

Driving TV Technology

Keeping It Turned On

By Leo B. Willner, Ph.D. with R. Gregory Kalsow,
Partners at Alvairi-Derfler Associates

Are you like the rest of us somewhat befuddled by the ever-changing role of advanced technologies in TV entertainment and related communications media? Not surprising really, considering the disoriented state many of us experience when first encountering such things as VOD, DVD, PVR, HSD and other advanced TV products and services. It may also be difficult to fully grasp the impact these technologies are having on electronic media in general including on the Internet, the PC, the cell phone and the PDA. Is such uncertainty, while understandable, a necessary part of the evolving complexity of TV? Perhaps, but maybe not always to the present degree, as from its inception in the 1930s TV has always been a lively portal for new gadgetry and technology. Herein we examine the 'down on the ground' aspects of the changing television scene as a way of digesting it and getting on top of some of the intriguing changes that are taking place.

"...as from its inception in the 1930s TV has always been a lively portal for new gadgetry and technology."

Don't Miss the Last Word

CMS NewsLine offers items of interest for everyone.

Kalsow's Back-Channel (expanded in this issue) offers candid comments from the publisher.

Each month you will enjoy commentary on the state of the industry, new media and technology.

CMS NewsLine accepts no advertising, so expect our point of view to be no-nonsense, and maybe even a little controversial. See for yourself on page ten.

Early on television was expected to obsolete or replace radio, which of course it never could and never did. From its earliest days TV had a big impact on the American lifestyle especially in the home. All the while its periodic reincarnations involved new ways of 'seeing' and 'hearing' the world — a process that is ongoing and an influence it still has today. So all the wringing of hands and concern that seem to attend each and every new innovation is really nothing new and of little use as a way of avoiding the inevitability of the advancing media's future. With the bright history of TV

CMS NewsLine

"Validating the Middle Ground"



CMS NewsLine
Alvairi-Derfler Associates
Lake Forest, CA 92630
Tel: +1.949.584.0989
www.ad-assoc.com
newsline@ad-assoc.com

as a lifestyle altering, always evolving 'new' technology there is little reason for excessive concern. In this latest period of accelerating change it would be better and more realistic to accept television as the engine of change that it is and move on with it to new forms of entertainment and better means of accessing high-speed data.

As to the problems that naturally emerge alongside TV's complex evolution, many of these issues are indeed significant and at times troubling. As such they will indeed require great care and effort in order to be worked out among the various special interests towards their ultimate resolution. Fortunately, we already have in place many of the institutions of government such as the FCC and organs of free enterprise such as the capital markets in place that are needed to work through these challenges. Thus there is little need to push a panic button every time such a critical matter emerges as in, say, (1) the survival of TV Advertising, or (2) how to resolve the copyright and DRM issues of the day, or (3) how to take into account the growing impact of the Internet on traditional TV entertainment. These and similar challenges and concerns are already on center stage getting a good deal of attention from the government, the industry and consumer advocacy groups. Herein, we only try to illuminate these matters more clearly and to paint each part in their most appropriate colors.

"...it would be better and more realistic to accept television as the engine of change that it is and move on with it..."

As Johnny Cash once expressed so aptly in a song about our troubled experience in Vietnam: "Drive on, it don't mean nothin', drive on" — meaning that no matter what comes to pass, it soon becomes necessary to move on. While Johnny was right in a global sense, the present challenges are of real concern to us as they may greatly impact the future, the success and the economic viability of the electronic media industry including television. These basic issues have TV professionals and an educated public a bit puzzled and troubled. The challenge to the TV, PC and communications community is determining how to:

- Deal 'fairly' with the DRM and copyright issues for the benefit of the content owners and service providers as well as the public.
- Maintain TV advertising and its revenue within the rapidly growing 'time-shifting' VOD and PVR TV sectors.
- Combine, integrate, interoperate and network the roles and the functions of the TV and the PC in the home.
- Create the revenue models needed to enhance the available choices and level of enjoyment of the public while increasing the revenue opportunities of providers.

- Balance out the privacy concerns of thoughtful people vis-à-vis the level of permitted technical functionality in electronic systems so as to best fit the needs of the public and the commercial interests.

