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The HITEC Special Report provides thoughtful analysis on many of the technology issues on our minds.

With the amount of media we have at our fingertips there is a potential for information overload. We all are good at sitting down with our smart phones, tablets or laptops and wending our way through articles, links and commentary. Yes, gathering information is no problem. Then you have HITEC, which presents to you in one place an arena for an interactive experience. An experience that brings you the opportunity for thoughtful exchange.

While you are at HITEC, take in the multiple sources of information on offer — keynotes, super sessions, boot camps, tech talks, industry publications, exhibitors — and then reply right back so you can narrow in on the specifics useful to you. This is a once-a-year event where the dialog on hospitality technology flows, don’t let it pass you by.

This Report is a value-added bonus that I know will give you further insight on the industry trends you will discuss. In addition to the articles written by hospitality technology experts, we have a special feature on the inductees to the HFTP International Hospitality Technology Hall of Fame. A group of inductees provided insight on the industry challenges they experienced over the past four decades and where they see the industry is moving going forward. Also featured are profiles on the two 2015 inductees, much congratulations, and a gallery of all inductees.

I’d like to thank the authors who have volunteered to share their knowledge within these pages, as well as the members of the Advisory Council for their assistance with this project. In particular the three council members who helped review articles, including: Cindy Estis Green; Mehmet Erdem; Ph.D., CHTP; and Tanya Venegas, MHM, MBA. While HITEC is an established event, it remains responsive to industry changes and trends, due in large part to the experienced volunteers who help plan HITEC. Thank you for continuing to make this a place where important discussion happens.

Christina Cornwell is senior director of technology, APAC for Hilton Worldwide.
Recognized for being industry pioneers, inductees to the HFTP International Hospitality Technology Hall of Fame are the individuals behind much of the hospitality industry’s technology developments. Having been active in the industry from a time when technology was almost nonexistent to the present where it’s a part of almost every function, we asked inductees to discuss their perspective on the industry. We talked about the challenges — old, new and ongoing — what technologies have had an impact and which will continue to bring change to the hospitality industry.

What follows is an insightful conversation with a group of inductees. Participants include: Robert Bennett; Dave Berkus; Richard Brooks; John Burns; Fraser Hickox; Ted Horner; Jon Inge; Michael Kasavana; Douglas Rice; Jules Sieburgh; Harbans Singh; Sal Spano and Frank Wolfe.
Notable IT Challenges

There is no question that change is one of the defining features of technology, and as professionals who started in this industry over four decades ago, many of our participants went from zero to 100 percent integration. In the early days, if you can believe it, one of the largest hurdles to overcome was getting management to visualize the benefits of technology tools.

Brooks says, “Perhaps the greatest consistent challenge I encountered was just the acceptance of technology in our industry. For many years technology was viewed as a ‘necessary evil,’ or a tool that had not reached sufficient functionality and maturity to be a truly competitive asset to hospitality managers.” And because there was not sufficient support for technology, it took some time for technology companies to gain a foothold and stay in business long enough for their product to gain acceptance.

Time and technology did move forward, with technology developments leading to a size reduction of hardware — hello PCs and mobile media — and the improved functionality of systems. The challenge then came in the form of disconnected systems: the POS didn’t match the CRM, etc. Rice explains, “We operate in a world with hundreds or thousands of vendors, most
of whom don’t play by common architectural rules that would make it easier for hotels to bind them together in a cohesive way. So there are lots of loose ends that each hotel group (or even individual hotel) needs to try to tie together as best they can, which often isn’t a good or cost effective solution."

— Douglas Rice

On Technology Development

“Hospitality technology vendors and users must learn to be agile and adapt to change — or suffer a loss of leadership or even relevance. This form of creative destruction has continued to ravage the industry from its technology beginnings, and provides openings for new companies with new ideas periodically to shake up this industry.”

— David Berkus

“Each seven to 10 years, there is a new generation of technology that challenges suppliers of systems to upgrade or rewrite in order to remain current, and fend off new competitors who are starting with a clean slate and no massive user base to service, a reality that distracts R&D developers of current solutions from concentrating upon only the next generation,” explains Berkus. “Hospitality technology vendors and users must learn to be agile and adapt to change — or suffer a loss of leadership or even relevance. This form of creative destruction has continued to ravage the industry from its technology beginnings, and provides openings for new companies with new ideas periodically to shake up this industry.”

From the guest-facing side, hoteliers must align with cultural expectations. “Today the menu of IT options is so vast that hospitality has a new challenge, and that is to provide a user-friendly solution to a sophisticated consumer that is used to being gratified almost instantaneously with their own home/business selected IT solutions,” says Spano.

And still an ongoing issue, despite a lot of progress in that direction, is architecture. “Interfaces between systems is another one; there’s been so much work on standards that things have certainly improved, but so many hotels want a little bit more than the standard that the challenge never ends,” says Inge.

Fantasy to Reality

Certainly, having been immersed in technology in a time of immense technological progress, thoughts toward what could be possible can run far. We asked participants to name technologies that were once a fantasy which have actually become a reality. Amongst the responses, we got sci-fi like technologies such as video calling, mobile media, environmental controls, networked Internet-connect-
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ed devices in all formats, and as Inge enthuses: “a watch that could open my guestroom door, for one!”

“Since my start was so long ago it is very exciting to live today with the amount of power and portability that we have with us at all times using tablets and smart phones,” says Sieburgh. “And next is the potential of things like virtual reality, 3-D printing and newer wireless alternatives.”

Kasavana is amazed by the fact that the service-oriented hospitality industry has embraced self-service technologies. “All self-service applications are counter to the once held principle that hospitality functions need to be conducted on a face-to-face basis. In other words, technology had to remain out of the guest’s sight in order to preserve the sheltering of automation,” he says.

**Technologies That Made a Difference**

More down to earth, but still making a difference are the workhorse technologies that are the foundation of operations. For one, the Internet has been a game changer — yes for pretty much everything. More specifically for hospitality, it has brought to the mainstream online distribution and rate transparency, and made hotel information available to potential guests via the hotels’ web sites and travel review sites. Via cloud-based systems the flow of data is much easier to manage between multi-property companies and their partners.

Bennett explains, “What is most exciting to me now is that by combining the power of cloud computing, and the universal access to data via the Internet, we can create business intelligence applications using large databases that will allow the hospitality industry to serve guests better, improve operations and therefore thrive. I predict that data-driven analytics will become one of the next awesome technology-based developments to benefit hotels.”

On Greater Access to Data

“What is most exciting to me now is that by combining the power of cloud computing, and the universal access to data via the Internet, we can create business intelligence applications using large databases that will allow the hospitality industry to serve guests better, improve operations and therefore thrive. I predict that data-driven analytics will become one of the next awesome technology-based developments to benefit hotels.”

— Robert Bennett

On Problem Solving

“Methodology to solve problems only comes with experience and if you have a good global network of contacts this helps as you can reach out to discuss with them what they did to solve a problem. Also, I have found common sense is a great starting point in looking to solve issues and sometime this is lost in the desire to solve a problem quickly.”

— Ted Horner

Keeping up With Technology Innovation

In a discipline that has been experimental, new and evolving; keeping up-to-date depended on information sharing amongst practitioners.

Horner explains, “The only way to stay current is to attend as many industry events as possible, as the house systems that has allowed hotels to improve efficiency and maximize the accumulated data: such as property management, point-of-sales and central reservation systems. “Specializing in hotel reservations and electronic distribution, it all began with the development and widespread implementation of the hotel central reservation system (CRS),” explains Burns.

The other change that was widely noted by participants was the progressive downsizing of hardware and the personal computer. “After having done this for 30 years, one thing that has changed over the years is the technology platform: mainframes to minicomputer. This evolved to the personal computers and now we are evolving to mobile devices and online cloud based systems,” said Singh.

Bennett further emphasizes the importance of reliable hardware: “Early in my career as an IT manager at a hotel, maybe 75 percent of my issues were hardware related, leaving little time to improve applications or processes. Today, those hardware reliability and compatibility issues are almost completely gone and IT managers can make much more valuable contributions to hotel operations and guest satisfaction. Inexpensive, reliable, standard hardware and operating systems are really what have allowed technology to expand in hospitality. So one of the defining technologies of my career was the PC, which represented all these attributes.”
face-to-face contact is the best way to liaise with industry colleagues and get the information you want directly. HITEC is the first date in my diary and this year is my 27th in succession."

He further explains, “Methodology to solve problems only comes with experience and if you have a good global network of contacts this helps as you can reach out to discuss with them what they did to solve a problem. Also, I have found common sense is a great starting point in looking to solve issues and sometime this is lost in the desire to solve a problem quickly.”

Singh agrees, “In terms of problem solving, the key issue is to identify what the problem is. It seems like a no brainer, but many times the problem is not understood. The key to solving the problem is to look for the right resources, knowing who can help you address the issue; or if not, point you in the right direction.”

Another notable way to build knowledge is to accept the guidance of others. Hickox says, “I am fortunate to have a number of mentors who would freely exchange their thoughts on what was evolving from their labs. With this information I was able to undertake further research and determine how it may be applied within the industry.”

And one further way to build knowledge is to share knowledge yourself. Wolfe says, “Since I write columns for several magazines and also am interviewed frequently, I do a lot of personal research. But the thing that I do that pays the most in dividends is that I surround myself with executive level staff who are smarter than me. The HFTP team constantly strives to balance ‘bleeding edge’ ideas against risk and reward. In regards to the association’s services, our goal is to make them valuable and not just use technology for technology’s sake.”

A Look Ahead: Impact Technology

Networked technology and data stores are what will power hotel operations going forward. As the industry moves toward maximizing their capabilities, the way guests will be greeted, attended to and marketed to will all be supported by a technology net. Singh says, “I feel that the front desk of the future will change with the developments in mobility and cloud based applications. Guests are going to be driving the needs for the technology deployed in the hotels, unlike currently where hotels are deciding what their guests need.”

Already, the industry is taking advantage of the direct line of communication to guests via mobile media. “Smart phones and the proliferation of apps give us the power to do so many things from the palm of your hand… The hospitality industry has embraced apps to the point that mobility is an essential part of how hotels communicate with guests and vice versa,” says Horner.

And the advantages of big data are huge says Burns, “The potential insight available through Big Data, to better understand what is happening and why, as well as the possibility to achieve real personalization in online commerce and relationships between hotels and their guests.”

Final Reflections

As participants wrap up the conversation, they had some final thoughts to share:

Kasanova said: “Nothing can impact the way a hospitality business is planned, conducted or managed than a sound technology roadmap. The industry has a promising future given the progressive evolution of sophisticated property management systems, foodservice management systems, and guest and non-guest operated interfaces.”

