Hotels check into IP

From the early days of IPTV, much focus has been on large-scale deployments. Behind the headlines, using IPTV to deliver in-room entertainment is proving a boon to the hospitality industry and is also increasingly used by organisations to distribute video content throughout buildings and sites. How have players in the sector developed a thriving business and what challenges lay ahead? Colin Mann reports.

"People are now viewing IP infrastructure as the best conduit," says Colin Farquhar, CEO of building IPTV specialist Exterity. "It's about enabling organisations to control content they have access to," he explains. "Premium content is important to them, and building IPTV gives that level of control. We're in the right place at the right time to meet that requirement." He notes that during the course of analogue to digital switchover, and the upgrading of networks to IP, hospitality has been the most aggressive adopter of the technology.

There are a number of variables to be borne in mind, he warns. "It depends on the size of hotel, number of channels, the level of control required. There are also legacy issues. If you don't have a good infrastructure, it can be a nightmare and a costly exercise. You've got to weigh up the benefits. That's something we can get involved in to offer advice. With digital switchover, the old legacy co-axial distribution systems need to be reassessed," a situation he suggests will continue for a number of years to come.

"The hotel industry is driven by cost considerations," he advises, "and they find that

"With the Cloud approach, hoteliers have a fantastic opportunity to streamline their suppliers."
KEVIN PALMER, ISRIGHTHERE

IPTV is more cost-efficient and it's an available solution. It's right for many establishments, but there are a lot of break points. A hotel needs to decide whether it wants 20 DTT sets versus a branded guest experience. We're seeing IPTV beginning to dominate in the space." Though there are a number of technologies available to overcome analogue/legacy issues, he suggests that if a hotel opts to improve its IP and IT, then better Internet access will result. He warns of more complex design issues, citing the example of a project in the Middle East, where the client specified a large number of channels, up to 250; "analogue cannot support that number," he observes.

CONTENT CONTROL. "It's been a little bit below the radar," admits Steve Christian, VP of marketing Verimatrix, which specialises in securing and enhancing revenue for multi-screen digital TV services. "Nevertheless, the hospitality sector represents a small but a significant party of Verimatrix's business. People have realised there's a convergence of interest in supplying broadband and TV to hotel rooms."

He points out that with new hotels, "Cat 5 cable is the obvious way to do it. The old jiggery-poker cable is not up to it. Supplying both broadband and TV makes economic sense," he advises, adding that convergence between larger urban deployments gives rise to opportunities to supply wholesale services to the hospitality sector. "They need content, so it makes sense," he observes, noting that European telcos KPN and Belgacom are supplying live and on demand feeds to hotels via their respective IPTV operations.

He says that IPTV functions in more recent times are being subsumed into the TV sets themselves, with hotels being sold new TVs with apps.

"We're working with LG to provide compelling deployments for hotels with TVs that don't require additional STBs."

DOWNSIZE. In terms of scalability, Christian reckons Verimatrix is well placed to meet the hospitality challenge. "We've downsized our system. Hospitality requirements are way, way less than for telcos. You're looking at hundreds rather than thousands. We've been able to do this because we've worked with other specialist companies in the VoD server sector. IPTV wholesale services can get piped in and repurposed. We can take live feeds, decrypt and re-encrypt. Working with a partner solution, this tends to be pretty cost-effective. There's also less rack space taken up than previously than with VCRs!"

But, he notes that earlier premium content release windows available to the hospitality industry could give rise to problems. "What's clear is that early access to HD premium content, in advance of other windows, could be attractive to pirates. That's why we've been successful in this sector. Ours is an industry grade solution, so it's equally, if not more suited, for hospitality. We also have the value-added proposition of being able to add watermarking into that environment. Even if content is copied, it can be traced back to a transaction. Here, watermarking has a bigger role to play with respect to the earlier window than it would with a telco TV deployment."

He notes that the advent of IP into the sector opens up possibilities for personalisation. "That's developed in the middleware area so there is more server-side capability. It's something you'll see more in higher-end properties. We will also see more Cloud-based programming," he predicts, noting that for regular business travellers, what you miss 'on the road' is local sport access. The ability to offer that would, he suggests, be interesting, especially if a flexible app store approach

Otrum's upgrade from a 'receiver +modulator' installation to IPTV in the UAE saved space as well as thousands of Euros in power and cooling costs.

could offer remote access to such content. "That would certainly go beyond the current 'Welcome Mr Christian, Press 1 for TV Channels' screen that greets many a hotel visitor."

