VISION 2015

Media Trends and Challenges

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GENCOM TECHNOLOGY

Contents

About QR Codes

In several places throughout this document, references are made to internet links. While we have included the full URLs for these links as footnotes, we have also provided **QR** codes to make accessing these links easier for readers of a printed version.

These **QR** codes can be scanned using one of several commonly available reader applications for PCs, tablets, and smartphones equipped with a digital camera.

The Digital Media Nirvana

What defines Digital Media Nirvana?

Ease of Access is part of it… any information, anywhere, anytime. But without filters, unlimited information is useless, with the things we care about becoming lost in the noise. The role of curator is of critical importance, ensuring that consumers can find useful, relevant content when they want it. Search engines, recommendation engines, and social networks can help refine the selection, and learning to make effective use of these technologies is essential for the media industry. However, there is no substitute for a professional media organization to act as a content aggregator, making access to quality content easy. In this context, Digital Media Nirvana can be defined as ***unfettered access to the content consumers want, on their terms.***

The companies that can provide this user experience will be positioned to succeed in a fast changing market. Those that don't, risk losing forever the 40% of the market (and growing!) that have 'grown up digital.'

Where are we now?

We are close to achieving the total access we crave. If we so fancy we can access traditional media such as:

- Newspapers
- Magazines
- TV news bulletins
- Radio variety shows

New media such as:

- Breaking News Stories via RSS feeds
- Weather information including live weather radar
- Up-to-the-second stock information via websites, widgets and apps
- Video clips on any subject you care to think of *(try searching 'how to fold a fitted sheet' on YouTube, see link below)*[1]
- Live events streamed to the web
- Downloadable podcasts from your favourite commentator
- Your local radio heard from the other side of the world - or conversely a radio station from the other side of the world listened to whilst at home

Just as new media has become easily available so have the means by which to access it.

- Broadband connections
- To the home or workplace fibre connections
- Wi-Fi hotspots
- 3G/3.5G/4G mobile networks
- Satellite broadband

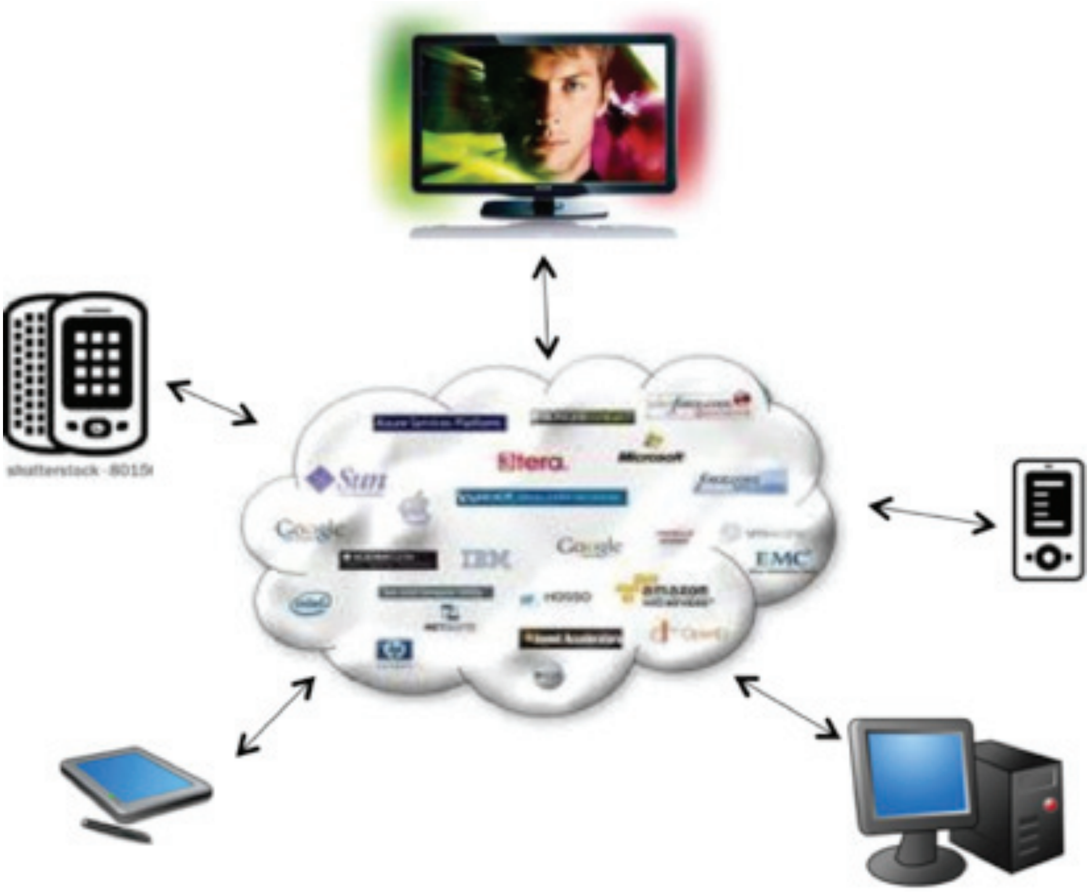
[1] http://www.youtube.com/results?search_query=how+to+fold+a+fitted+sheet&aq=f

There truly are very few places left in the world where it would be impossible to get online.