Two aspects of practical day-to-day economic life tend to facilitate an orderly evolution in each of these important matters. They are: (1) that markets for new products, services and technology generally transact or ‘clear’ at some price — no matter what, and (2) that we usually find a way to accommodate and facilitate those new products or services the public truly wants. To the degree that these behavioral factors apply to new TV services and applications, and they should, it is time to go with Johnny Cash’s advice and “just drive on.” Herein we offer some insight into this process and attempt to rationalize aspects of the evolving interoperability issues and dynamics of the TV, PC and Internet technology scene. In summary, it don’t mean nothin’ with the details to follow.

TIME SHIFTED TELEVISION

As we all know, all we really have to spend is our time. That is the irreplaceable commodity that paces and regulates human life. Thus, how we manage our time is of great importance to each of us. It is also a process the commercial interests including advertisers would like to control and use for their own purposes to help promote, advertise, sell and

brand their products and services. Yet as much as TV has extraordinarily empowered their means of capturing and controlling a mass audience of viewers, it has also now granted this public freedom from the worse of this tyranny. That is a reality the commercial interests must now face and accept and move beyond. By means of the remote control with its mute button and ability to change channels, the viewers have for years been able to separate their attention from any unwanted commercials, poor programming or other distractions. Today with the superior time shifting and recording capabilities of the advanced systems in DVD, VOD and PVR, ever more powerful means of redirecting one’s time and attention are now readily available to viewers. The very meaning and value of scheduled programming and organized channels needs to be reexamined in light of this ‘time is elastic’ time-shifted new viewing scenario. The business interests in the electronic media have little choice but to accept these facts of life and move on.

“...a state of blissful release from the past Germanic rigidity of TV life is more easily understood then achieved...”

Such a state of blissful release from the past Germanic rigidity of TV life is more easily understood then achieved as much of our habituating in the home traditionally centers around eating, socializing and entertainment. Although we may want to believe that we live casual free-form lives once away from our work, the reality is that television and its programming have

tended to provide a pace, some tempo and a bit of organization to our private time at home. The VCR, while capable of recording programming, never could help us manage 'live' TV as it relates to the constant interruptions and multi-tasking so prevalent in the home; but now time-shifted TV via VOD, SVOD, DVD and PVR certainly can. Whether it's the telephone, the doorbell, the watering system, various chores or interactions among family members, time shifting separates the actions of the viewer from any fixed timetable of TV content delivery. While these are still early days, the import of this factor cannot be underestimated — free at last, free at last, great God in heaven, free at last!

When we are released by means of time shifting from the fixed TV schedules of the past, are we sure that we benefit in any real way? After all we utilize events and destinations to help us organize our plans and give our lives a bit of order. Too much flexible time could turn out to be a problem. The advent of time shifting places the scheduling task back on our shoulders. The viewer freed to do as he will with his or her time may not know how to benefit from the newly found freedom thus gained. The jury will be out on this one for a while, so please stay tuned.

THE INTERNET LIFE

Similarly, the standard TV screen has now at least in part been replaced by various other 'screens', from the display on a PDA

device or Cell Phone to the monitor on a PC to the surface of a Tablet PC and mega-sized animated electronic outdoor displays — like the monstrous multi-million dollar multi-screen colossus rising in front of the fashion mall in Las Vegas. This change has already taken place to quite a degree and new types of visual portals are on their way. Thus, the evolution from the movie screen to the TV screen has now moved on to other visual forms by which we may entertain ourselves, view the news or engage interactive media.

The information and entertainment powerhouse that the Internet is becoming is central to these changes, so too is wireless communications and the use of massive data storage devices. In particular, entertainment from other sources than traditional TV channels, such as DVD

players and the Internet, can now reach a vast audience on or away from the TV screen. It is the Internet that may yet come to dominate the scene as the best way to aggregate and distribute information globally. Via the Internet the world is now 'wired' together in a highly democratized open-to-all network that challenges the gateway approach of the more traditional channels such as broadcast, cable and satellite TV. If it turns out that entertainment, news and commerce can be more readily and efficaciously communicated on the open Internet, then cable with its vast array of specialized channels will need

"...the evolution from the movie screen to the TV screen has now moved on to other visual forms..."

to further adjust its structure. There are in fact numerous content providers such as Disney that are testing the Internet as a major way of reaching their public with commercial offerings including On Demand. While some have suggested that cable channels are a most efficient way to distribute content, the technology to use IP protocols for high-speed data traffic over the public network, virtual private networks (VPNs) and the cable infrastructure continues to gain support from the likes of Microsoft, Intel and the major movie studios.

