

CTAM

MAGAZINE

FALL 2001

why is this man smiling?

could be because he's bullish on iTV...

james ackerman, ceo, opentv

PLUS: Catch-22 of iTV • Path to Profitability • iTV Interface Design Primer



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James Ackerman, CEO, OpenTV

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all the right connections

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BY ELAINE CANTWELL, TOM CONNOR, JEFFERSON LANZ AND ANNE WHITE

CABLE & TELECOMMUNICATIONS ASSOCIATION FOR MARKETING

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KEEPING iTV FOCUSED IN A FUZZY ECONOMY



BY LESLIE ELLIS

CTAM

Senior Technical Advisor

Eighteen months ago, the sweet future of interactive television was as clear as the top line of an eye chart.

The equity sum of the industry's top interactive television suppliers swashbuckled into a \$60 billion stratosphere. Digital subscriber growth was galloping. Companies like Liberate threw the parties HBO used to throw. Even the interactive applications themselves were starting to look pretty good. iTV was the go-go groove child of the new millennium.

Indeed, eighteen months ago, iTV's optimism vortex was so potent, it ruffled the bangs of the most curmudgeonly naysayers.

And here we are, autumn of 2001, and the future, 18 months ago. Insight Communications remains the poster child for iTV. The industry waits, riveted, for the dance of Cablevision Systems with Sony. Video on demand hunches along, its ankles tied and re-tied with stale films – at least, compared with video store inventories.

What happened? The same thing that happened at every other iTV surge, over the last three decades — something came up.

iTV, for all its fertility, always seems to linger somewhere below #2 on cable's strategic to-do list. When you're below #2 on the to-do list and something comes up, you get bumped. If interactive television were a rock, it'd be very, very smooth by now, for all the tumbling it's taken over the last 30 years.

What came up started with what came down: The economy, which bludgeoned about \$50 billion from that dizzying, \$60 billion booty of yore. In its painful wake,

the iTV supplier sector licks its wounds, cuts staffs, and digs in hard, still waiting for momentum beyond trials. Success is a matter of staying power, these days.

Subscription video on demand (SVOD) came up in a big way in South Carolina, spinning the heads of HBO and Time Warner. On-demand television is suddenly alluring enough to cajole Joe Collins and Jim Chiddix – two of Time Warner Cable's highest ranking executives – to form a company around it.

Technology came up, too, in a thicket of ironies: Digital set tops were installed at rates of hundreds of thousands per week, but they were unable to accommodate any but the most skeletally-written iTV applications. And advanced units, such as Motorola's long-promised DCT-5000, pumped up for more applications, were unable to make their way to market.

Where to now? Just as the tongue always returns to the sore tooth, so will the returns of iTV persist in the cable mindset. It will persist because cable is persistent. Video is still the core business. Making it better and richer in revenues is too important to linger below #2 in priority – especially with the mostly-free boxes, and the \$9 per month service specials of DBS competitors.

If today's interactive television marketplace seems more like the bottom line of the eye chart – fuzzy and indistinct – perhaps the words of Calvin Coolidge can provide some illumination. Not talent, nor genius, nor education, he said, can take the place of persistence and determination.

Persist. —A—

SIMPLIFY, SIMPLIFY, SIMPLIFY: AN iTV INTERFACE DESIGN PRIMER

Interface designer Stephen Johnson argues for a definition, process, and rationale to achieve a set of interface design standards for digital set top boxes, leading to what he calls “interface design simplicity.” He stresses that simple designs do not necessarily betray sparseness or lack of detail, rather, their simplicity arises from respecting standards and adhering to a clearly defined process, which he outlines in six simple steps.



BY STEPHEN JOHNSON

*User Interface Designer,
Coach Media*

The deployment of digital set top boxes has been a tremendous boon for the cable television industry. This success is due in no small part to strict technical standards (see Michael Adams' book, *OpenCable Architecture*, Cisco Press 1999, for some excellent examples), that allow both software and hardware vendors to coordinate their efforts and get products to market quickly. With standards, developers can focus on creative solutions and avoid arguing over every technical design detail.

Unfortunately, the process of designing interfaces has no such advantage. The discipline of interface design for cable television is largely adrift. The standards that do exist borrow heavily from other fields (the Web, for example) and are generally inapplicable to the television medium. Without the protection of exclusionary guidelines,

interactive television designs become increasingly complex and any perceived feature can be added at will.

DEFINING SIMPLE: SOME ATTRIBUTES

So, what characterizes simple interface designs? Fortunately, television viewing itself provides a wealth of interactive standards, many of which apply in the current context. Three attributes, in particular – respect for traditional interactive metaphors, focus on singular actions, and emphasis on visuals at the expense of text – provide an excellent basis for achieving a simple design.

TV Is Simple – Keep It That Way

Television viewing, at least before iTV, was simple: tune a channel, adjust the volume, and perhaps, mute the volume, if you want to get fancy. These interactions seem childlike now, but designers should remember that viewers

once had to learn even these simple actions. Once learned, these behaviors become highly resistant to change but, of course, remain quite comfortable and simple for the viewer.

In terms of setting standards, predictable viewing interactions are not difficult to codify. Think of a basic session of television watching and many of them become apparent. Viewers expect one remote control key press to change the entire screen to a new image. Exceptionally strong feedback accompanies any visual change. Viewers rarely take their eyes off the screen, even when pressing keys on the remote. Families and/or small groups watch television more often than individuals. These behavior patterns, though quite familiar, have been strangely overlooked by many iTV designers.

Beyond viewing habits, television interaction lends itself to many analogous metaphors (for example, animated flipbooks or slideshows) sharing common characteristics – a contained display showing continually moving images, quickly changed at a viewer's command. Use of these metaphors is exclusive and those applicable to other media do not translate. In particular, the desktop metaphor (graphical icons chosen by a floating pointer or cursor) common to PCs *has absolutely nothing in common with television viewing experience.*

One Thing at a Time

Perhaps the most effective interface standard might be the most easily overlooked: the simple idea that television viewer attention focuses on one activity, and *only one*, at any given time. Historically, audience attention could be easily captured by news

USE OF TEXT



Simple television design uses text as labels (left), to be casually noted while watching. Viewers resist reading long passages or responding to commands (right).

Source: Coach Media

and emergency system sources interrupting a broadcast with a special report (“we interrupt this broadcast...”) or superimposing an emergency alert. Creators of this information know that viewers maintain a singular focus and diverting actions replace, rather than add to, this focus. For a dramatic example, recall the 1994 coverage of police pursuing O.J. Simpson’s Ford Bronco through the freeways of Los Angeles. This attention-grabbing coverage even distracted NBA basketball players in the midst of a championship game.

Images, Not Words

A final television standard might also appear obvious—but merits mention due to its frequent violation in the interactive arena. Simply put: television is a visual medium. Viewers don’t read TV screens. Television design uses on-screen text for labels (naming a person or place) or alerts (weather or emergency tickers), but rarely for content (see Figure A). Yet many iTV designs present on-screen instructions that require careful reading.

▲ FIGURE A

Television has no shortage of standards that apply to interactive design. Though not exhaustive, this list of attributes illustrates how interactive design standards emerge directly from current television viewing habits. Respect for these standards provides an interactive designer with a firm foundation; applying them within a clearly defined process allows a simple, elegant design to emerge.

WHY SIMPLICITY MATTERS

Cable iTV designs have multiple customers: viewers, local cable division or system employees, and corporate executives, among others. Any design discussion must acknowledge that working within the cable TV industry presents unique challenges. In other fields, pleasing the primary user (in this case, the viewer) suffices. But the cable business quite rightly demands commensurate attention for those who procure and maintain the software application on which the design rests.

Simple interface designs have the virtue of addressing all of cable's unique requirements. Subscribers enjoy using an effective interface, but they also enjoy free services and other goodies. Keeping them happy does not, on its own, justify design simplicity. Division engineers enjoy simplified, low-maintenance software, but easy maintenance may be due to lack of use. Fortunately, simple interface designs do much more than avoid a myopic focus on customer happiness or ease of maintenance.

A simple, clean design inevitably produces more satisfied customers. When viewers perceive value in interactive software, they show their appreciation in higher subscription rates. To perceive value, viewers must feel free to experiment, use features with minimal practice, and quickly notice how an interactive design enhances their viewing experience.

A simple design also assists the cable operator by keeping the time spent on software maintenance

and training to a relative minimum. When interfaces are streamlined and software designs simplified, especially on the server, or network side, engineers spend far less time maintaining programs or keeping them from crashing. In contrast, complex or poor designs cause an increase in technical support calls and customer service complaints.

If simplicity leads to fewer features, simple designs may – superficially, at least – compare poorly against feature-stuffed competing products. However, customer acceptance and understanding make introducing new features far easier than removing them from a competitive but hopelessly complex product. Furthermore, once customers give up on an overly complex interactive design, luring them back is notoriously difficult. Many viewers, for example, hesitate to watch a bad program twice, so why would they agree to suffer a bad interactive design more than once?

PROCESS: MAKING IT SIMPLE

While respecting television standards, designs can exhibit simplicity in multiple ways. Each product has its own requirements, leading to unique results. However, the *process* of crafting a simple design can be isolated into six steps. To achieve optimal results, each step must be completed before beginning the next. Circumventing this process leads to poor designs, causing unnecessary revisions and, in the worst case, product failure.

1. Requirement Definition and Documentation

This step seems obvious but is often overlooked in the rush to define how the interface looks. First, ask what the product *does*, independent of how it looks or works. As Frank Lloyd Wright's mentor Louis Sullivan famously counseled, "form inevitably follows function." Naming functions and *writing them down* provides an excellent defense

against the temptation to add features later.

This step provides the additional advantages of clarifying the product design for all interested parties and achieving consensus on the product scope.

2. Clarification of Major Feature Areas

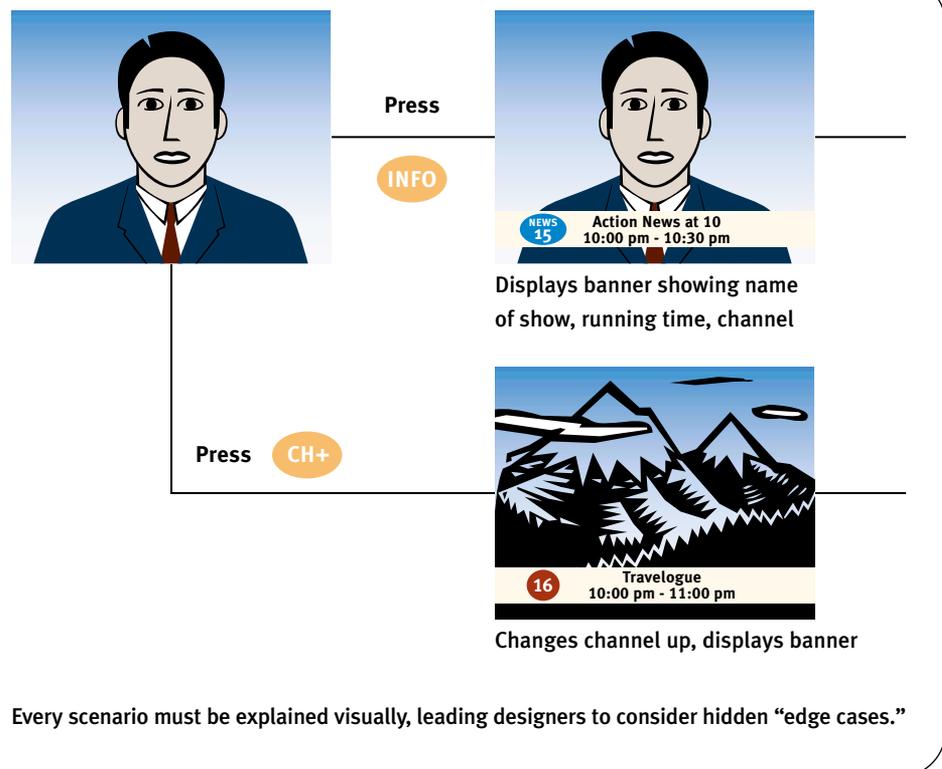
A clear requirement list suggests priorities. Some viewer features take precedence over others and an effective design emphasizes relative importance. For example, an interactive program guide might include requirements allowing a viewer to search for programs by title, channel, and category. These requirements suggest a feature area called “find a specific program,” which might have a higher priority than, say, setting up a sleep timer or a VCR recording. Organizing requirements into prioritized feature areas moves the design process from what the product does to what the viewer can do, effectively starting the interface design.

At this stage some thumbnail flowcharts of the key feature areas keep the design consistent and reveal potential challenges.

3. Feature Visualization

Clear delineation of feature areas suggests interactive activities, even potential screen designs. Before a single pixel is painted, however, a comprehensive set of point-to-point flowcharts must be completed, including every possible scenario for every potential interface (see Figure B). What happens when a viewer has entered two

COMPLETE FLOWCHARTS



Source: Coach Media

numbers on a PIN screen, decides she wants to change channels, and the VCR starts to record? Viewers inevitably create these situations, and the interactive design must accommodate every “worst case scenario.”