STARTING POINT. Wouter Staal, senior global marketing manager, Hotel TV at Philips, which has recently launched its MediaSuite Internet-enabled TV sets to the sector (see *The Wrap*, Page 9), reveals that the company had considered launching such a product at an earlier stage, but found that hoteliers were not quite ready. "We already had NetTV on the consumer market, and were looking at how to approach the hospitality sector."

A starting point for Staal was the finding that hospitality VoD takings were down heavily, with guests accessing their own content. As with Exterity's Farquhar, he notes the opportunities afforded by the digital switchover for upgrading infrastructure, but accepts that not everyone would necessarily be thinking about a 'heavy' IPTV system.

To ensure MediaSuite's market suitability, Philips worked with hospitality sector experts in defining features and capabilities. "It was a good time to do it with the market picking up," he says. "One important point that emerged was that social media was required. People want to access their own content and we can give easy access." So far, Staal reports an "enthusiastic response" to the initiative.

DIFFERENT DISCIPLINES. The MediaSuite sets incorporate a number of apps that were available. "We've also taken some out, such as Netflix, where there are rights issues involved. Phase 1 of the development adds social media apps, with Phase 2 reflecting the input of major hotel groups such as Accor and Starwood, with hospitality-specific apps." He points out that Hotel TV and Consumer TV are "completely different disciplines", with such niceties as the clock display on a hotel TV having to be incorporated.

Agreeing with Verimatrix's Christian, he notes the attraction of HD content, advising that systems integrators generally handle content protection. "We ensure that guests can't tamper with the set."

Staal has been gearing up for MediaSuite's full product launch in September with a 'Hotel Room of the Future' setting out possibilities for potential customers. According to Staal, these will likely be Three Star and above. "These will have Cat 5 cabling to the room. If they have the bandwidth, we have the product that's ready and available." He sees other

well as an energy efficient solution. Access to Cloud-based content will also be a big advantage for the hotel."

PRODUCT FEATURES. According to Gary Thomson, hospitality product manager, Amino, hospitality is an important part of the set-top box specialist's business. "Our product features have gone down well with the sector," he reports. "Systems integrators find them useful. They're working with a stable product and the boxes are locked away and kept apart from the end-user."

Amino has a "vast number of small deployments," in the hospitality sector, a good proportion of which are standard STBs, "although some are hospitality-specific, with additional communications requirements," explains Thomson.

Echoing Exterity's Farquhar, he points out that with a wide range of requirements, it's challenging to remain flexible and cost-effective for certain deployments. "It's a lot of work to keep track of requirements, such as control over security requirements. That's where we

potential benefits: "With no set-top box in the room, that's a hundred Euro cost-saving, as

According to Teresa Robbins, director of isrighthere, property developers and hoteliers can harness the television's current capabilities and use it as a dynamic and powerful tool to help save energy and cut carbon emissions.

Pointing out that building owners are under intense pressure to save energy and reduce carbon emissions, she advises that new homes and new schools face a 2016 deadline to become carbon neutral, public sector non-dwellings are required to become zero carbon by 2018 and other non-dwellings, such as hotels, will need to comply by 2019.

She suggests that if apartment owners, managed estates, hoteliers and the occupants within these buildings could visualise their energy consumption in an efficient way, then the impact could equally contribute in a positive way to cutting fuel consumption and carbon emissions.

"This is where the TV comes in. For buildings in these categories, isrighthere's TV media solution brings together TV as we know it, complete with streamed social media content such as YouTube, but also offers access to localised services, such as transport information and, importantly, energy usage. Previously, delivering this breadth of services would have required expensive equipment both in the individual hotel rooms or apartments and in the building itself, but, thanks to our centralised Cloud-based architecture, this

Using TV to help cut building energy consumption

has now become an affordable option," she advises.

"As part of our comprehensive Over The Top TV (OTT TV) media system, IS Energy Vision can measure utility consumption, including fresh and grey water, gas and electricity usage. It allows building residents and hotel guests to see exactly how much energy they're using and how this compares with the building's average.