We now have accessible media, effective delivery mechanisms and with the advent of the latest display devices such as:

- Connected TVs
- Tablet PCs
- Smart Phones
- Portable Media Players
- Laptops
- PCs
- Digital video recorders

We now have the technology to consume our media entirely on our own terms.



So What's Missing?

Given the leaps in technology, it seems as though we should have reached this digital media Nirvana - we have the media, we have the access and we have the devices! But something is missing! What is it? Put simply – I, the consumer, want more!

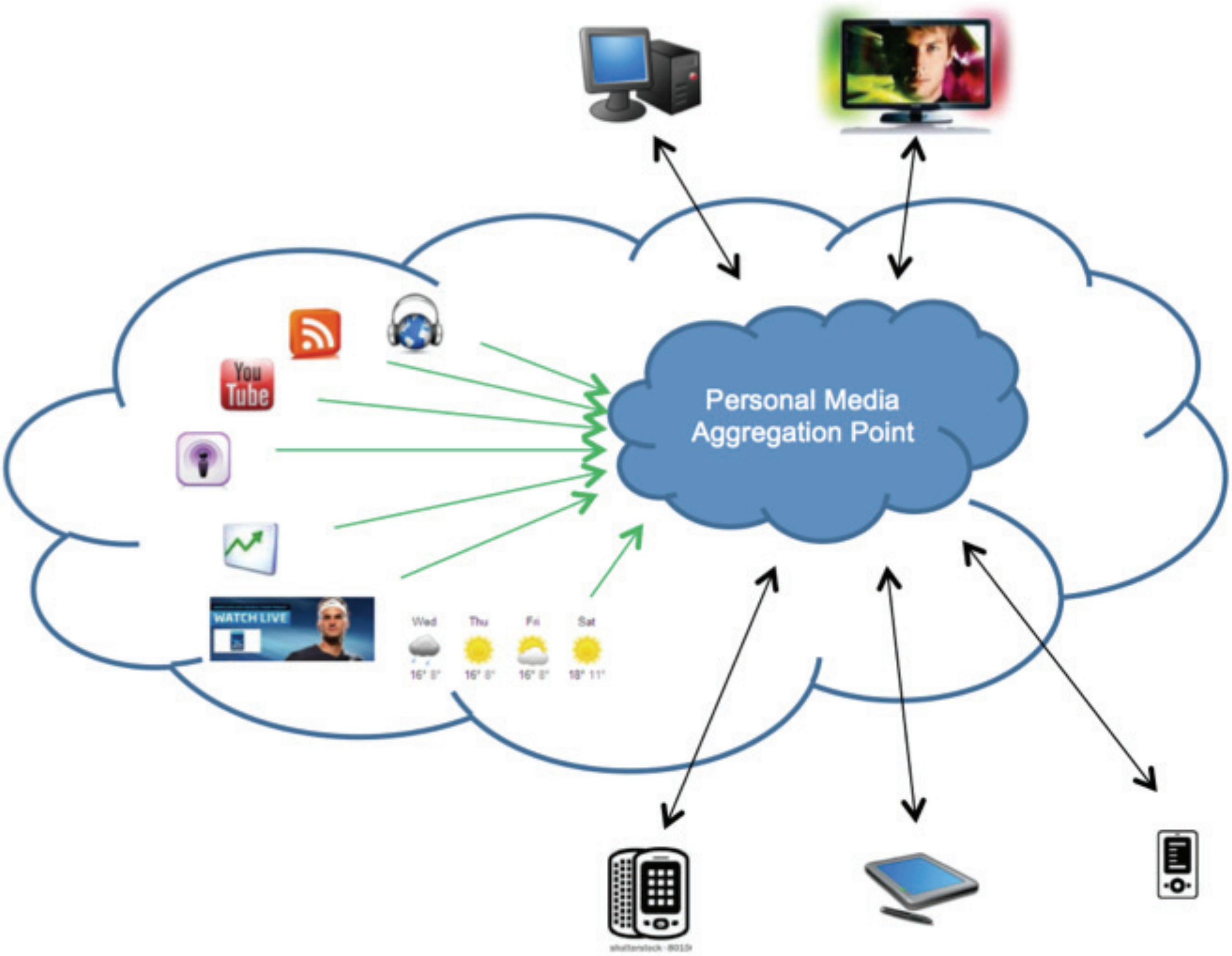
With increased performance and computing power many devices are merging. The differentiation is no longer functionality, it is now form factor. Today's tablet PC functions very well as a TV. Today's TV functions very well as a media player. But it's not enough.