4. Graphic Style Creation

The knowledge of *what* a product does and *how* it does it allows the designer to create a graphic identity. This step, though subtle, hugely enhances the final graphic design by forcing the designer to focus on consistent interactive metaphors and overall product detail. A graphic style is not a final design. At this stage, a designer

▲ FIGURE B

need only work out simple layouts, interactive rules (for example, pressing B always means “buy”), and decide on general icon and typeface styles. Final decisions on colors, shapes, and exact wording come later.

5. Contingency Coverage

With every screen detailed, the last interactive design step involves determining the resulting action of each remote control key press in every possible situation. This step is tedious, but critical, as viewers will press any key on any screen at any time. However bizarre the request, the design must react clearly and consistently.

6. Graphic Design and Completion

Effective graphics complement the completed interactive design work. This step adds a final polish to screens that fulfill requirements, are coherently organized, and meet every possible contingency. Note that this step, though obviously important, is only one of six and comes at the end of the process; far too many designers start here, confusing a graphic design with an interface design.

WHY SIMPLE ISN'T SO SIMPLE

If designers agree with the benefits, definition, and even process of simplicity, why have simple designs not proliferated? The answers vary from conceptual to technical to pragmatic, but they share a common lack of respect for the television medium, for subscribers, and for principles underlying information display design.

Ill-considered additions of new features to an iTV product represent simplicity's greatest enemy. The phenomenon earns the labels “feature-itis” or “feature creep,” diseases affecting those who want to add perceived benefits to a product without considering a possible decline in consumer understanding. While the causes of the diseases appear

understandable – for example, matching a competitor's feature list – inscrutable features needlessly add to a product's design complexity. On the other hand, watching viewers actually *use* a product provides an excellent guide to considering potential features.

Complexity also creeps into designs disguised as necessary technology. Interactive TV designs that display excessive menus, alerts, PIN screens and icons, ignore the basic premise that television contains only *programs* and conspicuously lacks static visual cues. Viewers expect images related to a current show, not text describing what they could do next Tuesday. We can thank personal computer and Web design for many of these technical artifacts, which a user may click or ignore as he or she pleases. Television, of course, has only begun to accept interactive options. For decades, *watching the program* represented the only choice.

Feature-itis and technical hubris compound the oft-repeated mistake of overestimating the average viewer's learning capacity. Many interface designers admit that the intelligibility of their designs depends on a measure of viewer *training*. Underestimating the visual perceptiveness of ordinary viewers might be excusable, but assuming comprehension of complex interfaces without enticement or incentive borders on contempt. How long would a TV producer last if he asserted viewers “will just have to learn” to like his program?

Design simplicity has many foes, but the prime candidates named here – excessive features, inappropriate technical contributions, and assumed customer learning curves – require special vigilance. In fact, these problems are often presented as advantages. —A—

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iTV TECHNOLOGY – DÉJÀ VU ALL OVER AGAIN?

How will the technology ecosystem evolve to enable widespread interactive television adoption? Ramon Chen of MetaTV believes that taking a glance at the business world, as well as the historical perspective of enterprise computing and information technology, may provide some insight into the future of iTV development. Examining the numerous parallels between the technology requirements for corporate businesses and interactive TV, he speculates on how they might affect the industry's marketing strategies and revenue potential for iTV applications.



BY RAMON CHEN

*Vice President,
Worldwide Marketing,
MetaTV*

Interactive television technology certainly appears to be making great strides. With the availability and choice of multiple set top boxes, middleware software and evolving standards, the infrastructure to put together robust iTV solutions would appear to be falling into place. As marketers, we eagerly await the opportunity to bring those services to consumers, anticipating that gaining consumer acceptance and adoption will require some trial and error. Customized offerings can only come from a flexible and adaptable infrastructure that will support the quick turn around needed to be responsive to consumer preferences. While consumers won't care - and why should they - which software and set top boxes are delivering their iTV service, it's worth pulling back the curtain on how iTV

technology will be leveraged to see what is in store and, ultimately, how it may affect our marketing strategies.

Firstly, the overwhelming choice does appear to be leading to significant integration and implementation complexity. The news of various trials and deployments on a variety of platforms appear as headlines almost daily. But, many are left scratching their heads, wondering if they are making the right choices and proceeding down the path to success. Because of the variety of environments, both cable operators and content providers find themselves faced with the need to support multiple platforms (combinations of set top, middleware brands and different release versions) in order to provide iTV services that span markets (see Figure A). The conundrum only promises to get

more complex as higher-end set tops begin to roll-out, while lower-end boxes remain in circulation.

Cable operators face the challenge of supporting multiple markets and working with a variety of technology vendors. Content providers, such as eBusinesses, advertisers and TV programmers, need ubiquitous distribution of their content, and therefore, look to cover both satellite and cable, as well as consumer set top environments, to ensure the broadest exposure and opportunity.

Because many iTV solutions involve middleware, building iTV applications and services is becoming more and more of a software play, requiring a whole new breed of skills. Suddenly, the word “programmer” in the traditional television space begins to take on the meaning of its information technology (IT) brethren. The need for programmers with coding skills enters into the equation.

SO MANY CHOICES

For years, businesses have been continually evaluating which enterprise operating system to use (Windows, Mac, Unix, Linux, OS/2), which type of box to deploy (Intel PCs, Sun Solaris, Mainframes), and which development tools or languages (Cobol, C++, Java) to adopt for their application development. Many find themselves forced to support multiple platforms resulting from acquisitions and mergers, as well as from the hardware and software purchasing decisions of different regions or divisions. As a consequence, some of the largest corporations have been unable to build consistency in their business application deployments and resulting business processes.

Interactive television’s current proliferation of middleware and set top box combinations is following along a familiar path and may indeed face similar challenges. This means that an ability to

launch and market an iTV service for one platform, may not automatically correlate with the requirements of implementing that same service on additional platforms and markets. The resulting additional effort, time and cost will be an important factor.

THEY WANT IT, BUT WHO WILL BUILD IT?

With business IT, the search for skilled programmers and specialized platform expertise in each segment became a priority. As technology progressed and business processes became more

complex, skills shortages ensued resulting in higher labor costs. In the end, labor (internal or outsourced), began to form by far the largest percentage (sometimes up to 80%) of the overall cost of implementing systems. In an attempt to combat this, the IT industry began a mass migration and training of non-IT professionals to help fill the bodies needed to build the applications. However, this meant that organizations had to lower the bar of acceptable skills.

Not surprisingly, the demands imposed caused the quality of the deployed applications to degrade. One could even reflect that the Y2K problem was partly attributable to the fact that too many programmers, who were often inexperienced on new technologies, were focused on specific assigned tasks rather than a complete overall solution. This resulted in a number of

SAMPLING OF LEADING U.S. MIDDLEWARE AND SET TOP BOX VENDORS

MIDDLEWARE

Liberate

MicrosoftTV

OpenTV

PowerTV

WorldGate

SET TOP BOX MANUFACTURERS

Motorola

Pace

Panasonic

Pioneer

Samsung

Scientific Atlanta

Sony

Thomson

Source: MetaTV

▲ FIGURE A

applications that were never expected to stay in circulation when the century rolled over. When the applications needed to be fixed, most of the original programmers were not available.

Business IT eventually adopted a component-based approach to development by embracing new programming languages moving from COBOL to C++ and Java, for example. This new paradigm was meant to aid the quality, productivity and, in the case of Java, even application portability. IT also began to re-train some of their COBOL programmers to Java. But this too was not a quick process. Statistics say that it takes a programmer (internal or consultant) about nine months to learn a new and complex technology.

Because existing Internet standards (HTML, XML, Java) and infrastructure are re-used in many iTV solutions, there is potentially a large pool of business IT savvy programmers to dip into. However, as previously described, not only is there already a shortage of talent, but training on iTV-specific technologies, and ongoing education of each subsequent middleware and set top release, will be time intensive. Also, the "art of programming" will certainly factor into the quality of resulting applications.

THE CHANGES KEEP COMING

While technology continued to evolve, an increasing demand from business users, as well as competitive market pressures, strained IT departments who simply could not keep pace with the growth of the industry. By the time new applications were designed, conceived and deployed

(often taking as long as years on some large projects), the business requirements and the needs of the consumer had moved on. Even the fastest, most expert programmers couldn't keep up with the demand and turn around schedule.

Interactive television should certainly take notice of this precedent. When rolling out a service, consumers may only give an offering one or two chances to see if it is right for them. The ability to be responsive to consumer expectations and to quickly adapt iTV services will be key to maximizing success.

STANDARDS GUIDE DEVELOPMENT

As technology has progressed, the formation of various standards and standards committees have helped guide the development and deployment of many business applications today. Prime examples include:

RosettaNet - a consortium of major IT, electronic components and semiconductor manufacturing companies working to create and implement industry wide, open eBusiness process standards.

World Wide Web Consortium - develops specifications, guidelines, software and tools to lead the Web to its full potential as a forum for information, commerce, communication and collective understanding.

History has shown that standards need to have critical mass with the vendors, the development community and the ultimate end customers, who will create the demand for their implementation. In addition, even when certain standards are

The ability to be responsive to consumer expectations and to quickly adapt iTV services will be key to maximizing success.

established, competitive pressures necessitate that vendors incorporate differentiating non-standard features that fully exploit the power of their specific platforms. To code to standards generally means that the lowest common denominator is merely addressed, thus sacrificing functionality for portability.

On the iTV standards front, Advanced Television Enhancement Forum (ATVEF), OpenCable Application Platform Architecture (OCAP) from CableLabs, and Multimedia Home Platform (MHP), are examples of ongoing initiatives. OCAP is intended to enable the developers of interactive television services and applications to design products that will run successfully on any cable television system in North America, independent of set top or television receiver hardware or operating system software choices.

Meanwhile, MHP aims to ensure that there is an open standard platform to enable content to be authored once and run anywhere on any MHP-compliant device. It is getting the most significant attention in Europe and in Asia-Pacific at this time.

While these standards are moving ahead, we are in the early stages of an emerging market. The successful implementation of iTV standards requires ubiquitous adoption by vendors, the training of skilled programmers to learn and work within the standards' parameters, as well as the integration with newer versions of platforms. So far, iTV standards have been very encouraging and the industry has excelled in efforts to date. However, as someone once put it, "the ironic thing about standards is that there are so many of them, and they too keep evolving."

MAINTAINING A STEADY COURSE

IT organizations creating business applications have and will continually underestimate the ongoing costs of maintaining applications. Most fail to

assess realistically the impact of product rollouts, staff and end-user training, revisions, technical support, infrastructure support and ongoing enhancements after project completion. Many wrongly assume that a solution is merely temporary, expecting it to be replaced when future technology and needs arise (a la Y2K). Overall costs end up much higher than estimated. On average, companies spend 30 percent in year-to-year maintenance costs on their portfolio of applications. In most cases, these costs are hidden, or assumed.

Once iTV solutions are selected, there will be a large amount of maintenance needed in the form of additional development, hosting, 24-by-7 technical and customer support. These costs should be factored into the total cost of ownership of any solution. In addition, as technology continues to advance, new releases of middleware and set top boxes will require upgrades that further contribute to ongoing maintenance costs. For example, old applications may require enhancements to take advantage of new platform capabilities. However, because there is a strong chance that the old boxes won't go away, maintenance costs will continue to compound through concurrent support of multiple versions of applications, each exploiting the nuances of the network topology/middleware/set top box combinations.

TECHNOLOGY THAT MANAGES TECHNOLOGY

Today the enterprise world has access to a new wave of technologies that have the ability to solve all the issues previously discussed. They are capable of multi-platform deployment by allowing business applications to be created at a level abstracted above eventual implementation. Translation: no coding required, but rather, application designs are created using visual drag and drop graphical design tools. Non-technical folks can then be empowered to build sophisticated applications, solving the

skills shortage paradox. Code is then generated from these designs that is optimized, unique and exploitative of each platform, forgoing the lowest common denominator approach.

