PAY TV AS THE ‘COMPLETE ENTERTAINER’

- RE-APPRAISING ‘DIGITAL NATIVE’ DESIRES
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After five years of unprecedented disruption to Pay TV, it turns out that people do still appreciate what it offers, including linear TV, PVR and the potential for everything in one place. The ‘digital natives’ might be more conservative than predicted. So after disruption and ‘survival’ comes the re-appraisal.

Pay TV responded to customer demands with more on-demand, better UIs and multiscreen TV. Like the man who fixed the hole in his ceiling to find everyone admiring his chandelier again, platform operators have turned attention back to their strengths.

In this report we consider the future shape of Pay TV services, from UHD to tablet TV. We look at how operators can deliver the best experiences on every screen in their home, which means taking a look at the ‘Cloud versus Gateway’ debate and how you deliver a great QoE. We review why Pay TV operators are best placed to be the ‘Complete Entertainer’.

John Moulding, Editor, Videonet
INTRODUCTION:
Preparing the Pay TV home for a world of extremes

By Paul Bristow, VP Strategy Consumer Experience & Middleware, ADB

The number of ways to access audio or video content is multiplying every day. Linear broadcasting, although still by far the most popular, is now just one of many ways to watch your favourite TV shows, sports and movies. Most of these many ways to watch use a device, other than a TV, that is connected to a network. Some think that this will lead to the disaggregation of the content value chain and the end of Pay-TV. In contrast, this report examines the proposition that far from disappearing, Pay-TV providers could be the best placed to be the ‘Complete Entertainer’ in customer homes.

The “Battle of the Brands”, with TV Channels fighting to keep their brands visible and relevant, has resulted in a cacophony of individual Catch-Up applications - at least one per channel - and the extension of the channel metaphor imperfectly into the application world. Licensing restrictions mean that catch-up is much more for those shows you didn’t record than a replacement for DVR. The end-result is that all the complexity of the raw, new, hybrid world is rendered visible and dumped onto the consumer. They have to remember which channel a piece of content is on and manually select the right application in order to watch it, exactly the opposite behaviour from the last 15 years of DVR usage. Or, as many consumers have already chosen to do, they can have a Pay-TV provider who aggregates all of this content into a single UI framework, and makes it simple to find and consume from any device.

Consumers are viewing video on everything from smartphones up to 80-inch televisions displaying Ultra HD in what is an increasingly complex connected home environment. Service providers are forced to confront the reality that controlled and uncontrolled devices will mix in the same home network, and they will have little influence regarding just how end-users set up their networks, nor over the entire mix of services they will access with these devices. We will explore just how much “do it yourself” TV packaging consumers will do - including the digital natives - and investigate just what is needed overall to deliver a great quality of experience.

We’ll see how media gateways, cloud architectures and the effective combination of both can be used to accelerate the introduction of cost effective new services - especially with UltraHD on the way.

At ADB we are convinced that, regardless of the technical solutions chosen, someone or something is needed to aggregate the content and bring it in a trusted and reliable manner to all your devices. Our experience tells us that in the ever-changing digital world this is best done by service providers, not by devices or algorithms alone. The curated combination of Pay-TV and broadband will, in our opinion, continue to be one of the most effective ways to provide content for years to come.
Pay TV as the ‘Complete Entertainer’

Why Pay TV providers are best placed to be the ‘Complete Entertainer’ in customer homes, fighting off the threat of OTT by giving consumers more of what they want through one service but across many screens. Multiscreen and multiroom are increasingly important, including for PVR, but everything still revolves around linear TV.

By JOHN MOULDING
convergence, they have more ways than ever to exploit their content rights.

More than anything, the last five years demonstrate the value of diversity, whether you are talking about content, customer profile or the services on offer. Pay TV operators serve homes as well as individuals. While they were developing their multiscreen and on-demand offers, the money kept flowing because Dad wanted his sport and his daughter was desperate for Disney Channel, even if his teenage son was spending most of his time watching YouTube on a laptop.

Where there is weak OTT competition, Pay TV operators are cementing their customer relationship on the living room TV first with next-generation platforms that provide smart User Interfaces and better content discovery. Where there are OTT alternatives on portable devices the imperative is to make the Pay TV bouquet available on as many screens as possible, including on more televisions.

Once Pay TV operators provide multiscreen and, increasingly, multroom TV services, they begin a new chapter in their history. Having diminished the threat of disintermediation, they can start to think about the opportunity presented to them thanks to their uniquely diverse services, available everywhere. They have the chance to be the ‘Complete Entertainer’ at the heart of an increasingly connected home.