I want to be able to pick and choose from the best user-generated online content, the best feature film content, the best terrestrial broadcasts, the best internet radio stations, the best news feeds, the most accurate weather services. I want access to everything, without being locked behind proprietary portals.

I want to access all content on all of my devices. I want to switch seamlessly from one device to another without pause or interruption. I want to take my favourite TV shows with me on the road, and finish watching them on my TV when I get home.

When I drive, I want to view traffic cameras on my PC before leaving work and on my smart phone or in-car media centre while driving. I want to see the webcam up at the ski slopes when I'm day dreaming about taking a ski holiday.

What I want is a universal remote control for the internet, one that can read my mind and find the media that I will enjoy. I don't want to go looking for it, I want it to find me -- but I don't want spam.



I want it all brought together, regardless of provider, as one super home page. I want universal simplicity. What I need is my own Personal Media Aggregation Point or pMAP.

When is it coming?

Strangely enough most of the building blocks are already in place. There are already triple play IPTV/VOD deployments that remember who you are and your current point in time, and manage the transition of media from one viewing device to the next.

The giants of the internet such as Google, Netflix and Apple are hard at work on quality recommendation engines.

What remains is for a player such as Google, Apple, Microsoft or perhaps the next Mark Zuckerberg (Facebook founder) to step up and create the pMAP, an igoogle homepage on steroids if you like.

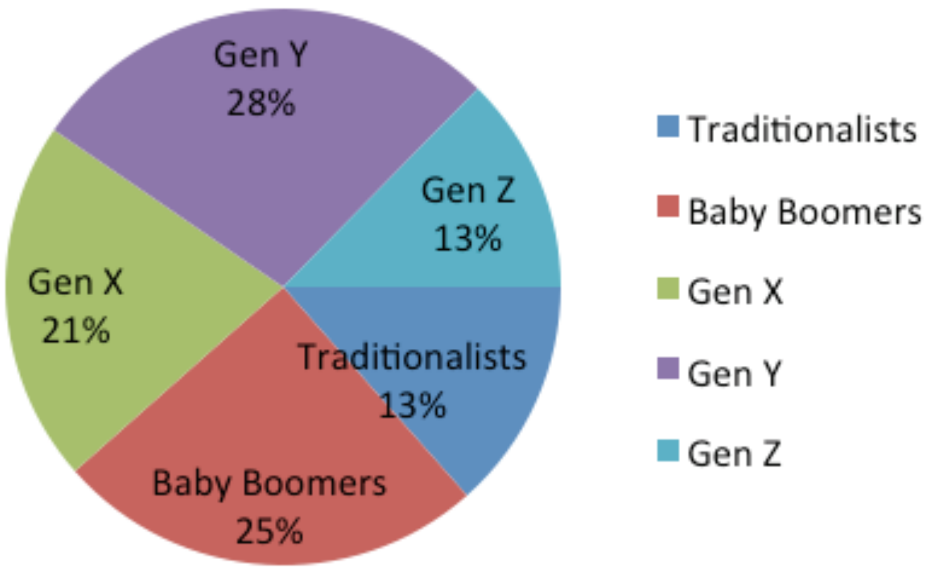
Once this happens, and it surely will, the face of broadcasting will change forever.

All media will become as easily accessible as turning on the TV has always been.