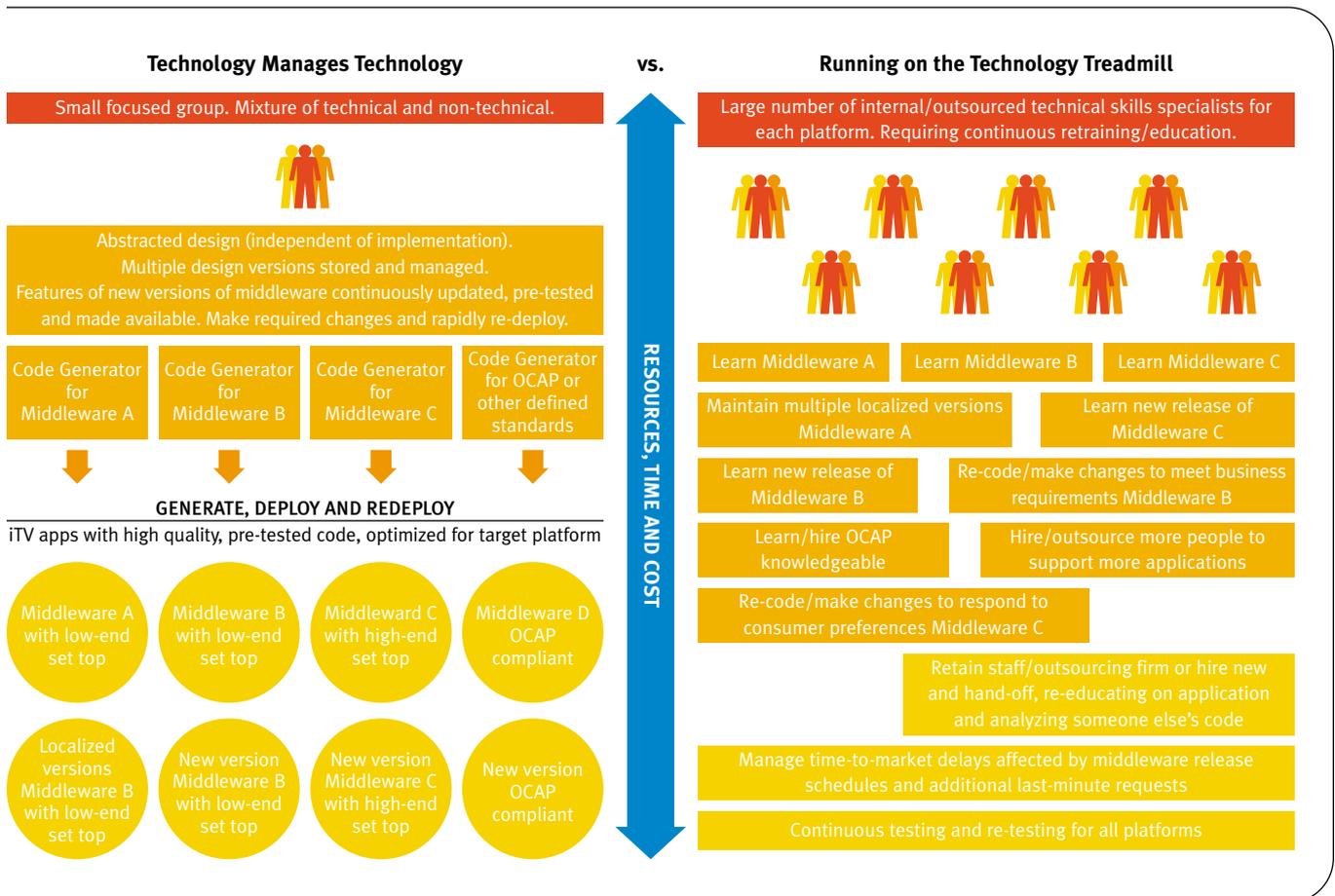
These “code generators” embed best practices, rules and sophistication of each target platform, and are constantly revised and upgraded to take advantage of the latest middleware and set top releases, thus providing relief from the technology

treadmill. Because the code that is produced is pre-tested, the quality of the applications is extremely high and any subsequent enhancements or modifications require minimal re-testing. Companies that supply these technologies maintain close alliances with platform vendors allowing their customers to focus on running their core competency.

In effect, these companies act as “technology portfolio managers,” drawing from the analogy that

FIGURE B ▼

THE POWER OF ABSTRACTING DESIGN FROM IMPLEMENTATION



Source: MetaTV

when most people invest in the stock market, they reduce risk by seeking the counsel of expert money managers who spend 100% of their time analyzing and recommending a diversified portfolio of investments. Just as it would be unwise to put all of one's money in a single stock, it would be similarly risky to commit to a single technology platform.

When standards are eventually established, a code generator is created for that specific standard then, presto, applications previously deployed can be instantly "regenerated" running on the code dictated by the new standard.

Other powerful benefits include higher productivity and faster time to market. By maintaining and modifying designs at a rapid rate, applications can be quickly deployed to support growing demands without adding large numbers of headcount or continuous retraining.

Is there a risk of these companies, themselves, going out of business? The resulting code generated from this is equivalent to that of thousands of well-disciplined experts creating applications for the target platform. Therefore, in a worse case scenario, businesses merely keep the code and their realized powerful productivity gains.

How might some of these same concepts apply to iTV? Comparing an abstracted design process with a traditional technology usage scenario provides a look at how these concepts may be used to benefit iTV development (see Figure B).

IN CONCLUSION

While iTV technology probably hasn't reached the level of complexity of IT in the business world, the patterns are already starting to take shape. The formation of standards bodies and initiatives, such as ATVEF, OCAP and MHP, are all great strides that bode well for the future. Our look at the parallels to the business world already provide significant clues

QUESTIONS TO CONSIDER WHEN APPROACHING ITV DEVELOPMENT

- ▶ What is the anticipated life span of this iTV service in its current form?
- ▶ Can I customize for and support all of the markets I need to target?
- ▶ Can the service respond rapidly to consumer preferences?
- ▶ Should I commit to a single middleware/set top box combination?
- ▶ Will it cost double if I choose to support two platforms?
- ▶ Will the system support the flexibility to strike the right business deals?
- ▶ What happens when new versions of middleware and set tops rollout?
- ▶ Do I outsource this to experts? If so, who are they and where are they?
- ▶ How will I handle ongoing maintenance of the deployed service?
- ▶ What will be the total cost of ongoing ownership?
- ▶ Will I be able to guarantee that the system is available 24-by-7?
- ▶ Should I leverage technology that can manage technology?

to the future and to the evolution of the ecosystem that will be needed to support iTV applications, but there are still many questions to consider when approaching iTV development (see Figure C). In the end, the way in which iTV applications are developed, managed and deployed will affect our marketing strategies, revenue potential and how we approach the expectations of our consumers. As Yogi Berra said, "It's deja vu all over again." —A—

▲ FIGURE C

MetaTV is a global provider of technology that enables interactive television services, such as portals, virtual channels, and enhanced TV applications. MetaTV's adaptive technology enables services to be deployed that contain any content running on any middleware and set top box. For more information, contact Ramon Chen at ramonchen@metatv.com or visit www.metatv.com.

INTERACTIVE TELEVISION: BEYOND *WINKY DINK*

While advertisers are intrigued by the appeal of interactive television, questions regarding verification and measurements of its commercial success abound. Susan Whiting, the new head of Nielsen Media Research and longtime CTAM member, addresses these concerns and outlines several of the new systems they are testing for collecting and reporting media usage in this evolving environment.



BY SUSAN D. WHITING

*President and
Chief Operating Officer,
Nielsen Media Research*

Since it entered our homes more than 50 years ago, television has changed the way Americans get their news, follow their favorite sports teams and are entertained. The medium and the audience have grown together and evolved in ways unimaginable at the beginning of the relationship. Throughout its history, television has been a passive medium. Early generations of program strategists relied heavily on “lead-ins” and compatible lineups. Unarmed viewers (remotely speaking) pretty much stayed with a channel, or network, throughout the evening or viewing session.

Two innovations began to change all that in the 1970s and 1980s. First came cable television, the California Gold Rush of the television frontier. That was followed by the remote control, arguably the first interactive technology, giving birth to a new generation of “grazers,” viewers armed with a clicker and the capacity to roam at will and in comfort over the increasingly crowded television landscape.

One factor that plays a significant role in the implementation of interactive

television is the fact that today's digital technology makes it possible for programmers and advertisers to capitalize on the viewer's appetite for innovative, informative, entertaining, and interactive options available through the TV set. Consider this: Approximately 98% of homes in the United States have a TV set (105.5 million homes at present). Remote control is now in 94% of those homes, and nearly 80% have multi-channel environments from cable or satellite services (see Figure A). Digital cable is currently in more than 12 million homes, and cable modems link 5.5 million homes to Internet service. The number of viewing choices in the home has grown to an average of nearly 73. On average, the TV set is in use for more than seven and one-half hours each day.

Another factor is the growth of the Internet. Now available to a potential total audience of 167.1 million residential users in the U.S., the Internet has substantially changed the way in which people interact with media. The average Internet user now spends three hours and 19 minutes per week on the

Internet while at home. Searching or surfing is increasingly common, leading audiences to expect, even demand, quick answers and actions.

The confluence of all these factors does not, however, guarantee success. Look at one of the earliest examples of interactive television: The children's program, *Winky Dink*, which certainly engaged its viewers and got them out of the passive mode, actually drawing the hero's escape path on a protective sheet for the television screen. The business side of the model was considerably less successful, however, as decidedly fewer sheets were sold to protect the TV screens than the number of active participants. The result was angry consumers (the parents), frustrated viewers (the children) and wary programmers. There's the challenge: finding the right balance of engaging, must-have content with a viable revenue stream to support the business and maintain customer satisfaction.

WHAT IS INTERACTIVE TELEVISION?

The term Interactive Television means different things. There is the cliché model of ordering fast-food delivery via Interactive TV. To others, viewing television through a computer is a form of iTV.

We think of Interactive TV more in terms of a continuum, starting with a "trigger," or a delivery mechanism, and then a response, no matter how made. So interactivity in its broadest sense can be a TV viewer calling the number appearing on the screen, or seeking details about a news story, sporting event or entertainment program by clicking on the logo trigger. That's our test of interactivity – a trigger is sent, a response is made. And, when truly interactive, that trigger and response can begin with either the programmer or the viewer and can go through multiple steps.

Interactive Program Guides (IPGs) are one dimension of iTV. The guides provide on-screen information on demand, and allow viewers to make choices about their TV usage. In addition, they give advertisers a new means of reaching targeted audiences. Because they reside in analog and digital television sets, cable set top boxes,

satellite service converters, and personal video recorders (PVRs), IPGs are steadily gaining penetration into homes. They can collect information about viewing patterns and feed commercials or tune-in promotions accordingly. That, however, raises an issue that is crucial to all interactive TV players – privacy.

Interactive advertising has been developed to serve both advertiser and consumer through a number of different offerings. Under some plans, advertising can be targeted to specific geographic areas, or even specific homes. Which ad is sent can be based on preferences shown by the viewer or household. Or, they can be tied to local or regional distributors or retailers. In other models, the ads offer triggers for the consumer to receive more product information or promotions to save money or other considerations. It could be argued that even more traditional infomercials or "per-inquiry" ad models are interactive, since they meet the trigger and response criteria of interactive.

With each approach, questions arise regarding the measure of success. How will advertisers complete post-buy analyses of these schedules? Will gross impressions be accepted for the targeted ads; and if so, how will they be verified given the nearly individualized nature of their delivery? Will iTV be judged in direct marketing terms? Perhaps, as with infomercials and other TV shopping, advertisers will judge success by the number of calls or orders. Or, will click rates be used to judge the success of commercials? If so, how will the click stream be reported? Will an Internet model be applied to these commercials? Will the number of minutes spent on additional screens determine effectiveness? Clearly, measurement and verification are questions that merit attention of anyone serious about using interactive advertising.

Video on demand (VOD) promises users the ability to select programs to match their schedules. With film and program archives available, challenges still abound for providers of the service who must contend with capacity issues and rights' acquisitions. At the core remains the question of which programs will generate sufficient demand to justify the attendant costs to yield reasonable

returns. Pricing decisions will require considerable analysis and balancing of all these factors.

Near video on demand (NVOD), yet another version of iTV, poses even more challenges. Given the nature of this model, providers of NVOD need to develop schedules consisting of more limited choices with set times. Beyond these services, but related to the VOD concept, PVRs enable viewers to turn the schedules of hundreds of content providers into their personal video on demand repositories. As PVRs become more fully distributed through cable and satellite services, as well as eventual integration into television sets, how will this technology impact the providers of VOD? And, that question doesn't even begin to deal with the numerous issues raised by PVRs in connection to the more traditional television services.

Subscription services have been a part of numerous offerings since the interactive concept was launched more than 20 years ago. Whether it is games, news, software downloads or other special interests, these may face tougher competition from similar offerings on the Internet. What form future offerings will take may be determined by ways in which iTV services differentiate their products, as well as how the financial models are developed.

NEW RULES AND EVALUATING TOOLS NEEDED

Considering just these few examples of iTV, one fact emerges clearly. The need for research and marketing professionals will not diminish anytime soon. The research needed to support critical business decisions will take many forms. Primary and syndicated research will be required to assist content providers in evaluating the service options and revenue models. There is little doubt that new metrics will be developed and new data collection procedures will be required.

The Internet may offer some direction and examples for understanding the challenges. In the mid-1990s as the Internet became a medium for information and entertainment, it also became a new venue for advertising. The apparent ease with which Websites were developed and launched led to rapid growth and opportunity for both providers and users. But, as with *Winky Dink*, not all the business plans were solid. The results are obvious today. The disappointments of the Internet, however, should not discourage development of new options. Rather, the Internet experience should support the need for more thoroughly researched and soundly evaluated approaches.