She suggests that the Greenhouse scheme in Leeds is a good example of how the technology works in practice. "For property developer, CITU, isrighthere helped provide each of the 166 apartments with its own integrated energy monitoring system by using the TV as an interface. This allows the owners to not only monitor their own energy usage, but also the amount of energy the building is generating and using as a whole. The system has also enabled occupants to form an 'energy co-

operative', with Greenhouse acting as energy supplier and invoicing homeowners by net usage, taking into account energy produced on site and energy 'exchanged' between apartments," she explains.

"Furthermore, homeowners can book an electric pool car from the on-site car club, get real-time information on the next buses and trains departing from local stations and access an integrated community notice board to keep in touch with the wider community, all through the TV. Our research shows that if people know when buses are due, they are far more likely to use this option and leave behind their car. An additional green benefit is that the IPTV screen is used as an information resource to reduce the need for paper directories, covering, for example, apartment or hotel services and local information," she observes.

For Robbins, ensuring that all residents would actively use

The Greenhouse scheme in Leeds is a good example of isrighthere's TV Media solution allowing building residents and hotel guests to monitor energy usage.

and participate in the communal technology system at Greenhouse was absolutely critical to the success of the project as a whole. "If the monitoring system wasn't fully integrated into daily life for the residents, they would not embrace the core values of the scheme and wouldn't change their energy usage behaviour, impacting on the sustainability of the building."

"The isrighthere solution encourages residents to watch their television through an IPTV set-top box provided by Greenhouse, which allows the energy monitoring system to be permanently on view. The screen is very similar to a regular Sky Box interface but it also displays details of the homeowner's energy usage compared to other residents, together with information on local transport and other communal features," she says.

She suggests that in schemes such as Greenhouse, the Cloud-based architecture of isrighthere's approach removes the need for hotel and estate owners to purchase and install expensive and energy hungry TV head-end and server equipment on site, making it vastly cheaper and more flexible than alternative OTT TV solutions.

have integration with conditional access suppliers. In this respect, we're more than an STB manufacturer. We can also get involved in the software layer, and allow different sources of content to be handled."

He notes that with IP being a two-way infrastructure, it's no longer a case of a hotel guest's TV just being fed with content; it's now a two-way communication. "Integration can be very different now; we connect much more than was connected before. We find our solutions interact well with the hotel business systems. We can offer seamless connection." Although aware of analogue upgrade legacy issues, he notes, "we're one foot away from the problem. System Integrators see more of the problems than we do. Often, there are older TV sets to be supported."

CHURN ISSUES. In terms of scalability, he suggests that deployments that number "tens to hundreds" tend to be the 'sweet spot', but, again, there can be considerable differences with topology and wiring. Amino supports multicast for TV and VoD access where integrated. He sees access to a generic OTT streaming service as something that could profitably be introduced, potentially with a revenue share arrangement. "We could offer

that to Systems Integrators as an additional user experience. Although there are no 'churn' issues with a hotel guest, this could improve his experience. A Netflix or Vudu app could be enabled for content to be sent and sold on. We provide a flexible framework, and look ahead to services that may be required, especially OTT," he concludes.

Nigel Bateson, VP business support at in-room TV specialist Otrum, says that it is important to remember that a guest is normally unfamiliar with the TV, remote and channels when they check into a new guest room. "In light of this, the hotel has to work hard to offer a simple to use service, while still offering all of the content needs of their international guests. Using an IPTV platform within the hotel allows the various content sources to be aggregated into a simple end-to-end solution which is easy for the guest to use, while also being simple for the hotel to manage and modify."

"The guest needs to see all of the channels in one simple list, and when they watch the channels they expect a consistent A/V experience no matter how the signal arrives at the hotel. IPTV also offers hotels a powerful tool in channel flexibility. No longer do you need to carry our on-site hardware changes to bring in a new channel, you just login to the IPTV solution, and re-map the channels," he

explains. "This is a great tool for the hotel when they have large international groups staying at the hotel for extended periods."

