pereira

Hotels have turned into communications service providers, where demand for bandwidth and network services has come to the top of the list of priorities for guests. With the need for ubiquitous connectivity and convergence of media devices is high, the once casual Internet is taking center stage, and hotels need to make sure they maintain a strong and secure network.

Keep a Strict Line on Bandwidth

As bandwidth options increase, it makes sense to build a regional network with a mix and match approach. One concern when you have such a widely used network is that the network's vulnerability grows. With this comes potential for network attacks and abuse, peer-to-peer (P2P) downloads, and a host of network continuity issues — from equipment failures to copyright infringement. Most hotels are not built to manage discontinuity; however, with careful planning, minor network protection and aggregation practices, hotels can proactively manage a stronger network.

With this approach you can have selective hubs, place tight security and implement Deep Packet Inspection (DPI) to offer a best-in-class guest experience and lower overall costs. This strategy also helps you mitigate illegal downloads and build premium tiers for Internet usage, which you can then charge for.

To begin every hotel must have a network disclosure statement that is readily accessed and puts your policies front and center. This alerts users to what is and isn't appropriate network usage. The rest falls to equipment and management.

A top priority should be network security. Several security systems today are highly sophisticated, and take care of a lot more than just security. They also do some level of DPI and combine firewall, IPSec and SSL VPN, as well as offer intrusion prevention, antivirus, antispam, P2P security and web filtering all in one unit. There are even some that track data by IP address, which helps to monitor for illegal downloading.

Consider using Deep Packet Inspection, which shifts through network traffic. This helps you manage non-compliance of multiple protocols, like Bit Torrent use, enable policy controls and offer bandwidth reservations for tiered Internet usage plans.

Next, consider implementing DPI, which shifts through network traffic. This helps you manage non-compliance of multiple protocols, like Bit Torrent use, enable policy controls and offer bandwidth reservations for tiered Internet usage plans. Higher layer additions permit for bandwidth caps, which create quotas for Internet users and discourages bandwidth hogs. They also enable video caching, so movies from Netflix can be cached without taxing bandwidth.

Other controls that the hotel can enact with DPI is blocking P2P intrusion and enhance the overall user experience by permitting guests bursts to higher bandwidth tiers when available. They also manage congestion by permitting new users to join when a network is busy, rather than allowing dropped packets.

The downside of course is that this kind of technology is not inexpensive. The pricing for below 100 Mb is manageable for medium-sized hotels; but as the overall bandwidth grows, so will the costs. Note that by installing security and DPI, one can save about 40 to 50 percent of bandwidth. Individually, security appliances can offer savings of about 20 – 30 percent and DPI about 20 – 25 percent. With the possibility of using less bandwidth and still offering a reliable performance, it's worth researching as a potential long term investment.

All in all with the right security in place you can have a manageable plan that protects your network, which then becomes a source of revenue and sleep. With a DPI interface guests can now pay for bandwidth on demand using a hotel portal menu for pay as you go bandwidth and your secure, reliable Internet access becomes a guest amenity you are known for. ■

Sebastian Pereira is CEO of Broadband Enterprise.

Provide What's Expected, Along With a Few Surprises

By Mark Munger

*Let us entertain you, Let us make you smile,
Let us do a few tricks, some old and new tricks,
We're very versatile.*

Robbie William's song, "Let Me Entertain You," provides us with some hints about providing entertainment. It's about providing the old and expected with new surprises; but most importantly, it's about being versatile and able to adapt to the guests' needs. It is no longer feasible to provide more entertainment options than what the guest has at home, especially with some guests bringing more entertainment technology and content with them than a hotel could ever provide. We are left with a goal to provide enough high value entertainment for those guests who choose to travel without technology and content. And for those that bring their own technology and media, we need to provide access to the in-room systems for them to connect into.

Something New, Something Old

Thinking of High Definition (HD) television as old and expected is surprising to some, but many guests have HD at home and expect it when they travel. New flat screen HDTVs have become the standard. When replacing the TV, remember the set top box or cable card needs to be upgraded/replaced, as well as having a head end that can deliver HD content. Using existing video players and content with new TVs may make your picture look worse and not better.

Dimensional. There is almost no demand for 3D displays or content and although it was shown by more vendors at this year's CES show in Vegas, 3D looks to remain niche and still maturing for at least another generation or two (one to two years). Should you choose to make this your new trick, research will be required. Most sets still require special glasses, and the ones that don't, have a very limited viewing area where the picture looks good. It's a rapidly evolving technology and market.

Content plus display equals entertainment. Content is another item that is changing. What is required varies by property. Based on cost and service level desired, some properties are opting for only free to guest channels although with several of them in HD. You can add some general high definition content such as nature, sports or



documentaries for a little more. But if you require first run VOD, there may be some considerable costs associated with it. And with many guests bringing their own content, the cost of infrastructure and monthly fees are not providing the ROI that they once did. Look at how guests bringing their mobile phones made in-room telephones no longer an ROI decision, but still remains necessary for safety and convenience. This revenue decline of first run movies somewhat resembles telephone charges. There will always be some guests who will pay \$10 to \$15 to watch a movie without having to connect to their own equipment, and higher end hotels are expected to have first run movies. But these are trends worth watching.