On hospitality professionals, Burns is intrigued by, “The need by hotel management staff for strong leadership, mental agility, decisiveness and a willingness to repeatedly reinvent their teams and their objectives.”

And finally, Spano has a positive outlook for HFTP, the producers of HITEC: “I personally have had a unique experience spanning almost half a century with the professional association of HFTP, watching it transform from a financial defined group to a world recognized group of executive professional that know no bounds. With the strength of strong leadership, HFTP will become a leader for the industry and help define where it can go in the next century.”

On What’s Ahead

“ I feel that the front desk of the future will change with the developments in mobility and cloud based applications. Guests are going to be driving the needs for the technology deployed in the hotels, unlike currently where hotels are deciding what their guests need.”

— Harbans Singh

On HFTP

“ With the strength of strong leadership, HFTP will become a leader for the industry and help define where it can go in the next century.”

— Sal Spano
Not only is Scot Campbell, CHTP a member of the HFTP Global Board of Directors, but he is also one of the 2015 inductees of the HFTP International Hospitality Technology Hall of Fame. Many peers and industry leaders wrote in to nominate Campbell and praise him for his exceptional leadership and status as an industry visionary.

Today, Campbell is the vice president of IT connectivity and communications for Caesars Entertainment, but his interest in the hospitality industry was piqued at an early age.

“As a child my family lived in a hotel for a month while our new house was being built in Omaha, Nebraska,” recalls Campbell. The entire hotel thing fascinated me. I was very curious about all the extremely nice people that worked there and the jobs that they did. It was many years later that I was given the opportunity to work in the industry and still picture some of the great experiences that hotel gave our family.”

Campbell “blames” his wife for his fascination with technology and cites her gift of a Commodore Vic20 for sparking his passion. Campbell remembers it was then that he fell in love with technology and “time started to drift away, days became nights, and I saw the sun come up too many days.”

Campbell began his career in radio broadcasting and was soon led to Las Vegas. He gained entry into the industry when he was hired to work at Mirage Resorts Inc. to centralize the IT function of the resort. It was at Mirage Resorts Inc. that Campbell recalls a memory he will never forget:

“My first day at Mirage Resorts, I asked the question, ‘What does customer service mean to this company?’ The answer, I will never forget: ‘If you make a mistake in the back of house and it costs the company money, I will want to know that you won’t make the same mistake again, but if a customer asks you where the elevator is, and you don’t pick up their bags and take them there — you’re fired!’”

As time went by, Campbell continued to learn and grow and was soon faced with the behemoth task of helping to open MGM’s CityCenter in Las Vegas. CityCenter is an $8.5 billion dollar multi-brand resort boasting in-room automation deployment that is recognized as the most technologically advanced resorts in the United States. When speaking to Campbell, it is clear why he was chosen for this project.

“Today it is becoming more important that the IT systems in hotels are part of the brand perception. Wi-Fi, in-room technology, self check-in, Bluetooth door locks, etc. are becoming brand differentiators. The resolution is that IT must become more development focused and the operations group probably should become more IT aware. When this happens, experiences begin.”

Outside of the office, Campbell readily offers that his passion is hospitality technology, but his purpose is “to teach young people that there is hope in their lives.” Next year, Campbell will become the chairman of LifeTeen International’s board of directors. LifeTeen International is a Catholic youth ministry used by over 1,800 churches worldwide.

Of all the things Campbell has accomplished in his personal and professional life, he wants everyone to know that “being some small part of inspiring another person to be great is what brings [him] the most satisfaction” and that he owes all of his success to his wife and family and his love for God.
You certainly would not be wrong if you called Michael Schubach a master of the hospitality industry. Schubach has established careers in both hospitality accounting and technology and will soon be adding HFTP International Technology Hall of Fame inductee to his list of accolades. With over 30 years in the industry, Schubach has proven time and time again that drive and know-how lead to success.

Schubach is a cum laude graduate of the University of California at Santa Barbara, dual HFTP certification holder (CHAE and CHTP) and a 2007 MBA graduate from Methodist University. Keen on sharing his knowledge with the industry, Schubach continues to lecture, teach, write and consult on systems worldwide. Schubach’s keen intellect makes him an easy participant choice for think tanks in North America, Europe, Asia and Africa.

“Few in our profession have the breadth of knowledge and practical experience that [Michael] has,” says Rod Jimenez, CEO of Sceptre Hospitality Resources, LLC. “His depth of understanding of the issues surrounding hospitality technology and his ability to distill proposed solutions into practical roadmaps is uncanny.”

Schubach began his hospitality career when the college dorm he lived and worked at opened as a summer hotel for backpacking Europeans. During the summers he worked as the manager on duty while the venue hosted back-to-back week-long cheerleading camps. Of this time, Schubach says, “even after all that, I still wanted to work in hospitality.”

Through the years, Schubach has served as a night auditor, front office manager, regional front office trainer and director of accounting services. In 1983 while Schubach was with L’Ermitage Hotels of Beverly Hills, he founded the Educational Services Group (ESG). ESG went on to become the exclusive installation team for Computerized Lodging Systems, Inc. (CLS). During a decade with CLS, Schubach supervised more than 2,500 PMS installations worldwide, participating in more than 200 of them personally. Schubach also served for more than a decade as vice president of resort technology for ClubCorp, overseeing the IT efforts for five major destination resorts, as well as the technology requirements for the 1999 and 2005 U.S. Open golf championships at Pinehurst Resort in Pinehurst, N.C.

Schubach’s time at CLS was particularly memorable because of his ability to work with an inspirational mentor, Dave Berkus, founder of CLS. Schubach says Berkus “led by example, was meticulous and fair.” Schubach notes that Berkus “tried to do right by everybody,” which is something he greatly admired of his mentor.

Most recently, in 2008, Schubach joined the Trump Hotel Collection as their CIO, where he is responsible for systems selection of the collection of ultra-luxury hotels in SoHo New York, Waikiki and Panama. The Trump Hotel Collection continues to open new destinations worldwide.

Aside from the hospitality industry, Schubach enjoys experiencing culture and the arts. He particularly finds great joy in writing and theater.

“What would surprise everyone is that I want to win a Tony for a hit play, preferably a musical, maybe starring Nathan Lane, Matthew Broderick, Glenn Close (who can sing) and David Hyde Pierce (who gets close).”

“I am thrilled and honored to be included in the HFTP International Hall of Fame. I’m extremely grateful for the recognition by my peers, coworkers and friends in the industry.”

By Danielle Earp
HFTP International Hospitality Technology Hall of Fame

Inductee Gallery

The Hall of Fame is HFTP’s highest level of recognition in the area of technology. Since 1989, 38 individuals have received this award as a reflection of their contributions to the hospitality industry. Hall of Fame members have been selected by their peers as representing the best in innovation and application and as leaders in their profession.
Wearable Market: Initial Insights for the Hospitality Industry

By Ajay ‘AJ’ Aluri, Ph.D.

As smart watches, glasses and other wearable technologies go mainstream, consider current consumer perceptions and interest level

Several mainstream technology companies in the last three years have aspired to capture the consumer market and to establish themselves as an early participant in the wearable technology movement. Some of the key players include Samsung, Google and Apple, but many more have been following developments, looking for a way to make their own entrance into mainstream markets. According to PwC (2014), 21 percent of consumers in the U.S. own a wearable device and 10 percent of them wear them every day. To put this in perspective, approximately 1,260 attendees at HITEC 2015 own some type of wearable device, and around 600 of these individuals will be wearing them during the conference. With the expected surge in wearable watch sales in 2015, especially Apple Watch, these numbers will probably rise. Gownder and McQuivey (2014) of the Forrester Research firm found that a significant percentage (68 percent) of global technology and business decision-makers consider wearables a big priority in 2015. They even predict that consumers will readily adopt smartwatches, which will open the door to other wearables that can be clipped to or embedded in clothing, ear buds and headphones, and smartglasses. Where hospitality educators and

Ajay "A.J." Aluri, Ph.D. (ajay.aluri@mail.wvu.edu) is an assistant professor of hospitality and tourism management at West Virginia University in Morgantown, W.V. Aluri was selected to be a part of the Glass Explorer program in the fall of 2013. He has since used the technology to explore wearables and its influence on consumer behavior, specifically on user acceptance and adoption.
practitioners are concerned, it is vital to keep up with wearable computing research and market trends, to see how this technology will influence guest usage and business.

The Smartwatch Market
In September 2013, Samsung launched its Galaxy Gear, a smartwatch wearable device that could “capture daily life from your wrist,” but the product failed to meet consumer expectations and performed poorly in the commercial market (Gibbs, 2013). What did these and other commercially available wearables teach us about how consumers receive this new technology? Perhaps we have seen that it is too soon to call this race. According to PwC (2014) and Gartner (2014) studies, two million smartwatches were sold by March 2014, and 3.3 million fitness trackers were sold in the U.S. in the same year. In fact, fitness trackers appear in more U.S. households than smartwatches. However, according to Adams and Koenig (2014) of the Forbes and Smartwatch Group, 40 companies launched smartwatches in 2013, the market share of the smartwatch industry was $700 million in 2013, and the market was projected to grow to $2.5 billion in 2014. In fact, the 2014 numbers have surpassed the 2013 projections. In 2014, 6.8 million watches were sold, with a market volume of 1.291 billion — an 82 percent increase from 2013 — and the number of companies selling them have increased to 89 (Smartwatch Group, 2015). The top five manufacturers of smartwatches include Samsung, Lenovo/Motorola, LG, Pebble and Garmin.

The year 2015 is a trendsetting year for smartwatches. With the launch of Apple Watch, market researchers and practitioners should now consider learning the market and studying consumer behavior before and after the Apple Watch launch. According to Slice Intelligence (2015), Apple sold 1.7 million watches through pre-order. In fact, there are thousands of consumers still waiting for their watches to ship, because most of the models have a waiting time of six to seven weeks. According to other sources, as of early May 2015, Apple may have sold 3.1 million units, and may
ultimately sell close to 15.4 million units by the end of 2015 — double the total sales for smartwatches in 2014 (Tibken, 2015). These current and projected sales of Apple Watches would make them the leaders in the smartwatch market in 2015. It should be noted that smartwatches are designed to integrate with mobile devices and can never have their own market. Even fitness trackers may be wiped out as these applications are integrated with smartphones.

