
Changing Media, Changing Roles: New Media Comes of Age

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Executive Summary

Digital media has been highly disruptive to the Canadian media industry. While creating challenges for traditional media companies, digitally enabled media has created many new opportunities including the formation of the interactive media industry. “Interactive” is the distinguishing attribute of new media.

Media has moved to a business that is increasingly audience centric as the audience now commands the power to choose. Bandwidth considerations are becoming less of an issue for delivery and computing power for consumers continues to progress in its capability. Media consumption is gravitating towards increased use of interactive platforms that are not tied to a single location or confined to the display of a single type of media. Media programming is being promoted and distributed across a wider array of platforms. As the reliance on single platforms and channels decreases, the reliance upon quality storytelling, information, design and promotion increases.

Canadians who are users of the Internet now spend an average of 13.5 hours a week online. This is 2.2 hours longer than they spend watching television. Some spend time creating content themselves and are discovering new ways of connecting with each other through online communities.

Consumers are headed towards reaching a state of *ultramedia*, a condition whereby all media is accessible at any time from any location.

Media production is no longer a business that occurs in discrete silos as producers need to consider the array of channels open to them to reach an audience. Conducting regulation of the media environment has become increasingly complex (and irrelevant).

Traditional media packagers and distributors continue to be disintermediated as producers find new ways to go directly to market.

Much can be learned from studying the history of media developments. The games industry is the only mature interactive medium and the music business is the harbinger of issues for other electronic media facing continuing disruption of their business models from digital technologies.

There are currently 30,000 Canadians working predominately in SMEs, generating \$4.8 billion dollars of activity in interactive media that is primarily intended for an export market. The vast majority of this work is in fee-for-service work for Canadian corporate interests (e.g. Web activity) and foreign interests, primarily those involved in the gaming business.

Canadian companies are particularly challenged in trying to access capital, maintaining a senior talent pool with technical, creative and management skills and in growing businesses for participation in a global market for media.

Digital enterprises need to pay particular attention to how they construct their business models. It is a highly accelerated business environment and requires a great deal of specialized input. A large part of the input needs to come from research, which is used to construct what are largely experimental business models. It is a very high-risk business to create original content products as companies are now in the full-time business of addressing change and their audiences have complete and immediate say over the success of programming.

Canadian producers of interactive media are organizing to improve themselves through the association of associations, the national Canadian Interactive Alliance.

Developing a knowledge-based economy by definition includes creative undertakings in media. The federal government can do a great deal to assist what are primarily smallish companies with limited resources.

Current assistance programs, particularly production funding programs, should be reassessed. This should be done in close collaboration with industry.

Initiatives that should be considered include market research services, research into the industry in Canada for planning, export support, training initiatives including support to attend conferences and through facilitating new business through partnerships.

Emphasis for government support should be towards a prime objective of building profitable Canadian media companies. These companies will become cornerstones of the knowledge-based economy.

Measures must be taken to engage private capital in the business of media. If this cannot be done Canada will squander any competitive advantage and become a fee-for-service production backwater.

1. Introduction

In this report we will provide commentary based upon FAD Research's twenty years experience dealing with digital media issues and working closely with Canadian independent producers. We will provide an overview of developments in technology as applied to the various media platforms that Canadians use. We will discuss trends in current usage and provide some context as to how it affects digital media production. We will deal primarily with interactive media business and outline some of the disruptive effects upon traditional audiovisual media such as feature film, television and the music industry that digital technology and distribution has caused.

The CRTC has asked contributors to the Fall 2006 public hearings to review changes in Canadian audio-visual technologies since the year 2000 and to suggest strategies for coping with them. The main force effecting changes as they relate to audio-visual communications is the same one that is affecting changes in many places today - "digital technology". Digital technology has spawned digital media, which allows interactive media and as a result of these changes the way in which Canadians communicate will never be the same.

Since the mid-90s the exercise of saying "things will never be the same" is perhaps the only thing that has remained the same. This phrase has been used as lead-ins to reports such as this one that attempt to chronicle and provide some insight into the continuing changes in media. While it remains a bit of an exercise in "fish studying water", as we are in the midst of a wave of change, there is still perspective to be gained from studying the history of media and technology and the influence that this technology has had upon media consumption habits and therefore the business of media. The changes have touched every traditional media platform, created some new ones, and transformed the acts of distributing, producing and consuming media in near every way.