Get Integrated and Connected

As we look at the evolution of the set top box, we are seeing more integrated applications. In-room controls and widgets are being explored to provide more features to the guests. The ability to control temperature, lighting, draperies and wake up events are in several hotels today. Ordering room service and other amenities has evolved. Adding applications to allow guests to watch YouTube videos or their own Netflix

Mark Munger is with Munger and Associates, which provides technology and marketing consulting for hotels, casinos, commercial and residential real estate.

content have been demonstrated, but most hotel Internet connections will not support these applications today.

Internet bandwidth is not directly an entertainment option, but it certainly is a medium by which we facilitate entertainment for the guest. The trend to provide more and more bandwidth has not stopped since HSIA was introduced, but the need for speed seems to never be satisfied. In addition to speed, guests are now aware of latency, jitter and other network issues affecting their online video viewing. When the guest uses their own equipment and has issues viewing, they may accept that bandwidth glitches occasionally. If the guest is paying for the bandwidth or is using equipment provided by the hotel for viewing, then quality must be preserved or complaints will follow.

The medium moves the message. Another trend with video is the move from Coax to twisted pair (i.e. Cat 6), as well as the integration of wireless to provide both Wi-Fi to the guest and sending video to the set top box. Integrating a Wi-Fi access point into the set top box provides consistent coverage for the guest. As we move to higher speed, having Wi-Fi being able to deliver content without wires will enable more versatility and lower costs.

Listen to this. Beyond video, audio entertainment is equally important to the guest. Having a simple iPod/MP3 connector on a clock radio is an old trick and may still be worthwhile, but guests value the ability to have higher fidelity using the same sound system the video system uses. Having a multi-jack wall outlet (aka Jack Pack or MediaHub) allows the guest to easily connect with media systems to the television, sound system or network. Bluetooth integration

We are left with a goal to provide enough high value entertainment for those guests who choose to travel without technology and content. And for those that bring their own technology and media, we need to provide access to the in-room systems for them to connect into.

for audio is also evolving, allowing guests to both play their own content wirelessly, but also use the in-room system as a speakerphone for mobile phones.

Stay Versatile My Friends

With all of this, it's important to know the guest you are serving. From the budget level up, having the new tricks may not be as important as providing the expected. But if you are serving a high-end guest, then you not only need the old tricks, but new tricks to surprise, delight and put the guest at ease relaxing with the entertainment of the room. ■

HFTP CALENDAR

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Austin, Texas

Leadership Summit

October 18 – 19, 2011
Omni Hotel at CNN Center
Atlanta, Ga.

HITEC 2012

June 25 – 28, 2012
Baltimore Convention Center
Baltimore, Md.

Club and Hotel Controllers Conference

June 20 – 22, 2011
Austin Convention Center
Austin, Texas

Annual Convention & Tradeshow

October 19 – 22, 2011
Omni Hotel at CNN Center
Atlanta, Ga.

It's More Than Just a TV

By Stephen Morris

In 2010, a report from Multimedia Research Group, Inc., declared IPTV a “must have” in hospitality technology. IPTV continues to be one of the hottest topics in the hospitality industry as it continues to transform in-room entertainment and information systems. The proliferation and availability of online content has dramatically changed consumer behavior which, in turn, has fueled the evolution of devices through which content is then consumed. Televisions are no longer dedicated solely to network or cable programming, and laptops are no longer exclusively used for computing. Technology devices are increasingly adopting a cross-functional design to deliver a robust personal experience to the user. The lines of differentiation between devices are beginning to blur and, soon enough, they will simply become screens of various sizes. Studies have shown that, all else being equal, people will generally watch the largest screen available at the time. This means your flat screen TV once again has the spotlight in the guestroom — and not because of what it is, but because of the guest experience it enables you to deliver.

From TV to Screen

Many hotels that have made the initial investment of purchasing flat screen TVs for the guestroom are finding that the investment has not paid off in the way they had hoped and they are still unable to deliver a satisfying guest entertainment experience. If hoteliers start to redefine the TV and begin to use it for what it has become — a screen — the limitations of cable programming and VOD movie selections dissipate. TV is no longer about watching a program or movie, but about a completely personalized and interactive entertainment experience that includes broadcast, cable, premiums, on-demand, gaming and Internet.

In 2009, an Intel study explored the topic of social TV in the U.S. and showed people a concept where they could use their TVs to connect with family and friends to talk, share photos and sometimes just watch TV together when they are located in different states. Half the participants picked this type of social interaction as a feature they would like to see in a TV or a device. One participant noted “I would pay money right now for this!” (*Intel Experience Study, 2009*).

For hoteliers actively pursuing solutions that can deliver the kind of entertainment experience IPTV enables, there are a number of critical factors to consider ensuring that the investment will deliver. One of the top questions to address



is how a solution will support the demand for new media distribution and how it will scale in the future? A solution that supports streamed media (television, movies, radio, etc.) is vital in terms of delivering a positive guest experience. In addition to having the capability to deliver online content, the solution must address a property’s need for providing appropriate bandwidth and include bandwidth management capabilities to ensure that guests actually receive the experience they expect.

Another key point to address is whether or not other services and applications are supported by the IPTV solution in addition to in-room entertainment. Achieving a solid return on investment from an IPTV solution requires that the functionality must extend beyond the guestroom TV and support content delivery to the multitude of connected devices available — laptops, smartphones, iPads and other tablet PCs, etc. Examples of how a solution may extend its functionality to applications and services outside of the guestroom may include customized messaging to guests, promotions for hotel services, in-room dining services and guest productivity tools.

