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Telecoms operators are gearing up for IPTV. But it's not about delivering television; it's about merchandising to somebody who's watching television. Sun Microsystems' Andy Sheldon and Darrell Jordan-Smith talk about "monetizing the eyeball"

Creating value from IPTV



Sheldon: "IPTV is not just a slightly different, slightly better version of the cable guide system. It is an opportunity to generate revenue by launching compelling and interactive services off content"

There needs to be a fundamental rethink of the opportunities that IPTV can bring to content creators, telecoms operators, and the viewing public, says Andy Sheldon of Sun Microsystems. "IPTV is not just a slightly different, slightly better version of the cable guide system. It is an opportunity to generate revenue by launching compelling and interactive services off content," he says.

To realize this opportunity, content creators will need to help viewers derive more value from the material. And to do this content creators will need infrastructure and tools to cost effectively provide interactive content and add viewer value.

Sheldon, who is senior director at Sun's telecom and media industries unit, sees this as a business imperative for telecoms operators that want to succeed as IPTV service providers: "For the sake of your own balance sheet, you are going to have to build the infrastructure and the business flexibility to let content creators do three things that they really care about: promoting their content, maximizing their advertising revenue, and accurately tracking usage."

In this way, operators will transcend their current role and overcome their biggest challenge: avoiding being disintermediated by the people who own the content.

Promoting content in exciting new ways

Through well-planned services, telecoms operators will make exciting new cross-promotions possible for their content creator partners — going well beyond anything that cable service providers are able to offer today.

For example, a subscriber could be tuned in to a regular TV channel, delivered through the IPTV system, watching a food programme hosted by a famous chef. At the end of the show, instead of just going on to the next item in the channel's schedule, the IPTV system could present an on-screen message offering a variety of alternatives: pay-per-view programmes by the same chef, for example, or the opportunity to order related books or DVDs. At any time during the programme the subscriber could get the IPTV system to send the recipe to their mobile phone as a text message for a minimal fee. Or they could order the ingredients they need to cook the meal from their local online supermarket.

"Imagine advertising that really spoke to your needs," says Sheldon. A young family, with a new baby could watch a commercial for baby products and be asked if they would like a discount coupon. An

identity management system in their set-top box provides a link to their mobile, which reminds them that they have a coupon to use the next time they are in the store. They simply show the coupon number stored in their phone to get the discount.

"With IPTV, you can get this linkage between television and all of these new things on demand, with 360 degree reporting for all parties," says Sheldon. "Ideally a content creator would be able to put a trigger in a channel that links you, the viewer, to the on-demand version of the programme, so it can keep you as a consumer. Keep you eyeballs, monetize your eyeballs."

Content creators are used to developing revenue from their content — from book rights, for example. Thus the programmer that creates the content is the ideal partner to run these on-demand applications. "What they need is for the right infrastructure to be in place," Sheldon stresses.

Building from the IPTV infrastructural capabilities

Current industry thinking creates a parallel between IPTV set-top boxes and the cable guide system. The IPTV boxes have more capability and the interactive programme guides (IPGs) look smarter, but that is about as far as it goes.

"We need to rethink the opportunities. The IPG is a navigation tool for the consumer to find the content they want. But it is also a tool for all parties in the IPTV value chain to maximise their revenue," Sheldon claims. "IPTV operators need a guide management system that allows them to move their on-demand assets around dynamically, based on what viewers are watching now and on what their best deals are."

Today's programme guides tend to list channels numerically, effectively separating related channels. "I might have Discovery at channel 38, Discovery Wings at 102, and Discovery Health at 127," says Sheldon. "With IPTV, the guide could automatically cluster channels so that at the end of a particular programme on Discovery, the next thing you see is the Discovery mini-guide — with a link to the full guide — plus promotions for related content and services, such as video-on-demand (VoD)."

But there are obstacles.

Strengthening the IPTV infrastructure

For a start, telecoms operators will need huge data centres to store video and manage IPTV services. Darrell Jordan-Smith, vice president of Sun's global

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telecommunication industries activity, notes that projects like AT&T's Lightspeed will need a large number of servers just to complete their initial rollout, consuming both space and power. Openly discussed estimates indicate that one server will support between 10 and 250 subscribers. And AT&T is targeting 17 million homes through Lightspeed in the US.