Since 2000, we have experienced the tail end of the first communications business boom created by digital media, more of a stalling really, with the event now referred to in popular parlance as the "dotcom bust" of 2001. This was a relative non-event in Canada¹ as we did not have an excess of investment in domestic dotcoms or in digital media creation (outside of the games industry). The bust did, however, bring about a chill in the air for any business related projects associated with digital media enterprise such as e-commerce initiatives. For a number of Canadian telecommunications and media businesses, ever late out of the gate compared to their heavily invested U.S. counterparts, the use of the word "convergence" did tend to cool the boardroom air a couple of degrees

¹ Not to say that the depreciation of companies like Nortel were "non-event" but we are focusing our discussion on content companies in the business of digital services and mainly digital media content production. These are the stuff of the classic dotcoms.

post-2001. Many projects went on hold, but from 2001-2004 the chill did more to collapse investments on the U.S. NASDAQ exchange than it did to stop Canadians from using digital media². Canadian service sector businesses continued to follow these consumer attentions, albeit more slowly³, by creating new services and by continuing to achieve cost efficiencies for their clients through the use of digital media applications on the Worldwide Web.

“New media is dead, long live new media.”

Since 2004, markets have regained most of their composure and considerations regarding investments in new technologies and, most particularly, those involving digital media enterprise, have proceeded forward with some important lessons learned. New media didn't go anywhere except perhaps temporarily away from the hype-filled columns of the business press at the peak of the last boom.

There are three major attributes of digital media that underlie the entire discussion in this report:

1. Digital technologies allow for digital media devices and transmissions which in turn allow for ALL traditional electronic media devices and messages to be smaller, more efficient, faster, more portable, easier to use, accessible and cheaper to produce. All these attributes arrive at once.
2. The digital technologies, that brought us digital media and allow for digital interactive media⁴, are highly disruptive as they bring relentless and ongoing change to traditional consumption behaviours and media business practices.
3. The most obvious attribute of digital new media is that it has the distinguishing characteristic of being “interactive”. The idea that the user/audience now drives their own choices is fundamental to understanding what works and what does not work.

Since last year we appear to be experiencing a new round of heightened activity in media business and investment in new media. We will describe, from our perspective, the challenging nature of modern media and share some of the insights we have gleaned towards better serving Canada's media producers and creative talent in a digital world.

² From 2003 to 2005 the percentage of Canadian homes using broadband connections went from 31% to 49% and as of mid-2006 Canada continues to lead the G7 industrial nations in broadband penetration according to the Organisation for Economic Co-operation and Development (OECD).

³ “Canada is a country one-ninth the size of the US; yet in 2005 Canadian consumers spent \$4.6 billion online—less than one-thirtieth the amount spent by US consumers.” From “Canada eCommerce”, eMarketer report by analyst Jeffrey Grau, September 2005.

⁴ Interactive media is digital by definition. Interactive media is new media and the terms will be used interchangeably in this document.

Complexity is the byword of the current mediascape. We are dealing with both elaborate technology systems AND human behaviour. In this complex and changing media world everything traditional is being challenged at once, channels and platforms continue to change and to proliferate; new types of programming and storytelling are still emerging. There are lessons to be remembered and lessons to be learned as they occur. One constant in this seeming chaos remains: the native ability of Canadians to rise to challenges related to mass media communications with innovative thinking and creativity.

The goal for FAD Research in this report is to describe some of the evolving changes in digital and interactive media in the climate of continuing change..

2. Networks and Bandwidth, Platforms and Screens

When discussing digital media it is instructive to gain appreciation for the pure technological changes that have occurred in terms of “more, better, faster” which is the hallmark of the tech industry proper. In the world of digital media production and consumption it is these changes that have an impact on every aspect of what is done and what is possible. Since 2000, the raw speed of a typical consumer desktop computer (still the place most people deal with much of their digital media consumption) has tripled in its raw computing power. The cost of storing media is 300% cheaper and a typical data connection to the home receives information 40 times faster. It has been observed that if these capabilities had been available at the time of the last bubble’s bursting, many of the wildly optimistic start-ups may have had viable business models.