Above all, it is of the utmost importance that you take into consideration how the IPTV provider is positioning itself, as well as its solutions in terms of how it plans to take advantage of emerging technologies and address future content consumption trends. This is essential as it demonstrates the providers’ technology vision and dedication to working with hoteliers to future-proof their investments. Without a sound understanding and knowledge of current technology and new media trends, it is unlikely that a provider will be able to develop technologies supporting future in-room entertainment, information and other hospitality applications. ■

Stephen Morris is president of ETV, an iBAHN company. He was the founder and CEO of ETV Interactive, a digital information and entertainment provider, prior to its sale to iBAHN.

The Impact of Mobile Media on Guest Entertainment

By Derek White

Today, trend discussions are dominated by the invasion of mobile and tablet applications. How will the hospitality industry be affected as the affluent, mobile and even business community becomes fluent with tablet applications and mobile video on demand? Well let's take a look at how hoteliers should view the mobile media explosion through the filter of the following four trends.

Trend 1: The TV Still Matters

Guests still crown the TV as one of the most important in-room amenities. LodgeNet's comprehensive analysis of over 1.7 million hotel set-top boxes and Nielsen metered hotel rooms revealed the following:

- Hotel TVs are used by over 98 percent of guests (unchanged over the last five years).
- The average viewing time is over three hours per day (unchanged over the last five years).
- The TV is the first thing guests interact with upon arriving in their room.
- Hotel guests continue to use the TV as "company" when doing other activities.

These findings are remarkable as the last five years have welcomed a host of disruptive technologies from laptops to smartphones and tablets. Yet, despite the array of personal media devices and content choices provided by cloud computing, the hotel TV has stood strong.

Why? First, screen size counts. Nielsen Research has studied media consumption on a variety of devices and definitively concluded that the large screen always trumps the small screen when consumers are provided a choice.

Another reason is that the TV is easy to operate and is fairly consistent in its content offerings. Well-known cable programming greets guests in a simple and reliable way. A study of 1,100 guests found that while they desire HD systems, guest satisfaction is almost identical whether they are offered five HD channels or 20 (*Monitor Venture Services, L.L.C. VOD Study, Dec. 01, 2010*).

Trend 2: Long-form Entertainment Over the Internet Has Yet to Find an Audience with Guests

Although guests cite Internet connectivity (specifically Wi-Fi) as a critical amenity, they are not using it to replace the traditional in-room movie experience; social networking and work-related applications continue to predominate. Based on

a recent analysis of LodgeNet's broadband servers covering over 300 million Web requests, the two most frequently accessed domains are Facebook and Google. With regard to entertainment, the previously noted Monitor Venture Services report found that less than 10 percent of guests consume entertainment over the Internet, and primarily short-form content at that.

Hotels will need to continue to provide more bandwidth (enabling faster connectivity and uninterrupted services), but whether that translates to increased uptakes of long-form, "guest pay" entertainment remains to be seen.

Trend 3: Premium Pricing Content is Gaining Traction

One of the hottest concepts among Hollywood studios today is Premium Video On Demand (PVOD), which involves delivering a one-time viewing of early-release theatrical programming (i.e., typically 60 days after theater release), for a price averaging \$30. Since this is the same window in which most hotels currently offer "pay per view" VOD programming (and for much less than \$30), this development can help hoteliers — provided they are willing and equipped to help convey this value message to guests who aren't aware of the distinction. With price and time being the primary barriers to purchase among surveyed guests, it will also be important to offer non-premium VOD titles at lower price points, as well as shorter-form content.

Trend 4: Standards for Cross-platform Content

A longer-term trend worth watching is the emergence of a standard for digital content ownership, accessibility and multi-device usage. An organization called UltraViolet is leading this effort. Companies such as Netflix and Best Buy are slated to start selling DVDs and digital downloads marked with the UltraViolet logo. Consumers will set up a free UltraViolet account online and register their purchases, creating a secure "digital locker" with the content that person owns. Households and up to 12 hardware devices can access the content in that locker, thereby viewing movies and TV shows from anywhere. This will present hoteliers with intriguing opportunities (e.g., a guest renting a movie in the room, then buying it, archiving it in his or her digital locker and watching it later).

By taking the above trends into account, hoteliers can make strategic decisions and investments necessary to keep their guests satisfied in the mobile, digital domain. ■