For advertiser-supported models, it will be critical for the industry to discuss options and reach some consensus on the measurements

FIGURE A ▼

TELEVISION'S CHANGING LANDSCAPE

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2001
% of Total Households												
TV Homes	10	67	87	94	96	97	98	98	98	98	98	98
% of TV Households												
Multi-Set	-	4	12	22	35	43	50	57	65	71	76	75
Color	-	-	-	7	41	74	83	91	98	99	99	99
VCR	-	-	-	-	-	-	-	14	66	79	85	86
Remote Control	-	-	-	-	-	-	-	29	77	91	95	94
Wired Cable	-	-	-	-	7	12	20	43	56	63	68	68
Wired Pay Cable	-	-	-	-	-	-	-	26	29	28	32	33
Wired Cable + Alt Delivery	-	-	-	-	-	-	-	-	-	-	76	78

Source: Nielsen Media Research, TV Audience 2000

needed to evaluate the effectiveness of new advertising. New definitions will be needed to understand behavior in the interactive world, thus requiring dialogue and agreement to develop new standards. When the currency of the iTV business is being defined and agreed to, it is important that all involved understand the foundation of the economy – the systems for collecting data, the methods for processing the data, and the rules for reporting the data.

ASSURING PRIVACY AND INTEGRITY

As we work together to successfully create systems for collecting, processing and reporting data to serve this new medium, we will also have succeeded in supplying content providers with a wealth of information about the individual people who use these interactive services. But, how will that information be used and how will it be protected to respect consumers' wishes? Successful business plans demand effective models for assuring the privacy and integrity of the data.

For example, when digital set top box penetration reaches a certain mass, cable or DBS systems will be able to collect near-census level data and track that data right back to a specific household or family without their knowledge or consent. Armed with respondent-level information, some have suggested that these systems could become national or regional ratings services – or at least data sellers on a massive scale. How will consumers react? How will the government react? What would all this hoopla do to the credibility of the industry? And, how will the buyers judge the integrity of data collected and reported by sellers of advertising time?

We understand how critical it is to ensure that the identity of those persons in our metered and diary samples is secure. By using research samples comprised only of participants who agree to allow their behavior to be tracked and reported for commercial purposes, we reduce most privacy concerns.

A third-party measurement service, independent of the measured media, is vital to guaranteeing the integrity of the data for both the buyer and the seller.

NEW DATA COLLECTION TOOLS

We have developed data collection tools to ensure that we can identify and credit viewing, or usage, for future technologies. For example, our Active/Passive Meter, uses multiple engines to identify what is being watched and it is currently being tested in the Northeast region. The results are promising. We have learned a great deal from the test, and have continually adapted and improved the systems. A particularly positive development has been our audio encoding process, which is now being tested at a number of cable networks.

We know that complex systems will require sophisticated solutions. Therefore, in addition to the new approaches to metering, our engineers are developing software metering solutions to work with systems that run many of the interactive television applications. We have partnership agreements with many of the companies, including equipment manufacturers and content providers.

Earlier this year, we also launched a Convergence Laboratory in partnership with NetRatings. In this panel, our current People Meter system is collecting television viewing data while the Nielsen/NetRatings software is collecting Internet usage information. Homes in this laboratory are not part of either active sample. The data, which are reported monthly to subscribing customers, offer valuable insights into the way that the two media are used together. While this is not a model of interactive TV, it certainly provides new views of media usage in the evolving environment.

There are no simple formulas for developing business models aimed at leveraging viewers' insatiable appetites for engaging content into successful interactive services. It's the same for audience measurement. There may indeed be multiple formulas and multiple approaches. The only constant is that the industry needs to work together to determine how to negotiate the maze of roadblocks, detours and new possibilities. Come to think of it, wasn't that the point of *Winky Dink*? —A—

Nielsen Media Research is the leading provider of television audience measurement and related services in the U.S. and Canada. For more information, www.nielsenmedia.com.

THE CATCH 22 OF iTV

A ROUNDTABLE DISCUSSION BY 3 RING CIRCUS

Developing branding solutions for television networks and entertainment companies worldwide, 3 Ring Circus tackles many of the “frequently asked questions” about iTV, from its brand promise to consumer expectations. Some of the many clients they have served include Cablevision, AT&T Broadband, Disney Interactive, Discovery Digital Networks, HBO and Showtime. Several of 3 Ring Circus’ top executives share their expertise in a roundtable discussion of the creative and business challenges of interactive television.

BY ELAINE CANTWELL

Head of Creative Services

TOM CONNOR

*Head of Marketing &
Brand Strategy*

JEFFERSON LANZ

*Executive Producer,
New Media*

ANNE WHITE

*Head of Business Development,
3 Ring Circus*

FAQ: Why is the implementation of iTV taking so long?

LANZ: There’s so much technology being developed and so many players trying to get into the same marketplace, it creates confusion for everyone. If the distributors, MSOs, and vendors could agree on standards, the rest of the industry would rise to the occasion.

WHITE: Part of the reason it’s taken so long in the U.S. is we haven’t determined how to make money at it. There’s interactive television in Europe because the same people who build the content, own it and distribute it, and also own the satellite or cable. Technically, our regulatory structures don’t allow for that. So it’s hard to find

an economic model that works. It’s the “catch 22” of iTV.

CONNOR: Like any new technology, it’s taking so long partly because no one really knows what *it* is. Companies are still trying to find out what the proposition is – what is going to attract people to this product – and then design the product to meet those needs. With iTV, it’s even more important, because we’re dealing with such a rich medium, and content that’s very engaging.

LANZ: Also, some companies deploying iTV services are simply re-purposing content, essentially slapping on interactivity as an afterthought, rather than creating the medium and the new business models that go with it.

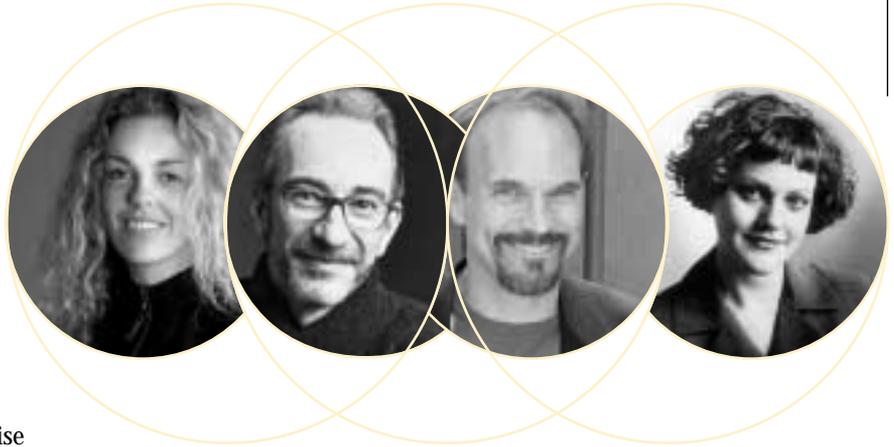
CANTWELL: Moving forward, we've got to establish with the viewer what the actual benefit will be to them, and how to use interactivity to make television a better and more compelling experience. Only by making that emotional connection with the viewer will content producers or distributors be able to extend the brand experience.

FAQ: If we're talking about the brand promise of iTV, is there one yet?

CANTWELL: It's definitely not clear in the viewer's mind what the promise is. So far, the benefits of iTV aren't obvious; it's not seen as enhancing the television experience. In fact, it seems as though they're trying to make something that's already easy for consumers more difficult by shoving it through the interactive television portal. There's so much more potential in terms of extending the iTV brand.

WHITE: Most people use the Internet to research or chat, while people watch television to be entertained. We have to find a way to think outside those two paradigms to create a completely different model. But, contrary to the Internet and its low barrier to entry, with iTV you have to build an amazing infrastructure before you can deliver to the consumer even a little teeny nugget of value.

LANZ: In the advertising world, they're retrofitting existing commercials for the iTV world, so the experience is pretty close to nothing. Advertisers need to look at programming in a different way than the CPM model, moving towards sponsorship or ownership of an hour of programming.



FAQ: What changes are needed to make the TV screen more conducive to the interactive experience?

WHITE: One of the issues we're looking at today is navigation and how to teach people what the navigational symbols mean. Because we can't take up the whole TV screen, we'll have to distill it down to a new visual language.

CANTWELL: The dimension of the canvas is really about having a conversation with the viewer. Adding a venue with a second screen extends the brand experience.

For example, if I'm watching a show and I see a coat on an actress that I think is really cool, and I could find out where to buy it, that is power. But, if you could go outside that realm, onto another screen, and see yourself trying it on or be virtually fitted for it, then that to me is extending the experience.

FAQ: What are the other challenges moving forward?

CONNOR: I think iTV's biggest challenge will be coming up with a better application, a better product than the Home Shopping Network or

Left to Right:
Cantwell, Connor,
Lanz, White

QVC on the TV. It's the perfect model – the perfect iTV brand, without the iTV part.

WHITE: Technical challenges will arise as the iTV model allows for more localization and targeting of advertising than the current advertising model offers, because of the way it's set up structurally.

LANZ: The infrastructure will have to be well thought out in advance, so that the information is synced with the program. How all that will work and whose responsibility it will be, are still undefined.

CONNOR: In the consumer product world here is a clear retail chain – the product manufacturer, the distributor, the retailer. The infrastructure exists. What we're talking about here is trying to put all of those things into a different structure, and currently, nobody is in charge and no standards are being set.

Also, there's so much confusion about format and the platform. When compact discs came out, it didn't mean anything to anybody until you could get your favorite album on CD. Then all of a sudden the format was irrelevant. That's where we are with iTV. We don't have the product.

FAQ: Speaking of product, what is the killer app?

WHITE: VOD is really the only one that anybody sees any revenue stream from right now.

CONNOR: There's no better way to a consumer's heart than to give them what they want, when they want it. That's what VOD and PVRs are all about.

And, I think what's worked very well for cable is appealing to niche markets. ITV offers customization of sorts. It's not yet down to the individual, but it's certainly on the right track. An MSO is in a great position to leverage that.

WHITE: What's interesting about the PVR is that, as it becomes more prolific, people won't care what network a program is on or what time it airs anymore.

LANZ: So, iTV could lead to the death of the traditional network brand and advertising, as we know it today.

CANTWELL: That's where interactivity comes into play for the networks, where they can embed and maintain their brand in their programming. With "Six Feet Under" or "Sex and the City," I know it's an HBO show because of the type and quality of the program, not because I know I'm watching the HBO "channel" or network.

CONNOR: ITV is a way for networks to retain control over their brand, if they leverage it right. If consumers have a stake in your brand they're going to be predisposed to experience your brand in all of its various forms. To leave that kind of control or that kind of experimentation to others is a very dangerous position to be in.

There's no better way to a consumer's heart than to give them what they want, when they want it. That's what VOD and PVRs are all about.

FAQ: So you're saying the content providers need to take ownership of iTV?

LANZ: Absolutely.

CONNOR: The content provider needs to be the one to make the greatest investment in the R&D because it's their brand.

WHITE: But that content creation is speculative. Why should the iTV content creator put all their money into doing this great new content that's interactive if they don't even know if they can sell it to the MSO?

LANZ: Look at how many scripts are written and pilots done before the cream rises to the top. In the iTV space they're going to have to include that as part of the repertoire if they're going to produce programming. It is the content provider's responsibility. And, it's also the advertiser's responsibility to work with that content provider. Sponsoring programs, such as the Magic Johnson Basketball Hour sponsored by Nike, might be a way.

FAQ: And what about the consumers in all of this? We haven't mentioned them yet.

CONNOR: I think one of the most terrifying things for an entertainment brand – and this may be one of the things affecting the roll-out of interactive TV – is to have to talk to the consumer. Today it's – *we create, you watch* – that's how the entire business was modeled. We need interactive content that is entertaining, yet structured in such a way that it is a rewarding experience for both the content provider and the consumer. To get that, you have to ask.

WHITE: For example, with the younger generation doing such a quick read on everything,

programming could become very simplistic. Some shows may only be five minutes long. And if those viewers want to then go further, there are ways to drill down and get a deeper entertainment experience that's specific to them and their interests.

CONNOR: Most of the research I've seen has been more about asking consumers if they would be willing to pay more for this. It's the kind of research that asks the customer to imagine the scenario that doesn't exist. We have to develop the prototype, so we can put it in front of an audience to get response from them. So far that loop is not being closed.

FAQ: What's next?

CONNOR: I don't think we can look to the cable operators for direction on what a consumer wants in a new entertainment brand. The brand itself needs to take control of the situation. The content creators or network programmers need to go to the MSOs and say, "Here is my programming and here is my vision for what further benefits I can provide to the consumers who watch my show in your interactive environment."

WHITE: We need to truly look "outside the box" (*pun intended*) to come up with a great experience first and then develop the technology to make it happen. We really shouldn't call it interactive television anymore. We're talking about a whole new form of entertainment – and that's the most exciting thing to hit television in decades. —A

3 Ring Circus is an entertainment branding company dedicated to providing innovative branding solutions that connect clients with audiences around the world. Thanks to Susan Scarlet of 3 Ring Circus for preparing this discussion. For more information, visit www.oocircus.com.

A WORLD OF PROMISE

Real Deployments Underscore Enthusiastic Consumer Response to ITV

OpenTV has been at the forefront of the world's most prolific interactive television deployments, from Western Europe to Latin America and numerous Asia-Pacific markets. OpenTV's CEO James Ackerman, previously president of British Interactive Broadcasting, outlines examples of actual consumer behaviors and business results from these interactive TV markets, and says these interactive services will thrive using the same network architecture that U.S. cable operators currently have in place.