Screens are everywhere and many of them are interactive and connected to networks. Costs continue to go down to produce and access media. One recent example in the film world where this technology is being applied is in the relatively new area of digital distribution of film to theatres. Using regular film stock a typical single print can cost over \$3000 to create and \$200-300 in courier fees and insurance to get it from a distributor to a theatre. A digital “print” costs a fraction of this to produce and once you have one, it becomes a relative non-issue to send identical copies anywhere via an internet or satellite connections.

The same technologies that allow this enterprise level activity are the same ones that allow high quality digital films/programming to be streamed directly to the home. The week this report was drafted a company announced the capability to transfer individual films to consumers’ homes, enabling them to watch films on their computers or burn their own DVD to play on their DVD players. A number of major studios have announced that they will be making films available using this system, works on an average PC with a typical connection.⁵ This becomes yet another way for consumers to get VoD or NoD⁶. More and more as technological capabilities increase, distribution becomes less of an issue and any particular channel (TV, theatre, internet/computer, game system or even mobile phone) becomes less important for any particular media use.

Without belabouring specifics of technology, it is readily apparent that the changes here are allowing new things to be tried. It is less of an exercise in imagination in 2006 to appreciate the eventual shape that media products and services may take on. The basic digital capabilities of consumer delivery platforms have surpassed the demands of most of the applications available. This moves the use of innovative (now better designed) media related applications out of the domain of “geeks” and early-adopters and into the grasp

⁵ The service is <http://www.cinemanow.com/>, the technology is <http://www.fluxdvd.com/index.html>.

⁶ Video on Demand or Near on Demand (used to describe services where a download or program queuing is involved that may entail a short delay)

of more casual users. As far as bandwidth requirements go, more is obviously better but broadband services to the home are adequate for most of what consumers are spending their time with (email, chat applications, transferring music and still pictures).

Hardware-related technology developments allow software, in the form of applications, to follow with a built-in time lag for development and testing. For our discussion of media the software that has the most impact would include computer operating systems, Internet backbone software, standardized Internet applications (browsers, media languages [such as Flash]), compression technologies, encryption software, graphics drivers/engines for display and rendering 3D environments, search engines and databases, and last but not least, advances in interface design. These are all enabling technologies for digital media.

One technological bottleneck that has been a focus of discussion related to delivering digital media to the home is what is called the “last mile”. The last mile refers to the size of the data “pipe”, the capacity of the connection of the Internet delivery method to the home. Originally this discussion centred on a physical wire that connected the home to telco and cable TV systems providing Internet access. Nowadays it can refer to optical fibre, satellite, Internet access via power lines, and a number of other wireless systems currently in development. WiFi networks⁷ seem to be getting a good share of the attention now. These networks not only allow portable PCs to connect to the Internet, but also allow new WiFi-enabled phones, which normally rely on cellular networks, to complete calls via Internet protocols.

The U.S. and Canada appear to be on the verge of building out public and private WiFi network capacity in many urban centres including Toronto and Fredericton⁸. WiFi has large implications both for access costs and portable Internet enabled media access⁹ on a citywide basis. Essentially, connectivity and proximity to an Internet connection are becoming less of an issue for higher bandwidth demands (like audiovisual media) than they once were.

It has been 25 years since the PC was introduced in 1981, but it appears that it and an assortment of other technologies are only now beginning to fulfill the promise of digital media. Technology has created a “flattening¹⁰” effect upon media production and the presentation of media. Business is now very much

⁷ WiMAX is also included in our reference here. WiMAX allows connectivity at longer ranges than WiFi.

⁸ There is currently a WiFi trial on VIA Rail passenger trains in the Toronto-Montreal corridor.

⁹ Publicly accessible Internet bandwidth in urban areas would completely disrupt the mobile phone business and further disrupt broadcasting, radio (including satellite delivered radio) would be first to feel the pressure.

¹⁰ Meaning that participation in media is less exclusive an undertaking than it once was. As in Friedman’s book the “World is Flat” referring to the idea that knowledge industry jobs are no longer the exclusive purview of the Western economies so too media is no longer the exclusive terrain of large conglomerates and technically savvy users.

more about content and promotion than about tools, technology and distribution access.

3. The Rise of Interactive Media – User Driven Media

Aside from the “physical” attributes that digital media convey through their technological characteristics, the attributes of smaller, faster, portable, easier to use, often times with network connected devices, there is another primary attribute conveyed through digital technology. It is the attribute of Interactivity. This allows the user of an interactive media device a high degree of control over the content of the messages that they choose to be exposed to. Interactivity is the distinguishing feature of new media from traditional media forms.