### RE-APPRAISING ‘DIGITAL NATIVE’ DESIRES

Drawing on its global insights, Ericsson ConsumerLab revealed in August 2012 that 41% of consumers are willing to pay for HD quality and image quality becomes more important as screen sizes grow. 60% of people watch on-demand content every week and 67% use tablets, smartphones or laptops in their everyday TV viewing, either for video consumption or to enable a social media experience.

It also found that scheduled broadcast TV is still the dominant form of content consumption, despite a slight decrease over recent years. It added: "Consumers have access to a multitude of different on-demand services as well as linear TV channels. These sources offer a good service, yet consumers are struggling to merge them together. People are eagerly looking for an aggregated service which can bring all content into one experience."

The researchers concluded that there is an opportunity for someone to take this new role. They could be an on-demand service provider, a social networking brand or a traditional TV provider. "Whoever takes this mantle will need to expand their business to support all ways that consumers watch TV," the report says.

Many of the predictions about the likely entertainment viewing behaviour of young adults who grew up with the Internet are now being challenged. The recent ‘Screen Life: TV in demand’ study from Thinkbox, the marketing body for UK commercial TV, contained a significant insight. "When given a choice between having the option to download a new series they liked in one go or waiting to watch it week by week on live TV, 73% of 18-24s said they prefer to watch it week by week. This was more than the older audience of 35-55s (57%)."

### SCHEDULED BROADCAST TV IS STILL THE DOMINANT FORM OF CONTENT CONSUMPTION, DESPITE A SLIGHT DECREASE OVER RECENT YEARS.

Thinkbox used a technology-centric, VOD-centric UK audience for the study and the conclusion was that young people are happy to wait to watch TV so they can enjoy a shared experience. The organization concluded that man cannot live by VOD alone. In fact. "Live TV is our daily food whereas VOD is more like a box of chocolates."

Earlier this year, Niclas Ekddahl, CEO at Viaplay, the online multiscreen service from Modern Times Group (owners of free and pay channels and the Viasat DTH platform) countered the idea that younger consumers will be happy to search for content from multiple locations and effectively become their own aggregators. "Our research suggests that our future customers do not want a user experience based on multiple apps downloads and multiple credit card relationships," he said. "Having most of what they want in one place will still be a differentiator for a Pay TV platform."

As part of its FutureMedia 2013 Programme, the UK media consultancy Decipher found that in BSkyB satellite homes where consumers have the same on-demand ‘player’ services available in a Smart TV and on their connected set-top box, 73% of them preferred to access it via the STB. The two biggest reasons were that it is quicker to access (47%) and the catch-up content is in the main room (45%).

"The power of inertia cannot be overstated," the company says. "It is simply easier to switch from live TV to the on-demand library on a set-top box than it is to switch from live TV to the Smart TV portal, load a broadcast app and browse for a show." Decipher concludes that the ‘ace in the hole’ for Pay TV operators in the battle for our attention is that it is easier to move around within the environment they create than move in and out of it.

Pay TV operators still have to give us the content we want, where we want it… and at the right price. The 2012 Ericsson ConsumerLab report noted that, "The biggest barriers to consuming on-demand are cost, or not finding the content that the user is looking for, and not being able to watch the content on the household’s main TV screen."

Kevin Nolan, Vice President at the User Experience Practice at Strategy Analytics says the viewing of content from OTT sources within the home is typically driven by two main motivations. Either, ‘there is nothing on regular TV’ or different family members want to watch different things.

“In the first scenario, viewers often leave the operator UI because, while they know that premium Pay Per View content is available from their provider, they perceive...
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DIVERSITY IS A STRENGTH AT CANAL DIGITAL

Canal Digital is currently piloting its new cable TV platform for Norway, which will launch in the autumn. Called TWE, it will provide a one week catch-up service across 30 channels and a larger archive service, plus universal search.

These new features will be available on the current Canal Digital HD PVR (provided by ADB) but the operator is also deploying a new HD DVR in the autumn (also ADB) that will also serve as a multimedia gateway for distributing content to multiple screens around the home.

A Canal Digital spokeswomen says the new platform will provide live TV, SVOD, VOD and OTT in one place. She says this is an advantage when the solution is easy to use. “Our customer base is diverse, with 500,000 households. For the older demographic ease-of-use is highly important. The younger demographic is more demanding in terms of Quality of Service,” she reveals.