Energy Harvesting Wireless Sensors Balance Hotel Comfort and Energy Savings

By Cory Vanderpool

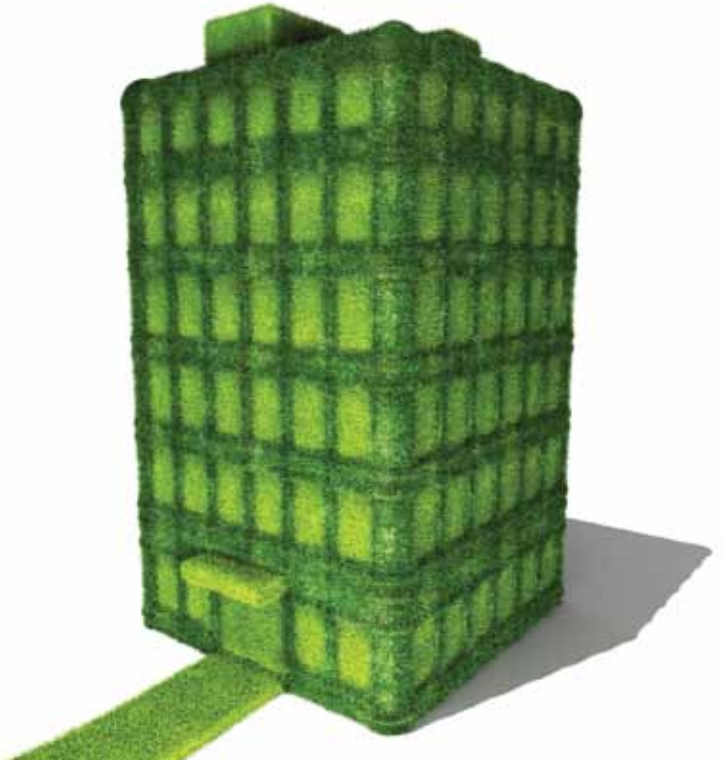
Guest comfort is a top priority among hotel owners and is vital to an establishment's desirability. Savvy hotel guests expect comfort and convenience, regardless of a hotel's star rating, and an increasing number are becoming more mindful of their environmental footprint while traveling. Unfortunately, considerable energy is wasted in hotels, due in part to the lack of automation and control in guest room operations. More often than not, upon checking in to a hotel room, including those with luxury accommodations, guests find that they have limited or no control over the temperature settings. Another common scenario finds guests opening a window to cool down an overheated room, because the thermostat is not working properly or is controlled by a central system.

This inefficiency and lack of control in guest room operations wastes energy and eats into hotel profitability. As a result, energy management technology, specifically battery-less, wireless sensors are being adopted and deployed at an accelerating rate. Hotels around the world are now discovering that wireless sensors enhance "climate" control, improve guest comfort and lower utility costs. The bottom line to hotel operations is that this important combination of guest-centric benefits improves energy efficiency in the facility.

Wireless Technology

With wireless technology that harvests energy from the surrounding environment to power sensors, hotel facility managers have a cost-effective solution that enables guests to control room temperature and lighting. When a guest room is vacated, sensors restore the temperature to optimized pre-sets put in place by the facility operator. Signals can be sent to turn off all light switches, and even TVs, when the room is vacated. This eliminates unnecessary energy use when a room is vacant and rids hotels of a major contributor to energy waste. When the guest re-enters the room, an occupancy sensor, or a wireless key card switch automatically restores the guest's preferred lighting and temperature settings.

Historically, hoteliers in North America have been slow to embrace energy management systems because of steep investments and a perception that installation practices are disruptive, and therefore a considerable inconvenience to guests. Yet wireless sensor technology has been extensively



adopted in Europe, from luxury hotels to hostels. What European facility managers have discovered is that this innovative technology is easy to install, scalable and flexible. Plus, it is virtually maintenance free, since no batteries are required.

To appreciate the impact that wireless sensor technology has on hotel energy consumption, consider the following: average hotel occupancy rates are currently running at around 70 percent. "Sold" rooms are occupied, on average, for only nine hours within a 24-hour period, meaning that a hotel room is *unoccupied* over two-thirds of the time. Despite this, many unoccupied rooms have the heating or air-conditioning running at high levels, even with a window or balcony door open. Very often lights, TVs or other appliances are also left on. Consequently, having the ability to automatically determine real-time room occupancy, including window and balcony door sensing, makes it possible to save between 20 and 30 percent on in-room energy consumption each year.

Room occupancy can be determined by a number of factors, most commonly using a key cardholder inside the

Cory Vanderpool is business development director, North America for EnOcean Alliance. Vanderpool is also pursuing her Ph.D. in environmental policy at George Mason University and is a part time contributing writer at Triple Pundit.

room where the guest inserts the card into the holder to energize the room upon entering and vice versa upon their exit. Alternatively, a door-opening sensor combined with an occupancy sensor inside the room can determine room occupancy without any guest interaction, if preferred.

Until recently, installing sensors and switches to enable these energy saving functions required new cable installation, resulting in large investments, building noise and disruption. Today, wireless systems enable flexible installation without any disruption to guest occupants. Hoteliers who want to avoid the tedious battery maintenance of conventional wireless solutions can now avoid an expensive and labor-intensive maintenance hassle by using innovative energy harvesting methods to power sensors and switches.

These sensors and switches remain maintenance free for decades by using tiny amounts of energy available in their surroundings, including mechanical, solar or thermal. The sensors can store energy for multiple days for uninterrupted operation when no energy source is available. The sensors can be installed in a matter of minutes as a simple stand alone system per room, or they can be integrated into a building management system, a hotel PMS or even the Internet.

Battery-less wireless technology has been successfully installed in over a quarter of a million buildings, including thousands of hotels. Case studies reveal average in-room

Hoteliers who want to avoid the tedious battery maintenance of conventional wireless solutions can now avoid an expensive and labor-intensive maintenance hassle by using innovative energy harvesting methods to power sensors and switches.

energy savings of 20 to 30 percent. Payback periods of two to three years are becoming the norm and hoteliers that leverage federal and state incentives can reduce ROI time frames to around one year or less. The Commercial Building Tax Deduction, set forth in the Energy Policy Act, offers hotels a deduction of up to \$1.80 per square foot for such retrofits.