"Sun was not surprised when Google, which runs thousands of servers, recently warned that if the performance-per-watt of today's computers does not improve over the next few years, power costs could end up overtaking hardware costs by a large margin.

It is to address this challenge that Sun has created the Niagara processors that can simultaneously execute 32 instruction sequences, or threads, compared to the one or two that typical server chips are capable of handling — delivering more work per watt than anything else on the market today," he says.

The 9.6 GHz UltraSparc T1 Niagara processor is already available in the Sun Fire T2000 server. The new server family has achieved eight world-record benchmarks and is setting a new industry standard for performance, energy and space efficiency with as little as half the power and space of competing systems.

Sun is also in the process of certifying its x86 servers to support MSTV, Microsoft's IPTV offering: these will triple storage density and cut power consumption to a third. This could save operators tens of million of dollars in electricity alone. With space at a premium as well, Sun's new platforms deliver further cost benefits at an order of magnitude greater than other manufacturers.

"Today Sun's x86 platforms support Microsoft's offering, but we are making plans to open up the market in 2006," Jordan-Smith says.

Among other IPTV-related developments, Sun is also actively working on open standard technologies for digital rights management (DRM). Sun's DRM architecture, the DRM InterOPERAbility Framework, implements standardized interfaces and processes to ensure the interoperability of DRM systems. It is independent of specific hardware and operating systems and is not restricted to specific media formats.

"The DRM InterOPERAbility Framework enables user-based license provisions as opposed to the situation today where licenses are assigned to devices. Content owners will thus be able to track who has access to their material and where they are located — potentially satisfying worries that programmes licensed for viewing in one country will be illegally exported to another," explains Jordan-Smith.

Implementing IPTV will be complex, he admits, adding that telecommunications operators should "focus on the services people want to buy and the mechanism by which they will provide them, and then work back from there" to develop their systems.

A new model for maximizing ad revenue

Sheldon points out that telcos should take a serious look at advertising when they specify the system. "None of the current IPTV vendors are talking about the basic fundamental economic driver of TV, which is advertising," he warns. "And if they are talking,

they'll most likely be telling operators to do what is done in the cable industry: buy a commercial insertion server, a trafficking system."

However, Sun sees an opportunity for telecom operators to become advertising fulfilment partners for the content creators.

"It's a very simple model. The operator's network is capable of doing things such as profiling and direct response. Using these capabilities, the telecoms operator could help the content creator make advertising more valuable at an incremental cost per thousand. And the content creator would share that incremental cost with the operator. This is a pay-for-results model," he says. "Advertisers we've talked to say they're willing to pay 15-20% more for this sort of service."

Cable operators are already able target a specific advert to a specific demographic market, but the industry does it fundamentally differently to Sun's proposed model. The content creators charge the cable networks for the programming, and in return provide a certain number of minutes of advertising that the network can sell. The cable operator has to provide equipment for insertion and billing.

Sun is suggesting that the content creator sells all the advertising on its channels and pays the operator a proportion of that for delivering to the targeted audience. "This gives telecoms operators a way to generate revenue from the IPTV investment that doesn't come from the consumer," Sheldon says.

This would create value for everyone in the chain. "The advertisers get a better relationship with the consumer; the content creators like it because it forms a closer bond with their advertising partners, which is the lifeblood of their business; the operators like it because it's an incremental revenue source that doesn't come from the consumer; and by targeting an ad and making it more interactive and interesting, the consumer is happier as well," he adds.

100% accurate reporting for the first time

Content creators will be happier for another reason, too, he says. TV audience figures are gathered using a very small statistical sample. This is useful for the top few channels but hardly meaningful in a 500-channel world.

"No matter which side of the business you are on, creating or licensing a program is very expensive and surprisingly subjective. The industry's CFOs need to know that their investments in programming are paying off. But with very little feedback about who is watching what, this is next to impossible. IPTV will change all that by providing completely accurate reporting — as much about tracking what's not being used as what is. This reporting will form the basis of good, solid commercial decisions," he says.

Investment in IPTV will happen, Sheldon concludes: "Telecoms operators are going to spend \$28 billion over the next three years to equip their networks to deliver media. Many of them think it's about delivering television. We think it's about merchandising to somebody who's watching television — understanding what are they interested in and offering a value-added service that builds on that interest to generate more revenue." ■

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Fixed line operators globally face increasing challenges to support a declining revenue source and legacy cash cow of voice services, writes Andy Sheldon of Sun Microsystems. If they are to compete successfully against competitors they must think differently about not only the service they offer their subscribers but also the economic model under which they provide the service

Changing the economics of TV distribution

IPTV would appear to be a potential, albeit challenging, saviour to the fixed line operator's consumer business. The challenges are daunting.