The company recognizes that diversity is not just about the services available, but how they are packaged and priced. “We have been making major changes to make sure our customers have more freedom to tailor their packages,” says the spokeswomen. “For instance, we launched a new basic package for TV last year where customers get the 30 largest TV channels but can then choose 15 channels individually from a total of 70. We believe we have to provide a more diverse offering for our customers in the future.”

THE ‘COMPLETE ENTERTAINER’ CAN DELIVER A GROWING RANGE OF ON-DEMAND CONTENT WHILE REMAINING THE GUARDIAN OF LINEAR TV AND PVR.

The term, ‘Complete Entertainer’ was aired at the Connected TV Summit in May as a way to describe the future role of platform operators who, thanks to hybrid broadcast/broadband delivery, can deliver a growing range of on-demand content while remaining the guardians of linear TV and PVR. Ian Mecklenburgh, Director Consumer Platforms at the UK cable operator ONO has strengthened its relationship with customers thanks to a focus on the living room TV; the company has yet to deploy multiscreen TV. But in several other markets multiscreen is now a must-have for Pay TV operators. Parks Associates figures show that 60% of TV viewing on the mobile phone and 70% of TV viewing on tablets is performed within the user’s home, which is why multiscreen is more a part of the ‘whole-home’ strategy than the TV-on-the-go strategy.

Ben Schwarz, CEO at CTOi Consulting, a consulting firm in the TV and telecoms sector, says content is still king so if you want to extend your reach to all screens the biggest challenge is knowing what content you need, then securing the rights before it is already out of fashion. So the role of curator remains key.

If you get this right, there is a way in making online video available on the television set in a convenient setting, with YouTube and broadcaster catch-up apps including from RTVE and Antena 3, and even some regional broadcasters like TV3.

ONO also provides 130 linear channels, 25+ channels of very high bitrate HDTV and its own managed VOD offer called Videoclub. The Videoclub content surfaces in search results already and in the next software upgrade to its TiVo platform some of the OTT content will be integrated into the search function.

German Sanz, TV Product Development Manager at ONO, has no doubt that making everything available in one place is one of the reasons behind the company’s high customer satisfaction levels. ONO is recording churn rates that are several times lower for customers of its next-generation platform compared to its standard proposition. Sanz says ONO is definitely in a stronger position than it was 2-3 years ago, which was the ambition when investing in the new technology. He adds: “Young people are very clear that they are happy to get their content from one place if you make it easy for them.”

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Virgin Media said the ‘Complete Entertainer’ is a good vision, with big Hollywood blockbusters at one end of the Pay TV scale and cats on skateboards, courtesy of YouTube, at the other. But as well as providing depth and diversity, everything must be easy to use. At Virgin Media this is enabled on the TiVo platform.

Mecklenburgh says the platform operator role is not just about aggregating content but surfacing it. "We will surface the best and most relevant content and make it easy for customers to get hold of it," he notes. "We want the customer to have our remote control in their hand and our service on the TV!"

Being a Complete Entertainer invariably means giving access to some third-party OTT content via the set-top box. This does not have to be a defensive play. In Spain, the cable operator ONO is leading the way with the TiVo platform. This does not have to be a defensive play.

Other content sources like Netflix to be better value for money. If operators were able to convince viewers that their on-demand offerings were price competitive with alternative providers then we believe that the convenience of being able to access all services from a single UI would be very appealing.”

Strategy Analytics has found that when people opt out of watching what the rest of the family has chosen on the large screen, and go to the tablet or PC, there is much more interest in trying out new content that they would not normally watch at home, and new sources of the content. “As such, the threat from alternative sources is definitely more acute in the personal device domain,” Nolan cautions.

It is hardly surprising then that the next-generation platforms that Pay TV operators are deploying are focused on improving the living room TV experience as much as extending the Pay TV service to other screens. On the television the focus is on a much-improved User Interface, better content discovery and the provision of complementary broadband content, from YouTube and Spotify to broadcaster catch-up services.

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The deployment of multiscreen offers a master PVR to share its content with multiple ‘zapper’ set-top box clients. All the DVR/STB devices on the home network are connected and their tuners are treated as a common resource, including the DTT tuner on a zapper box. According to the NC+ spokesman, “The sales figures show that the multroom solution is very important.”