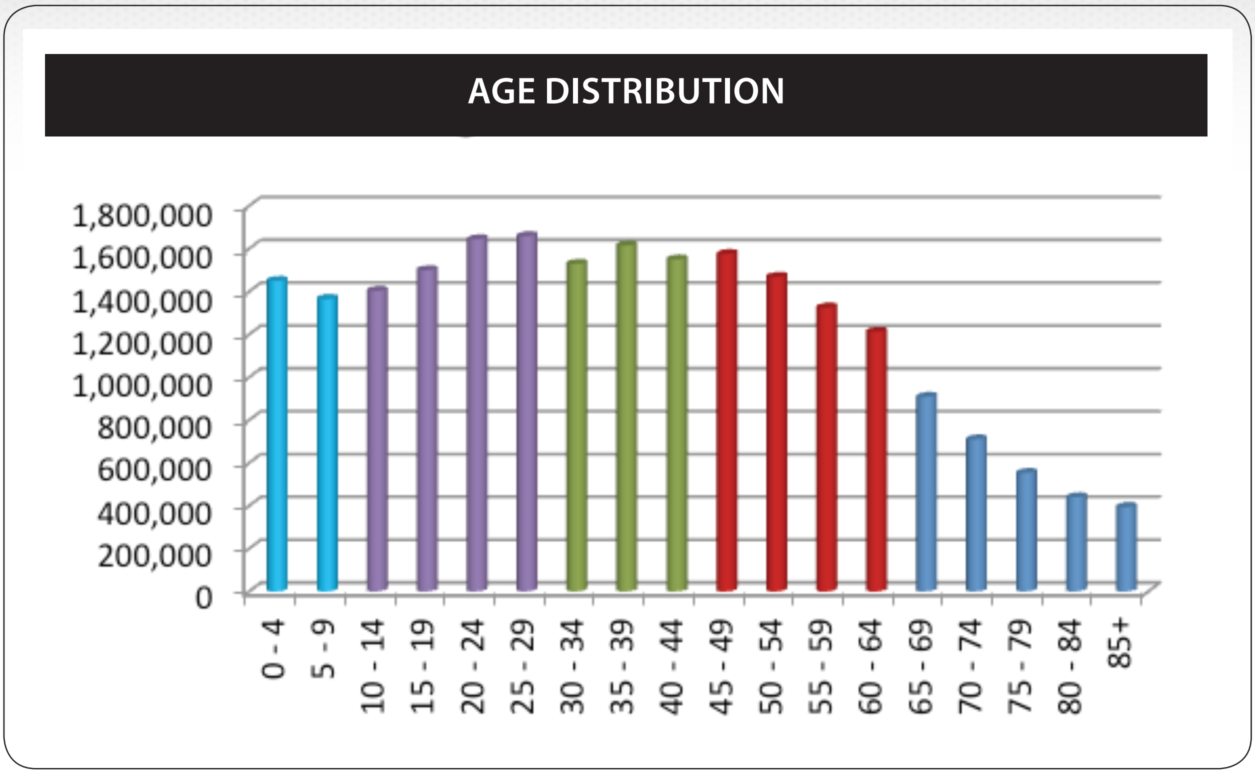
The Generation Gap

The Australian Bureau of Statistics data released in March 2011 breaks the nation down into the following age demographics:[2]

GENERATIONAL BREAKDOWN



[2] http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Mar%202011?OpenDocument



Traditionalists

Traditionalists defined as aged 65 and over represent 13% of the population. By nature they are highly brand loyal persons, and are highly unlikely to change their viewing habits. The impact of IPTV/VOD services on these people will likely be insignificant. Whilst traditional linear broadcast remains available (irrespective of delivery mechanism) they will continue to consume as they do today, watching linear broadcasts on large displays.

Baby Boomers

Baby Boomers defined as aged 45-64 make up 25% of the population. Once again they are mostly cemented in their viewing ways, while consuming small amounts of online material. They will only do so if it is easy to access and compelling, though even then, only in small amounts.

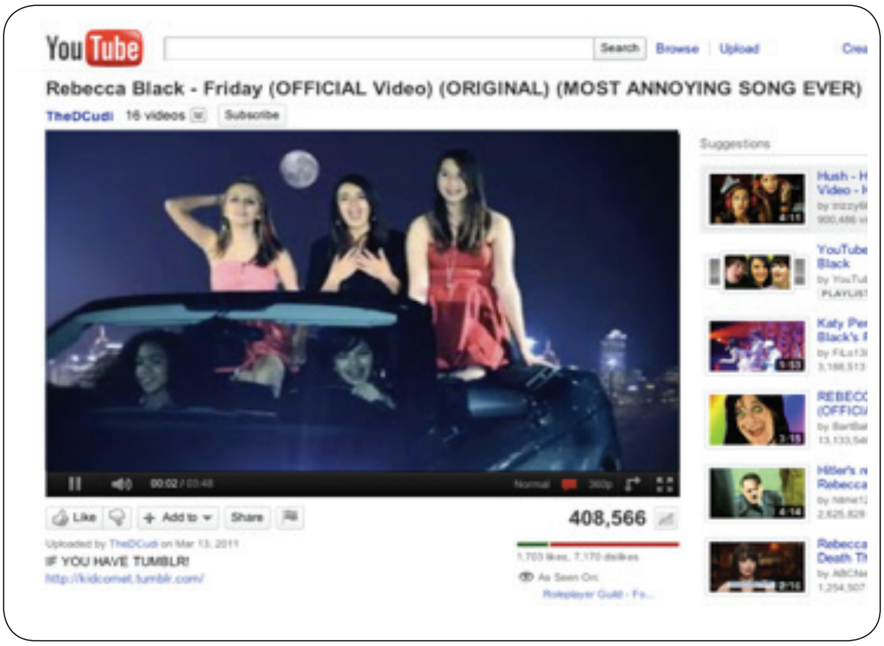
Gen X

Aged 30-44 and constituting 21% of the population, GenXers are actively trying to keep up with today's technology. Some are ready to adopt the new IP enabled technologies, while for many others it is simply too difficult or onerous. If an easy-to-use solution is placed before them, then they are happy to adopt it, however it must be simple and work 'out of the box'. Traditionally this style of offering is limited and closed, coming from one specific service provider.

Tech-savvy Gen X consumers have an appetite for online media, particularly whilst sitting at a workstation. Particularly tech savvy consumers will also access this media on their mobile devices.