NO COMPROMISE. He warns that a hotel should never compromise quality for cost on its IPTV headend. "I would be the first to admit that Otrum often over-specs the IPTV deployments; a hotel is just not the environment where you want to have a system failure at 7pm on a Friday evening," he says. "Finally, the biggest benefit is standardisation. By deploying an IPTV headend in all hotels, a branded operator can ensure that all guests will have the same in-room experience, no matter what the source of the signals coming into the hotel."

In terms of tackling analogue legacy issues, Bateson says that thanks to QAM / DVB-C, there are no problems with carrying all the IPTV services over legacy hotel networks. "Infact seventy to eighty per cent of hotels still only offer a co-ax infrastructure for the TV solutions, therefore pure Ethernet solutions are not the most common."

He admits there is a small cost uplift for the IPTV hardware when moving from Ethernet to co-ax infrastructure, but points

IPTV will open doors for hospitality

Results from the IMS Research study- *IPTV: A Global Market Analysis – 2011 Edition* - indicate that the worldwide Hospitality market for IPTV set-top boxes will reach a revenue milestone of three quarters of a billion US dollars in 2015, growing at a CAGR of 16%. The market is forecast to encounter double-digit year-on-year revenue growth rates as hoteliers adopt IPTV technology as their entertainment platform. Currently, IP set-top box revenues for the Hospitality market hover near $400m.

John Kendall, IMS Research Market Analyst and author of the study states, "Internet Protocol technology is a natural fit for the Hospitality market. Consumers prize the choices IP platforms can deliver, and the opportunities that the platform offers to the hotelier have great value."

Kendall goes on to recount his hotel experience in London for IP&TV World Forum in March. "I stayed in two separate comparatively priced hotels for my duration in London. In one hotel, my TV option was a free-to-air CRT television. The reception was slightly fuzzy, and was Standard Definition. My last two nights of the week, I spent in a smaller room equipped with an IPTV sys-

tem – flat panel HDTV, VOD options, and a crystal clear picture. I could order room service and a wake-up call off the TV screen. When I next need a hotel in London, which do you think I'll pick?"

According to Kendall, IP technology not only offers choice and convenience to the consumer, it gives hoteliers expansive opportunities to increase brand identification and loyalty by offering a consistent hotel experience from site to site. The platform also allows hoteliers the option to integrate IP solutions normally accessed by telephone or computer on the TV, whether that be ordering room service, ordering broadband access, or scheduling a wake-up call. Environmental

controls can also be incorporated as a solution. Even further, access to apps, local news, weather or traffic widgets, local flight information, etc., are all value-adds that IP offers and consumers have increasingly come to expect.

"I have stated in the past that IP offers tremendous scalability on the VOD front for hoteliers," Kendall continues. "While common knowledge seems to indicate that VOD revenues are plateauing or even, in some cases, declining, in the Hospitality market, IP technology and the ease it offers for the consumer experience indicates to me that hoteliers incorporating IP platforms can still have a viable business model for VOD."

out that the re-cabling costs are far higher, and will offer no benefit to the hotel or guest. "Otrum carries both IPTV and Guest Internet traffic over the same co-ax cable, allowing hotels to upgrade to digital TV and HSIA services (High Speed Internet Access) without any re-cabling costs," he adds.

FORM FACTOR. As for scalability, he advises that Otrum has only been using AppearTV hardware in its deployments so far. "This is scalable by design, allowing for custom head-ends depending on the TV channel and source mix. The hardware is also hot-swappable, allowing for running upgrades without disturbing the existing services. For hotels, AppearTV is a very suitable choice, as it combines a small form factor and a robust 'broadcast quality' service with a reasonable price point."

Otrum deploys Verimatrix content encryption on those channels that require end-to-end encryption. In addition, it is also deploying invisible watermarking on HD Premium VoD content from the major Hollywood studios.

As for personalisation, he notes that every hotel and chain has a different channel mix, and different alternatives for content reception. "Normally DVB-S is the standard for the TV content reception. However, we do find that DVB-T is rather popular in countries such as the UK where Freeview has such a high penetration. DVB-C is also supported for the reception of content, but the deployments are minimal," he says. He suggests that multiple CA standards can be supported by simply swapping out the CAM modules, and at the same time Otrum is able to decode multiple services using a single card, further reducing the hardware footprint.