By contrast, smartglasses can stand alone in their own market as a hands-free, voice-activated device, and therefore have fewer limitations and a greater capacity to revolutionize the way we use technology. The current market success of smartwatches and fitness trackers is a good indicator that we need to be looking into comparable kinds of wearable technology, particularly smartglasses, although so far, that kind of in-depth market research hasn’t been done.

The Smartglass Market
When it comes to commercial smartglasses, Google is one of the first innovators with its Glass Explorer program. In the Google+ Glass Explorers (2015) community, there were 46,519 users as of February 2015. Unfortunately, this community only represents a portion of the Explorers in the program. According to Sacco (2014) of CIO Magazine, an “admittedly unscientific” estimate of 10,000 Glass units were sold in 2012, and the program creators predicted they might have as many as 40,000 official users by the end of 2013. All totaled, it can be guesstimated that there may be around 300,000 Glass Explorers in the program. On January 15, 2015, Google notified its Glass explorers that they were closing the Explorer program on January 19. Several news channels and magazines, as well as the online community responded by criticizing Google’s decision and its Glass team. To be fair, Google never launched a commercial version of Glass; it was an Explorer “beta” version. It was always legitimate to test innovations such as Glass and other eyewear wearables before a mainstream market launch.

Early research found that most consumers prefer wrist-based wearables over eyewear and smartglass wearables (Read the Gownder & McQuivey (2014) study from Forrester’s Research). If Google had developed Glass secretly, they would not have had such an excellent opportunity to examine current consumer behavior and explore the future of the wearable wearable market. This Glass Explorer program gave early adopters an opportunity to explore this new technology and learn more about the future of wearables. Furthermore, Google paved the way for several start-up companies to develop cutting-edge wearable devices specifically designed for games, augmented reality, virtual reality, commercial use and personal use. In other words, this is the beginning of wearables (especially smartglasses), not the termination.

Smartglass Preferences
The attendees at HITEC 2014 were given a demonstration of Google Glass and a research survey was conducted to explore consumer intentions to use and buy wearables. The results of this study are available online at The Bottomline magazine, Winter 2015 issue, “Are You Ready for Wearables” article by Aluri (2015).

As a Glass Explorer and researcher in wearable technology, I surveyed 708 respondents between March and November 2014. I asked individuals about their preferences and intentions to use Glass, and here are a few things I learned:

- 88 percent of the respondents said they were familiar with Glass;
- 5 percent of the respondents had already used Glass;
- If given an opportunity, 94 percent said they would like to try Glass;
- At the suggestion that the price was flexible or negotiable, a significant majority, 56 percent, said they would be willing to buy the device if it cost less than $499;
- Regarding the battery life of Glass when used continuously with video capability, 37 percent of respondents said they were looking for eight hours or more of battery life;
- When using hands-free, voice command activated Glassware applications, 84 percent wanted to use Glass for directions, 82 percent wanted to take pictures, 76 percent wished to record videos, 73 percent planned to send messages, 69 percent would use it to place phone calls, 68 percent would have used it to search, 64 percent would use it to translate and 64 percent would use the device to stream live videos; and
- A 66 percent majority said they would be willing to buy Glass if it was commercially available.

These results reveal that a significant number of consumers are familiar with smartglass wearables, namely Glass, and are willing to try, use and buy them, if available. However, the respondents gave five main reasons why they wouldn’t be interested in Glass and wouldn’t buy it:

- Cost of the device;
- Glassware apps were not personalized enough or didn’t offer features beyond familiar mobile apps;
- Battery life of the device;
- Not personally interested or uncomfortable using Glass wearables; and
- Privacy concerns.
Going Mainstream?
When it comes to wearable computing, especially smartglasses, there is hope. Consumers are willing to try and even buy the devices, but only if they meet their specifications. Regarding costs, wearables can be designed with multiple price points, each with different battery life and memory options, so consumers can buy them based on their usage and budget. The challenges with wearable batteries continue to diminish as researchers make breakthroughs in nanotechnology that will phase out the lithium-polymer batteries in the market today. Several start-ups in the wearable industry are already offering alpha and beta versions of their own devices. The results of this study reveal that smartglasses should be fascinating, comfortable to use and the design should be subtle enough that users are comfortable wearing them everywhere. One possible solution for overcoming privacy and security concerns about wearables, especially smartglasses, is a call for universal standards or laws to guide businesses that manufacture wearables.

Google provided an opportunity to examine consumer behavior regarding the use of wearables, which allowed both consumers and businesses to pinpoint their concerns regarding Glass and develop ethical and legal solutions to these problems. Looking ahead, the market for general and daily use wearable smartglasses is now open, and several sources have predicted that wearable computing will be a huge market. This May, Microsoft showcased its new wearable device, HoloLens, a holographic wearable computer that runs Windows 10, at the Build 2015 Conference. Now that it is an open competition, wearable smartglasses that can meet the everyday needs of the consumer may come from existing companies like AtheerOne, Aurasma, CastAR, EmoPulse, HoloLens, some future model of Google Glass, GlassUp, Icis, K-Glass, Laster Seethru, Magic Leap, Oculus, Ora-S, OrCam, Meta, Vuzix, or perhaps a new company we have yet to see. It will also be interesting to observe whether Apple Watch and other smart watches will change the future of smartglass wearables. Wearable technology is here, and it will continue to draw attention to itself in the market, until the right technology and device emerges that will improve the way we compute and use technology every day.

Sources
The Rise of Robotics in Hospitality

By Galen Collins, Ph.D.

Increased functionality and declining costs raise the appeal for service-oriented robots

Some may think the title of this article is an oxymoron. How could robots replace the warmth and personal attention from well-trained employees? And why would hospitality businesses even contemplate pursuing this course of action? Because robots have the capability of performing basic, repetitive tasks unsupervised 24 hours per day in a world with an inadequate workforce. A 2015 World Travel & Tourism Report predicts a decade-long global shortage of “the right people, in the right place, with the right skills” to meet the growth of the global travel and tourism industry, which roughly employs 266 million workers. Perhaps robots could be part of the solution in filling the workforce gap.

Robots have come a long way since the first digitally operated and programmable robot, invented by George Devol in 1954, was installed in 1961 in an auto plant in Trenton, N.J. to lift hot pieces of metal from a die casting machine and stack them. Robots can now take inputs from onboard sensors (e.g., camera, sound, proximity, biometric, contact, light, temperature, navigation, etc.) and send outputs to their effectors (e.g., wheels, speech, legs, arms, fingers, propellers, etc.), enabling them to perform behaviors or tasks with a high degree of autonomy. They can move and work for an extended period without human intervention and assistance. They can also gain information about the environment,
interact with people and systems, manipulate objects and tools, and locate and connect to charging stations.

One way of characterizing robot design is by appearance: human-oriented or product-oriented. A human-oriented robot resembles a human’s appearance or behavior, whereas a product-oriented robot appearance maximizes the robot’s dedicated functions (e.g., Roomba vacuum cleaner). Several studies have shown that the human-oriented robot is more effective in social interactions with customers. However, a 2014 study conducted by Korean university researchers found that product-oriented robots were accepted more than the human-oriented robots. Customers may initially perceive robots as an impersonal technocratic intrusion, much like they did when wireless handhelds were first introduced in restaurants during the ’70s and ’80s. The public did not accept them. At some restaurants, servers were instructed to step away because of customer complaints.

**Robots in the Field**

Huis Ten Bosch, a theme park in Japan, will open a hotel in 2017 employing three human-oriented receptionist robots, called actroids, that will have the appearance and mannerisms (e.g., blinking) of a young Japanese woman. They will be multilingual with the ability to make eye contact and respond to body language and tone as they engage in intelligent conversations with customers. The hotel will also use other human-oriented robots for other tasks, such as cleaning rooms and carrying luggage.

Two product-oriented, headless industrial robots, originally developed for manufacturing cars, are now used as bartenders at the Bionic Bar on Royal Caribbean’s Quantum of the Seas ship. Together, they can make two drinks per minute, delivered in plastic cups via four conveyor belts, but cannot yet handle garnishes. Passengers input drink orders via smart tablets. The robot arm movements, which are based on the gestures of Roberto Bolle, principal dancer with the American Ballet Theater, periodically go into dance mode when not making drinks.

At Starwood’s Aloft hotel in Cupertino, Calif., a product-oriented robot resembling R2-D2 delivers items to rooms (e.g., snacks), aids the check-in process during rush periods, and moves towels and linens from the laundry room to guestrooms. The robot, called Botlr, uses navigation technology to find its way throughout the property and cameras to avoid people and other obstacles. The manufacturer of Botlr, Savioke, will offer it as a service and charge a monthly fee that includes maintenance of the devices.

In most industries, robots are being recruited for applications that have generally been performed by humans because of their increased functionality and the declining cost of making and supporting them. A 2015 study by the Boston Consulting Group predicts that over the next decade robots will become more prominent in the U.S. labor market as they improve productivity and cut costs. The Asian hospitality industry is already taking advantage of this trend. Thousands of noodle-making robots have been purchased by restaurants in China. A number of restaurants in Singapore use drones, pilotless flying robots, to ferry food from the kitchen to serving stations. Robot servers, costing under $10,000, can be found waiting tables at restaurants in China, Japan, South Korea and Thailand. A restaurant located in Ninbo, a city in China’s northeastern Zhejiang province, is staffed with two robot servers that can take orders, serve food, and speak to customers with a 40-phrase Mandarin Chinese vocabulary (e.g., “enjoy your meal,” “I’m blocked, please give way to me, thank you”). They travel through the restaurant using an optical sensing system and can work for eight hours at a time. Their expected life span is five years.

The hospitality and travel industry may eventually find the deployment of robots a competitive necessity. In the increasingly competitive healthcare environment, hundreds of hospitals are using robots to deliver linens and medications to patients’ rooms. Thoughtfully designed robot systems, however, will be required for service environments where customers may not even know what robots are and what they are trying to do, says Chris Jones, director of strategic development at iRobot.

**Robot Challenges**

Challenging problems in human-robot interaction (HRI) exist, both technically and socially. The goal of HRI research is to define models of humans’ expectations regarding robot interaction to guide robot design and algorithmic development that would allow more natural and effective interaction between humans and robots. Socially interactive human-oriented robots, for example, must be proficient in areas such as perceiving and interpreting human activity and behavior, regulating social interactions using dialogue and action at human interaction rates, and providing informationally and emotionally responsive feedback.

It is clear that robots are about to do much more than pickup dust and dirt particles. Hospitality businesses around the world are beginning to dip their toes in new robotic technologies, which might not make sense for those positions that deliver highly personalized services.