Joerg Eggink, ACCESS

“THE DEPLOYMENT OF MULTISCREEN PROVIDES MORE CONVENIENCE TO CUSTOMERS. THE EXPECTATION IS TO INCREASE THE VIEWING TIME”

In some mature HD markets thoughts are turning to what comes next. 3DTV in its current iteration, with glasses, has failed to ignite consumers’ imagination for home viewing, so the smart money is on Ultra HD (in particular 4K video) as the next big thing. The CE manufacturers are certainly wishing it so.

Simon Bryant, Head of Consumer Electronics at Futuresource Consulting, believes 4K represents a more natural progression for the industry than 3D in the home, but one that brings its own challenges. These start with the intricacies of producing 4K panels at high yield rates and the complexities of delivering the bandwidth-hungry content.

Edward Border, Analyst, TV Technology at IHS Screen Digest noted the arrival in July of a 39-inch, UHD LED television in the U.S. for $699. He said the launch of the model, from Seiki Digital, is significant in several aspects. “It represents the first sub 50-inch UHD launch in the US; it is the first sub-$1000 UHD launch, marking the technology’s entry at a lower price range; and it demonstrates the first step in competitive pricing in the UHD market.”

There is a debate about whether consumers will notice the benefits of 4K on screens smaller than 60 inches, and doubts about whether UHD has a large enough addressable market if they cannot. Regardless, Vassilis Seferidis, Director of European Business Development at Samsung is working on the basis of a viable starter mass-market for Ultra HD in 2017 in Europe.

Futuresource Consulting says 4K has a 2-3 year incubation period ahead and is on track to become a significant technology segment. The company forecasts that global 4K TV shipments will grow to 22 million units in 2017.

UHD has been trialled by broadcasters and platform operators, including Sky Deutschland, the German DTH operator. In June the French Tennis Federation and France Televisions cooperated to broadcast live multi-camera UHD from the French Open at Roland-Garros.

The big question is whether UHD is the next 3DTV or the next 4K.

Joel Barrett, Director of Consumer Analytics at Parks Associates does not buy into the much publicized theory that on-demand viewing will take over from linear. “Our studies show that people like linear channels and want linear channels.” He points to service provider networks, built to distribute linear channels, as a key advantage moving forwards.

People love HDTV and at People love HDTV and at

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NC+Go multiscreen offer earlier this year and declares itself very satisfied with the early results. “What is crucial is that this product is targeted at the best client group, who are usually young and who are very actively looking for content,” a spokesman says.

In an example of where things are heading in multiscreen TV, all the linear channels that are routed through the NC+ PVR (the main home gateway) are made available across the home network to view on iOS devices. For technical reasons (cited as the limitations of Android devices) only MPEG-2 broadcast channels can be redistributed to the Android handholds today.

Redistribution of broadcast channels to multiscreen devices is the next big step for multiscreen services. The main reason is the popularity of tablets as a consumption device. The NC+ spokesman says, “We believe the tablet can be used as an extra television set for individual use. Such a service [making linear channels available on them] differentiates us from pure OTT offerings.”

Multroom viewing is where you make content available on every television, but a growing number of Pay TV operators are reporting that tablets are now being treated like secondary televisions. The NC+ spokesman confirms that the company now views the tablet as an alternative to multroom.

NC+ is well advanced in its whole-home strategy. It provides a standard and premium multroom DVR service, with the latter using a master PVR to share its content with multiple ‘zapper’ set-top box clients. All the DVR/STB devices on the home network are connected and their tuners are treated as a common resource, including the DTT tuner on a zapper box. According to the NC+ spokesman, “The sales figures show that the multroom solution is very important.”

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American TV Research for Display-Ead aNd IS oN TRacK To bEcomE a SIgNIFFicaNT TEchNology SEgmENT way for standard-definition and then Catch-up TV via the STB with BSkyB HDTV. After much fanfare, 3D has shown no meaningful North America was more than 40%, has a 2-3 year INCUBA TIoN pERIod FUTURESoURcING coNSuLTI NG Says 4K has a 2-3 year INCUBATION PERIOD AHEAD AND IS ON TRACK TO BECOME A SIGNIFICANT TECHNOLOGY SEGMENT. Paul Gagnon, Director, North American TV Research for Display-Search, cites a long list of reasons for why 3D has shown no meaningful growth in North America. The most important is cost; 3D as a feature still had to endure some body blows recently as the BBC announced it was putting 3D on hold and ESPN decided to discontinue ESPN 3D at the end of the year.