Gen Y

Gen Y, aged 10-29 and constituting 28% of media consumers, are the powerhouses in today's media landscape. Capturing and holding their attention is the driving force behind the current demand for technology and innovation. Gen Y are universally tech-savvy and they have an almost insatiable appetite for media, though the style of media that appeals has changed markedly and proves to be a difficult proposition for traditional broadcasters to address.



Research has shown that Gen Y are very community-focused. Peer acceptance and a feeling of belonging are very important to them. This leads them to assign a high value (though not necessarily monetary value) to 'on demand' and tailored media. If their peers are watching a specific YouTube clip, then they too feel the need to watch the upload. It is this connected social experience that has seen some of the most obscure media reach viral status, and why they will tweet between themselves while watching broadcast television.

Gen Y tend to live for the here and now. They have lots of disposable income and a willingness to spend it on services (or content) that represent value on their terms. They do however have highly matured 'hype filters' which makes advertising to them and capturing this disposable income difficult.

Gen Z

Gen Z, whilst still under 10 years old and representing only 13% of the population, should not be ignored. It's important to remember that they will follow closely in the footsteps of Gen Y as the societal conditions for them are very similar. That equates to GEN Y+Z constituting 41% of consumers.

Though similar to Gen Y in many ways, they are growing up in a non-linear media environment, and have never lived in a world where 'on demand' does not exist. It is highly likely that they will develop a higher expectation for immediacy and individuality as they will be accustomed to faster connectivity speeds and more advanced search algorithms by which to access information. What's more, they've grown up with interactive and tactile user interfaces that make engaging with technology literally child's play. Many parents with touchscreen smartphones or tablets have related stories of their toddlers approaching the television and not understanding why swiping their fingers across the screen has no effect. This intimate relationship with technology and media represents a profound generation gap that will shape their development in fundamentally different ways. As adults raised in a world of limited content choices and one-way, linear consumption of media, we can't even conceive of the world these children will create in the coming decades.

What does this mean?

The long term future of broadcasting relies on capturing the attention of Gen Y. Gen Y will not simply sit back and watch a TV programme because that's what's on. They will find their own entertainment.

As has always been the case, success is based on having relevant content to share, making sure people know you have that content and then monetizing that content.

This is an extract from a blog entitled Understanding Gen Y – the 15 Most Important Innovations of Our Age, written by a Gen Y blogger, that is highly pertinent to this discussion:[3]

#1 – **The Internet** – The single greatest innovation of our era, and quite possibly the single greatest invention of the last century, is the Internet. Having had the Internet in our lives from childhood onward has had a tremendous impact on both what and how we learn, not to mention every other facet of our lives. Freedom of information means something very different to Gen Y, as we have become used to almost unlimited access to almost unlimited information.

#6 – **Google** – While search engines in general have had a major impact, Google is very nearly the deity of Gen Y. They are dedicated to providing as much information and as many tools as possible, absolutely free. Sure, they charge for some things, but they have done more to bring down the cost of music, news, movies, games, and data in general than any other company.
If Google sets their sights on your industry, you can kiss it goodbye.

[3] http://samantics.wordpress.com/2010/02/18/understanding-gen-y-the-15-most-important-innovations-of-our-age/

#7 – **iPod** – The iPod changed our entire concept of how music is shared and listened to, and had a major impact on the long-tail of the music industry. It also opened the door to the decline of the traditional CD business. Why on earth would we pay for music when we can share with our friends? We see it as no different than loaning out a CD. How the hell do you think music outside the top 100 spreads? Word of mouth, and sharing. The iPod also helped to further un-tether us from fixed locations. We are a very mobile generation.

And most importantly

#8 – **P2P Networks** – The iPod and Napster really got this 'industry' going. You see, Gen Y is a generation that likes to share. We love the concept of 'try before you buy'. We don't like rules, restrictions, and limitations that only work in your favour, and as you can see, we've found ways around them. No amount of copy protection or litigation will prevent software, music or video piracy.
Do you know why?

#13 – **Streaming Media** – We love entertainment, be it movies, music, skits, pranks, etc. We like to watch and listen to and play what we want, when we want, from wherever we happen to be. Oh yes, and we don't want to pay for it either. Thanks to services like Hulu, Pandora, Grooveshark, and YouTube, we can have our cake and eat it too. If we can't find what we want for free…well, see #8.

For a media company seeking to compete in this changing media landscape, this translates to the following key imperatives:

- Business systems need to be flexible enough to interface with the Personal Media Aggregation Points and recommendation engines of the future.
- PR and Marketing need to stay abreast of the latest peer recommendation trends and tools and remain part of the 'connected social experience'.
- Back-end media systems need to have enough capacity to stream out On Demand content at different bitrates for different devices; and to share content, metadata, and processes between workgroups.
- Programming needs to remain relevant. Thirty minute and one hour programs may no longer appeal to Gen Y.

