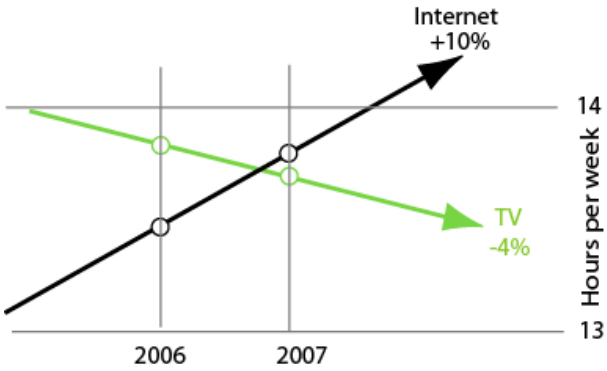
TV or not TV, that is the question.

Current technological and social trends are paving the way for the Internet to topple television as the dominant source of home entertainment. The line between television and the Internet is already rapidly blurring. ***Peter Vogel*** *examines the implications for industry and government.*

Over the past 20 years the Internet has changed the way we communicate, get information, and do business. Now it's turning socialising and entertainment on its head. And that won't take 20 years. Two years would be closer to the mark.

Time spent in front of the TV is falling and Internet usage is climbing. A recent Australian survey found that the average Australian spends as much time on the net as watching TV.



Australian TV viewing down, Internet usage up. Source: Nielsen 2008

The lure of online video

A survey this year found that 75% of UK and US internet users watch videos online and 35% of these do so "often".

So, what's the attraction? Plenty.

- Unlimited choice — A generation raised on Google expects to be able to find any video they want, instantly
- Time is a precious — We want TV to fit in with our busy schedule, not the other way around
- Multitasking — The Internet generation is accustomed to texting, surfing the net and watching TV all at the same time
- Social networks — Watching video online lets viewers share it with friends elsewhere
- The "long tail" — Content can cater to niche interests which would not be economical for broadcast TV.

Advertising dollars follow the audience

Not surprisingly, advertisers are moving their spending from TV to the online environment. In Australia online advertising revenues are about 50% of TV's annual $3.5 billion. UK advertisers are expected to spend as much online as on TV this year.

The comparison is even more striking when we look at Australian growth rates. Online advertising is expected to grow 38% this year, compared to TV advertising's projected 5%.

Those figures refer to all online advertising. If we look at the shift specifically in terms of online *video* advertising, the explosion is even more dramatic.

Online video ad spend 2008-2012
Data source: ABI Research

Recent studies even suggest that advertising accompanying TV shows watched online is a lot more effective than on traditional TV.

Online video ads can outperform traditional television commercials on a number of levels. Whereas TVCs rely on frequency and reach for their effect, online advertising has much more to offer both viewer and advertiser.

There is a reason Google has shot to the number one global advertising company. The ability to charge for advertising by clicks rather than by number of impressions (or in TV terms CPM) offers advertisers an irresistible commercial proposition. Not to mention the online medium's ability to seek out very particular audiences anywhere in the world, and the ease with which interest can be converted into a sale.

Online TV or videos can now utilise all the new tricks of the trade to improve the return for content owners and hosts.

Technical stuff:

IPTV and Online video

It's important to understand the difference between Internet Protocol TV and online (or Internet) video.

IPTV, which has been around for over a decade, is a form of cable TV where the signal is sent digitally to the home using a protocol called "internet protocol". The viewer's experience is pretty much like watching normal TV — they choose a channel and watch the show.

IPTV can be thought of as an alterative to broadcast TV. The programs are sent to the home via cable rather than via radio waves. However IPTV can carry more channels than broadcast. IPTV can also offer interactivity, notably Video on Demand (VoD) which means that instead of watching shows to a schedule, you can select the show you want and it starts immediately, or a least within a few minutes.

Being a digital format, IPTV produces better picture quality than analog TV, especially the newer high-definition services.

Foxtel Digital is an Australian provider of IPTV.

The main hitch with IPTV is that it requires a very high bandwidth, well beyond what is typically available through Australian broadband Internet services. That is why services like Foxtel require their own cable to the home.

The other way to get TV, movies or any other videos into the home is through standard broadband Internet. Internet TV (also known as "over the top" because the video comes on top of the standard Internet service) only provides a fraction of the bandwidth that can be pumped through the Foxtel cable, so picture quality is greatly reduced. A typical Australian subscriber uses ADSL (through the copper phone wires). This is fast enough for small, low definition pictures like YouTube or video ads on web pages.

The way get better quality for watching movies or TV shows on a big screen, for example, is to download the movie at whatever speed the customer's internet will provide, store it on a hard drive, then play it back at high speed for viewing. This system is usually known as progressive download and is used in Australia by Bigpond Movies and others.

People like ads

…although they do hate TV commercials. Online advertising is much better accepted than TV advertising because they can be presented in a non-interruptive format and targeted so that it is likely to be of interest to the audience.

Following the winning Google formula, the viewer will be able to choose whether to watch a commercial or not. The advertiser just needs to make sure their commercial is likely to appeal to the online viewer, which is no great burden given that exposing an ad to someone who is not interested is a waste of money.

Why now?

A new generation of "systems on a chip" has been released over the past year by the major digital media chipset vendors, notably Sigma Designs, Broadcom and ST Microelectronics. These chips support high definition digital video, run flexible Linux operating systems, and include Ethernet networking.