Interactivity can be described as a “lean forward” versus “lean back” engagement with media. Interactive is a medium unto its own and making the change to incorporate it into traditional media business models is challenging for what have been directionally “one way” media¹¹. Interactivity is what has tipped the balance of control over to the audience for media. Giving a voice to the audience has proved very disruptive.

A bi-product of digital technology and the companion of user control is the amount of choice that has become available. User control and choice arrived with the global move to store information of all kinds including media on computer controlled storage systems. For practical planning purposes the Internet, a network of computer controlled storage systems, can be thought of as an infinite choice system in many ways. It is media agnostic in that it does not discriminate in the kinds of media it stores and provides access to. It works equally well with text and graphics, still images, moving pictures, and animation and audio with some minor, and diminishing, allowances for file sizes/bandwidth. Canadians who are users of the Internet now spend an average of 13.5 hours a week using the Internet. This is 2.2 hours longer than they spend watching television.¹²

So we have an open interconnected media system with almost no controls over it and very little oversight. It is an un-regulated medium, a Pandora’s Box. The system allows extreme user control over the material they wish to access. It allows the transmission (and mutation) of all formats of traditional media and then some. It allows relatively easily created user-generated media to be melded with already created media (in spite of ownership concerns) and for it to be used by the audience themselves for the purposes of their own communications. Interactive media allows all media to be mutable and feedback and choice to be near instantaneous. These aspects are having a tremendous impact upon how business is done and how media institutions operate.

¹¹ Also referred to as “one to many” media while Internet media is delivered point-to-point with the user driving selection of the program.

¹² From “Canada Online!” a report from the Canadian Internet Project, page 70, October 2005.
www.cipic.ca

The main impact upon traditional media enterprise from interactive media is the loss of control over how their business is conducted and the previously predictable nature of their revenue models. Interactive media is playing havoc with traditional advertising supported media like radio and television. This is particularly true of Canadian enterprises operating in regulated business environments receiving governance from the CRTC.

The main impact upon established media's traditional audiences from interactive media is the emergence of a continuing desire for more control and a manifest impatience with traditional ways of consuming media. Naturally consumer electronics and digital services companies have stepped in to accommodate this desire with devices and programming that allow consumers continued engagement with and access to their media of choice.

"What we're moving towards is having any content, anywhere, anytime, on whatever device is available to you."¹³ Gartner Group Analyst

In the extreme we are moving towards a state of *ultramedia* -a condition whereby connected digital media audiences will be able to access any media, anytime and from anywhere. This is likely a fair description of the audience's desire for the future.

It is often said that a new media technology does not replace an existing technology but rather it causes changes to occur within it. The radio didn't eliminate record players; TV didn't eliminate radio or movie theatres; interactive media delivered via Internet hasn't eliminated radio, television or film. Digital media in the form of interactive games on PCs have been with us for 25 years and the Internet has been a mass medium in Canada for the last 10 years¹⁴. Each media development brings new challenges and opportunities. Each new delivery platform, content option, and killer application has a multiplying effect on the possibilities for digital audio-visual media. Each individual area of significant new media technology development has a ripple effect on the others. The main difference from changes in the past is that today the changes occur much more quickly. Things associated with digital media are very often "here today, changed tomorrow". It is likely that while digital media will not necessarily replace the traditional mediums it will overlay its attributes (technical expedience, interactivity and choice) on all media and they will in turn be changed.

Each area of media content/programming has their associated delivery devices, and while we have said that the devices matter less and less, in some cases they are synonymous with a shift in media behaviour (e.g. the iPod) and are worth noting. We will examine a few of the most influential areas of development in the

¹³ Van Baker of Gartner Group quoted in "television's Next Big Shift", *The Economist*, March 9, 2006

¹⁴ 1996 marked the year that over 50% of Canadians had an Internet connection to their homes.

next section and describe their effects on the media ecosystem. Canadian producers are actively addressing opportunities in all of these areas. Many are addressing multiple areas simultaneously in multi-platform initiatives designed to reach consumers in their traditional haunts. Many Canadian producers are leveraging new technologies designing media products and services in every imaginable format¹⁵. The business models, in many cases, are as emergent as the products themselves as producers try to anticipate audience consumption patterns that are, as yet, not established.