EMPOWERING DRM AND 'FAIR USE'

New digital rights management (DRM) and conditional access (CA) technology have done much to protect copyright and other basic content rights when displayed, stored or transmitted over electronic media in a way that benefits content owners and their service providers. The net result has been to limit the effectiveness of content pirates and other 'bad guys' from willy-nilly stealing content from those who have created it at great effort and expense. While this is at least a partially successful approach, it has come at a high price indeed in terms of the individual rights of honest viewers to exercise their right of Fair Use over copyrighted and protected materials. In the juxtaposition of owner content rights and consumers Fair Use rights, fair use has suffered greatly and is under a growing threat from those who do not fully grasp its critical importance to

the public and to the creators of content. This is a matter of grave concern to civil libertarians and others because of the long-term impact the misuse and hoarding of content rights can have on the nature of freedom itself and even on the future of democratic institutions.

Years ago, when on the faculty at Lehigh University, the head librarian explained to me that the reason the doctoral dissertations and other research papers were kept under lock and key and away from the graduate students was to protect them. He failed to notice that making these materials unavailable to their public also greatly reduced their value and impact on future research. Nonetheless he stood his ground and made it very difficult for the world to get to the research works developed by this university. In a similar manner Fair Use access to copyrighted materials is a practical necessity that benefits every one, including the content owners and creators!

"In the juxtaposition of owner content rights and consumers Fair Use rights, fair use has suffered greatly..."

By their very nature the technologies that are being used to enable DRM are also disabling time honored Fair Use capabilities over protected content in an unhappy twist of fate. To a considerable degree this outcome could not be avoided. Furthermore, were copyrights not sufficiently protected, then quality content would no longer be produced in necessary quantity and Fair Use would no longer be as much of an issue. So, somewhat

inadvertently, the scales have tipped too heavily in favor of the owners and creators of content over the valuable rights of users. The good news is that we have now reached the point where technology can also be used to make Fair Use work for the benefit of viewers while continuing the protection of property rights. This is the new technological challenge whose ultimate resolution will hopefully solve this dilemma.

It is now up to the media industry to invest the time, the energy and the expense to develop the capability to enable the Fair Use of content while in the presence of effective DRM. There is no contradiction at all in this,

only common sense. In fact, once access to copyrighted materials is ensured and protected by strong methods, then it is right and proper to empower Fair Use that allows a user for his or her private purpose to make limited copies of parts of a piece of electronic content for research and other private purposes. This is similar in concept to copying an article out of a periodic such as Time magazine in order to fax it over to a friend, archive it for future reference or make similar use of it. Such Fair Use will only tend to enhance the value of any 'document' or piece of content and lend it greater currency and permanence.

TV ADVERTISING STILL WORKS

It is understandable how nervous some TV and advertising executives are about the future of

television advertising. There is also still a little jawboning and pontification about what is right and wrong regarding the 'stealing' of content by failing to watch a commercial when, for example, one heads to the refrigerator for a beer — a la Jamie Kellner. Such a point of view may carp on, but, as with a tree falling in a forest when no one is listening, there is little meaningful sound. As Edward Fitzgerald said so many years ago "Oh leave the wise to wrangle, and with me the quarrel of the universe let be to make as much of that which makes as much of me". The fact of the matter is that advertising by its nature is a wedged-in attention getting methodology requiring cooperative

behavior on the part of the public. The very idea of forcing viewers to pay attention to advertising has a draconian flavor to it that is surely repugnant to most of the educated citizenry.

Good effective advertising relies on creativity, good placement and various forms of seduction — and not on the enforcement actions of a media secret police.