These chips have dramatically improved the price/performance of many appliances including high-definition DVD players and PVRs (Personal Video Recorder).

PVRs are the next generation home entertainment device to replace the VCR. They consist of one or more TV tuners and a hard disk. Shows that viewers choose to watch are selected off an on-screen program guide and recorded to the hard disk.

Thanks to these chips, high definition PVRs which can record two programs at the same time and store more than 50 hours of TV are coming out of a number of factories for under $A250.00

Most importantly, these new chips make it extremely easy and cheap to connect the box to the Internet. As a result, many high-definition TV devices such as PVRs and DVD players with Internet connectivity are already in production. The ecosystem to utilise this connectivity is in its infancy, but there are many moves in that direction.

A good way of migrating Internet video viewing from the computer to the main screen in the living room has long been elusive. The ability to connect basic devices like DVD players to the 'net at effectively zero extra cost, combined with the ability of high-definition TVs to show as much detail as a PC screen, means that the longstanding "convergence" dream is a finally a reality.

Development of the Internet has also reached an inflection point where most users are on broadband of some sort and the speed (yes, even in Australia) is enough for "snack" videos such as YouTube or embedded video ads, or for feature movies by "progressive download" which uses the hard drive as a temporary store to overcome bandwidth inadequacies.

Improvements in video compression technology such as adoption of H.264/MPEG-4 standards have significantly improved picture quality that can be achieved with not-so-broad band.

The bottom line: good quality video entertainment can now be delivered to the living room TV painlessly and economically.

Opportunity or threat for TV networks?

At first blush, these trends appear to be a serious threat to FTA television. However broadcasters could cash in on myriad of new opportunities if they use their current dominance and expertise to ensure they have a seat at the head of this New Media table.

Free TV is inherently appealing to Australians, as is free online entertainment of all kinds. The key is easy access to a huge range of content that they can watch at any time. The new generation of TV viewers are accustomed to Googling to find whatever they want in an instant — the idea of browsing a TV guide is "so last century". Add to this their total comfort with multitasking between computer, TV and mobile phone and it's obvious that any content which has to be watched in a linear fashion will hold little appeal compared to the immediacy of the internet.

The public is about to discover a cheap and simple way to enjoy online entertainment through the living room TV, instead of the computer. When they unpack their new BluRay DVD player, or they replace their VCR with a PVR, they will find a new place to connect their "blue cable", and suddenly their TV is on the 'net.

This offers broadcasters the opportunity to sell advertising into both the online and broadcast environments. That means that the migration to online video is an opportunity to increase, rather then diminish, advertising revenues.

Broadcasters can also use the net connection to build viewer communities, offer “extras” and generally capitalise on their online properties as the distinction between “off-air” and “online” quickly dissolves.

Issues for Government

Governments around the world are keen to replace the analogue TV services with digital as soon as possible. The motivation is basically that spectrum is a finite resource and hence very valuable. More digital channels can be provided within the same spectrum now occupied by analog TV – five to ten times more.

The spectrum to be made available by the US digital switchover was auctioned in February 2008 and raised $A20bn. The UK spectrum auction is scheduled for 2009 and is expected to raise $A2-4bn.

Digital switchover is being promoted in Australia as a means for increasing the number of free-to-air channels available, thereby increasing viewer choice. In the UK this has indeed happened, with Freeview offering over 40 popular channels plus many niche ones.

However with the present shift away from broadcast TV towards online entertainment generally, the most public benefit as well as greatest dollar value will come from reducing the total spectrum used by television, rather than opening up a zillion new TV channels.

It is no accident that Google bid $A5bn for a block of spectrum in the US auctions — demand for the liberated spectrum comes largely from new services such as portable wireless Internet devices.

Australia has set a target of end of 2009 to start changing to digital.

Members of the EU are aiming to switch over by 2012. Japan has named 2011 and the Netherlands has already shut down analog TV.

2006 Luxembourg, Netherlands
2007 Finland, Switzerland, Sweden, Austria
2008 Germany
2009 United States
2011 France, Japan, South Africa, Canada
2012 United Kingdom
2013 Australia
2015 China

Global digital switchover completion targets
Australian Digital Switchover Taskforce

Unscrambling the egg

Regulators who already have their hands full managing digital switchover are being sideswiped by the concurrent online video explosion. The Internet is largely unregulated, and as viewers leave broadcast TV in droves in favour of online video, the finer points of media diversity and license conditions which have hitherto exercised government minds are rapidly losing relevance.

Again, with the threats come many opportunities for Government.

In Australia, for example, the television band has evolved rather haphazardly with the result that instead of being one contiguous block of frequencies it is intermixed with various other services. The digital switchover was an opportunity to unscramble the egg, because if viewers are being forced to make a change to their receiving equipment under the guise of better quality and more channels, other technical irregularities can be sorted out at the same time.

There is a real risk, however, that regulators who have a deep understanding and long experience of one area, such as spectrum management, will let opportunities slip by. This is especially likely given the compressed timeframes in which technology is evolving.

With the whole population of the country poised to install a new TV gizmo in every home within just a year or two, the impact of the collision between TV and Internet cannot be overstated.

*** Peter Vogel** is a specialist technology consultant to Lincoln Crowne & Company. Peter has invented, patented and commercialised a number of ground-breaking technologies, starting with the Fairlight sound sampler in the eighties. He specialised over the last decade in “new media” and was a founder and CTO of IceTV Pty Ltd before moving into a broader consultancy role.

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