¹⁵ One example of this might be the broadcast of short codes through television. These allow the audience to access media content and make transactions through their mobile phones. Media elements (audio, video, pictures, text offers and information) are then forwarded to user's phones and or PCs.

Sidebar – IBM predicts new business model

In 2004, IBM Business Consulting Services released a report called *"Media & Entertainment 2010"* in this report they predicted the characteristics successful media companies will share in the future.¹⁶

The report foretold of major changes – especially for TV and film entities, warning of shifts in technology and consumer consumption habits. Like the music sector, industry and market forces are propelling TV and film companies to become more accepting of business partners, customers and consumers - opening content reserves and formatting, production processes, packaging and sales options - without subjecting the company to increased vulnerability.

While consumers have limited attention, it has also become clear that they want to manage their own entertainment experiences. Consumers have demonstrated a desire to increase their involvement in media creation, production and distribution, all of which builds on the blogging and basement-produced video-streaming increasingly seen today.

Technology is required to make this work. As consumer budgets for media remain limited and the number of media choices expand, it will continue to be difficult to keep the attention of consumers - but not impossible.

According to IBM, there are four things media companies need to do in the next five years to compete:

Embrace open standards: Give consumers the ability to customize, tailor, change, overdub or repurpose content. This will allow media companies to sell increasingly smaller elements of their content - including music tracks, individual clips or ring tones, and video clips over cell phones - using technology. Open industry accepted standards allow media companies to deliver multiple packages with variable pricing and 'always on' customer service.

Provide sophisticated content management and distribution systems: Media companies can't play in the game if they don't have their content in digital form. Once there, they will have to manage the content for optimum flexibility and asset value. This means having it digitally stored to include Meta tagging, cataloguing and content management capability. Open standards access will give consumers the freedom to experience content as they wish.

Use advanced business intelligence and data analytics: This will help media firms focus on key initiatives, satisfy their customers, and make ongoing evaluations of where there's value. Media companies need to determine what to do with that intelligence, listen to consumer feedback and create new business models that respond to the data.

Develop a strong 'Attention Loop': This concept is based on how IBM expects customer and consumer experiences to evolve, and how media companies will transform their businesses to serve them, as well as to restructure for the changing media landscape.

¹⁶ Shortreed, Sarah, "Insider Trading: Future Proofing Made Simple—What media companies can do new to be competitive tomorrow," [RealScreen](#), September 2005, pg. 24

3.1 Videogames – The Original Digital Interactive Medium

Videogames, computer games, interactive entertainment are all names for the original interactive digital medium. The history of game development is quite interesting. It has been proclaimed since 1995¹⁷ that the sector's revenues are greater than those of the first-run feature film business. Attracting its business has become "the new film industry" for economic development offices in many jurisdictions with corresponding labour and investment credits (see Appendix 1) to go along with these initiatives.

The range of skills necessary to produce games includes all of the same skills required in both software development and other audiovisual media undertakings. There are roles for project managers and programmers, 3D mathematicians and computer animators as well as directors and cameramen, sound designers and writers. This wealth of highly educated creative talent required for game production makes it a highly desirable enterprise for cities looking to expand their knowledge-based industries.

Videogames are an area of digital media where competitive advantage is very much dependent on "new and improved" products. Consumer hardware developments and sales are driven by the capacity to bring new incremental advancements to the interactive experience encountered in games. This is particularly true in improvements related to the display of graphics. Toronto-based¹⁸ ATI Technologies (www.ati.com) is involved with manufacturing graphics processors. This is a \$2.2 billion business annually that is in large part driven by consumer demand for ever-richer entertainment experiences related to games. The business appeals to the insecurity of early adopters that hardware imbued with incrementally more processing cycles or pixels in a display will make an entertainment experience that much better and it succeeds very well in driving sales. The same is true of genre-based games software reflected in titles like Madden Football, which has been re-released every year since 1991.

In the spirit of "new and improved" many new ideas are tested within the context of game media first. Areas such as interface design and artificial intelligence routines as well as some of the earliest insights into the virtually connected experience and connecting game players to each other via modems are all results of game development. Some of the early-connected games brought glimpses of what we have today with Internet enabled massive multiplayer experiences. The original interactive entertainment medium games epitomize the changes in media experience in the last decade.