Many believe that affordable robots will soon be able tackle an array of tasks with greater degrees of autonomy and intelligence. This trend is obvious to Google who bought eight robotics companies in 2013. While there have been significant advances in robotic technologies, there is still much work ahead. Experts agree that we have a long way to go before robots are omnipresent in service establishments. But I can imagine the possibilities, such as robotic drones taking orders and delivering food and drinks beachside or roving security robots taking lost guests to their rooms, detecting and reporting intruders, and saving lives.
Are Mobile Payments (R)evolutionary?

By Cristian Morosan, Ph.D. and Agnes DeFranco, Ed.D., CHAE

The convenience of the one-size-fits-all model of mobile payment using near field communication poses to eclipse other payment options

October 1 or 10.1. A date that seems predestined for information technology, given its binary flavor. This is the date by which most merchants in the United States will eventually change their point-of-sale terminals to accommodate a new generation of electronic payments or be liable for fraud. The change is long-awaited. Most cards currently in use in the United States are based on a technology that stores information on a magnetic strip located on the back of the card, and many consider them obsolete. The change is a necessary step toward more secure electronic payments. Most civilized countries have already adopted secure electronic payments, facilitating large-scale consumer adoption of payment cards that include a microchip associated with either a pin or a signature. The microchip communicates with the point-of-sale terminal using an unique transaction code, which is supposed to make the transaction more secure. Additionally, there are proximity or near field communication (NFC) cards, which do not require the insertion or swipe of the card, but rather placing the card in the proximity of a reader to initiate the payment process. It is now the turn for the United States to show whether its consumers and merchants are ready to adopt the newer generation of electronic payments. At the time of this writing, many merchants have already deployed...
new point-of-sale terminals capable of handling chip- and NFC-based cards. In anticipation of the October deadline, many card issuers have started to gradually offer their consumers such cards. Overall, the shifting of the cards seems to be an attractive proposition to consumers and merchants alike, as both will greatly benefit from the more secure transaction environment. However, even with increased security as an invaluable commodity, in reality a card will replace another card. Thus, some may argue that this change is not revolutionary, but rather evolutionary. That is, consumers will still have to carry their wallets full of plastic when they go to a hotel, gas station or grocery store, and the card may still leave their sight when they pay in restaurants. So, is the United States electronic payment ecosystem ready for a revolutionary change? We believe that it is.

A Switch to NFC

Enter mobile payments. For quite a while, mobile technology companies have flirted with the idea of mobile phone payment. This idea could not have been implemented unless there were mobile phones capable of handling steady connections to the Internet and providing opportunities to consumers to view such hardware as replacements for their bigger relatives, the computers. Yet, what truly differentiates the mobile payments from the rival electronic payments is that consumers can combine the mobility and ubiquity benefits of the mobile phones with the user-friendliness of the online payment environment. At one point, a major barrier was the size of the screen, as most early smartphones capable of pay via the mobile Web were limited to providing surrogate payment solutions, which were not really convenient for consumers. As user friendliness, along with usefulness, represent two major conditions for technology adoption, the world of mobile payments was still waiting for something that addressed not only these two requirements, but also added a touch of fun and excitement to the technology utilization. This is what leads to the initial popularity of NFC mobile payments, which fit all the conditions to be largely adopted in the United States.

NFC mobile payments use two-way communications between devices that are equipped with NFC chips. In the United States, there are currently a number of mobile phones equipped with NFC technology, allowing consumers to use them as payment devices. The mass adoption of such devices is predicated upon some very interesting dynamics. First, to ensure that the basic conditions for adoption are met, the device, the carrier, the app developer and the merchant receiving the payment have to be all on the same page. All participants to this ecosystem must be performing properly, or weaknesses in the value chain could be created. In addition, to facilitate adoption, the whole ecosystem must be easy and entertaining to use. Although the full ecosystem is responsible for this, the most visible element ensuring user-friendliness and entertainment value remains the payment app. The success of apps like Apple Pay is largely attributable to their excellent user friendliness and entertainment value.

There are some other advantages offered by the NFC phones that could revolutionize the mobile payments in the United States. One important advantage reflects the fact that today’s mobile phones are not only viewed as technology devices per se, but rather as extensions of one’s self in the digital world. Because they can store and easily exchange personalized information, today’s mobile phones represent very attractive digital companions for consumers.

Another important factor that could facilitate the role of the mobile device in the payment ecosystem is the availability of the myriad of structured informational pieces that taken together describe the dense and fragmented hospitality industry. Especially when consumers are on the road, in hotels, airports, etc., their mobile phones can give them unprecedented, fast access to products and experiences that would be difficult to find in the absence of optimized search and fulfillment tools as the ones provided by the mobile phones. Such wealth of information facilitates all of the phases of purchasing, that is, from reading reviews about a certain merchant, finding that merchant and paying for the merchant’s products by using one single device.

"Such wealth of information facilitates all of the phases of purchasing, that is, from reading reviews about a certain merchant, finding that merchant and paying for the merchant’s products by using one single device."
Why EMV Shouldn’t Scare Hoteliers

The push to shift to EMV-capable terminals is an opportunity to switch to more secure systems, including point-to-point-encryption and tokenization.

EMV is coming. Don’t panic. By the time we all meet together at HITEC, we will be just four months away from the October 2015 liability shift date for retailers in the United States if EMV (or Europay, MasterCard and Visa) is not supported. After that date, whichever organization “breaks the EMV chain” will be held responsible for fraudulent card activity that could have been prevented had they supported EMV. In practical terms, that means the liability for fraud could shift to the banks if they do not offer chip-embedded smart cards to their merchants, or to the processor if they are not certified to receive the EMV transaction. Of course, it also means it could shift directly to the hotel if all other players are EMV ready, but the property could not process the transaction through a certified EMV terminal.

Before you panic and rush to implement an incomplete or insecure EMV solution, consider this: the EMV liability shift will likely have very little effect on the U.S. lodging market. What do I mean by that? The liability shift will effectively eliminate a business’ ability to fight chargebacks and will make them liable for a very specific subset of fraudulent card use. How much fraud and how many chargebacks does your property see today? It’s likely not very much. Recently, one large hotel chain ran the numbers to identify their potential liability exposure and realized their existing...
fraud and chargeback rate was only 0.03 percent. To put a dollar amount to that figure, the chain in question would have spent close to a million dollars to purchase and install new EMV-capable terminals in order to avoid an annual fraud loss that was in the low tens of thousands. If avoiding liability is your only reason to adopt EMV, it may take decades for the decision to make financial sense.

Why Should You Support EMV?
To honestly answer the “why” question, we have to look at what EMV will actually accomplish. In contrast to media reports following the Target and Home Depot breaches, EMV will not stop hackers in their tracks, nor prevent the types of breaches that affected dozens of major businesses (in both retail and hospitality) over the past two years. So what will it do? EMV was designed to authenticate the card itself and to reduce card-present fraud. And that’s exactly what it does. Almost all the security claims beyond that are exaggerated marketing efforts.

So, why should hotels with relatively low fraud rates spend significant resources to upgrade to EMV-capable terminals? For one simple reason: so long as we still have magnetic stripes on the back of our cards, our cards remain vulnerable. To see the true benefit of EMV in preventing fraudulent card use, we need the EMV “chip” method to become universal.

What’s In It For Me?
That brings us to the age-old question, “What’s in it for me?” The answer is two-fold. First, there will be many significant consumer-education programs undertaken by card-issuing banks as they begin to disseminate EMV cards. They will talk about added security and fraud prevention, and guests may begin to question the security of organizations that opt not to support EMV immediately. Sure, we could explain to them that even criminals aren’t dumb enough to use a stolen card to alert police to where they plan to sleep that night, but perception is reality and if you’re the last property in town to move to the new secure credit card machines they’ve been hearing about, people will notice — even subconsciously.

Second, the groundswell behind EMV gives those of us who are security-minded a perfect opportunity to not only upgrade our payment devices to support EMV, but also to support point-to-point encryption (P2PE), which will actually prevent the types of breaches we’ve seen over the last 18 months. Merchants should realize that EMV alone will not stop breaches, and while it will make it harder to use stolen card data in physical stores, it cannot prevent the use of fraudulent data online. And, if we’re totally candid, most of the EMV terminals on the market today actually send clear-text card data out of the back end and into the point-of-sale or property management system — making those systems an even bigger target for hackers than they likely are today.

Before worrying too much about EMV, make sure your system supports strong security solutions like P2PE, which encrypts card data the moment it enters the hotel’s systems, and tokenization, which provides for secure long-term storage of card data. As you are implementing P2PE and adding terminals capable of encryption at the swipe, simply choose one that also supports EMV, allowing those benefits to come as an afterthought of your real mission: securing your customers’ card data.

In the words of Ingenico’s vice president of security solutions, Rob Martin, “EMV protects you from the fraud that’s already taken place. P2PE and tokenization protect you from becoming the source of new fraud.”

When we look at the EMV migration as an opportunity to reevaluate our entire credit card environment and to take long-overdue steps toward true security, it becomes a benefit for us all. ✷
Imagine you’re at a casino playing at the craps table. You’ve decided the game is no longer going in your favor and you get up from the table. A message suddenly pops up on your smartphone giving you $25 worth of free tokens to be used in the next two hours.

Or suppose you’re just standing at the table watching. You’re not very good at craps and need more practice. A message is delivered to your smartphone giving you a free tutorial on how to play the game. After this, you are more inclined to play.

Using Wi-Fi data to track, enhance and engage the customer is no longer a fantasy. For many hotels, this technology is a necessity to create customer loyalty and repeat stays. For Caesars Entertainment, the importance of improved Wi-Fi service was paramount to delivering a favorable guest experience.

“We needed a system that not only provides bandwidth to our customers, but also one that enabled our business operations to go mobile,” says Scot Campbell, CHTP vice president of connectivity and communications for Caesars Entertainment Corporation. “This allows our employees to bring superior customer service right to our customers wherever they are in the hotel.”

Thus began the monumental project of installing data and Wi-Fi service to 42,000 rooms in 40 of Caesars’ U.S. properties encompassing 40 million sq. ft. and requiring

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just under 50,000 access points. The coverage would include guest rooms, all front-of-house and back-of-house locations, and indoor/outdoor space. The result would be the largest, single-provider Wi-Fi network in the gaming-resort industry.

“The project timeline to install all of this was 24 months or less,” says John Fountain, director of network technology for Cox Business/Hospitality Network, the company that installed the service. “We ran into unexpected challenges such as the appearance of physical infrastructure issues like power and air conditioning capacity.”