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The quality of the experience makes this a significant step forward for the consumer. It is a very immersive experience, he says.

His colleague, Carl Furgusson, Head of Business Development, TV Compression at Ericsson, predicts that first generation real-time HEVC encoders will deliver UHD at 15-36Mbps. By the second generation bandwidth demands will be down to 10-24Mbps for live broadcast content. On-demand content will need less because you can take longer to encode it (non-real-time encoding).

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Telefónica Digital believes local hard-video is stored and in what quantity could be successfully substituted where it is more economic to have the rights on that. “The content is no longer available two weeks from now. At that point permanent access. “Cloud storage has become the more attractive model. There will be pull and push over time in this debate. The tipping point is based on the cost of connectivity more than the cost of storage.”

Charles Cerino, the President of MoCA and former VP at Comcast, points out that as a consumer, local storage gives you guaranteed permanent access. “Cloud storage has an expiration date, which might be two weeks from now. At that point the content is no longer available because the content owner has pulled the rights on that.”

Lucendo de Gregorio at Telefónica Digital believes local hardware could be successfully substituted by network services that support catch-up, archives and some user-selected recordings with persistent access rights. “But, of course, this is not possible with all access technologies and has some cost-effectiveness issues.” The answer, therefore, is a hybrid of cloud and home storage.

The way operators provide access to PVR content is part of a much wider technology debate about the role of the cloud and the customer premise gateway. Pay TV providers also need to decide the best way to deliver their TV Everywhere multiscreen offers to laptops, tablets and smartphones around the home. Meanwhile there is a debate about whether you can remove Pay TV operator STBs from the home and instead stream video to apps in Smart TVs, which is the ultimate CPE versus cloud debate.

When it comes to multiscreen viewing, one option is that multiscreen devices make direct requests to an Internet server and are fed adaptive bit rate (ABR) video over broadband that is passed via the home Wi-Fi router, without any intervention by the in-home equipment. If you wanted to get rid of the primary set-top box (or DVR) in a home then this is how all television could be delivered, including to TV sets. The decoding and content security requirements would then be taken care of by an app inside a Smart TV or game console.

The other option for multiscreen devices is to take the broadcast TV feeds into the STB/DVR, which then acts as a processing hub and gateway, repurposing the content into forms that are acceptable to the multiscreen devices and then routing them around the home network as IP video. If the primary operator STB is removed in favour of Smart TV apps then there is no equivalent to this gateway function and all content going around the customer premise begins as a multiscreen feed, in effect.

Key issues that shape this debate are the reliability of delivery, the availability of content for the different distribution scenarios, and the extent to which you can manage and guarantee the customer experience. The storage debate has little relevance when feeding tablets, smartphones or laptops but clearly network PVR becomes a necessity if you rely on Smart TVs as the only customer premise equipment.

In June Guilhem Poussot, Head of Connected Devices at Vodafone, noted the cost considerations for shipping gateways versus upgrading the cloud infrastructure. He sees the attractions of the cloud but thinks a gateway is an important means by which Pay TV operators can manage the experience at home. In conclusion, he says, “I think the more cloud we have, the more gateway versus cloud.”

Paul Bristow, VP Strategy, Consumer Experience and Middleware at ARRIS, dismisses the concept of Smart TV (or other connected TV) apps as a replacement for the primary STB or DVR on the grounds that it would greatly diminish the customer experience. Unreliable video streams, lack of insight into what happens in the home, and a cumbersome navigation paradigm, where consumers have to go in and out of apps to reach content, are among the reasons given.

His company is firmly in favour of the gateway redistribution model where it comes to feeding multiple televisions and multiscreen devices. When it comes to PVR, Bristow says one benefit of taking content from the local hard drive is that you can skirt around any cloud rights issues. It is also easier to guarantee the QoE. “You have a much better connection to the hard drive in your home than to the cloud,” he argues.

ARRIS, which now includes the former Motorola Home business, is preparing for a hybrid world where we have powerful gateway devices in the home and cheaper thin client secondary STBs but then a decade-long migration of secondary device functions into the cloud.

Bruce McClelland, Group President, Products & Services at ARRIS, has seen a shift towards

“I THINK THE MORE CLOUD WE HAVE, THE MORE GATEWAY WE WILL HAVE. THIS IS NOT GATEWAY VERSUS CLOUD.”
cloud-based thinking over the last 12 months, especially when it comes to storage and UI functions. "This could provide an alternative to doing things on a heavy client architecture but for the next three years or so will see pretty powerful devices in the home with their own storage, streaming and transcoding," he comments.