BOTTOM LINE. Kevin Palmer, head of hospitality sales at managed IP-based triple-play networks supplier isrighthere, suggests that an in-room entertainment service can cut costs, create new revenue streams and provide a fantastic guest experience, courtesy of the Cloud.

"In this age of austerity, every hotelier is under pressure to reduce costs and maximise revenues. The question is: 'Where can the biggest gains be made without having to compromise on the quality of the guest experience?'" he suggests. "In-room entertainment systems can deliver a win-win for the hospitality industry. In fact, many OTT TV providers talk persuasively about the cost reductions their service can provide. But, in reality, many of these solutions are only scraping the surface in terms of the benefits that can be achieved. That's because, for all their proclaimed advantages, these services demand investment in expensive property-based solutions and rely on legacy guestroom technology for delivery."

According to Palmer, by contrast, isrighthere offers a much simpler solution, which brings far more significant cost-savings for the operator, as well as a "seismic shift upwards" in the quality of the overall guest experience. "Our approach is based on an IP-converged, Cloud platform which clearly represents the best way forward for the hospitality sector in today's economically challenging climate. And we're not alone in our thinking," he reveals, noting that Nick Price, Mandarin Oriental's CIO/CTO, speaking at the HTNG (Hotel Technology Next Generation) Conference, declared that "Cloud computing will soon be the only way to deploy property technology necessary for chain expansion."

CLOUD PLATFORM. "He's right for a number of reasons," suggests Palmer. "Because Cloud platforms can support applications uniformly in multiple locations via the Internet or private networks, properties only require a high-speed connection for the delivery of multiple services, including in-room entertainment. No server equipment needs to be located in the hotel at all and a single IP backbone infrastructure is all that's needed rather than the separate and disparate multiple systems (e.g. telecom, CAT 5, wireless, co-axial for TV and guest services) found in most hotels today."

For Palmer, the result is more usable space within the property, with the potential for the old comms room to be transformed into a new conference room or even accommodation. "In addition to creating an extra potential revenue stream, our estimates show that by taking out traditional TV servers, hoteliers can expect running cost savings, principally through energy consumption reductions, in the region of £2,000 to £5,000 annually per property."

"A server-less hotel is not just greener. Since there is less equipment actually on site that requires maintenance, the hotel's own staff can be used much more effectively. There will likely also be fewer site visits from the service provider as well. The result is better time and cost-efficiency all round," he suggests.

SLA. Furthermore, since no server installation is required, the Cloud platform enables hoteliers to deploy services much faster and with minimal disruption, he clims. "This makes switching providers much, much easier. The Cloud platform also brings with it much greater contractual flexibility and simplicity. Most hoteliers are currently restricted by punitive Service Level Agreements for in-room entertainment services, extending from between seven and 10 years."

"In the world of the Cloud, shorter contracts are the norm, potentially as low as 12 months, and certainly no longer than 36 months. It's a fixed price for the 'service' and there are no additional upgrade charges down the line. Since this is an integrated platform, there is no need for a separate digital signage agreement. In fact, with the Cloud approach, hoteliers have a fantastic opportunity to streamline their suppliers providing back office ADSL lines, guest Wi-Fi or in-room internet ADSL, fax, ISDN and telephone lines into just the one guest technology vendor and achieve even greater cost reductions," he notes.

"Service benefits also double up as cost benefits for the hotelier. More TV channels and on-demand services for guests can be delivered through the Cloud platform at a reduced overall cost thanks to the negotiation of bulk deals with broadcasters. Unlike traditional IPTV set ups, which require expensive head-end equipment, on-site Cloud services are delivered from high reliability data centres via a leased line and are infinitely expandable," he says.

GLOBAL REACH. He points out that the Cloud platform also allows a chain to make branding changes or add new information about additional services quickly and easily without any cost implications or the need to visit any of the properties individually. "It brings the potential for integration with housekeeping and maintenance operations and, for brands with a global reach, it can be integrated into the back-office solution, giving even further cost reductions for the big hospitality brands."

According to Palmer, these benefits are all eminently achievable today. "The key is the Cloud and an IP infrastructure backbone which can deliver enhanced in-room Entertainment services alongside high-speed tiered bandwidth Internet access. Multiple hotel services can be delivered reliably, simply, quickly and, above all, more cost-effectively. The more services that can be converged the bigger the savings will be," he concludes.