The bottom line is that energy harvesting technology serves a variety of pain points within the hospitality industry. With this technology, operators can balance guest room comfort and reduce energy related expenditures. ■



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Sweeping Change: The Future of IT Comes Into View

By John Sanderson

The cloud, regarded by some in its early stages as a nebulous entity of ambiguous purpose, would be more accurately described today as a dynamic powerhouse blowing the roof off the IT world as we know it today. Where once IT's role was primarily focused on maintenance and operations, the near infinite resources and flexibility of today's cloud are freeing up IT professionals to concentrate on strategy and vision. New technologies that support multiple cloud configurations absorb some operational tasks, giving hospitality enterprises both the ability to focus on big-picture initiatives and the agility to successfully execute them.

The new cloud model — a hybrid synthesis of both private and public clouds — presents an opportunity that IT leaders and business decision makers within the hospitality industry are recognizing as more than a cost-saving or efficiency measure. It is transforming the way organizations think about smart business growth, experiment with new solutions, and affect innovative outcomes; the idea of moving more and more applications above-property is here.

Private and Public Cloud Infrastructures

Enterprise assets and information encompass a huge spectrum of use: from financial, regulatory and other proprietary properties, to things like e-mail, web sites and OLTP applications such as property management systems that need capacity on demand. Public and private cloud options already exist to support these differing requirements, but sharing resources between silos has been a challenge.

Private cloud infrastructure is defined as operated solely for an organization. It may be managed by the organization or a third party and may exist on premise or off premise. The industry defines a public cloud infrastructure as made available to the general public or a large industry group, and owned by an organization selling cloud services. While a hybrid cloud infrastructure is comprised of two or more



clouds that remain unique entities, but are bound together by standardized or proprietary technology that enables data and application portability.*

In a private cloud, sensitive data and services might remain behind a firewall and be virtualized, automated and standardized for maximum efficiency. Organizations can manage the platform and control data flow on a dedicated infrastructure.

Operations and applications that require elastic scaling, metered consumption or fast time-to-market populate the public cloud infrastructure. This is ideal for application ubiquity, increases in load for short-term bursts during spikes in traffic, and rapid expansion during periods of high demand.

Industry estimates put the average IT budget spend at 70 percent on sustaining and running basic IT operations, and 30 percent for increasing business value through IT innovation. Embracing cloud computing, and cloud-delivered applications in hospitality, represents a true paradigm shift, where CIOs and IT leaders can flip those numbers and spend less time keeping the lights on, and devote more time to driving innovation to increase business value:

Flexibility and Agility. Allows for a hyper-accelerated start up time, no need to assemble hardware and data centers

Minimizes Service Disruption. Applications are ready for immediate distribution and consumption

Increased Control. Applications and IT resources are automatically directed where and when they need to be; across the country or around the world.

John Sanderson is with Microsoft Corp.

Efficiency. Access and management are self-service, but supported by stable technology, requiring much less IT management time.

Independent Software Vendors

Today, Independent Software Vendors (ISV) around the world are building new and innovative software offerings, leveraging the power of various cloud platforms. These bring the very best capabilities of cloud applications into the hands of organizations and end customers.

Moving existing premise based applications to the cloud yields only marginal return. The real opportunity lies in developing innovative new applications purpose built for the cloud. This approach best uses the capability of the cloud to accelerate business processes, generate upside value and reduce IT spend. Scalability, security, availability and stability are built into cloud platforms, allowing ISVs to concentrate efforts on information workflow to better enable decision and action. These offerings, such as Libra onDemand on the Force.com platform and ATRIO from PAR Springer-Miller built on Microsoft's Windows Azure platform, are available worldwide via global delivery networks and are designed to be rapidly available, localized, and exceptionally easy to deploy direct to any internet connected device.

The new cloud model... is transforming the way organizations think about smart business growth, experiment with new solutions, and affect innovative outcomes; the idea of moving more and more applications above-property is here.

Whether you build your own line of business application or acquire a new property management system from an ISV, the move to the cloud seems to be a natural evolution for the hospitality industry. Can you imagine a world where you can call up an ISV, order their product and deliver it via an existing PC/browser with no new hardware infrastructure or management investment! The future is here; what's next! ■

* The NIST Definition of Cloud Computing v15, Mell & Grance, 10/07/09.

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Moving to a Design-Orchestrate-Manage Shop

By Mark Peacock

Where are you going to spend your next IT dollar? This is the fundamental question facing the large chain's IT shop. Will you invest in customer-facing technology with new lobby or in-room amenities that will build customer loyalty? Will you direct budget to your data center to better manage the exponential growth in shopping transactions? Should you address data analysis with business intelligence to mine data for revenue-generating insights? Or, is your greatest need is improving the speed and efficiency of transaction processing?

In answering these questions, consider the IT shop's legacy — legacy technology and development. The latter has generally been accepted as design-build-run. However, the acceptance of cloud computing, software as a service (SaaS), and above property systems means IT shops will no longer be "rolling their own" software. In the interest of better, faster and more efficient, the large chain will orchestrate and assemble services from across a number of providers creating an architect-orchestrate-manage lifecycle.