- Ad Sales needs to come up with innovative ways of creating and selling commercial inventory.
- Technology needs to find ways to support these innovative sales strategies.
- Now more than ever, 'Content is King'. No longer will consumers sit through a program just because there's nothing else on. The days of 'filler' content are numbered, whilst quality niche content will find its audience.
- As a result of the previous point, protecting and controlling that content is more important – and more difficult – then ever. Content is the most valuable asset a media company has, and it's easier than ever to pirate. Plus, in many cases consumers can go around their service provider or local broadcaster through legitimate channels, such as Apple's iTunes or the content producer's website..

The newly emerging technologies enabled by the internet affect each generation differently; not all viewers are interested in the viewing choices becoming available. However, these new ways of experiencing content are rapidly coming into the mainstream. As consumer technology improves, it is being adopted in ever-greater numbers. Although traditional limitations of consumer broadband access in many regions have kept them from being at the forefront of the internet video revolution, new government initiatives and market forces are driving rapid development; and consumers will become more vocal in their expectations for advanced broadband video services as a result. Thus a fully-formed strategy for addressing this trend is essential to any media company operating in developed markets.

Future Proofing Your Business Interests

For a media company to effectively future proof its business, proactive action must be taken on a number of fronts:

- Human Resources
- Monetization
- Technology

Human Resources

The demographic data presented in the previous section cannot be ignored. Based on the generational behaviour assumptions stated earlier, this shows that:

- 38% of the viewing public is highly unlikely to change
- 21% are moderately motivated to adopt new service offerings
- **41% of the current population (and growing) may be lost forever if Marketing and Programming cannot keep pace with the rapidly changing digital media landscape.**

Clearly great care must be taken to understand and provide suitable services for Gen Y.

There is a vast array of information available on the web on this topic. We have provided some interesting links at the end of this document that were used in its preparation.

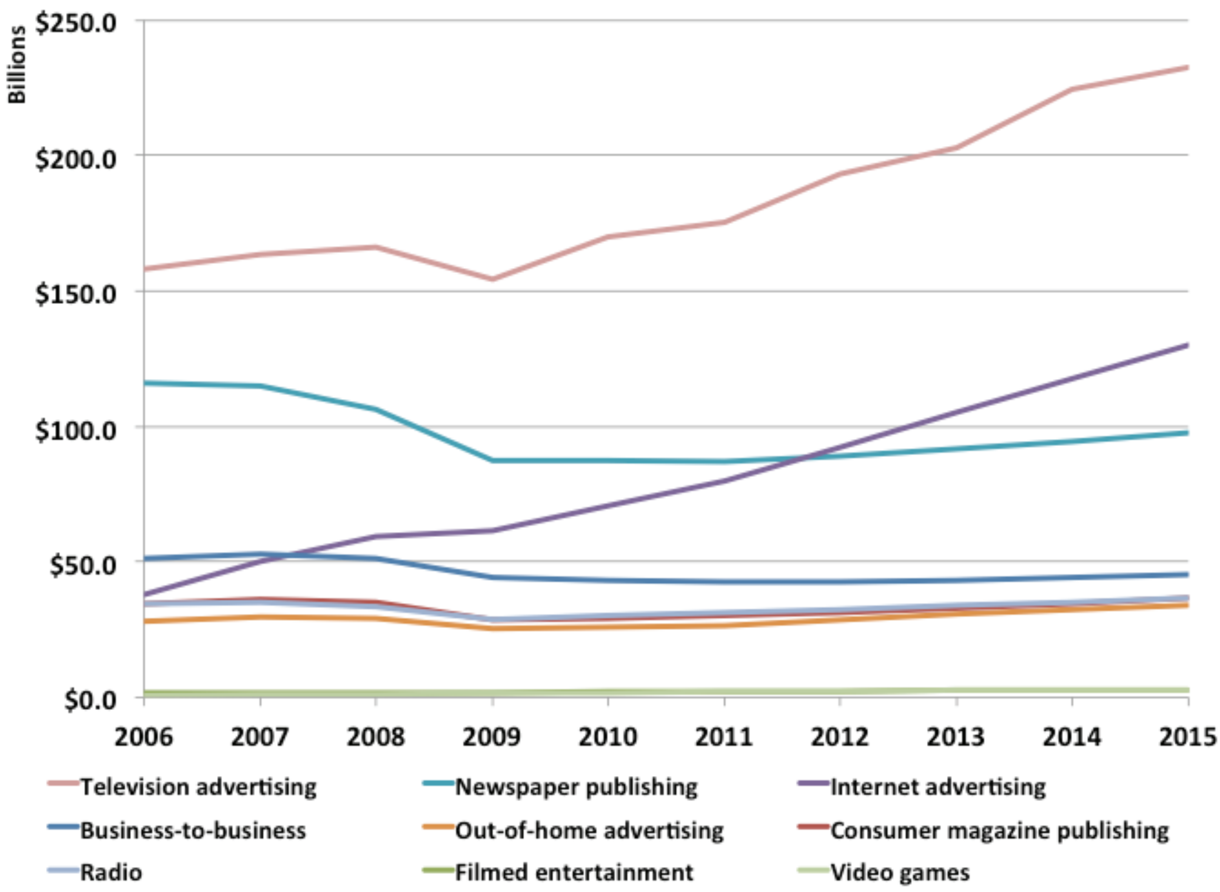
It should be stressed that to reach Gen Y, having the right people in the right roles has never been more important.