Ben Schwarz says the most likely architecture for the future Pay TV home is a gateway device feeding multiple IP clients, which could be operator STBs or CE devices bought in retail by the customer. "Either the gateway will get more intelligent or the STB will get more network savvy," he suggests. "But even if the cloud can greatly enrich services to the home, there will be a role for a central device in the home for the foreseeable future."

Kevin Nolan, Strategy Analytics, says the most powerful devices will have "equivalent to transcoding" functionality through software that can manipulate the broadcast bit stream so that by the time it arrives at the player in the mobile device it can be played. The client-side transcoding is performed within the TV Everywhere app downloaded from the Pay TV operator. ADB is now developing such apps for customers.

Bristow says these TVE apps behave like a virtual set-top box. "Our role is to provide a secure, trusted environment for the Pay TV experience to come through. That means having a gateway device that can distribute broadcast content and a combination of STBs acting as clients and providing a great experience, which we provide, and also apps for the tablets and smartphones."

Virgin Media customers can use tablets to watch or control TV utilised by the living room PVR, for example, PVR content is made available on other TVs and to multiscreen devices.

In order to feed tablets or smartphones the STB or DVR must be able to perform CA to DRM translations and the equivalent of transcoding to ensure the video is playable on the receive device. The "equivalent to transcoding" refers to a technique that ADB has developed for homes where new gateways with transcoder chips are not yet present.
DECIPHER HAS BEEN ARGUING THAT THE CONNECTED PVR IS THE DEVICE THAT WILL ENABLE PAY TV TO DOMINATE IN ITS OWN SUBSCRIBER HOMES

soon Sony Smart TVs.

The DIRECTV Pay TV experience is ported to the CE devices using an application that provides the same features you would expect if there was a set-top box attached, including full programme guide and of course the PVR functions. Theoperator environment is launched automatically; this is not an app store experience where you go to the Smart TV portal to find DIRECTV. “It is DVR without a DVR,” notes Alan Smith, Senior Product Manager at DIRECTV.

In another reminder of why multiroom is so important, Smith notes that the core business for his company is still viewing on the TV, something people will pay for. “The television set is still the social heart of the house. People predominantly watch television in the main rooms and most still consume television in linear form. They want to watch football on the big screen if they have that option.”

There is a growing number of platform operators who believe that eventually they can replace second and third room STBs with apps, in what is termed the ‘Operator as an App’ model. DIRECTV is one of them. But there is little support for the idea of removing operator-supplied Customer Premise Equipment altogether.

At this year’s Connected TV Summit, Daniel Simmons, Principal Analyst, TV Technology at IHS provided a list of what he sees as the flaws in the ‘Operator as an App’ model, and why primary STBs will merge into home gateways provided by platform operators rather than into televisions provided by CE manufacturers. He pointed to the difficulty of managing QoS when feeding apps across an unmanaged network, and the fact that only sub-sets of content are available via apps, rather than full packages, due to rights issues.

Perhaps more importantly, he pointed out that operators who remove STBs are limited in what they can do by the devices built by third-parties. This hardware is outside their control. “Connected devices do not replace set-top boxes; they minimize the number that you need,” was his conclusion.

Aruna Bensaid, VP Market- ing at SoftAtHome, which provides home operating platforms for convergent digital home services, points to IHS Screen Digest forecasts for record STB shipments in the next two years as proof that there is a long life ahead for this device category. He reckons multiscreen will boost the market as operators deploy gateways that can serve PCs, tablets and other devices.

Where the ‘Operator as an App’ is being considered seriously it is the kind of virtual STB app pioneered by TeliaSonera and Samsung, where the operator interface launches automatically and remains the default environment for the customer unless they choose to leave it. TeliaSonera is delivering a fully managed, multicast IPTV offer to Samsung Smart TVs in some customer homes and the identical service to other homes that use STBs.

There may be exceptional reasons for giving up the primary STB, however. Due to competitive pressures, Swisscom expects that it will eventually have to give away a 100 channel television service, bundled with broadband. This probably explains why the IPTV provider is leading the hunt in Europe for an STB alternative. The likelihood is that the telco would deliver its free service via connected TV apps and provide STBs for higher-tier customers.