Perhaps the biggest challenge was room access and the ability to install the service without interrupting hotel operations and the guest experience.

“Room access is difficult if the guest is in the room,” says David Gagné, vice president of wireless and services for Zebra, formally Motorola which provided the hardware and physical deployment for the installation. “We managed to get 1,000 to 2,000 rooms installed in one week.”

Yet staying on this timeline was not easy. The logistics for getting materials into the hotel was formidable. According to Fountain, the number of network elements, cables to be installed and end devices was very high. “It required coordination of purchasing thousands of devices for a single hotel, landing them at a staging facility, building the entire network in that facility, tearing it down, packaging, shipping to the hotel, unpacking, installing and verifying operations while creating limited interference with guest and hotel operations,” Fountain says.

Building a Wi-Fi Network
Cox Business/Hospitality Network brought in Cisco gear for network transport and leveraged Wi-Fi access points using the 802.11n family of wireless standards, as well as the 802.11ac specification that provides the fastest Wi-Fi speeds currently available. Not only would hotel guests in all public areas of a given resort have seamless access to the Wi-Fi network, but hotel employees throughout its back office operations would also be able to connect to the wireless system.

“By installing this ‘personal Wi-Fi’ system which includes an access point in every guest room, our customers not only benefit from great bandwidth, but in the future will be able to communicate with numerous devices in their room (television, sound systems, etc.),” Campbell says. “This enabling technology is what customers will soon consider a requirement for their hotel stay.”

Recall the scenario with the craps table and the ability to track customer preferences. Cox Business/Hospitality Network deployed a customer envisioned, highly secure platform to deliver this useful marketing information in order to improve Caesars’ bottom line.

“We implemented location-based services (LBS) and Wi-Fi security using Zebra’s AirDefense Services Platform for security and their 6500, 7500 series APs to deliver advanced Wi-Fi,” Fountain says. “Additionally, all Cisco elements are redundant to the greatest extent possible ensuring high network availability as needed in a demanding hospitality setting.”

And for the guest, all of this Wi-Fi is free. Guests can choose to buy a premium package for video streaming, but standard service is included in the hotel rate for in-room service and in all public areas. How then can providing complimentary service improve the hotel’s bottom line? “The payback is being able to engage the customer which creates revenue and loyalty,” Gagné says.

Zebra triangulates the signal through Wi-Fi and passes the data to Caesars’ analytics department. The hotel then decides what to do with the data and where to take the guest. “By tying the data to their Total Rewards loyalty program they can learn who their customer is and can provide consistency of service, especially through franchises,” Gagné says.

The LBS technology allows hotels to guide guests to the right place at the right time. For example, Caesars can locate a guest who is waiting in the buffet line and give them an offer to get them out to the casino where they would spend more money. “If they are in the middle of a fine dining experience, they are spending money and we wouldn’t want to draw them away,” Gagné says. “When they are close to dessert, the Total Rewards app might send them a $50 gift certificate to spend in the casino.”

According to Gagné, Caesars’ new LINQ Hotel was experiencing some difficulty in getting guests far enough down the walkway that led to the High Roller — “the world’s tallest observation wheel” — so they could sell more cars on the ride. The LBS analytics allowed Caesars to see how much traffic they were getting and which paths guests were taking through the hotel. They then added regional shops and street performers to the walkway which directed more people to the attraction.

Customer experience is then improved in all areas, from Wi-Fi connectivity in each guest room to preferences in dining, gaming, entertainment and overall hotel offerings.

“Over the long term, Caesars Entertainment will be able to increase the Internet speed offerings while simultaneously leveraging location information to better serve guests,” says Fountain.

Savvy travelers have high expectations when it comes to their technology needs. The ability to use their devices anywhere in the resort and get rewarded by LBS, elevates their stay far beyond what they can get at home.

“Our goal was to seamlessly integrate technology to create an exceptional guest experience,” says Derrick Hill, vice president of Cox Business and Hospitality Network. “The Caesars Wi-Fi deployment represents the future trend in the hospitality industry.”
Managing With Mobile Tools

Management utilities designed for mobile media bring the command center out from behind the desk and immerse it within the action

By Mark Heymann

Mobile technology is transforming the way we live and work. In a world that has grown increasingly reliant on, and empowered by, such technology, 2015 marks a tipping point. Millennials — the first generation of digital natives — have become the largest percentage of the workforce. This new majority is accustomed to a world of instant information and tech-driven communication.

Hotels and restaurants are increasingly adopting mobile tools to not only help with more real time decision-making, but also to help them manage their workforces with greater agility, leading to better productivity and efficiency, employee engagement and guest satisfaction. And these same tools are satisfying the needs of their app-savvy, millennial workforce, who are less interested in traditional career paths and more in pursuing work-life balance.

So what does this mean for the culture of an organization? In a dynamic world of free-flowing information and real-time communication, does the conventional “command and control” management model, which is already showing signs of wear, still have a place? Or does today’s successful manager require a different skill set?

Managing on the Move

Traditionally, the manager’s command center was his or her desk, where part of the work day was spent analyzing information (keep-
ing it close to the vest), correcting time cards, planning shifts and measuring performance. Employee feedback was dispensed at scheduled performance reviews or with an annual survey.

In today’s streamlined service industry, managers are constantly on the move, cultivating relationships and responding to guest needs and staff issues as they occur. And the command center moves with them — in the form of a smartphone or other mobile device that puts an unprecedented amount of real-time information at their fingertips.

**Agility, Flexibility and Collaboration**

Mobile dashboards on their devices give managers the ability to evaluate overall performance, revenue, quality and costs while on the go. These same devices can be used to approve scheduling requests, shift resources according to real-time demand and monitor staffing issues. They can receive automatic alerts for everything from late clock-ins to workers who are approaching overtime to absenteeism. By adding survey tools that gauge guest satisfaction and employee engagement, managers can identify and address the root cause of issues that ultimately impact the bottom line. Customizable dashboard features allow managers to track the metrics that are most critical to them, which better enable them to advance a plan and get ahead of the curve.

That same technology is available to their employees on their own mobile devices. Currently, it empowers them to review and manage their own schedules from any location at any time. They can negotiate shift changes with other employees, request time off and create a more flexible, less traditional schedule that fosters the work-life balance they seek. The collaborative nature of this process, through which staff and managers communicate and share information in real time, has fundamentally changed the way these two parties interact.

Looking forward, at some point the employee will be fully tuned in to the general performance metrics of the business and will be part of the real-time process to improve results.

**Driving ROI**

Mobile combined with an effective service delivery system keeps real-time, accurate information regarding service demand and staff availability at the managers’ fingertips, making it possible for them to deploy more resources or scale back shifts as a situation unfolds. Managers armed with such tools can determine quickly not only how much staff is needed to meet guest demand at a particular time, but what skill level is required and how to best execute the plan. Accurate, real-time measurement of results allows them to adjust and continuously improve strategy, which can lead to significant ROI growth.

The use of mobile tools has a measurable impact on the engagement level of the staff, which converts to hard bottom line impact. A study of 11 hotels using UniFocus’ Total Workforce Performance Solution shows in excess of a five to one return within the first year of implementation.

**Manager or Coach?**

A baseball coach goes into the dugout with a game plan, but is he prepared to adjust that strategy on a play-by-play basis once the game starts? Likewise, today’s service manager is presented with a constant barrage of real-time information that requires him or her to monitor and respond to changing circumstances. While yesterday’s desk-bound managers held information close, mobile managers can share information and knowledge freely. Sit-down performance reviews are replaced with on-the-spot feedback that enables employees to learn and adjust as they go. The skill set required of a manager, therefore, is beginning to align more with those of a coach.

**Looking Ahead**

As mobile becomes ever more ubiquitous in the workplace, it is changing the dynamic of how managers and employees interact. The pressure to operate lean and optimize costs with the increase in wage rates combined with the millennial majority’s non-traditional career mindset, is spurring a freelance economy that will afford more workers the flexibility to work for multiple employers and choose their own schedules. We’re already seeing this shift in certain markets. Companies that have adopted mobile workforce management technology are finding that their managers and employees embrace it very quickly. And as they do so, there is an organic shift in the way they approach their positions. Moving forward, it will be interesting to see how this affects the way managers are developed, the skill set a hotel company expects of its management team, and how those managers perceive their own roles.
Steps to a Proper Litigation Hold

By Daniel Vecchio and Don Scaramastra

Plan ahead for potential litigation with prepared guidelines on preserving electronic documentation

By now, most lawyers are, or should be, familiar with the requirement to preserve potentially relevant evidence as soon as a lawsuit is reasonably anticipated. Implementation of an effective “litigation hold” to preserve evidence can be challenging, particularly in the fragmented business environments that are commonplace in the hospitality industry. So long as hoteliers plan ahead for preservation and document the steps they take, however, they are unlikely to be faced with the problems that can arise from an ineffective hold.

Have a Plan Before the Need for a Litigation Hold Arises

If the first time you think about how to implement a litigation hold is when you actually need to implement one, you have come a bit late to the party. This is a bit akin to going shopping for your earthquake kit after the ground has begun to shake. Unless carefully planned, a hold may prevent employees from accessing documents they need to do their jobs, such as contract templates and database information.

Make sure your IT personnel have thought through the logistics of a hold. Identify the types of documents you have and record where and how they are kept. In addition to the usual suspects (e-mails, Word documents, Excel spreadsheets and the like), you must be aware of rapidly-developing technology.
and how your employees use it. Do employees use text messages to relay information? Does the hotel provide customer service online via real-time chat? What about online reservation systems? All of these systems may contain data that will need to be preserved. Once you have identified the data, your IT specialists should plan in advance for how they can preserve these documents without disrupting the business if the need arises.

Think About How Things Will Look in Hindsight
A litigation hold is required when an event puts the hotel on notice that litigation may be imminent. Some triggering events — for example, a letter from a guest’s lawyer threatening to sue — may be obvious. But others may not be. A disagreement between a franchisor and one of its franchise owners, a breakdown in negotiations between a hotel and its vendor, or an employee complaining about being passed over for promotion all might — or might not — signal that litigation is on the horizon. Hotels must recognize that what looks unlikely in prospect may seem inevitable in retrospect. Hindsight is, indeed, 20/20. If you think a particular situation is unlikely to lead to litigation, write down the reasons you think so and run them by someone whose opinion you trust. Remember: one day you may have to explain why you didn’t issue a hold. You’d better see if that explanation holds up now, before someone challenges your failure to act.