Monetization

A critical aspect of the changes occurring in the media industry is that traditional monetization models are under threat while new ones are still immature. Internet advertising has grown rapidly over the last decade, largely at the expense of print. This caused significant disruption in the publishing industry as online display and rich media advertising developed, while a significant piece of the value pie was permanently lost to new entrants (notably Google) in the form of search advertising.

Today, it's television advertising that is most at risk. As a USD$175 billion dollar market worldwide, television continues to be the dominant advertising platform. However, consumers are increasingly spending their time on the web or on internet-connected devices and are using Personal Video Recorders (PVRs) to skip commercials on traditional television. Meanwhile, even as professional video content moves to the web, sites like Facebook and YouTube allow non-commercial content to 'go viral' while professionally-produced but mediocre content languishes. This dynamic makes the challenge of connecting with audiences even harder.

GLOBAL ADVERTISING SPEND BY CATEGORY, 2006–2015



These dynamics are leading brand advertisers to search for new ways to engage with their audiences. As television advertising continues to be fundamentally one-way and linear in its delivery, advertisers are shifting their dollars to online inventory and branded content produced for the web. However, they're finding it difficult to effectively reach their core audience across media properties and devices, and to control what content that advertising is placed against. Video advertising continues to provide the best brand awareness and recall, while display continues to provide superior engagement and drive to purchase. There is a chasm in between that continues to exist because of an inefficient and fragmented supply chain.

Solving this problem and enabling an integrated supply chain requires a unified approach to ad sales, content management, and publishing that transcends boundaries of video, print, display, and interactive platforms. In this world, advertisers buy audiences, and the content provider delivers them on whatever platform consumers choose. With increasing consumption of television and print content on internet-connected devices, there's an opportunity to deliver dynamically targeted, interactive advertisements that engage consumers on their terms. This could come in the form of a targeted TV commercial inserted into a linear TV feed via an internet-connected television, or a display ad alongside a news article on an iPad that allows an interested viewer to 'tap through' for a two minute video piece providing additional product information. With the right technology in place, the possibilities are limitless.

Technology

Winning the fight for Gen Y's attention is going to take innovation and determination on both the HR and Monetization fronts, however the heavy lifting will still be performed by the background technology.

Technology will continue to deliver gains on a number of important fronts:

- Efficiency
- Ground Breaking Innovation
- Open Systems

Efficiency

Although the landscape is changing, core media operations will continue to be driven by the same basic technology needs.

News Departments will continue to demand speed to air, and manufacturers will continue to develop existing and new products to achieve this.

Program Production will continue to demand faster times to release, higher video and audio quality, better visual effects, and fewer human resources doing more tasks with the aid of automated workflows and better interfaces. Again manufacturers will continue to meet these demands, which have changed very little.

Traditional Playout centres (content aggregators) will continue to require tighter and tighter regionalization to better target advertising, better graphics to brand the channels, lower capital investment and simpler architectures.

Content Acquisition will continue to gain efficiency, and file based workflows will continue to mature as organisations come to understand what metadata is useful and what is not.

Transmission and Compression will also continue its leap forward in terms of efficiency. Mobile broadband will get faster, fibre connections will become more commonplace, and DVB-T2 modulation techniques will offer more bandwidth.

Video compression will take another leap forward enabling even more video on even fatter pipes.

It may be argued that the technology delivering these improvements is ground breaking and innovative, but to the consumer it's just a better, more efficient version of what we already have.

So in many respects it will be business as usual. However the next 5 years will also see certain aspects of the Acquisition / Playout / Transmission Centre reborn as new ground breaking innovations are released to market, engineered solutions to create the hybrid Broadcast / IPTV / VOD environment that Gen Y is demanding.

Ground Breaking Innovation

Demise of Baseband Video

File based content delivery, integrated receiver/decoders with IP out, dense transcoding with IP inputs, IP multiviewers… the scene is set for a total departure from baseband video in the modern playout and transmission facility.

Currently the IP Master Control Switcher is the missing link - but likely very close to becoming a reality.

Cloud Computing and Virtualised Servers

Once the first IP Master Control Switchers emerge, it will not be long before this hardware device / appliance becomes a purely software tool that can be deployed on virtualised hardware. This advancement then opens a multitude of options using either private or public clouds.

IaaS (infrastructure as a service), SaaS (software as a service) or even PaaS (Platform as a service) all become viable propositions.