According to Philip Brennan, Vice President of TV Technology at S3 Group, which provides industrial-scale CPE testing, including for the interoperability between gateways and multiscreen devices, RDK reduces the time required on software stack development.

Where operator STBs and CE devices co-exist as clients on a home entertainment network, the STBs could become smaller over time. We already have set-back boxes (which are small enough to hide on the back of a television – ADB introduced these years ago) and there is growing interest in HDMI dongles that contain the essential tuning, decoding and content security functions of an STB.

There are important efforts to reduce the cost of STBs and gateways and these could have a bearing on the future role of these devices. Zenterio has an interesting solution to make STBs easier and cheaper to manage, for example. The company provides its own Linux OS that it is porting onto different makes of set-top box. The aim is to create a homogeneous device environment where all the STBs in a network run the same OS.

Then there is RDK, the Reference Design Kit initiative led by Comcast, which is expected to reduce costs and time-to-market for STBs and gateways, including those delivering multiscreen viewing experiences around the home. As one example of how this is already making a difference, STMicroelectronics has pre-integrated RDK with its Orly family system-on-chip, reducing integration time for customers.

According to Mustapha Bouraoui, STMicroelectronics, “CONNECTED DEVICES DO NOT REPLACE SET-TOP BOXES; THEY MINIMIZE THE NUMBER THAT YOU NEED”
allowing operators to control and differentiate on the User Experience. Cheaper STBs, faster, is the promise. One major advantage is that leading chipset vendors are investing in RDK, making sure the drivers they develop are compliant with the RDK. This allows STB OEMs to have the RDK software layer up and running on their new STBs very quickly.” He adds that because RDK will help make STBs cheaper, it could secure their role as thin clients on the operator home network.

ENSURING GOOD QoE

Supporters of the multimedia gateway model say it provides the Quality of Experience guarantees that cloud delivery cannot. Charles Cerino at MoCA argues that “unless the CE industry wants to put some telemetry in every device they build, to tell you how good the data connection is, you cannot work with that model. You need to know when the set-top box is unhappy. You want to be proactive, telling the customer that their set-top box has a problem so we are coming to fix it. But if the CE industry puts that onboard then yes, we can work with them.”

ADB’s Bristow dislikes the attitude, inherent in the ‘Operator as an App’ versus STB debate, that set-top boxes are a Capex burden rather than an investment. He says you only need to prevent a few customer care calls before hardware devices start paying for themselves. If you can anticipate problems you can prevent customer care calls and when calls do happen it is easier to pinpoint problems and work out remotely how you fix them, then reduce the chances of them happening again.

ADB provides the Epicentro PMP suite of remote management applications to support the best possible customer experience. Any gateway solution must also manage resources when different screens are competing for services, Bristow adds. This includes practical issues like telling customers that they cannot watch a channel on their tablet because too many other screens are being used.

Until now, resource allocation has been a weakness of the OTT/cloud delivery model for multiscreen. Adaptive bit rate streaming hands over control of bit rate allocation to the client devices. Each device then attempts to get the best bit rate it can, which means they all compete with each other.

This is about to change, though. Roland Mestric, Solution Marketing for IP Video at Alcatel-Lucent, points out that the latest generation of CDN technology from Alcatel-Lucent.Velocix includes network-side management software that takes the resource allocation decisions back from the client devices. This means you can set policies and then dynamically control subscription requests. As a use case example, if there is limited bandwidth in the home, a Smart TV can be given priority over a smartphone. In practice this can mean limiting the number of ABR bit rate profiles that the smartphone is allowed to access.

Christy Thomas, Director Business Strategy at Alcatel-Lucent, notes that this management solution is designed for operator TV Everywhere content and where the operator has its own CDN. It only takes effect when there is contention issues inside the home but when there is competition for bandwidth it overrides the greedy ABR clients and decides the allocation of resources based on the best total outcome for household customer satisfaction.

Service providers know they will get the customer care calls for failures in a TV Everywhere viewing session on a CE client, so reliability is crucial. That means there is a focus on interoperability and as John Maguire, Director of Strategy and Marketing, TV Technology at S3 Group points out, this puts an emphasis on testing.

“Interoperability is critical. There is good work going on at the standards body level, like Home Grid Forum’s G.hn standard, to increase the degree of interoperability between the different transmission systems, which we see as crucial for a seamless multi-screen experience,” he says. “There also needs to be an increased focus on interoperability testing of the product and application. The multi-screen home environment now requires in excess of 5,000 individual functional test cases in the lab to ensure a good QoE.”