¹⁷This was first heard by the current author at the CGDC in San Jose, California in 1995. While is a matter of some interpretation whether the statistic then professed included both hardware and software revenue, suffice it to say, that games are a very large media business.

¹⁸ Between drafts of this document we have another example of change. This paragraph was written on July 22 and on July 24th ATI was sold to *California-based* AMD for \$5.4 billion.

It has only been in the last 10-12 years that the games business has been legitimized by attention from Hollywood and other major media. Up until this time game companies operated in their own digital world with a bit of an inferiority complex. Media has become more connected (both literally with the Internet and figuratively in the transformation of all media) to digital since the mid-90's and games play an increasingly prominent role - particularly in driving the idea of interactive experience. Games are now purveyed across a number of hardware platforms that include PCs, game consoles, portable game devices/media players, mobile phones and even Personal Digital Assistants (PDAs). This demonstrates our point about the ubiquity of capable delivery platforms. Digital media for the consumer is now less about hardware and gadgets and more about programming/content. The point being that you can select a game experience from a large selection of devices.

The game software industry has been dealing with distribution, piracy and Digital Rights Management, various rights, licensing models and experimental business models in a digital world longer than other media. Perhaps the characteristic of how each shade of digital media programming is distributed is worth mentioning in this brief overview of the effects of the digital way of doing things. In games, content is definitely king. Publishers controlling rights to popular titles distribute versions across an array of gaming platforms. The delivery platform remains subordinate to the content in a world of many platforms. Platforms fulfill the role of media players.

Games companies are the original "disintermediators"¹⁹. Faced with a few key publishers and retail outlets controlling access to retail shelf space, game developers came up with innovative ways of getting their products out even before the connectivity of the Internet was an option. They would distribute "freeware" versions of their games to entice players to try the game. Once they tried it and became hooked on the game experience the developers would provide 1-800 numbers for direct mail ordering from the company. These types of arrangements have translated nicely to an online environment with games (along with other software, books and CDs) being amongst the most purchased items via the Web. Games and other media are now sold and transferred to a customer completely without physical media. Games were likely the earliest entertainment media selling their wares directly online as their earlier audiences also tended to be more computer literate. All this activity was occurring as people realized that other media besides software could be readily transferred through connections with increasing rates of transfer.

It is instructive to look at the history of the game industry as it relates to the pains being encountered by current traditional media silos as they are subjected to their own digital transformations.

¹⁹ The elimination of intermediaries in a supply chain. Also referred to as "cutting out the middlemen."

Games are a sophisticated, well developed content business worth \$28 billion CDN²⁰ annually and are the biggest money makers in interactive entertainment media. This figure is without counting gaming that involves gambling, estimated at \$12.5 billion CDN in 2005²¹ and, politely put, ignoring “mature content” sites, in which Canadian based operations figure prominently, estimated to be a \$60-80 billion CDN business annually²². Canada is home to a number of large and small games software developers and publishers. These are mainly, though not exclusively, located in the “gaming clusters” in Vancouver and Montreal. The largest by far is US-owned Electronic Arts with global revenues in 2005 of around \$3.5 billion CDN²³.

To date, the majority of the videogames business’ revenue has come from a system that resembles that of any hit driven media industry like those of Feature Film or Music. Far and away the majority of the revenue is earned by a very small percentage of the “Top 10” charting releases. The videogames business is a mature media business in many respects but opportunities still exist for Canadian producers with the proliferation of niche markets, the creation eLearning applications involving games, continued growth in online game environments, casual games and in what are known as serious games.²⁴ Many of these are being made possible through further developments in the digital media world fueled by a demand for more connected games and the realization that the game experience can be applied more broadly. It can be applied in calling attention to products or in being used to promote learning. This is particularly true for generations raised with electronic games as fixtures in their entertainment milieu.