Open System Architecture

The problem with the future is that nothing is certain. The only certainty is change.
This means that particular care needs to be taken to work with solutions providers that understand this. Their solutions must be open and adaptable.

While nothing is certain, Gencom feels confident that within the next few years the industry will see the global premiere of the Personal Media Aggregation Point. What is uncertain, is how it will be implemented and when it will reach individual geographic markets.".

This poses an immediate challenge of identifying which metadata is essential so that:

- The recommendation engines put it in front of the viewers
- The viewer then makes the decision to watch it.

Attempting to foresee the answer to these questions is important, to ensure that a company's catalogue of content is available to Gen Y.

The final part of the puzzle is determining how this information will be made available to the recommendation engines. Will it be an updated version of RSS, or an entirely new method? Not having this information dictates that critical business software systems must not only be secure enough to protect the information but open enough to access it.

Strategic Options

As companies evolve to address the industry changes discussed here, new strategic options will emerge. Some current broadcasters will realign themselves around one or more of the following core business models:

- Service Providers, with the ability to supply RF based last mile connectivity
- Playout Providers, hosting 3rd party channels
- Program Producers creating both mass market and niche programming
- Content Aggregators capitalising on decades of core competency.

Cloud Computing and server virtualisation will certainly offer more options to make each of these business models more viable.

A media company may have opportunities to either acquire or divest businesses that fit these models, and should have a strategic plan that defines the company's core businesses and provides a framework for strategic development.

Impacts from the changing technology landscape

The changing technical landscape will affect broadcast television in many ways:

- The broadcast centre of the future will look much more like a data centre than a traditional TV station.
- Video cable will be replaced by ethernet cable in many areas.
- Premium content will need to premiere globally rather than regionally to overcome the current practice of pirating the latest season from the US.
- Cheap 'filler' programming will lose its relevance in the market, whilst quality niche programming will increase in relevance.
- Advertising models must change.
- Archiving practices will change. Currently much content is archived locally as it's easier to archive then to have it resupplied. This could change in the future, such that the content producer is the only person permanently archiving the content.

Despite the changes there is also opportunity:

- Rather than cramming many low bandwidth channels into the RF spectrum, current broadcasters could re-prioritise its use. SD channels could be delivered via internet at a lower Quality of Service, leaving the RF channel available to broadcast higher quality HD or even Ultra HD programming. Doing so repositions FTA broadcasters as Premium Service Providers.

- The time may even come when content producers PAY the broadcaster for access to this highest quality delivery mechanism, transitioning the DVB-T model to that of satellite broadcasting.
- Personal Video Recorders, creating a new challenge in the form of ad skipping, also bring the advantage that any time of day is now prime time. So long as a viewer has easy access to the EPG to set the recording, it doesn't matter whether the program airs at 7 pm or 2 am. In fact later is better, as a staggered programming schedule results in fewer scheduling conflicts on the record device.

Summary

The next five to 10 years will be turbulent in the media industry; there will be some big winners and some big losers. New players will arrive with much fanfare. Some will be a flash in the pan whilst others will be the Next Big Thing. Sadly, all but the most innovative traditional broadcasters will eventually fade to black.

The challenges ahead will be great, however forewarned is forearmed and media companies are in a position now to embrace these new paradigms and prepare for a nonlinear future. Gencom and our technology partners look forward to working with our customers to achieve this goal. We hope that this insight is helpful, and we stand ready to engage directly with our customers to help them implement a strategy that is specific to the needs of each organisation.

About Gencom Technology

Gencom Technology is a leading provider of integrated media technology solutions with a reputation for inspiration, partnership and support.

End-to-end technology solutions for the broadcast, multimedia and telecommunication industries are our speciality. As the telco and broadcast industries have converged, Gencom has kept at the forefront of technological developments such as HDTV transmission, media asset management and new delivery technologies like IPTV.

At the heart of Gencom's ability to deliver the finest technologies are our exceptional personnel. We have progressively invested in highly experienced and talented engineers strategically located in markets worldwide to benefit a broad range of customers.

Gencom's head office - including a world-class design centre and factory - is located in Auckland, New Zealand. We also have a regional office and second factory in Singapore; and maintain offices in Wellington, Sydney, and Johannesburg to provide design and support services internationally.

Our 'can do' attitude promotes confidence in any project. Clients and business partners are inspired not only by Gencom's enthusiasm and experience but also by the efficiency and cost-effectiveness of our media technology solutions.

Further Reading

The following links have proved helpful in producing this document, and provide a starting point for further research and analysis of the media industry.

http://www.learningtolearn.sa.edu.au/Colleagues/files/links/UnderstandingGenY.pdf

http://samantics.wordpress.com/2010/02/18/understanding-gen-y-the-15-most-important-innovations-of-our-age/

http://www.penn-olson.com/2010/07/19/understanding-gen-y-infographic/

http://www.wired.com/magazine/2010/01/ts_burningquestion/

http://www.pcmag.com/article2/0,2817,2381166,00.asp