A sort of native faith has always supported the dream of interactive television here in the U.S. True, this particular experiment may have ended and that particular company may have folded, but those of us involved in the medium persevere, believing the world's most affluent and media-enriched consumer population represents the ideal breeding ground for this new communications medium.

And, we're probably right. It's just that for right now, the intensity of our debate over the right delivery platforms and the proper mix of services and the manner in which we price and package our applications, obscures a very powerful source of intelligence about the medium at large.

It seems that while we've been busy seeking to perfect the formula for introducing interactivity in the U.S., elsewhere the category already is flourishing. The sorts of services described with futuristic bravado here are everyday realities there. While U.S. operators are gradually grafting iTV onto an increasingly prevalent digital platform, many of the questions about consumers and their willingness to embrace interactivity, already are being answered. Not by educated guesswork and carefully fostered focus groups, but real deployments to mass audiences.

BY JAMES ACKERMAN

*Chief Executive Officer,
OpenTV*



At OpenTV, we've been privileged to be front-and-center with some of the world's most prominent examples of interactive television deployments. We've been able to work with our network operator partners in learning some of the key lessons stemming from these watershed deployments.

And yes, Virginia, there is a killer application.

BURSTING WITH ACTIVITY

Remember, these aren't isolated, coddled trials. Across Western Europe, in Latin America and throughout numerous Asia-Pacific markets, digital media machinery is pulsing with content, and bursts of electronic activity are coursing through the rich pipelines of satellite and cable television networks. These are full-blown commercial introductions in which real people, replete with busy lives and lots of media options, can choose whether to embrace or ignore new interactive services. Around the world, iTV is in business.

With all of this motion swirling, we'd be remiss to ignore what we can now say with some amount of certainty about consumer behavior in a real interactive television environment.

True, today in the U.S. there is still much hand-wringing over the underlying technical platform that supports cable television's digital strategy. But the message from across the Atlantic resoundingly supports the idea that a full-blown and very compelling collection of interactive services can thrive over the very same sort of network architecture that U.S. cable operators already have in place. The thin-client types of boxes that prevail in the U.S. are mirrored in England and elsewhere in Europe, where today customers can fire up video games, summon weather reports, catch up on the news and conduct any manner of interactive applications over the television.

Again, we're not summarizing focus group reactions here or making educated guesses about

likely consumer response. In England, where OpenTV's interactive TV software supports the world's most prolific iTV deployment – the Sky Digital interactive service operated by News Corp.'s BSkyB – more than five million households have access to interactive services and applications. In France, TPS delivers interactive services to another 1.3 million homes. Via Digital in Spain has more than 625,000 digital subscribers. All told, OpenTV's interactive-enabling software resides in more than 18 million digital set-tops, evidence that interactive TV has grown well beyond the boundaries of the theoretical and into the category of a worldwide reality.

WHAT CUSTOMERS ARE DOING

With that in mind, let's take a peek inside the home to find out what these early-generation iTV customers are actually doing:

They're shopping. Sky Digital's interactive service has partnerships with more than 80 retailers, offering up everything from fine wines (ChateauOnline) to luxury gifts (Harrods) to the single most popular category, recorded music. And because no article about interactive television would be complete without a pizza anecdote, we'll dispense with ours right away. Today there's a well-established market for home delivery over the interactive platform, and it's generating meaningful numbers. In the U.K., Domino's reports that they have generated large sales placed through interactive television. In fact, sales via the Internet and interactive TV account for about four percent of the pizza chain's total sales.

They're banking. Through August, more than 260,000 TPS subscribers in France, or about 20 percent of all digital subscribers, had signed up to conduct home banking transactions via television. That's not a mere conversion of Internet-savvy home bankers to the new platform of television.

Eighty percent of those who now check balances, pay bills and transfer funds via interactive TV had never used a home banking service previously.

They're communicating. Sky Digital has opened up 1.4 million TV email accounts that allow users to zing messages to anybody with an Internet-based email address.

They're playing. PlayJam, the world's largest fully interactive TV games channel, is a runaway hit over the Sky Digital interactive platform. Each month the service attracts 3.9 million visitors, serves up 83 million individual games and draws an audience viewing share that ranks it eighth among all cable TV channels within the 18 to 34 year-old demographic.

They're responding. Via Digital reports that the typical interactive advertising campaign produces 100,000 responses or more, representing one response for every six households Via Digital reaches.

They're betting. Legalized wagering on events and games is a huge hit. For its fiscal year that ended June 30, 2001, BSkyB generated \$110 million in gaming revenues from its interactive TV business.

They're choosing. The breakthrough BBC telecast of the Wimbledon 2001 tennis tournament over Sky Digital was a huge hit. Viewers for the first time ever could choose among five different matches played on five different courts, all presented over an on-screen menu that rendered an entirely new television experience (see Figure A). Close to one million viewers used the service daily throughout the duration of the tournament.

They're clicking. In an overwhelming endorsement of iTV at large, 91 percent of TPS subscribers use at least one interactive service daily.

VIEWER'S CHOICE



Source: OpenTV

They're sticking around. That killer application I promised? It's interactive television itself – the complete package of communications, shopping, information and entertainment services – and the impact it has on reducing subscriber churn. In Britain, Sky Digital has enjoyed a sharp reduction in total subscriber churn – to 9.8 percent annually from 14.2 percent – after introducing interactive services. That's a contribution bound to make any CFO celebrate.

TODAY'S REALITY

We certainly applaud the efforts made by analysts and forecasters to predict the size and range of the interactive television category in years to come. But, the numbers we've just recited aren't educated guesses. They're the stuff of today's reality, a vibrant marketplace in its own right, and one in which real consumers seem to feel right at home in the interactive domain. This is no longer the turf of guesswork and studied "what ifs." We

▲ FIGURE A

have ample demonstration in the real marketplace of how interactive services are faring.

Similarly, experience has helped us learn the right ways to introduce interactive television. For instance, we know from real-world deployments that it helps to whet the interactive TV appetite with an easy-to-use suite of services that tends to invite experimentation. News and weather reports, for instance, or simple games can very subtly and in a non-threatening manner begin to familiarize users with the notion of using their remote control devices to do more than just change the channel. By offering a range of what we call “soft” interactive services – daily horoscopes are another good example – we’ve been able to lay the groundwork for later upgrades that prove popular.

A broad range of interactive services can be layered atop the introductory package. Email and chat services, for instance, might be added as a

secondary enhancement. More elaborate video games represent an excellent opportunity to introduce premium iTV services. In the long run, getting Americans to understand and interact with television requires great content. The good news is that deployments to discerning consumer groups elsewhere have proven that the right mix of content does work, and that it already exists and is accessible to U.S. operators.

We’ve also learned that the technological qualms and worries now being sorted out by U.S. cable TV operators aren’t new. The very consumer behaviors and business results I tallied earlier, reflect the delivery of interactive television over household set tops and network architectures almost identical to those currently deployed by U.S. cable companies.

In any event, the international lead won’t last forever. Here in the U.S., the interactive TV story already is beginning to build. In California, for instance, the independent MSO, USA Media Corp., is among the first U.S. cable companies to deliver a rich blend of iTV services – games, news, enhanced TV shows, TV email – across the Motorola DCT-2000 set top terminal that’s prevalent among domestic cable companies today (see Figure B). In the coastal town of Half Moon Bay, USA Media has launched a fully rendered interactive portfolio that rewards customers with a range of easy-to-use television enhancements, all running over equipment that’s already in the home. It’s that sort of model that will begin to bring to the U.S. market what European and international providers have already begun to achieve: a deep and meaningful rapport with an enthusiastic consumer populace. Ultimately, that’s the best kind of interaction there is. —A—

OpenTV is the world’s leading interactive television company. For more information, visit www.opentv.com.

FIGURE B ▼

ITV SERVICES IN U.S.



Source: OpenTV

A FOLLOW-UP CONVERSATION WITH JAMES ACKERMAN

With millions of interactive deployments worldwide, OpenTV's CEO James Ackerman is not just hypothesizing consumer behavior with iTV services. He believes that the same interactive offerings that have been so successful in Europe, will be received just as enthusiastically in the U.S. Sharing the lessons of their mistakes, he offers cable operators, content providers and developers "must do" and "must avoid" advice when launching iTV services.

CTAM: From your experience around the world, what marketing approaches work best to get consumers engaged in iTV services, and then to keep them interested?

ACKERMAN: The power of television is easily our best marketing ally. Television allows us to connect with very large, mass audiences and to move them from a purely passive viewing perspective to an active experience – learning, purchasing, communicating and playing – using the marketing prowess of the television medium itself. Television's power is that you have millions of people watching simultaneously, and you can effectively drive them toward interactive experiences. You can't do that over the Internet. You can't communicate simultaneously with millions of people, who happen to be surfing the net, in a million different ways. With television, we can.

So we have a great platform and opportunity. It is true that consumers

navigate to the simple iTV games and email in the beginning, so it is important to give our customers opportunities to discover and become comfortable with this new way of using their television. This means having a broad range of services for people. Then we can introduce them to complex t-commerce and banking-style services, more sophisticated games and enhanced television, which generally are the higher revenue sharing services.

CTAM: What are the early returns from customers experiencing the Half Moon Bay iTV services? Do you have other examples of iTV "working" in the U.S. today?

ACKERMAN: While we have more than 18 million deployments worldwide, in the U.S. we're just starting to build that critical mass necessary to see the trends. For our primary U.S. customers, iTV is still in its early stages.

EchoStar, with DISH Network, has more than two million boxes with OpenTV deployed, which is exciting as a middleware number, but they are just starting to roll out iTV. USA Media in Half Moon Bay has a small number of customers deployed. They're using iTV in part to improve sales and penetration of digital service at large, but, again, we're in the birth stages in the U.S.

CTAM: Is there a "chicken and egg" problem with content and delivery?

ACKERMAN: I don't think so. One of the wonderful things about the business is that we have access to the works of thousands of marvelous content creators already. Graphic artists, application developers, TV producers, video game creators all can create new or translate existing content into interactive television experiences. What iTV does for existing content is make it more accessible, over the most ubiquitous and widely used consumer media appliance, the TV set. And, remember that one of the hallmarks of the digital age is that people invent their own content – chat rooms, email and messaging. Will we invent and offer new forms of content? Most certainly. But to your question, no, we have the chickens and we have the eggs, so to speak, already in hand.

CTAM: The U.S. has different regulations, development opportunities and consumer needs than the U.K. or Europe. Tell us, in a nutshell, why you're so bullish on iTV in the U.S.

ACKERMAN: I think the markets you mentioned have more in common than the question suggests. Look at the video channel lineups from satellite and multichannel cable systems serving western Europe and even Asia, and you'll see many of the very same networks that delight customers in the U.S. – MTV, CNN, Nickelodeon, HBO. Good content tends to find a receptive audience regardless of geography or borders. And the same, no

doubt, is true of interactive television. People in England, for instance, clearly loved watching Wimbledon this summer in new and inventive ways, selecting their own broadcast, in effect, from multiple matches that were available via Sky Digital's interactive TV service. I can't imagine that a similar offering wouldn't be just as enthusiastically received here in the U.S. We all like television. We enjoy shopping, we like to catch up on the latest news, and we love interacting via instant messages and email. Interactive television simply presents us with another avenue to enjoy these activities, arguably a more convenient avenue.

CTAM: Do you think U.S. consumers will do the things you describe European consumers doing with iTV?

ACKERMAN: Such as sending emails? Reading news articles? Playing video games? Reading sports stats? Ordering products? Of course they will. Residential Internet access in Europe lags the U.S. a bit, but I can't identify particular behavioral or cultural traits unique to Europe that would influence iTV consumption, versus what we'll see in the U.S. It's simply the fact that, internationally, many of the cable and satellite networks were quicker to embrace a digital delivery platform, and had a bit of a head-start in exploring some of the new things they could accomplish over it.

CTAM: What demographic or generational differences in customer attitudes have you seen with iTV?

ACKERMAN: The most frequent users are 16 to 34 years old. And, one of the most interesting findings is that banking, t-commerce and email applications are multi-generational. We all assume that video games and quiz games tend to skew toward younger audiences, but older people and middle-aged people are using email and banking services with great enthusiasm. And overall, there's an almost equal split of users between genders.

CTAM: How much is the lack of standards holding back implementation? Or, do you even see that there is a hold-up at all?

ACKERMAN: I think all of us in this category thought the U.S. market would be more advanced in terms of iTV penetrations by now. But that's not a bad thing, necessarily. Nobody wants to see iTV repeat what happened in the dot.com sector – people just hypothesizing entire new consumer behaviors and then throwing up technology solutions to serve them. Cable operators domestically are going through very, very rigorous and thoughtful diligence before launching services that will be very tightly associated with their local brands and operations. I can't say that's inappropriate.

CTAM: Give us your thoughts on the “thin vs. thick” box debate.