What is to become of this great source of TV revenue now that technology has made it convenient to skip viewing advertising whenever one wishes? Will advertisers desert TV now that viewers can no longer be forced or coerced into tolerating ceaseless, endless and mindless brain numbing quantities of repetitious commercials? Will CPMs drop precipitously now that Nielsen is unable to measure the viewing

"...Fair Use will only tend to enhance the value of any 'document' or piece of content and lend it greater

audience with its old fashioned reliable crispness? Or, will the world continue to turn as it always has and advertising simply reverts back to a more elective form of wedged-in interruption to programming? What do you think? Is it reasonable to suppose that companies offering products, services and brands can afford to abandon TV advertising, one of their most effective means of differentiating themselves from their competition? Hardly, more likely they will swallow hard and simply adjust their methods to the times.

TAKING BROADBAND TO MAIN STREET

The big wide pipe is what broadband is all about — lots of information quickly and cheaply delivered in beautifully displayed form! It is easy access to what you want when you want it rich in texture and presentation with many opportunities to make choices with virtual imagery displaying products, services and applications to aid shopping, entertainment and information gathering. In addition you get information and previews concerning your choices all displayed at your fingertips quickly and easily. What more could a viewer or shopper ask for, except perhaps more quality content. The broadband is now able to deliver a great depth and breath of information in a highly interactive visual mode that facilitates a great experience.

“...forcing viewers to pay attention to advertising has a draconian flavor to it that is surely repugnant...”

The secret to the growing power, usefulness and ubiquity of the broadband is in the quality and functionality of Internet infrastructure plus the vast assemblage of secondary client end equipment, especially multi-media advanced PCs and home gateways and networking systems. Taken together broadband, now in some 20 million American homes, is being delivered one-third by regional bell operating companies (RBOCs) with most of the rest supplied by cable MSOs. Speed or bandwidth is now discussed and at times offered in terms of tiers of service — as a means of limiting or else charging more for ‘real’ broadband at, say, 1.5-5.0 MBPS instead of the ‘snail-paced’ 200-400 KBPS mainstream broadband being delivered as a norm for some \$40-60

per-month. If you consider the fact that a 90-minute video of reasonable DVD quality has several Gigabits of data in it, the streaming or downloading of such content can only be achieved effectively by a small percentage of broadband users.

Nonetheless, the overall potential as well as the current impact of broadband is truly enormous. Its impact on communications, entertainment and the use of the Internet is already great, with much more functionality and variety to come. Broadband has indeed reached mainstream, and that is mostly to the good. However issues of privacy, security and trespassing are very troublesome. Paul Kocher, President

of Cryptography Research has expressed the view that no security system, no matter how elaborate or well conceived is completely secure, all can be broken, as it is only a matter of time and money. As the broadband typically involves an always on, seldom fully secured connection into ones home, home PC and home network, the risk from thieves and virus spreaders is quite a problem. Even the halls of Microsoft have been repeatedly breached, so no one is safe. Put that in your broad pipe, and smoke it!

The answer is very simple, do not keep your most important information on your broadband connected PC, and guard against cookies that are Trojan Horses in your midst and secure and back up all your data, etc. With regard to legal matters and legal protection, it would be foolish to assume that our government will not violate our privacy from time to time — for our own good. Furthermore, such violation may come without notification or warning and information gathered in this way can and will at times be used against us, and that is by our ‘friends’. Now think what those who are ill willed towards us might do with such information like steal our identity, credit cards and good name. One still wonders why Richard Nixon thought that those ‘private’ White House audiotapes would not be taken under subpoena and used against him? Caveat broadband user, let those who connect

“...it would be foolish to assume that our government will not violate our privacy from time to time...”

carelessly to the big pipe beware. Also do not expect that the cable MSOs can or will take it upon themselves to fully protect their broadband gateways. It all sounds a bit like a for real 1984, as in the book or the movie.

INTEROPERABILITY

Networking the TV, the PC , together with the DVD player, the stereo system, the PDA and the Cell phone can be compared to a gourmet kitchen at a fancy restaurant where the chef, the sous-chefs and the other cooks all

speak different languages and practice different cuisines. Staying with the analogy, the net result is at best a difficult arrangement that produces some strange ‘tasting’ dishes, for there is a lack of fit, compatibility

— or interoperability — in combining the various systems and they are likely to have great difficulty working well and happily together. Such a combination will tend to result in internal confusion, discord and frustration resulting in unhappy patrons and little harmony. On the other hand, attempts to achieve full convergence and standardization can lead to a sluggish dull environment that stifles innovation and creativity. After all what is more universal, uninteresting and standardized than oatmeal and a couple of hard-boiled eggs — but who wants to pay good money for such a bill of fare?