They must upgrade their networks to deliver approximately 20 megabits a second to the home; licence hundreds of channels of TV content and thousands of hours of VoD programming; build the infrastructure to distribute this content; buy new consumer premises equipment; train their field service technicians to install video and home networking solutions; integrate these new services in to legacy billing and subscriber management services; provide call centre expertise to handle consumer questions and spend billions on marketing the new service to an already cynical and over marketed-to consumer.

And yet, they are proceeding at full speed to bring these new services to market. Indeed, Strategy Analytics predicts that the telecommunications industry will invest \$28 billion over the next three years to build out their networks and service infrastructure to deliver television services.

Content is still king

The lifeblood of any pay TV service is the video content that is delivered. Acquiring content generally requires months of detailed negotiation and more attorneys than there were extras in Lord of the Rings. But all content is not created equally.

Consider the current TV line up of a basic cable subscriber in the US. The FCC mandates that local broadcast channels must be carried by the operators providing a pay TV service in the area. In addition to these local channels, some 30 cable channels are provided in the basic line up. For these channels, and others besides, the cable company pays each programmer a fee per subscriber per month for the content. These costs range from a few dollars for channels like ESPN to a few cents for less well known channels.

These carriage agreements are negotiated based on the number of subscribers that an operator brings to the bargaining table. In the case of Comcast and Time Warner these can be significant, over 20 million subscribers each. Thus, these two cable operators drive the hardest bargain and receive "most favoured nation" rates in return.

The carrier charges the subscriber a monthly fee of \$35-\$45 for these channels to offset the cost of the content and the service infrastructure to deliver the service. To sweeten the pot, in return for the carriage fee paid to the programmer for the content, the programmer provides the operator with advertising time, typically two minutes per hour, called an "avail", to which the operator can sell advertising and derive further revenue.

Challenging economics

Verizon's FiOS TV service in Keller, Texas, is offered at \$34.95 per month for the basic channel line up, while the cable competitor's basic cable service costs \$43. Verizon is paying more for the same content than Time Warner, given it has fewer subscribers in the market, and is charging less for the service in order to gain market share.

While this is a logical way to enter a market against entrenched competitors, it is not good for the underlying economics of delivering the service.

It's time to change the game in TV distribution. To do this we must consider the interests of the content owners who will license their content to the carrier's service. These interests can be summarized in three areas:

- reinforcing the content brand;
- increasing advertising inventory and value;
- comprehensive reporting on content use.

Providing the tools for the programmer and content owner to brand their VOD pages is essential in helping them promote their content on the operator's service. These tools should be based on open industry standards such as the Open Cable Application Protocol (OCAP) or the Multimedia Home Protocol (MHP). Furthermore, the tools should be inexpensive and easy to use, for example, web-based templates and industry standard metadata such as the CableLabs 1.1 specification.

In short, the best people in the world to promote Discovery Channel programming is the Discovery Channel, not Comcast or Microsoft.

Long tail VOD content

The IPG is not only a way for subscribers to find the content they are interested in quickly and simply but it becomes a revenue optimization tool.

An excellent article in Wired magazine published in October 2004 by Chris Anderson (who is writing a book on the subject due out in 2006), describes the concept of the content long tail. The more niche the content the more valuable that content is to the few people who are interested in the subject matter. Inexpensive storage, IP delivery and a comprehensive search methodology within the IPG make the VoD infrastructure of a telco operator ideally suited to deliver this type of content to the consumer.

The amount of this content is staggering. Amazon carries somewhere in the region of 160,000 videos or DVDs. By comparison, Hollywood has approximately 20,000 mainstream titles.

There are 43,000 people who make a living every day producing videos, but for them, sales and marketing channels are a challenge. The independent videographer would welcome the ability to submit content

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into another distribution channel using simple, low cost, tools.

Advertising — the Basic economic driver of TV

In the US alone television advertising is a \$67 billion a year business. By comparison the revenue for all pay TV services combined — the fees paid to cable or satellite providers to receive TV programming — is \$54 billion. Thus TV advertising dwarfs pay TV service revenues by some \$13 billion per year. Advertising payments are roughly equivalent to \$600 per US household per year.