ACKERMAN: There's going to be a role and a place for both types of terminals for quite awhile. It really depends on what the cable operator wants to offer. If it's a combination of t-commerce, games and some messaging services, delivered in sort of a walled garden environment, thin boxes are absolutely fine. At the other end of the spectrum, Cablevision Systems is launching a very sophisticated digital interactive services suite on an advanced box. PVRs, which the industry is very focused on right now, also demands a more advanced box, as does high speed Web browsing.

But it's not either/or. Both of these types of platforms have a role to play.

CTAM: What about the issue of integration of content, delivery, billing and so on? Who should be in charge?

ACKERMAN: The operator, no question. The operator is in charge because the operator is responsible for the customer relationship — responsible for selecting the content that's appropriate for the market, for determining how to bill for services, for making decisions about integrating iTV services into the operations of the company. That said, OpenTV does provide options in which we manage integration and we provide a full suite of content and services. But, at the end of the day, we think the cable operators are responsible for maintaining the customer relationship. So it's our job to support them

CTAM: What is the right economic model?

ACKERMAN: There are basically three applicable economic models, or three categories of models. There's a subscription and pay per play or view model, where customers are paying for access to services directly. It works very well for games and entertainment services. There's the revenue-sharing model, which works well for commerce applications. And then, you have what I call a bundling model, where you might align the appeal of iTV

Don't overwhelm people. Take your time. One of the greatest things about interactive television is that you can keep adding new things and surprises for your customer to discover.

services, such as news-on-demand, with a certain digital or premium tier, so that iTV is available if you subscribe to a particular level of service. Which model works also depends on how much interactive television the operator is introducing and the familiarity of the customer base with iTV.

CTAM: What are the roles of advertising and t-commerce in iTV? How do you see advertising evolving?

ACKERMAN: Advertising is a major revenue source in the television industry and plays a large role in interactive TV as well. The power of iTV is to move mass audiences from simply watching commercials to an interactive process of learning and buying. Unlike the Internet, t-commerce can be used to deepen what the television already does – build better relationships with the consumer. Advertisers have the ability to directly connect with consumers and enhance their viewing experience by transforming them from a passive to an active participant.

For t-commerce, the two key opportunities include the ability to expand purchasing for existing home shopping shows, and to add commerce opportunities to traditional television ads.

CTAM: How much of a competitive threat is DBS to cable? Do you think cable needs to move faster to provide iTV features to compete with EchoStar?

ACKERMAN: EchoStar, with more than 2 million interactive deployments in the U.S., is first out of the gate, but I don't believe either medium has taken ownership of the category in the mind of consumers. So that's an opportunity that's still wide open. The race is on.

CTAM: What has been your biggest mistake in deploying iTV and what did you learn from it?

ACKERMAN: Offering too much, too soon. We've learned, our partners and ourselves, to be somewhat gentle in the way we introduce iTV, not to assume that the usage patterns associated with the Internet will stampede their way into the living room, and to be very, very respectful of the bond people have with television as it stands now. And, finally, we've learned to be sure we live within that relationship, and not to attempt to intrude upon it.

CTAM: In launching iTV services, what is your "must do" and "must avoid" advice to cable MSOs, content providers and developers?

ACKERMAN: We have learned a lot around the world. First, it's important to launch with recognizable brands, particularly relating to commerce. It makes sense when you think about it, the audience just doesn't want to experiment and give their credit cards to a brand they're unfamiliar with. The mass-market audience will recognize names such as Amazon and Wal-Mart, and that adds a sense of confidence and reliability.

It's equally important that cable operators deliver reliability in terms of customer service. You only have one chance here so it is important to introduce a positive experience from the start. Don't rush the technical trials, and take the time to make sure everything works.

Third, deliver an absolutely easy, navigable service. It should be so easy that my mother, who doesn't use a PC, can pick up the remote control and understand how to use the service as well as a 14-year-old, who is a PC expert.

And, don't overwhelm people. Take your time. One of the greatest things about interactive television is that you can keep adding new things and surprises for your customer to discover. —A—

iTV: THE PATH TO PROFITABILITY

A recent study from Accenture on digital television services sheds new light on consumer interest and preferences for interactive services. According to Accenture Partners Robert Clauser and Leszek Izdebski, the research confirms high interest from consumers and offers insights into how cable operators can profit from their digital investment.

BY ROBERT CLAUSER

*Partner, Media & Entertainment,
Accenture*

LESZEK IZDEBSKI

*Associate Partner,
Strategy, Communications and Media & Entertainment,
Accenture*

For years, the biggest question confronting the development of interactive television (iTV) has been: "What do consumers want?" Today, there is an important follow-up question: "Once we know what consumers want, what do we do about it?"

Accenture recently completed comprehensive research on digital television services that answers both questions. Over the past several months, Accenture surveyed nearly 1,000 consumers, held 10 focus groups, performed interviews with dozens of industry executives, and conducted marketplace analysis and financial modeling based upon Accenture's experience with cable operators worldwide that currently serve more than 1 million iTV subscribers. The overall research project, *The Path to Profitability Study*, reveals consumer preferences and shows how the intro-

duction of iTV services will affect cable companies' competitive positioning and business success.

The research uncovered some surprises in certain areas, while validating the industry's thinking in others. The message from the various consumer studies is clear: Consumers' interest in iTV is very real.

Consumers give high marks to many new digital products, especially TV centric services such as video on demand (VOD) and personal video recording (PVR). The research shows that there are ample audiences that can be targeted for many iTV services, including enhanced TV features, high speed Internet access over TV, interactive games, TV email and t-commerce (see Figure A).

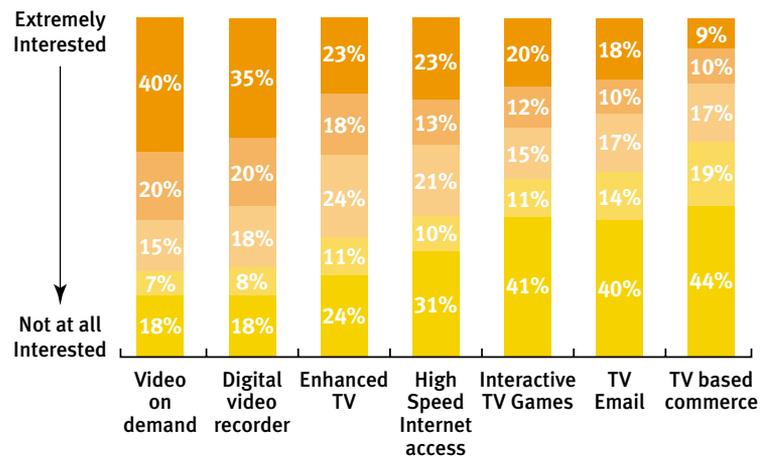
Additionally, the priorities for programming genres that can be enhanced

by interactive features are becoming clearer—though perhaps not as expected (see Figure B). While television is regarded largely as a passive, “lean back” experience, there are many “lean forward” genres that are ripe for the addition of interactive features, including sports, game shows, children’s/educational programs, reality TV and home shopping. Depending on the genre and the available technology, iTV applications can be successfully deployed to enable consumers to access programs on-demand, time-shift shows, add Web content or other information, communicate (email, chat), interact with programs, affect the program outcome, play games and engage in interactive advertising and t-commerce.

As the keys to fostering consumer interaction with TV are better understood, the question is how companies that participate in iTV can tap into this consumer interest and transform it into a viable business opportunity. What is the correct path to profitability?

Cable operators and “content aggregators” (media companies such as Turner Broadcasting System, The Walt Disney Co. and News Corp.) have much to gain by aggressively deploying digital programming and iTV services. Operators also have much to lose if they lag behind satellite competitors in deploying digital and iTV services. Satellite companies, which can deploy iTV using their national footprint, threaten to capture some of cable’s best customers for new revenue-generating units.

INTEREST IN ITV SERVICES



- ▶ VOD is clearly the service with the highest interest among both cable and satellite subscribers and is most often mentioned first as the offering customers would be most willing to pay for among all DTV services
- ▶ Low interest in T-Commerce and TV email indicate there is opportunity for cable operators to target roll-out of DTV services, and selectively delay service launches as needed

Source: Accenture Analysis, Survey Response Data

Cable operators should consider using their existing capacity to start providing simple interactivity in order to protect their most valuable customers—those who are most interested in new technologies and are willing to pay for new services. Cable companies are well positioned to

▲ FIGURE A

Cable operators should consider using their existing capacity to start providing simple interactivity in order to protect their most valuable customers.

launch—and consumers are very ready to take up—simple gaming, localized data enhancements and interactive program guides, which already are being deployed. VOD and PVR capability demonstrate high consumer interest and revenue potential, although operators must be careful to optimize pricing and content to avoid burdening their system capacity.

The Path to Profitability Study offers insight as to how cable companies can generate returns on their digital investments in the face of increasing competition from satellite operators and telephone companies. Cable operators have an opportunity to profit from iTV services, if they act quickly and follow four mandates:

1. Minimize the loss of subscribers most likely to adopt iTV services—the most valuable customers—to satellite companies by understanding and targeting various consumer segments (see Figure C). Customer buy-back

programs are expensive to undertake. Currently, the most vulnerable customers generate a substantial proportion of revenues and are likely to be big spenders on future digital services. Cable subscribers are less likely to switch to satellite once they have digital services, access to additional programming, and iTV features available to them.

2. Accelerate the take-up rate for existing digital packages by simplifying pricing and packaging so it is easy for consumers to understand. The study suggests that operators reduce the price difference between analog and digital packages and lessen the barrier to large-scale take-up of digital. The profitability of iTV services is largely dependent upon the size of an operator's digital subscriber base. For example, a multiple system operator with 2.1 million digital subscribers in year one and a total subscriber base of 5 million could generate a net present value (NPV) of \$680 million from interactive services in just three years. But those with a digital subscriber base of 600,000 or less and a total subscriber base of 5 million are unlikely to achieve positive NPV within this time frame.
3. Rapidly roll out selective iTV services, prioritized according to their ease of deployment, consumer demand and estimated profitability in relation to key market segments. Higher priority can be given to those services that will compete with satellite companies, while operators can “pace” less important services so that overall demand does not exceed system capabilities.

FIGURE B ▼

WHAT CONSUMERS WANT ISN'T ALWAYS WHAT YOU WOULD EXPECT

- ▶ **“Lean forward” program genres** are best for potentially utilizing the breadth of interactive programming features (Sports, Game Shows, Children's/Educational, Reality TV and Home Shopping).
- ▶ **“Too much” interactivity** will take away from a program's main message and annoy viewers.
- ▶ **Familiarity increases adaptability**, which explains a positive response for IPG, VOD and PVR features.
- ▶ **Personalization is *not* a driver**; it is not demanded by consumers nor feasible for providers.

Source: Accenture, *The Path to Profitability Study*

4. Actively manage pricing to control capital expenditures and demand for system capacity. Operators need to identify optimal price points for individual services and use pricing to control demand for capacity constrained services such as VOD. Subscription video on demand (SVOD) needs to be adequately pre-planned and approached with caution, since simultaneous usage by consumers—which will be much higher than with individual VOD title purchases—could require substantial infrastructure investments.

Accenture found that PVR capability can greatly enhance cable revenue and margins and is important for cable to compete with satellite companies already offering this service. Cable operators should consider marketing PVR as a service that is available through the set top box (whether controlled through the headend or not), so it is fully integrated with IPGs, pay TV and other cable services. Current penetration of PVRs is low because they have been marketed as a separate device, which requires too much integration with a TV system.

In order to bolster all of their new service offerings, operators also must provide customer service that is differentiated from competitors. The incremental cost of the required service improvements can be reduced by understanding different market segments and their future value, and ensuring that system operations have the capability to meet the needs of the most valuable customer segments.

The consumers have spoken, and they clearly have expressed their interest in iTV. Now cable is in a prime position to march down a path of iTV profitability for many years to come. —A—

TARGETING iTV CONSUMER SEGMENTS IS KEY

Cable operators must understand their market and realize that the customer is not monolithic. Different types of consumers want different services. By approaching the iTV market as five distinct segments, cable operators can better target and serve consumers and can achieve profitability sooner. Accenture's research identified five distinct groups of consumers with differing attitudes towards technology and interest in iTV services:

- ▶ **Early Adopters:** Typically male, these consumers thrive on new technology, are more interested in features than price, and are comfortable self-installing. Their retention depends on constant innovation. Most likely to adopt all iTV services.
- ▶ **Utilitarian Skeptics:** Knowledgeable about technology and willing to pay for specific features that offer utility and save time. Require highly targeted marketing. Very likely to adopt iTV services. Most likely to adopt iTV services that improve convenience.
- ▶ **'Only If It's Easy' Users:** Appreciate and want technology but are most concerned with ease of use. Willing to pay for customer service to simplify the experience. Require highly targeted marketing. Most likely to adopt iTV services if packaged properly.
- ▶ **Bargain Hunters:** Willing to wait for the price to drop. Most likely to spend on education. Will adopt new services during promotional activities.
- ▶ **'Can't Afford It' Consumers:** Mostly low-income households usually very uncomfortable with technology. Don't spend much on entertainment.