Paradigm Shift

Traditional design-build-run IT departments must re-tool their people and their processes to operate as cloud-savvy design-orchestrate-manage shops. This paradigm shift requires a focus on data structures and modeling, interfaces, contract negotiation and vendor management, requiring management of processes and deliverables, not activities.

In August of 2009, *CIO* magazine featured a story about CIOs evaluating shared IT infrastructure and applications through the lens of the Hotel Technology Next Generation (HTNG) board. At the time, HTNG was discussing appropriate areas for shared services in hotels, including shared property management systems, reservation systems and networks.

On the topic of CRSs, the author discussed the transaction processing created through extensive aggressive shopping. This online "bargain shopping" trend is the key contributor to a hotel's look-to-book ratio — the number of looks generated for each booking made. Today's common ratio of 3,000 to 1 means that a hotel will be shopped by 3,000 information requests, and receive only one booking as a result. Inflated look-to-books weighing on the CRS is an issue that, if addressed with the right cloud-based technology solutions, could cut costs while improving reliability and response times. It is an area that, if mishandled, can lead to hotel-crippling outages.

This paradigm shift requires a focus on data structures and modeling, interfaces, contract negotiation and vendor management, requiring management of processes and deliverables, not activities.

In this picture, cloud computing often means working with generic platforms such as Amazon Web Services or Salesforce.com's Force.com. However, industry-specific vertical solutions are beginning to emerge, like HP's hospitality-specific integrated cloud solution. The benefit of these cloud solutions is enhanced customer service through pre-built integration of hospitality management systems with improved reliability, leveraging technology infrastructure such as data center services including server, storage and network management, and disaster recovery.

The *CIO* article featured an insightful quote from Todd Thompson, CIO at Starwood Hotels & Resorts Worldwide, about driving down operating costs and freeing resources for more ground-breaking endeavors, which also speaks to the fate of today's large IT department. A quote many an IT professional would be wise to note.

"Do we want 100 people working on developing and maintaining a hotel reservation system? Or do we want 100 people focused on building innovative solutions for our company?"

As hospitality technology continues to evolve, new technology tends to add, not replace, capabilities — e.g. Internet booking technology did not replace the need to maintain call center technology. Each new layer of technology adds cost and complexity, and for many hospitality companies, there will come a tipping point where they'll need to ask the strategic question — "Are we a hospitality company or a technology company?"

The answer to that question will determine where your next dollar will go. ■

Mark Peacock is CIO for Pegasus Solutions.

Clouded Vision: Do Your Research Before Committing

By Lyle Worthington, CHTP

The real meaning of the term “Cloud Computing” has become a bit of a moving target. The benefits of public clouds to startup companies, coupled with the decision by many large software developers to invest heavily in moving their product “to the cloud,” created a marketing frenzy that has led to the term being used to describe just about anything that uses Internet access. While I wouldn’t consider your laptop accessing movies from your home computer over the Internet from an airport a valid example of cloud computing, nearly any software or computing resource hosted by a third party and accessed via the Internet could be considered a form of cloud computing.

There is a lot of buzz in our industry that cloud computing is the answer to all our technology problems, and the sooner we get everything moved into the “Cloud” the better and more secure we will be. In reality, though, there are many issues you must consider prior to fully committing to cloud computing. Among the most important considerations are delivery, bandwidth and security.

Cautions to Cloud Computing

Delivery. There are different ways to deliver applications over the Internet. Which one you use could have a considerable impact on cost, performance, security and compliance. A vendor could run their application in a public cloud, such as Microsoft Azure, RackspaceCloud or Amazon AWS. In this case, the vendor is providing the software, but the public cloud company is managing the physical hardware. The vendor could also have their own servers that they manage and use to provide their application to you. It is important that you understand which one your vendor provides and that you trust them to ensure the server on which your application instance is running is secure, routinely backed up and always available.

Additionally, some software is designed specifically to run over the Internet, while others are designed to run locally or in a client/server model. If you have to remote in to a server via Terminal Services or Citrix to launch your application, it is very likely that it was not designed for the cloud. Running it over the Internet compared to hosting it locally on your LAN could cause performance issues. Also, remember that when using cloud computing, specifically a public cloud, you might not have any vision into or control over where and how your application is located. If you sign up for the wrong plan you could end up with your servers running in another state or even country.

Bandwidth. Before considering running many — or all — of your applications in the cloud, you must make sure you

have enough bandwidth for your organization and that your network is set up to prioritize the connections used to run your applications. It’s also imperative that your bandwidth be extremely reliable. With your critical applications running in another location, a network outage or slowdown caused by a surge in traffic has the same effect as a severe outage at your property. Consider the cost of your bandwidth, too — if you operate in a location where bandwidth is relatively expensive, that will eat into your cost savings. As with the delivery section above, the bandwidth available to the vendor hosting your application is a factor, as is the latency between your organization and the vendor’s network.

Security. As recent hacks on Google, RSA, Epsilon and Sony demonstrate, even the major vendors are vulnerable. Keep in mind that by storing your data with a larger vendor, you might be actually increasing your attack surface. A large vendor might be more of a target for hackers, and you are adding their employees — over whom you have no control — into the equation. Similarly, a recent outage at Amazon and Microsoft show that even companies with a major focus on server uptime can and do experience downtime. You may read that your cloud provider has multiple backups of your data. However that might just mean they are replicating the current active data to prevent data loss, not that they are actually backing up and archiving your data. There could easily be additional cost or labor required to ensure that you can restore your data to specific points in time. Lastly, it is up to you to beware of compliance issues, specifically PCI compliance. Some public cloud vendors have stated publicly that they can’t and won’t ever be PCI compliant.