Such is the interoperability, convergence and standardization

conundrum the electronic media now faces. This problem in various other forms has occurred many times before say in such places as the transportation, medical and military hardware worlds, but perhaps never to the degree seen today in modern electronic media. That is the case in part because of the very rapid innovation and obsolescence cycle of advanced technology. Such a condition can also result from politicized market forces nurtured by a bit of government meddling and the misguided actions of cartels and oligopolies. Can it really be, for example, that the electrical network in the European Community operates at 50 cycles and 240 volts while we in the US employ 60 cycles and 115 volts for our primary electricity? Well, let's just go out and buy an adapter. If it were only that easy with electronic media, say for it all to be in MPEG with an IP wrapper operating under LINUX over IEEE 802.16a.

Have you ever seen a child go out of the house in winter overdressed and overstuffed with an excess of clothing so that it cannot move? A better answer is to loosely layer the parts, for if you do not the overall system may fail. Think of the coupling connections between railroad cars of different types on a train going at high speed, if you make the connections too fixed and rigid and do not provide enough giggle room you are likely to witness a train wreck. Combining the various electronic systems in the home

too closely and with too much rigidity can be a bit like that. Thus a degree of loose interoperability along with some separation of systems may be best for quite some time. Now go tell that to Microsoft and see where it gets you.

A BRAVE NEW WORLD

It is a brave new world out there that promises to be a lot of fun. The evolution of new entertainment and communication systems is just beginning and what a ride it will be. For the commercial enterprises and technology houses, the flux of change will only accelerate, as will the challenges such change will bring. The net result will be a dynamic evolving system. So let's just accept this as the stable norm, the platform on which the new entertainment world will continue to emerge. Drive on, it don't mean nothin', just drive on.

(Leo Willner and Greg Kalsow contributed to this issue. In order to discuss any of these points with the authors, please e-mail them at: leo@ad-assoc.com, greg@ad-assoc.com)

[CMS NewsLine frequently publishes the works of contributing writers. The views expressed are strictly those of the contributors. CMS NewsLine makes no endorsement of their opinions.
—Georgia Pech, Editor]

“Such a condition can also result from politicized market forces nurtured by a bit of government meddling...”

KALSOW'S BACK-CHANNEL: "Validating the Middle Ground"

■ Lurking somewhat under the radar armed with its new TV Foundation Edition IPG Guide cyber weapon is Microsoft stalking the next big game, the Gemstar TV Guide prize. Having effectively deflected the US government antitrust suit resulting from its successful decapitation of Netscape just a few years ago, Microsoft is now hunting an even bigger game. All the while, as in a gentlemen's agreement, the cable MSO watch hopefully as their TV Guide nemesis begins to look around somewhat frantically in the kind of preliminary dance a quarry sometimes engages in as it senses the coming of a fatal attack. The real prize for Microsoft is not just control over the IPG, but overall Interactive TV dominance itself. That is control over an interactive TV future many of us have wrongly discounted into an early oblivion just a year or two ago.

■ Sony's upcoming trials with Comcast and Charter of its Passage multi-system conditional access (CA) technology portend to herald in the onset of a new era for cable. If it all works out as planned, this CA system will no longer force the cable MSOs to limit their use of advanced set-top boxes (STB) produced by the likes of Sony, Panasonic, Pace and others. The net upshot could also be a growing retail-marketing sector that improves the competitive position of the cable MSOs vis-a-vis their DBS satellite competitors DirecTV and Echostar. It could additionally help to reduce the burden on capital expenditure funding needed to keep cable MSO services modern and evergreen. Nonetheless, Motorola and Scientific-Atlanta can be expected to fully adjust to systems like Passage and to continue to prosper in their STB sectors.