Source: Accenture, *The Path to Profitability Study*

Accenture's Media & Entertainment Industry group specializes in digital content solutions for clients in the areas of publishing & printing, games & portals, and broadcast & cable, including iTV. For more information, email leszek.m.izdebski@accenture.com and robert.c.clouser@accenture.com.

▲ FIGURE C

EVERYTHING WE IMAGINED, AND MORE

MARKETING INSIGHT'S INTERACTIVE DIGITAL PLATFORM

Insight Communications has been at the forefront of interactive television, aggressively deploying digital and interactive services in the Midwest. As he outlines their digital marketing campaign, Insight's President and CEO, Michael Willner, points to their exceptionally low churn rates and high customer satisfaction rates as a testimony to the power of interactivity and its ability to retain customers.



BY MICHAEL S. WILLNER

*President & CEO,
Insight Communications*

Demonstrating value to customers, for their monthly subscription rate, has always been a challenge to cable operators. But, as we completed our rebuilds, it became more and more difficult to deliver new services over this increased capacity, without having to force customers to go beyond their self-imposed acceptance level of higher rates. We had to offer customers compelling new products, on an optional basis, if we were to expect them to write us bigger checks *voluntarily*. To that end, interactivity was waiting in the wings and surfaced in the most unlikely of places – Rockford, Illinois.

The rebuild of Insight's Rockford system, in early 1999, provided more than a capacity upgrade (from 330 to

750 MHz) and an increase in channel selection. It was also an opportunity to market the first launch of *Insight Digital* and its interactive applications. The Rockford customers would see not only a big increase in the channel line-up (from 40 to more than 160 channels), but also value-added services on a new level, including more choices and true interactivity on an extraordinary new digital platform.

Insight Digital was an entirely new approach to our business on several levels. Our first decision was to give customers multiple service options within the digital platform. Digital networks are grouped into three genre-based "paks" and sold as an optional add-on at \$5 apiece, or all three for \$10. To attract price-sensitive customers, we

chose a compelling package with a very affordable price point. Once that was established, we populated the *Digital Gateway* service, priced at \$6.95 per month, with numerous high-tech services, the digital box and remote control, but no new channels. This entry-level service also contains a portal screen that allows customers access to new digital products. For the first time, “Watch TV” was not the only function on their televisions, but one of many choices (see Figure A).

RETHINKING HOW TO USE TV

One of the prominent and unique features of *Insight Digital* is *LocalSource*, a service of SourceMedia’s Interactive Channel that provides customized community information in a walled-garden environment. Building upon cable’s strength in localism, *LocalSource* gives customers access to restaurant and movie guides, civic information, news, sports, and various local entertainment options. The pages are set up much like the Internet with layers of navigation, all accessible through the remote control. The key difference resides in their formatting, which is designed for a television screen (viewed from several feet away), rather than a computer monitor (viewed at close range).

Considering that less than 40% of the population goes online regularly, whereas 98% watch television, it seemed a safe bet that a market existed to bring the Internet’s information revolution to

OFFERING INFORMATION AND ENTERTAINMENT



Source: Insight Communications

television. This product was the first foray to our approach of using television differently, to make life simpler.

Building upon that approach, we introduced DIVA’s video on demand service into the *Insight Digital Gateway*, affording customers more opportunities to use their televisions for convenience. The fact that customers no longer had to make trips to the video store was a new concept, and one that required further education for adoption of the product. This became one of the key messages of the marketing campaign. Additionally, educating customers about the benefits of our

▲ FIGURE A

You can’t promote a product as one that simplifies life if nobody understands how it can help.

new services – *LocalSource*, *On Demand TV*, the interactive program guide, and the new digital program packaging by genre, became an integral part of the marketing process and supported our debut tagline: *Everything you imagined and more.*

EDUCATION IS EVERYTHING

A February 2000 focus group underscored a critical finding, which became the focus of *Insight Digital*: The more that customers were educated about our digital products, the more they used them. The customer education process was developed even further as we continued to launch *Insight Digital* in Columbus, Ohio and Evansville, Indiana, both of which faced the competition of overbuilders. Given the uniqueness of this product, traditional marketing tactics of cross-channel promotion, radio, billboards, telemarketing, and door-to-door sales, were simply not enough.

The hands-on experience of the product became essential to its success, meaning that customers needed innovative means to try the new services. So, Rockford went beyond the basic walk-in center demo approach by converting an entire space into “The Living Room of the Future,” complete with couches, lamps, television sets, Insight employees, and the *Insight Digital* product in full functionality. Demonstrations were also

held in a local electronics store. The Columbus system hosted “Digi-Ware” parties at apartment complexes in order to demonstrate the product’s capabilities to large groups of customers. With programmers in tow at many launch events, community VIPs, visitors and the media experienced our full digital enhancement capabilities firsthand. And, when no particular venue existed, the *Insight Digital Bus*, a replicated living room on wheels, offered visitors the full product experience.

Bringing this experience into customers’ homes was also a key tactic. Across the board, our installers spent more time on our *Insight Digital* installations and walked customers through the many features of the product, an investment that we felt was absolutely critical in terms of the customers’ comfort level. After all, you can’t promote a product as one that simplifies life if nobody understands how it can help.

To further augment the hands-on experience, all CSRs received expansive training to increase digital sell-in and educate the customer on various other aspects of the product. A detailed 30-minute infomercial was developed and ran on the *Insight Information Channel* on the analog tier. In addition, a 24-page, four-color users’ guide gave details and screen shot explanations of the many new features.

The churn rate is lower than 1.5% which points to the power of interactivity and its ability to retain customers.

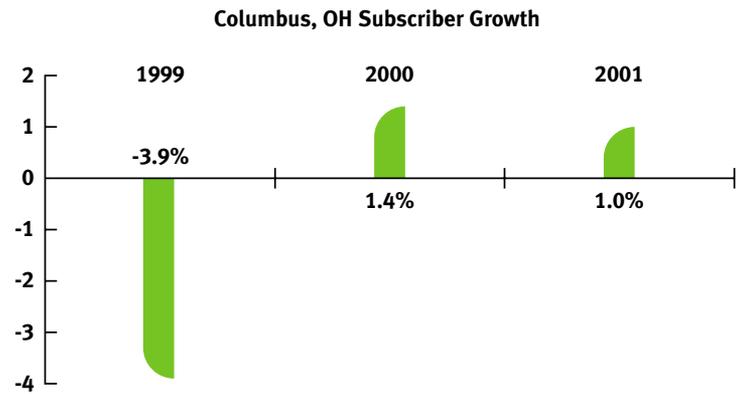
THE WORD GOT OUT

As the deployments continue, the success of the product has become evident. Beyond our initial three markets of Rockford, Columbus, and Evansville, *Insight Digital* is now available throughout most of our operational footprint, with the remainder to follow over the next several months. The average interactive digital penetration has reached 27%, with some systems as high as 32%. The churn rate is lower than 1.5% – about a third lower than that of conventional digital services – which points to the power of interactivity and its ability to retain customers.

Our research continues to show that the customers with interactive digital services are more satisfied (73%), and that satisfaction rating scores well above the industry average. A number of success stories, both quantitative and qualitative, have filtered in – from customers, who gave up their newspapers for *LocalSource*, to our Columbus system, which has seen subscriber numbers increasing vigorously, in a competitive marketplace, as a result of this product (see Figure B).

The next step? More interactivity. Recently, we introduced interactive shopping applications in our Lexington, Kentucky system through Commerce.TV. Our technology partners, Liberate and Motorola, continue to provide software and hardware improvements to make the customer experience even more enjoyable, and ultimately, to build customer loyalty for products that make their lives simpler and better. To that end, the marketing of the product continues to revolve around customer choice and convenience, and

INSIGHT DIGITAL'S IMPACT ON SUBSCRIBER GROWTH



Note: 2001 growth percentage is annualized, based on data through Q2.

Source: Insight Communications

seeing television in a whole new light. The ongoing feedback from customers is extremely valuable in the continuous process of refining the marketing materials. Finally, the recent Gold CTAM Mark Award for our *Insight Digital* TV commercials, and Cablevision's Magazine's "Operator of the Year" award are nice reminders that we're on the right path. —▲—

Insight Communications serves approximately 1.4 million customers, mainly in Illinois, Kentucky, Indiana and Ohio, offering bundled, state-of-the-art services, interactive digital services, high speed data and telephone service in selected markets. For more information on Insight Digital, contact Pam Euler Halling, Senior VP, Marketing & Programming at 917.286.2300.

▲ FIGURE B

GET THE HERD MOVING WITH ITV CONTENT

Audience interactivity is the answer to advertisers' demands for a deeper connection with their target audience, says Sarah Fay, president of Carat Interactive. And, she tells us why she believes that cable operators and programmers are in the best position to deliver and reap the benefits of interactive television, assuming they stay ahead of the pack.



BY SARAH FAY

*President,
Carat Interactive*

There is a rumbling just beneath the surface of the advertising industry. We feel a general unrest with the status quo that advertisers have settled for in the past. Gone are the days of merely delivering acceptable reach and frequency at a competitive price. Clients are imposing higher demands on agencies and media providers – they are not satisfied with merely reaching their target audience. They are seeking to use media to create a “deeper connection” with these consumers. And, they are demanding accountability for the millions they spend in media dollars.

We all face the challenge of media that has become more fragmented, therefore delivering audiences in lower numbers and lower involvement levels overall with the programs they watch.

And, to make matters worse, most advertisers are dealing with unchanged or lower marketing budgets. How could we *not* be trying to think of a way to climb out of this hole? Well, believe me, some of us are asking for new solutions, and more of us will be asking, as *accountability* and *consumer connection* become the drumbeat of advertisers' expectations. The cable operators and programmers who position their offerings to deliver on these two things will reap the benefits. The tool that can get you there? Two words: interactive television.

In his classic marketing book, *Inside the Tornado*, Geoffrey Moore illustrates how new technologies are accepted into markets: “After the better part of a century being content with letters, telegrams, and telephones, we have in

the past thirty years adopted touch-tone phones, direct-dial long distance, Federal Express, answering machines, fax machines, voice mail, email, and now Internet addresses. In every case, until a certain mass was reached, we didn't really need to convert. But as soon as it was, it became unacceptable not to participate. As members of a market, our behavior is invariable: we move as a herd, we mill and mill and mill around, and then all of a sudden we stampede."

If the industry is getting ready to stampede toward iTV, the last thing you want is to be moving too slowly, or you could get trampled. A much better position would be to start the stampede, which gives the opportunity to lead the pack. I believe the cable industry is in the best position to get the herd moving – and stands potentially to gain the most out of the iTV value equation. Here are some reasons why.

The More They See, The More They Want

Today, consumers do not know they need or even want iTV capabilities, the same way they once didn't know they would ever use email. Cable companies have the power to tickle their curiosity – to educate them and entice them to seek out iTV services. We know from a number of studies that the more viewers are exposed to iTV services, the more they want them. When cable operators start promoting, through content, that

the viewer has an opportunity to participate (or potentially miss out) with their favorite programs, consumers will seek out interactive capabilities.

Drives Greater Audience Connection

When consumers decide to interact with programming, they will likely become more dedicated viewers/participants. A niche player, Tech TV, is a great example of a cable programmer that built a strong following by promoting interactivity with its viewers (which it aptly calls "viewers"). By constantly prodding their audience to interact with Tech TV's programs, they can now make the astounding claim of having 52% of their audience on TechTV.com, *at the same time as watching* their programs. They have trained these viewers, just as Pavlov's dogs, to get online when they switch on their TV. Therefore, they are in a very good position to claim "greater audience connection" and to deliver accountability to advertisers.

Demonstrates Audience Involvement

Advertisers are looking for tangible evidence of an audience's involvement with the programs they choose for their advertising. Many cable programmers and advertisers know very well that Nielsen ratings don't tell the entire story of audience involvement. At Carat, two programs of equal rating are not necessarily valued the

If the industry is getting ready to stampede toward iTV, the last thing you want is to be moving too slowly, or you could get trampled.

same. We use proprietary optimizers to determine audience involvement levels to rate a program's ability to connect with its audience. Audience interactivity will raise the bar higher in demonstrating a program's connection to its audience.

Advertisers are intrigued by the promise of interactive television for all of its groundbreaking appeal: better targeting, the ability to elicit consumer response, accountability, and so forth. *But*, iTV advertising alone will not move acceptance of this new medium forward quickly. Think about it: Will the average consumer demand iTV capabilities in order to better respond to solicitous advertisements? In my opinion, that's an unlikely scenario.

In order to get the consumer conditioned to interact with their televisions, programmers must creatively embrace iTV enhancements within the content of their programs. It's my prediction that audiences will jump to participate with their favorite programs if given the chance. For instance, if a talk show host were to urge viewers

to pick up their clickers to vote, enter, win, or get an email, the viewers will feel more compelled to participate than if they were encouraged to do the same by advertisers. Again, we know that once consumers are exposed to iTV in its many forms, they tend to like it. So, when the programmers start to make it interesting, who is to say that consumers won't love it? And, if consumers love to interact with TV programs, advertisers will likely catch the residual impulse of this new kind of "clicker mania."