Understand the Potential Benefits and Drawbacks

The concept of cloud computing looks really good on paper. As with any other major technology decision, however, there is a strong need to fully understand all of the potential benefits and drawbacks before moving forward. Remember the “Cloud” in cloud computing represents an unknown — you won’t always know how the servers are managed, backed up or secured. In some cases, that uncertainty might be enough to warrant keeping your most sensitive applications and data behind your firewall. Remember that any compromise of a cloud vendor that results in your private data being stolen will still reflect negatively on your brand. That being said, with the right vendors and right applications, the benefits of cloud computing far outweigh the drawbacks. It is up to you to do your homework, make a realistic analysis and determine whether it’s the answer you’ve been looking for or not. ■

Extend a Meeting's Reach With Virtual Attendees *By Eric Bracht*



Face to face meetings and conferences can be extended online to give remote participants an engaging experience. Virtual attendees can participate in the conference, collaborating with on-site attendees to contribute ideas and input which would have otherwise been lost.

Virtual Meetings Draw, Not Detract, Attendance

A virtual meeting can be as simple as a conference call or as complex as a life-like, online experience in a customized world or environment. A true virtual meeting involves no actual, in-person contact and incorporates various elements such as e-mail, social media, Internet broadcasts, on-demand viewing and, at the high end, virtual meeting environments.

Meetings that incorporate some, or all, of these virtual elements with a physical meeting are termed “Hybrid” meetings. Hybrid meetings combine the traditional single location meeting with the virtual elements of social media, blogging, and both live and archived session broadcasts.

Most meeting professionals with experience in hybrid events no longer fear that virtual elements will cannibalize attendance at the physical events. In fact, there is growing evidence that adding virtual elements to the physical meeting is both necessary to drive engagement and to attract additional audiences to your message. Recent studies show that virtual attendance actually drives the desire for physical attendance at future events. In her blog post of March 23, 2011 on the Web In Travel web site, Corinne Wan discusses her virtual attendance to the popular South by Southwest Conference held in Austin, Texas. After outlining the benefits of virtual attendance, she says “...if attending virtually is such a kick, imagine what it would be live.”

The question that most hospitality managers are asking is whether or not to support this trend, and if so, how to do it. During the 2011 International Association of Conference Centers Thought Leaders Summit, Jeffrey Vredevoogd, director of education solutions at Hermann Miller said about the impact of virtual events, “...you can’t run from it — you must embrace it.” According to a survey published by PhoCus Wright in December of 2010, one in five meetings now incorporate some type of virtual element.

Setting Up a Virtual Meeting

The major impact of this trend is still to come, and hospitality organizations have the opportunity to prepare now. As with most trends, there are three basic approaches to accommodating this new reality. Facilities that adopt a

low level of preparedness will have a “wait and see” position on this trend. They will not make any improvements to infrastructure or offer any type of solution for service to their customers until not doing so proves to have a negative impact on their ability to book business. Facilities that adopt a medium level of preparedness are ensuring that they have the bandwidth required to stream multiple presentations into the virtual world, as well as provide adequate coverage for all of the mobile devices used by the on-site attendees to interact with both the physical and virtual portions of the event. A high level of preparedness is achieved by facilities that make these improvements to infrastructure, and then work with their IT and AV services to actively promote and offer virtual event solutions.

As the workforce gradually transitions from the Boomers, to Gen-X and eventually the Millennials, virtual events will become more and more commonplace. A study by the U.S. Department of Education has suggested that today’s students may actually learn better online than they do in a traditional classroom environment. On many college campuses watching lectures online is now the homework for classes, with the class time dedicated to discussions and interactive learning. As these next generations continue to enter the workforce they will expect to continue this type of learning and interaction in their professional lives.

The virtual world has already entered the mainstream, with hundreds of millions of users on social media sites such as Facebook, Twitter, LinkedIn and YouTube. Advances in personal technology such as smart phones and tablet computers allow everyone nearly instant access to the virtual realm. Face-to-face meetings, with multiple sessions and events, generate a great deal of content that has a value for both remote and on-demand viewing. Because meeting attendees will increasingly expect access to this content, meeting planners will look for ways to capitalize on its value. The hospitality industry must prepare for this reality sooner rather than later, because in many cases the future is already here. ■

Networking Considerations for the Next Phase of Interactive Television

By David M. Bankers

Today it seems as though everyone in consumer electronics is talking about apps, smart TVs, Over The Top (OTT) TV and so forth. Numerous companies want to sell you an apps-enabled box to attach to your TV, and every major TV manufacturer would like to sell you an apps-enabled TV to connect to Web delivered content — and of course, add still another remote control to your collection.

Yet after more than 15 years, consumer product vendors are still trying to figure out the best way to deliver Web content through the TV. Limitations carry over to the guest room environment, where they are compounded by questions of guest usability, installation costs and upgrades necessary to keep up with consumer expectations.

In this context, hoteliers contemplating the next phase of interactive TV (iTV) are wise to consider two key questions: in-room or virtual client, and IP or RF (coax) delivery.