But TV advertising is under intense pressure to deliver increased value to the marketing departments who pay for it. In a recent interview on CNBC's "Power Lunch" program, Bob Jeffries, CEO of JWT the largest advertising agency in the US, predicts a staggering decline in network based TV advertising expenditure over the next five years.

Audience fragmentation has caused this decline. Thirty years ago an advertisement on all three TV US networks — ABC, NBC and CBS — would have all US TV households covered. Today 94% of all households have pay TV, and receive hundreds of channels of linear TV, a few thousand hours of VoD, have a DVD player, a PC connected to the internet, own a cell phone or PDA that receives data services, play on game consoles rather than watch TV, and carry a portable media player, such as an iPod.

Personal video recorders fundamentally change the way that people watch TV — and have reduced churn for cable operators. Strategy Analytics estimates 8% of US households own some form of PVR and by 2008 this will be 35%. Advertisers are naturally concerned. After all, 76% of Tivo owners say that the most valuable feature of the product is the ability to skip ads.

Another challenge facing TV advertisers is the distinct lack of direct response to an advertisement presented on the one way networks of broadcasters. If a consumer sees a product or service that interests them, they must make the effort to get off the sofa and make a phone call, or log on to the internet to respond.

Both off-line methods from the TV hinder the impulse buying potential of the advertisement. Today's marketers are turning to the internet and search engine-based advertising with inherent direct response properties.

More valuable advertising

Advertisements are more valuable when the right message is delivered to the right consumer at the right time. Consider the single man who receives feminine product ads from P&G. The advertiser in this case has alternate products that are targeted at men. Ideally the right 30 second commercial is delivered to each household based on some basic demographic. Furthermore, by targeting an ad to a household, the likelihood increases that the consumer will interact with the ad. In doing so, providing a higher touch point for the advertiser. Thus a permission-based marketing database is established over time that becomes an incredibly valuable tool for the operator and advertiser alike.

Interactive advertising can provide even greater value. For example, while watching a 30 second commercial the viewer is prompted to learn more about the product in which they have an interest. In a PVR provisioned household the consumer can pause live TV and watch a longer form of the commercial delivered by the operator's VOD infrastructure. The advertising industry calls this emerging model a "telescope."

Advertising partnership — everyone wins

Each of these incrementally more valuable ads is worth paying for. Industry experts suggest anywhere from a 15-20% premium on the CPM, or cost per thousand, the traditional way of valuing advertising rates. Thus a role exists in this new cooperation between the programmer and the operator whereby the operator acts as an advertising fulfilment partner.

The key value to the operator of acting as a fulfilment partner is incremental revenue that does not come from the consumer's wallet. Furthermore, this business model strengthens the symbiotic relationship that exists between the programmer and the operator. It strengthens the advertising relationship between the programmer and the advertiser and can even be more valuable to the consumer. Google has shown us that when we get ads for something we're searching for these are no longer an annoyance. They can be a real value. Thus delivering the right commercial at the right time makes everyone happier.

Content reporting

Reporting on content use is very poor in incumbent pay TV services today. Often this is not because the technology doesn't exist to provide accurate and timely data but more because the operator wants to guard the viewing data as a control point over the programmer's content — or because they are deriving higher CPMs for their advertising than the programmer is for the same content.

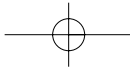
Linear TV viewing data is similarly antiquated. The Nielsen system of ratings has not kept pace with the ever burgeoning ways that a consumer can absorb content.

Reporting is a double-edge sword. While programmers would love to have far more accurate and complete data on which of their programs are being viewed, when, and how, not necessarily with personally identifiable information but in aggregate, this kind of full disclosure also poses a problem for them. It would perhaps more accurately show which programming is not being viewed to the same level that the rating the show received would suggest. Thus, they could be overcharging their advertisers.

While this fundamentally challenges the economic of TV distribution it has been allowed to exist since the inception of paid advertising based on ratings.

However, the challenge facing programmers today is that marketers can use other media outlets, such as the internet or mobile platforms, and get 100% reporting on content and advertising use. So the programmers and operators will have to address this head on in the near term to satisfy the basic requirement of corporate marketers and CFOs to know what is actually working with their TV ad campaigns. ■

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