Keep Your Hold Notice Plain, Simple and Clear
Once you decide to implement a hold, you will almost certainly issue one or more written “hold notices” to affected parties to inform them that a hold is in place. Businesses often find themselves in a bind: they want to issue a notice quickly, but they also want to issue one that clearly explains what must be preserved. The two goals are often in tension, but don’t delay while trying to find the perfect balance: you can always supplement your initial hold notice with a more detailed one later.

No Two Holds Are Exactly Alike
There is a temptation to look for a one-size-fits-all approach to litigation holds that will make it easier to “automate” the implementation of one. Unfortunately, hoteliers face all manner of litigation large and small, and not every hold will be the same. Electronic documents relevant to an employee grievance may be wholly different from those relevant to a large antitrust class action. If you have planned in advance (see point one above), you should be in good position to translate this effort into a simple, effective hold.

Find Out Where the Relevant Information is Kept
In the hotel business environment, it is not safe to assume that all relevant documents will be stored locally. Potentially relevant data could reside with the hotel owner, operator and/or the franchisor. Suppose, for example, that the litigation involves a dispute between a hotel in Albuquerque, N.M. and one of its vendors. Perhaps all of the pertinent electronic documents will be found on the computers in Albuquerque. But more and more, documents are stored on servers located far away from the actual place of business — perhaps on the hotel operator’s central server, or perhaps even in another country. Employees who work remotely also may store relevant evidence on their home computers. Key vendors may also have relevant documents, particularly as more hotels look to cloud-based service providers to manage their electronic data needs. Don’t forget to look outside your office.

Document What You Did and Why, When You Decide to Do It
Once you have properly put a litigation hold into effect, there is one final issue to address: how will you prove, or remember, what you did to implement the hold? The key is to contemporaneously document all decisions made and all steps taken to implement the hold. So long as you have acted in good faith, judges are unlikely to sanction you if you can clearly document and explain what you did and why. But if you are unable to do so, or if your later statements about what you did are inconsistent with what you actually did, do not expect much sympathy from the court. As in so many things, an ounce of prevention is worth a pound of cure. *
A guide to outlining a clear statement of objectives and the strategies for achieving them

What, Why and When
A business plan consists of a clear statement of objectives and the strategies by which one will achieve the objective. It must include at least an enumeration of costs and revenues. A more formal one will include a complete budget, while a prospectus (a legal form of business plan for investors in securities or other regulated investments) will usually include a set of pro forma financial statements. The business plan must include a time element and should explain the marketing, sales and communications efforts required. Most business initiatives require people to make them happen, so the plan must identify who is going to do what. If other assets are required, those should be identified in the business plan also. Finally, the business plan should state possible risks to the plan and how these risks can be avoided or mitigated.

This article is all about the concept of the business plan. First, we will review what a business plan is, why one might need one and when you would write one. Then we will discuss elements common to most business plans.
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determining the proper level of detail and formality for the proposed initiative and the intended audience. A business plan serves two primary purposes.

1. Convince someone else to invest in or otherwise support a business initiative:
   ➔ The initiative could be to start a hotel company, take some lobby space for a new F&B outlet or to replace a proprietary central reservations system with an outsourced third party solution; in short any business initiative.

2. Tell the leaders of the initiative whether or not they are on track to meet their objectives:
   ➔ After all, if you don’t know where you are going, how do you know when you got there?

You will invest the time and effort to write a business plan when you want to convince others to invest in or otherwise support your initiative. These others might be third party investors that you are selling equity in your company to, the CFO of your hotel company or the mother of two children that want to run a lemonade stand.

**Common Elements of a Business Plan**

Longer and more formal business plans will usually begin with an executive summary, a brief overview of the plan as a whole, intended for the busy executive that will not read more than a page or two unless they become intrigued by the executive summary and want to read more. But a business plan of any length and depth must begin with a succinct statement of the objective of the initiative.

**What about our two kids with the lemonade stand?**

Read the girls’ executive summary:

**Executive Summary**

Mary and Gwen want to run a lemonade stand this afternoon because we are bored and hot to raise $10 for Mom’s favorite charity.

Okay, that explains what the initiative is. Another one could be: Reduce management risk and P&L losses by outsourcing the restaurant space to a concessionaire that will pay the hotel rent instead of us running it at a loss ourselves.

Now that we know the objective, what are the strategies that will enable us to achieve the objective?

**Strategy**

We have the lemonade mix, water and ice already, so everything we sell will be profit money for charity, it is a hot day and lots of people walk down the main street at the corner of our block.

In this case, the strategies are low cost and to capitalize on high demand due to weather and foot traffic. A key strategy for an outsourcing initiative might be to: ensure guest service with contractual obligations for hours, but make the concessionaire responsible for labor cost fluctuation due to changing occupancy levels.

**How will the girls measure their success?**

**Key Performance Indicators**

We need to raise $10, so sales is the most important measure, especially since we have mix, water and ice for free. We should also measure what we drink as **Lost Revenue**.

These measures are Key Performance Indicators (KPIs) indeed! If we are moving from a proprietary CRS to a third-party one, perhaps a KPI is: Total Cost Per Net Reservation. If a reason to move to an outsourced CRS is because the hotel company cannot attract, manage and keep software developers that want to work in the archaic language the old system is built in, another metric could be: headcount reduction in software development, maintenance and support.

While many important metrics are financial, quality and performance metrics matter too. Quality and performance metrics usually relate back to cost or revenue, but can be directly managed. **What is a quality metric for Mary and Gwen?**

**Quality-based Metrics**

We need to ask every customer if they like our lemonade. If they like it, they might buy more later, or send someone else to our stand. If they don’t like it, we can make it better right away. If we don’t, they will tell their friends to skip our stand.

For the CRS example, quality and performance metrics might be average talk time, net transactions per gross transactions or interface failure percentage.

Any business initiative is time-bound in some manner. When are you going to do this, and when will the business benefit from the effort? Mary and Gwen’s lemonade stand is time-bound as well.

**Timeline**

Let’s do our lemonade stand today, because it is really hot. Tomorrow will be rainy, not good for a lemonade stand, and we have gymnastics anyway.

If your hotel restaurant is losing money every day, then you need to know how long it will take you to find...
Strategic Planning

The hotel is risking the F&B requirements of guests on the concession’s ability to deliver and stay in business, so the contract needs a performance clause that allows the hotel to take the space back. If the new CRS doesn’t have an interface to the PMS installed in all the hotels, then there is risk in developing and deploying the new interface in a timely manner.

Common Elements of a Business Plan

In summary, business plans are used to convince others to support the initiative and provide the managers of the initiative with metrics, objectives and milestones. Each plan should be tailored in content and formality suitable to the purpose, but common elements include:

- A clear statement of the objective(s) of the initiative and key strategies to achieve the objective;
- Identified key financial and non-financial metrics;
- Usually including a budget and pro forma P&L;
- A timeline for events from start to the point at which the initiative concludes or at a steady state of operation;
- Sales, marketing and communications plans;
- A human resources plan;
- Identification of other assets or investments required;
- A discussion of risks entailed by the initiative and ways to mitigate those risks.

Business plans are used to convince others to support the initiative and provide the managers of the initiative with metrics, objectives and milestones. Each plan should be tailored in content and formality suitable to the purpose.

For the restaurant, it might be the cost of running a temporary “Grab & Go” in the lobby while the restaurant space is being modified to fit the new concept’s requirements. The concessionaire may require the hotel to pay for an interface from the new restaurant POS to the hotel’s PMS for room charges. The new CRS will require new interfaces, possibly a new facility, or the costs of disposing of the old facility, no longer needed.

Finally, all business plans should discuss risks to the initiative, and what those risks entail. What do the girls say?

What if Mom wants us to pay for the lemonade mix and cups? We would have to sell more to reach $10. What if we Brian drinks all the lemonade? We would be in trouble.

Getting the Word Out

We need a big sign that says: “Lemonade for Charity — 50 Cents.” And we will talk to everyone that walks by, and people stopped in their cars at the stop sign. Also yell at people driving down the busy street.

The new restaurant will want to advertise their opening date, provide coupons or some other incentive to hotel guests to try the new place and make sure they have a nice sign out on the street. The CRO outsourcing needs to communicate the changes and the impacts to all affected employees, with consistent messaging about the impact.

Speaking of impact on employees, what does that mean for Mary and Gwen’s lemonade stand?

Staffing

Mom says there always has to be at least two of us at the stand, but what do we do when we need more water and ice? Let’s make Brian do the running help us.

For our other initiatives, we have employees who will be affected, either laid off, hired or re-trained. The business plan needs to identify how many people will be laid off from the hotel payroll by outsourcing the restaurant and the costs of doing so. It also may lay out a strategy of minimizing the impact by negotiating with the concession operator that all current employees must at least get an interview. Software developers that will be getting laid off in the CRS example might be offered a retention bonus to stay on until they are let go, rather than seeking a new job now and leaving in two weeks.

Human resources and the goods that go into cost of sales (lemonade mix, water, ice, etc.) are not the only assets required. These should be listed in the business plan.

Assets

We need a sign, markers and way to hang the sign. A card table to put the lemonade on. Pitchers, cups, paper towels. A box to put the money into! What else?
Important fundamentals for building a trusted relationship between the IT and marketing teams

Brian P. Garavuso, CHTP

There have recently been an increased number of conversations about the strain, sometimes stated as a war, between the technology and marketing departments. It has been said that marketing will just greenlight IT systems/software without consulting the IT department. At the same time, the marketing department is becoming a major purveyor of IT tools. In a study from Gartner analyst Laura MacLellan (2012), the results indicate that by 2017, the amount that marketing departments will spend on technology will be larger than all other IT initiatives within a company.

Even if marketing is the largest consumer of technology within an organization, there shouldn’t be any breakdown in the relationship between the CIO and the CMO. In fact the same level of partnership should exist between the CIO and all other C-suite leaders. I have seen success when some important fundamentals are followed within an organization in order to maintain the best business relationship between the CMO and CIO (or any other key department).

**Key 1. Alignment / Partnership**

I realize that the phrase: “IT must be aligned with the business” has been overused and maybe even abused; but in my experience, it is absolutely necessary and key to overall success. There are several ways to ensure this alignment. First, are the CIO/IT leaders attached to and focused on the success of sales and marketing?

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This typically means that they are both focused on company earnings or other important company goals. It’s important to know marketing’s business. Know their KPIs and what is important to them. You can’t be a good partner if you don’t know their goals, objectives and challenges.

Second both departments must work to build a strong relationship. It starts with trust and respect. IT has to be viewed and accepted as a strategic partner, not just a platform provider. This is accomplished by thoroughly and continuously understanding the needs of marketing and working together to bring solutions that meet these needs and are delivered as committed. By delivering projects on time and as requested, you will ensure that IT is always part of the initial conversations about any project or initiative.