In-Room or Virtual Client?

The in-room client model involves equipping each guest room with a dedicated processing unit and application software that runs locally. In-room clients have the processing power to support robust applications, as well as a personalized TV experience and one-to-one guest marketing. On the other hand, adding an in-room box to the TV typically duplicates TV components (such as tuners, video processors and power supplies), which increases total solution cost, complexity and maintenance demands. The box and its connections also increase the risk of guest tampering in this less controlled environment. That being said, solutions are available that integrate the client into the TV, delivering the essential benefits of an outboard client without some of the drawbacks.

In contrast is the virtual client model, in which computing and rendering power is moved to a hotel data center (or ultimately, the cloud). The virtual client host machine takes the form of a powerful server that virtualizes the equivalent of numerous in-room clients. User input is passed from the guest room to the virtual in-room client for each user. While this approach offers lower capital cost, improved scalability and maintenance, and is readily upgradeable, it is subject to denial of service (if not enough clients are available to meet peak demand) or poor performance. Virtual clients deliver services with increased capabilities at a much lower cost per room, as it is more affordable to place powerful computing devices in a central location than to deploy to each room.

Ultimately a balance is ideal: modestly capable TVs as in-room clients for very frequently used lightweight apps

Virtual clients deliver services with increased capabilities at a much lower cost per room, as it is more affordable to place powerful computing devices in a central location than to deploy to each room.

(like an interactive program guide) and virtual clients for complex heavyweight apps.

IP or RF Broadcast Distribution?

Regardless of whether an in-room or virtual client model is employed, the connection between the device and server (or cloud) is critical to performance. This connection can be done via an IP network or an RF network.

IP is being successfully implemented in hotels and is seen as the infrastructure of the future. From a total cost of ownership perspective, IP can provide advantages for properties that have installed a converged IP network and are using it to provide voice, video and data to guest rooms and the back office. For a “green field” installation, a converged network provides capital and operations leverage compared to installing and operating multiple networks. Operating multiple applications on a converged network requires increased network management capabilities to manage Quality of Service and security.

For hotels with an existing coax network it is typically most cost effective to deliver video services using RF broadcast technologies. There have been great strides in providing IP over coax — but while these capabilities typically meet the needs for data services and possibly IP video on demand (VOD), they typically do not support the bandwidth needed to provide IP-based, free-to-guest services. This situation leads to installing and operating hybrid solutions that use an IP network for data and VOD, but still uses the RF plant for distributing TV channels.

As you can see, an array of options are available to position your property for the next phase of app-intensive, interactive guest room television. ■

Strong Protection Starts With Building a Culture of Security

By Mike Soule

PCI compliance is a hot issue in the world reservation processing. As the online travel industry moves away from manual data entry to automated reservation delivery, many hotels and software/service vendors find themselves under the scrutiny of data protection standards that rival those of governments and international banks. More importantly, we find ourselves facing real world risk and the reality that data security, if taken lightly, can mean disaster both in terms of cost and reputation.

It walks the much touted, but often misunderstood, Payment Card Industry Data Security Standard or PCI DSS. So what is PCI compliance really? First off, there is not simply one standard or level of compliance. There are in fact four levels of compliance, each requiring increasingly rigid scrutiny to meet and maintain compliance (Level 1 being the highest). What's more is that it is not entirely clear which level a given vendor is required to achieve. Until a vendor is processing several million credit card transactions per year, the level of compliance the vendor should meet is rather subjective and usually chosen by the vendor. Furthermore, only Level 1 compliance requires an onsite audit by an independent authorized PCI auditor.

Evidence of Compliance

What this means for hotels that rely on vendors to handle their most sensitive data is clear. A vendor can claim PCI compliance by filling out a self-assessment questionnaire and performing one automated software scan every three months. This level of compliance may be suitable for a small e-commerce store, but it could mean disaster for hotels that rely on secure processing of sensitive data.

So what about a Level 1 compliant vendor? In order to be Level 1 PCI compliant, an independent authorized auditor must audit the vendor annually. As part of this process, an auditor will perform several independent scans of the vendor's environment and will require regular internal and external scans. An auditor will verify that all requirements have been met by collecting documented evidence for each requirement. They will also verify that the vendor has regular reviews of its compliance procedures throughout the year and has mechanisms in place to detect and respond to potential threats both from the outside world and from within the company itself.



Building a Culture of Security

Using a Level 1 compliant vendor for critical business needs is a great step in ensuring that your data is safe, but it doesn't stop there. True security is less about having a seal of approval and more about having a culture of protecting your customers and your data. To have real peace-of-mind, data security should not just be an annual or quarterly review, but instead a mission embraced by all ranks of an organization and its partners. Sensitive data should be shielded by several layers of security and multiple steps should be required when accessing data in its raw unencrypted form.

For the travel industry, the jump to automating data delivery to property-level systems means sharing critical data across multiple vendors. It also means higher scrutiny from consumers and industry standards like PCI DSS. This jump, however, does not have to mean greater risk for hotels and their customers. If we are diligent about building an industry culture of security, we can move into the world of automated distribution and reservation delivery with solutions that not only bear a seal of compliance, but offer truly secure data processing and transmission. ■

Mike Soule is director of technology for EZYield where he is a driver behind technology initiatives like PCI DSS compliance.

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