Let's dream for a minute. I'm watching TNN's tribute to Joni Mitchell (I'll admit, I own her whole collection and know every song by heart). As the show airs, I am filled with a sense of connection to the program and other fellow worshippers out there, while sadly no one else in my home cares for Joni. While other performers sing her songs, a quiz appears regarding her life and the lyrics of her poetry. This keeps me engaged, and I jump to test my knowledge and show my dedication as a fan. As the program airs, a button for CD NOW sits unobtrusively in the corner of

The simpler applications, such as Wink and Respond TV, will inspire a comparative flood of interaction. The reason for this is simplicity itself – the viewer's ability to interact with a mere click.

my screen, promoting Joni's CDs, as well as those of the other artists performing in this show. Having my clicker already in hand from the pop quiz, it's easy to browse the offering. No purchase this time, as I already have all of Joni's CDs, but I make note of a Shawn Colvin CD I might like to buy later. Now it's time for the commercial break. I've got my clicker all warmed up, and it's a skin care commercial – just the subject for me. Erase lines? Free sample? Yep, send it on over – *click!* Do you see how interactive content can pave the way for interactive advertising? Now TNN ends up with valuable information on my viewing behavior and how I interacted. All useful data for showing my interest and involvement in both their content and advertising, and targeting relevant messages to me next time.

Naturally, not every flavor of iTV will fit into a content developer's strategy. Right now, the most viable interactive platform for TV audience participation is the computer, because there is a critical mass of online access. Many media providers are referencing their Websites for viewer interaction and they are packaging their online and offline offerings to advertisers. The really great news is that these opportunities are starting to get exciting. Carat has executed some multi-platform programs recently with ESPN and FOX that have demonstrated significant value to our clients. In other words, we delivered results that showed consumer connection and accountability for the dollars we spent. And, we have an eagle eye on organizations such as AOL Time Warner that

promise to deliver more break-through opportunities in the shape of cross-platform media integration. It is the shape of deals to come.

But, if and when digital TV achieves the same kind of critical mass that the computer has today, I believe that the simpler applications, such as Wink and Respond TV, will inspire a comparative flood of interaction. The reason for this is simplicity itself – the viewer's ability to interact with a mere click. There is so much power and promise in that "click" that the industry should be doing back flips to get iTV capabilities into the homes of America.

In this crazy world of diminishing returns, marketers and their agencies spend every day thinking about two things. Marketers ask: "How can I create a deeper connection with (*not just reach*) my target audience?" And, agencies ask: "How can I prove I did that?" It is an enormous opportunity for cable operators, programmers, developers and marketers, to dream up ways to deliver on those two goals through audience interactivity. Not only will you be easing an acute pain point for all involved, but, more beautiful than that, you will be creating a new revenue stream. Let the stampede begin! —A—

Carat Interactive was named "Interactive Agency of the Year for 2001" by Myers Forums for their work and perseverance in Interactive Television. Carat Interactive is the interactive media arm of Carat, one of the world's largest media agencies. For more information, contact Sarah Fay at 617.449.4224 or sfay@carat-na.com.

PAVING THE WAY FOR ITV AT ESPN

When ESPN launched two interactive products in the space of a week in June 2001, it marked the beginning of what they believe will be an exciting new phase in the evolution of television. But, the two products – a virtual channel, branded “ESPN Today,” and a redesigned on-demand scores application – debuted only after a two-year educational and developmental process far more complex than they had envisioned. This is their story.

BY BRYAN BURNS

Vice President,
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In the years prior to the summer of 1999, ESPN had participated with WINK, but had not really awakened to the scope of its implications. As we began to investigate the possibilities of WINK’s technology, we were approached by DIRECTV, one of our top customers, regarding the concept of creating a virtual channel, which coincidentally would also utilize WINK. Soon, calls from various iTV companies started to come in on a regular basis, and we listened to the scope of what those in this business thought *could* happen.

We were intrigued. Sports are often an early technology driver, and ESPN has a long history of being on the leading edge of technological development. However, flying back to our headquarters in Bristol, Connecticut

one evening in November of 2000, following an interactive television meeting in Atlanta, we came to a troublesome realization. As impressed as we were by all the companies’ various presentations, we were unsure of their individual abilities to execute what we were learning was going to be a very complex business. It was on that night, somewhere over Pennsylvania, that we decided to put together a real world test using the ESPN service.

THE TEST

We wanted to quietly determine the ability of interested parties to conduct a live test of interactive television. As a means of testing functionality across both cable and satellite platforms, we wanted to enhance both pre-produced and live content, to sell merchandise,

and allow advertisers to offer interactive enhancements within their commercials. We also wanted to test the abilities of transaction processors and enabling companies to deal with issues such as: simultaneous triggers, requests for information, order routing and payment processing and fulfillment confirmation to the consumer.

As we considered all the variables, what had been made to sound so simple was suddenly a daunting task, and the reality of the intricacies of iTV were right in front of our eyes. We'd originally thought this project was a simple opportunity to gain a level of confidence that the vendors could deliver what they promised. But, it became an opportunity for us and, as importantly, for them to learn much more.

We fashioned our test around two types of events – one that ESPN owns and operates, and another that we acquired from a program supplier. On February 3, 2001, our schedule included live, prime-time coverage of the *NHL All Star Weekend* in Denver, immediately followed by same-day coverage of the *Winter X Games* from Mt. Snow, Vermont. Our friends at the National Hockey League were technology-savvy, willing to experiment, anxious to learn, and able partners.

We invited a number of companies, who had confidently expressed their interest in a relationship with ESPN, to be in the test and “show us their stuff.” That invitation brought reality into focus quickly. Confident presentations turned into wary glances and “what ifs.” Encouraging distribu-

tors sometimes said, “Well, we really won't be quite technologically ready in early February, but we will be soon thereafter.” What had been presented earlier as “easy” or “simple,” now could not be produced in a few weeks without Herculean efforts.

Every day a new issue confronted us, often threatening the viability of the test or our ability to execute all that needed to be done. On more than one occasion, we almost pulled the plug. As the list of unanswered questions grew, we had ESPN caps made up for our staff that displayed the acronym, TWWADAT, which stood for “That's Why We Are Doing A Test.” It had become the standard answer to nearly every question that posed an unanswered consideration.

- ▶ What happens when a single-standard trigger hits two kinds of set top boxes?
- ▶ How long does it take to integrate a merchandise fulfillment company?
- ▶ Which companies could bring actual household deployment to the test and which couldn't?
- ▶ How can we monitor all the variations from ESPN's Bristol headquarters?
- ▶ Which advertisers will be interested in experimenting with us?
- ▶ How do we let consumers know what an unexpected icon on their screen means?

In retrospect, we gained 95% of our learning from the test long before that Saturday night in February. However, we still felt the familiar adrenaline rush of live television as the clock

Among the most telling lessons from the test and the virtual channel development were the real-world limitations of a lack of iTV standards.

ticked down to the NHL telecast start. When we inserted our first triggers and saw reports returning that consumers had indeed purchased merchandise, all parties involved felt a bit of a satisfied glow. The various processes and procedures had worked. When consumers pushed buttons on their remote controls, content was displayed, requests for information were processed, data was delivered to advertisers, commerce orders were processed and credit cards were charged. However, we did not declare the test a success until merchandise arrived on doorsteps a few days later.

Among the most telling lessons from the test and the virtual channel development were the real-world limitations of a lack of iTV standards. We've all read about the theoretical implications of a lack of iTV standards, but we now had to deal with them head on.

Is there an economic model under which a programmer can afford to produce different versions of a service utilizing multiple variations of hardware and software?

How can we help operators build their digital cable business when consumers can bypass the operator through consumer-purchased devices that display standards-based applications?

How do we build and protect our brand when, for the first time, an ESPN service could look differently within a Cox system in Connecticut than it does in an Adelphia system in Southern California?

THE OPERATIONAL CHALLENGES

On the strength of the successful test, we began a concentrated effort to provide fans with our first real interactive products. Our work on *ESPN Today*, the virtual channel, escalated. It became apparent that the concept would be of interest to multiple distributors, which use a variety of set top box hardware and operating system software combinations.

We formed our virtual channel goals around a simple mission: to retain viewers on the television set, a premise good for our affiliates, our advertisers and ESPN. We wanted to provide a television channel that was full of information, easy to navigate, with the "look and feel" of ESPN, and would get right to basic content, without the need for using a bulky keyboard. "Keep it simple and give the sports fan the basic information he or she needs" was our mantra. Also, from a practical standpoint, we wanted to produce products that would "work today." Demonstrations of "what could be" weren't good enough. Whatever we proposed to our customers had to be real and deployable now.

Additionally, we wanted a continual tie to ESPN on television. Digital cable and satellite bring a host of branding and navigational issues. As most consumers go from a 50 channel universe to a universe of hundreds of channels, they won't remember that *ESPN Classic* is on channel 403. To that end, we designed one-button quick moves to the ESPN Networks from each page of the virtual channel.

Sports provides the best opportunities. But, it also poses the worst operational challenges.

While it sounds so simple now, establishing operational procedures, inside the parameters of WINK Communications' technical abilities, brought a new challenge every day for the DIRECTV version of *ESPN Today*.

Developing *ESPN Today* meant not only planning for the present, but preparing for tomorrow's more advanced products, both within the context of WINK upgrades and the utilization of different hardware/software combinations chosen by our affiliate customers. It is certainly fair to say that most systems were designed for programming much less complicated than live sports. Sports provides the best opportunities, from the standpoints of content and programming flow, advertising applications tied to the progress of an event, and multiple commerce offerings tied directly to the passions of the audience. But, it also poses the worst operational challenges. As people in sports often say, "no pain, no gain."

OVERCOMING THE LIMITATIONS

We had grand plans, and still do. But, the reality of bandwidth limitations, set top box memory and proprietary system limitations set in quickly. We often felt there were more limitations than possibilities, but we pushed ahead.

ESPN Today launched on DIRECTV on June 5, 2001. With no announcement or promotion, more than 500,000 visitors made their way to the channel in the first four weeks, and viewership continues to trend upward. The content flow is in place and will expand, and advertising and commerce opportunities are just around the corner. Other distributors are interested in a similar effort, and our discussions with other entities in the iTV food chain, such as set top

box manufacturers and software/middleware suppliers, make it a busy time. It seems simple now, as we document it in hindsight, but we've looked at each other dozens of times over the last year and acknowledged that it's been one of the single most complicated things we personally have ever done.

The slowdown in interactive television roll out has been frustrating. Those in and around the business tie slow deployment to the complexity of the business. There's no one who understands that better than we do. Having said that, we see the future of iTV and understand what it can be for everyone in television.

We believe that sports television may be one of the toughest hurdles iTV will face. But, we also believe it will bring the most rewards. The passionate nature of our viewers will provide just the kind of support, lift and demand the iTV business will require to motivate consumers to make the decision to move to digital service for access to iTV applications.

ESPN is committed to producing products that are good for affiliates, advertisers and viewers. And, as sports fans ourselves, we go home now at night and turn on the tube and see what the future can be. What we see is very exciting. We eagerly await distributors and other programmers alike joining us in what will be a truly fabulous ride. —A—

ESPN Today was recently named a winner in the CTAM Broadband/Cable Modem Marketing Case Study Competition, sponsored by Cable World and Terayon. In addition, Bryan Burns is the Chair of the CTAM 2001 Interactive Television Council. For more information, send email to bryan.burns@espn.com or visit their Web site at www.espn.com.

KATE MCENROE

President, AMC Networks

Member, CTAM Board of Directors

Kate McEnroe, President, AMC Networks, is an extraordinary leader. She defines the term "CTAM super-volunteer" in all her efforts – from her role as the current Chair of the CTAM Strategic Planning Committee to co-chairing the inaugural Broadband Opportunity Conference in 2000. In addition, McEnroe won a 1997 TAMI award for her work as co-chair of the 1996 CTAM Summit.

When she's not volunteering for CTAM, McEnroe oversees the operations of American Movie Classics, WE: Women's Entertainment and AMC's American Pop.

A pioneer in cable programming, McEnroe took over the management of American Movie Classics in 1984. Under her leadership, the network's original programming has won several notable awards, including the President's Award by the Academy of Television Arts & Sciences for which she received an Emmy.

Recognizing the need for more women's programming, in 1997 McEnroe created and launched Romance Classics. In January 2001, McEnroe re-branded the network, renaming it WE: Women's Entertainment, to meet the changing interests of the millennium woman.

In 1999, McEnroe created a third brand franchise, AMC's American Pop, the first digital entertainment network to offer convergence programming – unified content for the Web, broadband and digital cable platforms.

McEnroe has been widely recognized for her contributions to the industry, including the 1996 NCTA Vanguard Award for Young Leadership and, more recently, a Vision Award for her creative contributions to the enrichment of humankind through her work with AMC.

She is married to a well-known events production designer, Scott Cullather. They have two children, Caitlin and Christian.

Thank you, Katie, for your dedication to CTAM.

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