Key 2. Understanding Resources and Communication
Marketing must be vested in the success of the other departments that also rely on technology resources. Often the lack of understanding of the competition for IT resources brings about rogue or hidden IT projects happening outside of the IT department. Your company culture needs to stress that this is not an acceptable practice. If additional resources are needed, IT and marketing should work together to request the extra resources. The business must see the partnership between the two departments as well. This will also continue to foster the partnership between the departments.

In addition, marketing should be able to prioritize their IT projects and reset prioritization as business needs change. There should be frequent conversations about the status of ongoing initiatives. IT should never be viewed as a “black hole” for projects that go in, but never come out. This will also foster continued trust.

Key 3. Agreement of Business Results
Marketing sometimes has a tough job meeting their own goals due to the ever-changing customer needs and outside influences. Therefore, sometimes marketing priorities change quickly. In addition, demands on the marketing department often require a project to be completed quickly.

In order for a project to succeed, there must be an exact agreement on what needs to be accomplished. A clear definition of the project’s scope and a realistic time frame should be set. Sometimes negotiation is necessary, but if the mutual trust and respect discussed above exists, than this should not be a painful process. Advanced planning like this helps reduce, or hopefully eliminates, scope creep which is a result of improper analysis and planning, and is a factor that will over time erode the relationship between the two departments. The process also ensures that the project’s success is measurable and therefore success or failure of the business outcome is shared. Furthermore both departments / business leaders should be willing to commit time to share future strategies, business goals and resource constraints. This helps both departments gain appreciation of the other’s goals, objectives and budget constraints, as well as other demands on the departments.

A Marketing/IT Scenario
Now if I may, let me share a little about the relationship between the sales and marketing and IT departments at Diamond Resorts International. I am confident to say that we thoroughly follow the principles that I outlined above. While there is often contention for resources, we’ve built mutual respect and trust between the departments. Please don’t get me wrong, it is not always perfect. There have been projects or initiatives that have gone a little sideways. When we analyzed why, it always came to a lack of alignment of business goals, poorly defined outcomes and a lack of open communication.

Here is a little more insight into how we interact with marketing (and all major departments). As most IT departments, we have a long list of sales and marketing IT projects. Our IT department is now structured with a dedicated group of IT professionals specifically focused on sales and marketing projects who manage that department’s specific IT needs. This has brought the two departments in sync. They meet biweekly to discuss ongoing projects, deliver dates, cover new projects, and review and/or adjust the prioritization of the projects in the marketing queue.

I’ll give you an example of a recent urgent project that was brought to me by Eric our senior vice president of global marketing operations. When we met, he started the meeting by discussing his department’s successes of the past year, he thanked me for my team’s help and explained in detail some of the potential upcoming challenges. He continued to explain how they planned to overcome those challenges and what kind of technical support was needed. He then dropped the small little bomb that this needed to be up and running in about five weeks. He acknowledged the short time frame, reiterated the importance to his business unit (and the company) and basically said that he was calling in a favor without having to say it.

I committed to get back to him in a couple of days with a proposed technical solution. My team rallied. We discussed how we could maintain project integrity, but cut some procedural corners and think outside the box. Within a couple of days of the meeting, we presented a product specification document and a rough prototype. We all agreed that this would meet / exceed their expectations and we committed to meeting the short deadline. Eric and I stepped back and let both our teams get one with the project. Marketing was fully engaged throughout the whole process and IT stayed focused. The project was delivered on time and is proving to be a success.

So in summary, there doesn’t have to be shadow IT projects in your organization if technology is truly perceived as a business partner that can deliver as promised.
Turn Customer Information into Valuable Guest Engagement

By Robert Cole

To develop value-creating digital or real-world engagement, consider three critical aspects of one-to-one marketing: quality data, customization and personalization.

Hoteliers have been warned for some time that to effectively compete in the future, it will be necessary to collect vast amounts of customer data to power big data platforms and advanced analytics. While that may indeed be true, a significant gap exists between that lofty, abstract goal and the pragmatic solutions that drive the return on investment necessary to justify the spending allocated to support such projects.

For hoteliers interested in developing highly relevant, value-creating digital or real-world engagement, three critical aspects of one-to-one marketing must be taken into consideration. Quality data, customization and personalization are three inter-related, yet critically distinct facets of the equation.

Quality Data
It all starts with quality data; specifically, the ability to associate online behaviors, such as campaign response, web site navigation and booking transactions with a guest profile. Similarly, stay information, such as folio/purchase detail, special requests and expressed preferences should also be captured, if possible. It is increasingly important to acknowledge the multiple personas that all travelers possess. Understanding how needs differ when a guest is traveling with family over a weekend, as compared to traveling alone midweek can dramatically improve guest satisfaction.

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Most hoteliers ignore the specific persona for each type of itinerary, choosing instead to concentrate on the simplistic tracking of a frequent guest number. While a number is helpful in identifying the associated guest profile, it has virtually nothing to do with the purpose of the guest’s stay. Presenting irrelevant offers or messaging wastes resources, undermines trust and potentially annoys guests. The key is to identify signals within the data that indicate a high probability of relevance and/or conduct. If the source data capture is questionable, there is little hope for the signals to be reliable.

A simple example is a guest searching on a web site for room availability for a party of two adults and two children. If the web site supports adaptive content, the web site imagery may simply shift to photos of families. It is relatively simple to run A/B tests to track conversion rates for typical images versus the family oriented pictures. Over time, web site performance can be optimized to offer the best set of images based on the stay pattern and party composition.

**Customization**

Customization is the process of modifying the guest experience based on clear signals expressed through guest behavior or stated preferences within the profile. Customization changes traditional marketing dynamics. Suddenly, instead of focusing on broad market segments or distribution channels, specific guest behaviors can trigger specific responses — online or at the property. For most hotels, customization is a great starting point, beginning to gather data, identify signals, test results and monitor performance analytics.

**Personalization**

While frequently used interchangeably with “customization,” the term “personalization” refers to a very different process when it comes to working with identifying behaviors and adapting guest experiences. Instead of being based on overt signals, personalization is based on more implicit analyses of available information. As opposed to a specific guest’s behavior triggering a customized experience change, personalized experiences are based on the collective behaviors of a population of similar individuals.

Personalization frequently relies on contextual relationships between people, behaviors and outcomes. In many cases, the relationships and derived signals that indicate behavioral preferences may not be simple or obvious. For example, a user entering the web site through a honeymoon landing page may not be a sufficient signal to indicate that upgraded suite accommodations may be desired. However, it may be discovered that if such an individual also happens to visit the “adventure activities” area of the web site and also reviews the formal dining room’s wine list, there is an exceptionally high correlation to booking a top suite. Further, through focused testing, the hotel may also ascertain that by offering a couples massage as a value add, a suite booking is a near certainty.

To arrive at such definitive conclusions, incorporating multiple signals, a relatively large data sample and multivariate testing may be necessary to identify the opportunity. Advanced personalization analysis takes a decidedly different approach to identifying the signals. Instead of targeting the guest, marketers now focus on the behaviors. Bookings of upgraded suites by honeymoon couples are initially isolated, then the universe of actions exhibited by the individuals is analyzed to identify common patterns. This provides a classic example of how big data opens new dimensions for marketing teams.

Most importantly, hoteliers must have discipline to thoroughly test presumed signals for reliability. A high degree of correlation may be reassuring, but when big data is involved, it must also be remembered that it may not necessarily represent causation. Additionally, refusing the temptation to become too personalized and behaviorally oriented is also vital. Relying too heavily on algorithms can introduce the risk of offering such highly customized experiences that the guest could feel that their privacy is being infringed upon.

**Predictive Analytics**

Predictive analytics are acknowledged as the holy grail of big data marketing. Wielding the ability to understand guest wants and needs, even before the guest may realize them, is a powerful concept. However, the power of predictive analytics is built on a firm foundation of reliable signals that have been thoroughly tested and vetted. Most importantly, the applicability of the signals within the proper contextual framework is essential in order to avoid inappropriate recommendations that fail to engage or convert.

The development of reliable big data platforms that are able to accurately produce highly personalized marketing tactics may still be somewhat beyond the reach of the average hotelier. Nevertheless, ample opportunity exists to start getting the data, placing the signals and producing customized guest experiences, based on explicit behaviors. Innovative marketers that understand guest experience customization will gain valuable experience that will serve them well as the industry starts heading down the path to true guest personalization, powered by big data platforms.
Making Sense of Big Data

By Sherry Marek

How the industry molds the vast stores of data into useable content for customer outreach

Many hospitality companies are using big data today to understand trends and obtain additional customers. In addition, many more hospitality companies want to comprehend the value of obtaining big data or correlating big data with data from their own systems.

For many years now, hotels and resorts have used big data to understand current customers and obtain new customers by matching attractive customer profiles with current guests. Some of the older big data companies seeded their initial information with government census data, incoming surveys from warranty cards and buying mailing lists. Popular zip code lookup tools, help properties understand their current customer profile and seek additional customers similar to that profile. For example, if the weekend customer generally comes from a 250 mile radius of a property or from three specific metropolitan areas that have a direct flight to the city, companies can understand the demographic characteristics of those customers. Are they: Trendsetters — singles, not ready to settle down, unfettered by home and vehicle ownership, with good jobs who spend disposable income? Or could they be Downtown Melting Pot — barely able to make the ends meet? If it is 85 percent Trendsetter and 15 percent Downtown Melting Pot in a particular zip code area, perhaps it is an area a property should focus on by using direct mail, radio and other media to

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advertise to these potential spending-ready customers. Most of these zip code analysis companies have anywhere from 50 to 75 profiles, providing the percentage breakdown on overall market profile, income, age, population density, etc.

While many properties review their guest history loyalty database or guest history data, what about guests who have only stayed once or never before? Some hospitality companies want to build profiles of this customer, available via big data, to understand their habits such as if they want to rent Segways for city tours or if they like to attend sporting events. Other hospitality companies use big data to compare booking trends and occupancy statistics to analyze the results after a media campaign such as radio or TV ads.

Hotel companies are adding big text analytics to their analysis mix. This practice stores text or comments in many different silos throughout the company and uses programs to translate key words and phrases. A sentiment index can be assigned to the comment, as well as key likes or dislikes. By attaching customer sentiment from social media, survey results and call center logs, companies are able to understand customer experiences which result in improving services and product offerings. Other startups have started taking photos posted to Instagram, comments from Twitter feeds and other social media tools to create consumer profiles that allow companies to create an outstanding customer experience based on the consumers’ interests (i.e. exercise habits or entertainment preferences).