■ The Engagement Factors chart on page 20 of *Television Week* dated: 6/23/03 tells it all when it comes to ad skipping: the fact of the matter is that viewers only watch a very small percentage (7~15%) of all television advertisement. So it really doesn't matter that much whether they skip the ad by muting the sound, changing channels, turning away, going to the fridge or fast forwarding via a VCR, DVR or DVD-R. When, technology notwithstanding, all is said and done, consumers will continue to watch the

degree and type of advertising they choose, or are perhaps too lazy to avoid. Therefore, it is time for everyone to go get a TiVo or its equivalent, say, one of those sexy new DVD-R+PVR machines with the TiVo service coming from Pioneer this holiday season – and join in the fun with the ‘time is elastic’ crowd.

■ Cable marketing practices, what topic! It seems that some of the MSOs continue to push their services by simply displaying nice graphics and a bit of hype while providing little information that Jack and Jill can resonate to. Or they promote their PPV, HSD or VOD services by simply listing the content, but failing to mention many of the features and benefits. Forgive me, but maybe it is time for some of these folks to revisit the key points in Marketing 101. No wonder the less well equipped and functionally weaker satellite folks keep getting away with parts of cable’s lunch.

■ Surprise, it seems that quite a few of the VOD and DVR advocates among the cable MSOs such as Time Warner Cable have discovered the benefits of downloading content and in other ways balancing their network to increase QoS and reduce head-end and network capital cost. Will the wonders never cease? Next we can expect them to adjust their revenue models to begin to reflect traffic, mode of usage, aging of content, appeal and value to the subscribers etc... – but wait a minute, that is surely for another day.

[Your mileage may vary. –RGK]

About CMS NewsLine

CMS NewsLine is published monthly by Alvairi-Derfler Associates, a Market Development company, which specializes in assisting corporations with:

- Full Life Cycle Marketing Support
- Product Development and Product Strategy
- Branding and Positioning
- Business Development and Strategic Alliances
- Communications, Launch and Deployment Plans

At Alvairi-Derfler Associates, senior partners personally manage every engagement.

Contact us today at:

info@ad-assoc.com or +1.831.427.3833

Alvairi™—Derfler Associates

Better Marketing Execution

Alvairi-Derfler Associates is a MARKET DEVELOPMENT company situated to help your company navigate through its most challenging marketing problems. It is also there to assist you sort through and exploit the marketing opportunities your company now faces. Alvairi-Derfler partners, each with twenty or more years of direct field experience, can help prepare broad-based, professional, time-tested alternatives for action by you and your team.

Working hand-in-glove with your in-house corporate team, Alvairi-Derfler partners can:

- Assess New Product Opportunities
- Gauge Competitive Threats to Products and Markets
- Refine Specific Pricing Tactics
- Determine How to Reposition Products and Services
- Provide Comprehensive Support for Your Trade Shows
- Optimize Advertising Campaigns and Promotional Programs

Better Marketing Tools

Clients of Alvairi-Derfler Associates enjoy the confidence gained from thorough analysis, meticulous preparation and crisp execution leading to:

- Better Targeting of Products
- More Effective Branding
- Sharper Pricing
- Improved Sales Promotions
- Better Communications
- Upgraded Advertising
- Better Distribution Systems
- Improved Command and Control

Alvairi-Derfler partners also participate in business development activities involving new marketing relationships with third parties to help create advantageous alliances, organize licensing and joint development agreements and the like. When needed, its senior staff can help facilitate a client's outside business relationships in new markets at home or abroad.

Please contact Alvairi-Derfler today for an informal chat, to discuss a business situation, or to get advice on a new product or a changing market.

Silicon Valley: +1.831.427.3833

So. California: +1.949.584.0989



CMS NewsLine
Alvairi-Derfler Associates
Lake Forest, CA 92630
Tel: +1.949.584.0989
www.ad-assoc.com
newsline@ad-assoc.com

Subscribe to CMS NewsLine

CMS NewsLine is available only by subscription, and is e-mailed to our subscribers at no additional charge.

To subscribe using your credit card, please visit:
<http://www.ad-assoc.com/news.htm>

Every month you will enjoy thought-provoking analysis of the significant issues driving the growth of new media, technology and entertainment.

Georgia Pech, Editor
CMS NewsLine