A spokesman at NC+ in Poland says ease of use and reliability are key factors in the success of multiscreen around the home. “And we do believe we deliver it. However, we sometimes face limitations beyond our control. As customers can use their own routers, access points and cabling, quite often these suffer from technical problems. We have to provide support and guidance.”

Complexity can be viewed as an opportunity as customers will be grateful to the company that makes everything work for them. Paul Bristow suggests that the more screens there are where people view Pay TV, the stickier the service should become. “If you want to swap providers you are not just changing what happens in the living room now, but changing what happens everywhere. Does the multroom DVR service at Provider X work as well as mine? People will have to make a bigger leap of faith than they do today when changing providers.”

Telecom Italia sees a big opportunity in providing a quality service from a trusted brand. Pier Luigi Gardini, Consumer Marketing Fixed Offer Director, explains: “Italians trust our brand’s tradition. Quality of service means that a service works, it is easy to use, well designed and attractive. That is absolutely a key differentiator. We have a good reputation for quality and for technical assistance.”

He adds: “Quality, reliability and the usability of services is a key element if you want to win market share and avoid competing on price. We believe that all these elements reflect a customer’s willingness to pay and we are leveraging them to sustain ARPU, maintaining our premium price positioning in the market.”

The outlook looks pretty good for Pay TV operators and a good deal better than it did three years ago, but there is no room for complacency. Various consultants are predicting Smart TV consolidation around Android, Microsoft Windows TV or maybe even iOS. That could sharpen competition between the Pay TV and open CE ecosystems. Netflix is intent on becoming a new HBO except, for now at least, outside the Pay TV universe. Catch-up TV is still a big opportunity in providing a quality service from a trusted brand. Pier Luigi Gardini, Consumer Marketing Fixed Offer Director, explains: “Italians trust our brand’s tradition. Quality of service means that a service works, it is easy to use, well designed and attractive. That is absolutely a key differentiator. We have a good reputation for quality and for technical assistance.”

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dominated by the terrestrial broadcasters, never more than a tap away on tablets. And the free-to-air platforms have also raised their game with next-generation solutions of their own, offering good UIs and companion apps.

John Barrett at Parks Associates has a warning about pricing for Pay TV. He says cord cutting is more about economics than anything else. “In the U.S. lots of people try Pay TV but cancel because the price goes up and the reason the prices are going up is because the content providers are raising their prices.

“If you look at young people that don’t have Pay TV, most tried it and left rather than never tried it. But one-third never tried it and that is significant because it is a much higher rate than among older adults. The problem with these consumers is that they don’t seem to buy into the value proposition of Pay TV.”

For the young adults who left, a price adjustment might be needed to get them back. Nobody is really catering for the low end of the Pay TV market anymore, Barrett explains, especially since the migration from analogue to digital.

Younger consumers, according to Parks Associates research, do not have quite the same connection and loyalty to television that their parents have and their grandparents had, when TV was the in-home entertainment rather than one of the options. Barrett says you can then start considering the way that free or low-priced Internet video can tip the scales towards cancellation.

For those consumers who can afford Pay TV, the connected home is the key to remaining at the centre of their world. Christine Mitchell at Vodafone points out that you can often find the same content in multiple places, and this puts the emphasis on the whole customer experience. As an operator you need to give people a reason to use you in the same way that supermarkets fight to sell the same branded food on their shelves.

“You choose a supermarket because their stores are nearer or they are priced better or they have the best customer service,” Mitchell points out.

Balázs Birck, Head of Product Development & Innovation at Magyar Telekom, highlights the power of broadcast, the need for relevant on-demand services and the opportunity that multiscreen and OTT gives operators to increase their bundle, so exploiting an existing strength. “The Pay TV industry is good at bundling; it is our core competence so we need to create one core offering that is easy for customers to digest without having to educate them,” he says.

Steve Christian, VP Marketing at Verimatrix, whose content protection solutions are helping a number of service providers extend their reach to multiscreen devices, says the aim should be to provide universal access rights to content, whatever screen you are using. “That is the role of a good service provider and it is why people pay their money to them,” he says.

He thinks the ‘Complete Entertainer’ is a nice tagline for operators. “The trick is to do what you do well across different platforms and devices and so defend your territory as the company that bills the credit card every month.”

“They are still your key customer.”

Vassilis Seferedis, Samsung

Javier Lucendo de Gregorio, Telefónica Digital

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