**Think Before Diving into Big Data**

A lot of big data is available today, but not all of it is currently useful to a property. Yet, companies outside the hospitality industry continue to collect the data, reasoning that it may be useful someday. With tracking technology available with the Internet of Things (where everyday devices such as watches, clothing, etc. are networked and connected to the Internet), there is a lot of potential to have a better picture of guest patterns and in turn, provide better service. If a guest consistently resets the room’s thermostat to 68 degrees, this can be noted and programmed for the guest upon their return.

**What Does the Future Bring?**

Google’s predictive application Google Now collects consumer activities and trends to create an automated virtual assistant for consumers. By sifting through e-mail, location, calendar and other data, Google Now can notify a person when they need to leave the office to get across town for a meeting and map the most efficient route. How can this application be used by a property for new guests? Can this be useful for when a first time guest stays at your property and your hotel suggests spa services, which based on the data is a particular interest of the guest? Or how about dining preferences?

**What are the Possible Pitfalls?**

Today, customers want to understand what companies are doing with their data. They are often happy to supply information if they trust the company to keep it safe. Others feel comfortable if there is a perceived value to contributing information such as receiving a service as Google Now. Heeding these concerns, many countries are enacting legislation to protect their citizens and clamp down on how companies handle personal data. Laws regarding data privacy may affect the accurate understanding and tracking of data. For example, the European push to enact the “Right to be Forgotten” concept means that Europeans may have links to personal information removed from the Internet. To maintain respectful management of the data, companies must have security controls in place surrounding personally identifiable information (PII) to protect it in the case of a data breach.

**Data Collection and Use**

Disney has found a use for big data which delights the guests and provides it with a wealth of knowledge to make better decisions, improve its offerings and personalize its marketing messages. Disney collects data from the MagicBand which engages guests with the magic of technology woven throughout the parks and resorts. With the MagicBand, guests can order meals at a restaurant in advance. Upon entering the restaurant, the host greets guests by name. Then, another host welcomes guests to sit anywhere they like and almost by magic, specific food orders find guests shortly after they sit down. How did this work? When the customer is a few feet from the restaurant entrance, a radio signal picks up the family and the hostess is notified...
Big Data

of Walt Disney Company explained the goals for the MagicBand with a reference to Arthur C. Clarke, “Any sufficiently advanced technology is indistinguishable from magic.” (Wired, March 2015)

Today, some resort properties track guests going through specific doorways: to the health club or walkways to the beach, to measure the flow of on-property traffic. This is done via security cameras equipped with software to identify many guests, and coming ahead: facial and voice recognition technology. Add this new metric, plus reservations at the spa or golf course and suddenly, companies are able to understand the amount of time that a guest spends on property.

What Does the Future Hold?
Big data markets are estimated to grow 45 percent annually over the next five years. Many companies are looking to understand how they can incorporate pieces of the big data pie into their company and leverage this powerful data knowledgebase (Gartner Group).

Equally important, it is vital to measure and understand how to track the changes in metrics as a result of the new big data initiatives. Some metrics may be new to the property. Some big data initiatives need to be tracked to confirm that big data provides the uptick in bookings as expected. Some marketing initiatives may fail, if the technology isn’t mature enough or the database is not fine-tuned to correlate all of the data points expected. As Tim O’Reilly, founder of O’Reilly Media commented, “We’re entering a new world in which data may be more important than software.”

Glossary

Big Data
Gartner Group defines big data when volume, variant and velocity of data exceed an organization’s storage or compute capacity for accurate and timely decision making. (Gartner 3-D Data Management 2001)

Data Lake
Unstructured data, unprocessed by analysis, with no order or hierarchy. (like water modules in a lake, a big free for all).

Data Warehouse
Data is archived and ordered in defined way (in containers, on shelves, in orderly rows like a traditional physical warehouse).

Gamification
Process of creating a game from something which would not normally be a game. This is a powerful data collection tool.

Hadoop
Free, Java-based programming framework that supports processing of large data sets in a distributed computing environment.

IoT — Internet of Things
Physical products that collect information about user location and behavior.

Additional resources:

www.datasciencecentral.com
Online resource for big data practitioners.

www.Nielsen.com
Nielson DMA designations — private company which sells exclusive geographic area and reports media market penetration.

www.esri.com
Provides data by tapestry segments, income, age, etc. to illustrate demographic and lifestyle information about a neighborhood.
Metamediaries: The New Frontier of Worry For Hoteliers

By Loren Gray

The power of the littlest screen could gain the greatest control over search parameters

With all of the complexities of a hotel’s digital presence in our current market, it’s of little comfort that despite all efforts it may be to no avail. That’s because the very technology that is used to find our hotels steps in line and controls our ability to connect to our audience.

It’s easy to insert Google into that statement, but not necessarily for all the apparent reasons. Search engine results are and have been a part of our ongoing everyday life, and strategy. The growing shadow is over deliverability, put simply it’s all about the phone.

New Search Parameters for Mobile

In our ever-growing use of mobile*, by any and all definitions of screen shape and size, comes the very real race of the very platform itself, the phone and its operating system. With Google’s widening market share via its Android-based phones, comes its ability to satisfy the convenience demand of its users with Google Now, its semantic search development which delivers results based on the searcher’s intent and context. Mirror that with Apple’s Siri, Microsoft’s Cortana, and you see why Amazon found it so critical to join the fray with its Fire Phone.

So what is all the interest in semantic search, that new interactive way all this voice assistance works? Quite simply it offers the path of most convenience. For mobile users, typing, searching, navigating, basi-
cally anything physically interactive with a mobile device, is less convenient than simply asking and being told what we want. Semantic-based search makes this possible.

With the rise of online bookings coming from mobile, this would at first glance appear to be a strong positive for hoteliers, as they continue to improve their online presence via mobile. But with screen sizes shrinking, so too does the volume of content represented.

With almost 70 percent of all search volume coming from Google, let’s start by bringing our attention to its recent developments. Going back only a few short months, we have seen dramatic changes from Google. First was the securing of searches, effectively ending the use of keywords for web site optimization. Then came the Mockingbird search engine update, maximizing the use of schema (a markup language that adds context to a term). With the advent of schema comes a more robust ability to display specific content as it relates to the intent of a search, not just the words used in a search. Google proceeded to refine its search engine yet again with the release of the Pigeon update, which now brings the definitive end to non-mobile friendly sites, simply removing them from mobile SERP (search engine results page). Add to this the use of Google’s Hotel Price Ads (HPA) program of real time rates and inventory availability. Now you quickly see that without hyper-specific, location-based data and active bid management within HPA, even your most relevant content will not show on a mobile SERP page above the fold; but be certain, all of Google’s data choices will.

As disturbing as that may be, there is still more to be concerned about. Remember the path to the most convenient? We know in our current world of big data that Google knows a lot about us, even more so if you use them for the host of services they provide, such as Gmail, G+, YouTube, Google wallet and others, all of which require a user to have a Google account.

We have already seen that when you receive a flight confirmation or hotel confirmation in Gmail you can check-in right from the e-mail (thanks to the addition of new schema coding). For now this links you back to the site of your booking to expedite your travel process, but already other online payment solutions you may have, like PayPal, are beginning to show up as alternative forms of payment. Now imagine before you book anything, you ask Google Now about hotels options at your intended destination. It can check on what your best choices are and allow you to select and purchase with them via Google wallet. No typing, no forms to fill, no search results to sort through, just say: “Book it.”

As wondrous as all that may seem for the user, not too far from this process is the potential to book all accommodations in one fell swoop. Since Google already has your method of payment on file, your travel history, your preferences and even your reward membership information, even more convenient would be to get a notification from Google Now that has already looked for and found your best flight options, hotel selections, and transportation services such as Uber. All you have to do is confirm the choices. Wait, what just happened to search results and rankings, or using all those apps we keep on our phones for doing this? Put simply, the convenience that the phone provided just short-circuited all of it.

Now of course we can move on to review Apple and its use of SIRI or Microsoft’s use of Cortana, and you begin to see why Amazon wanted to get in on the phone making market sooner rather than later, especially with its own established payment system and big data driven purchase platform. Add to that the evolution of semantic search and increased data available about us as individuals (remember over 40 percent of us in the United States have said we would be willing to give out more personal data if it improved our user experience). Now combine it with a method of payment already in place, and you can see that the actual phone becomes the tool, not the third party software added to it.

Just think of all the apps we stopped using due to a better one coming out, now imagine it if it’s the actual phone and its OS functions. If we want a sense of what this may be like, examine what happened to all the health apps when Apple’s IOS 8 was released. They all integrated with iHealth at the risk of being replaced. And now with Apple Watch, this risk is even greater.

**New Marketing Strategy**

So when does the scale tip? For Google, it’s probably when the
The revenue potential from handling purchase transactions is forecasted to be larger than the current revenues from pay for placement advertising, especially from the online travel agencies (OTA). Also, the continued growth of mobile use is another factor. For Apple, Microsoft and Amazon, the bar is more connected to a disruptive model and based on scaleability and reductions in app development revenue. We’ve seen this before with Apple, when it has cannibalized one revenue stream for another (iPod to iPhone).

For either reason, we as hoteliers could simply become a commodity. After all, we do not own our place on any search engine, app or carrier service, it’s all rented land. This is not a pronouncement of gloom and doom though. Ironically a lot of the success that a hotelier could have in this soon to be convenient world hinges upon what makes us a success now, good hospitality and location. The OTAs have more to be concerned about then the brick and mortar operators, because they would have to justify their larger commission model and in turn only be valuable during the discovery phase of travel. Just as Google and the rest try to personalize the process, so do our individual preferences gain more value. By providing our guests with a better experience and being located in the right place, we inherently will be their guided location of choice.*

Sources
Enhance your guests’ experiences

When your hotel offers the most advanced and robust solutions – like state-of-the-art WiFi and HDTV – you’re more attractive as a destination. Your guests feel more at home and are more likely to recommend your location to others.

Count on us and our two decades of industry experience to provide your guests with the solutions they’ve come to expect from your hotel.

**DATA SERVICES** Our WiFi and wireless broadband give you affordable, reliable connectivity to enhance your guests’ experiences.

**TV SERVICES** Give your guests a home-like experience and customize your service package.

**VOICE SERVICES** Professional-grade voice offerings provide your staff with business continuity and mobility features to maintain productivity.

Consider Cox Business and Hospitality Network and our robust suite of hospitality solutions for your property today.

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