3.2 Music Industry – The Canary in the Coal Mine

The first industry from the traditional media to go digital in a big way was the music business. Digital media at first was a godsend. Introduced in the mid-80s, music delivered via CD all but eliminated vinyl and the pre-recorded audio cassette by 1991²⁵. A new medium that was physically smaller to merchandise, sounded better and was cheaper to produce than vinyl, CDs allowed the music

²⁰ “A Whole New World”, Wall Street Journal, December 2005 Classroom Edition, http://wsjclassroom.com/archive/05dec/medi_disney.htm

²¹ eMarketer, “US Cracks Down on Online Gambling”, Ben Macklin, July 19, 2006

²² Bloomberg.com, “Apple Should Succumb to iPod Porn temptations”, Mark Gilbert, April 10, 2006

²³ For context purposes FAD Research performed some calculations based upon the expenditures for R&D activities described in the EA annual report. The company spends \$16.75 million CDN *per week* on this activity. We would caution production funds about getting engaged in project funding for developing “Top 10” title games when their money could perhaps be applied to greater effect in industry development activities.

²⁴ See <http://www.seriousgames.org/index2.html> & <http://www.seriousgamesummit.com/>

²⁵ A debate still rages amongst some as to whether vinyl has been replaced in sound quality.

industry to fatten their margins significantly²⁶ and to get consumers to re-purchase their catalogues.

We refer to the music industry as the “canary in the coal mine” because it was the first of the electronic media to bear the full brunt of the effects of digital media transformation. The record industry has never quite been the same since digital copying and distribution arrived in the hands of consumers. The big label industry has lost approximately 20%²⁷ of its revenue in Canada since the turn of the century. With that go layoffs and a failure to make sustained investments in developing new Canadian talent. These developments occurred at the same time digital media technologies were becoming accessible (CD burners dropped in price and a little enterprise called Napster started in 1999) and bandwidth to the home was increasing making it easier to share larger files.

The many challenges that arose for the music industry were harbingers of the challenges now faced by all of electronic media today. Many questions of rights, fair compensation and fair use remain unresolved to this day. The absence of a widely accepted framework for some of these issues has mired creative enterprise in the negotiations and machinations of lawyers. It is not the purpose of this report to get into any great detail on these issues²⁸ only to say that digital media technology and the consumer ability to “drive” their own experience while demanding more choices has severely impacted the music business. Music labels have been very “old school” in their approaches in dealing with these changes. These are companies that had controlled the entire value chain for their product since they started. Creating inertia in the face of change, suing your own customers, creating blocks to trials of new business arrangements, these are not the way to make a smooth transition, to go with the digital flow as it were. Many players in the music business are to blame for the inertia that keeps consumers from getting what they want at the speed at which they want it. They are paying the price in reduced business.

While industry heavy weights are forging ahead at their own speed, digital consumers will have the last word in the direction the business will go. This is a lasting lesson for the electronic media as they transform themselves through the effects of digital. Ignore the customers’ needs at your peril. Digital interactive media have empowered a consumer in a way that has never been experienced before. What is happening to the music business is being followed very closely by executives of some film and television companies. The same issues experienced in music are now current affairs for other media companies.

²⁶ An added bonus was the new and improved price point. Consumers were actually prepared to pay \$16-20 per unit instead of \$8-10 per unit for a product that was cheaper to produce.

²⁷ Numbers from the Canadian Recording Industry Association (www.cria.ca). Year end gross revenues were \$608 million in 2005 versus \$761 million in 1999.

²⁸ For a detailed discussion of the impact of digital technology on the Canadian music industry see the FAD Research report listed here under the “Studies” section: http://www.pch.gc.ca/pc-ch/pubs/esm-srm_e.cfm

Here is the distribution challenge in music (and media). Digital distribution changes everything about models that previously were in place for selling or providing access to media products/programming. Music is the first traditional electronic media to face the challenge of digital distribution. If a program is in a digital format, it can be copied and transmitted to anyone, almost anywhere at no cost. The problem is obvious, without rights protection the material has no value. Rights can only be enforced by controlling access to the material.

The music industry creates and possesses material that audiences find highly desirable but they are apparently no longer willing to pay for it in the way it was being packaged by the major labels, nor are they willing to agree to the price point labels they are used to charging. Digital media systems provided a consumer solution from the consumer's point-of-view. With the help of a format called "MP3" and some very creative insights into file searching, database construction and the workings of the Internet, systems emerged which made it possible to access an incredible amount of copyrighted material for free. Free is a tough price point to beat if the only alternative is a \$20 item that comes with a lot of tracks you don't even like. It doesn't make it any more legal certainly and the industry is faced with a massive image problem which runs counter to its own star system PR which centers upon vast sums of money to be made and excess in all its forms.

High profile legitimate alternatives to theft have emerged in the likeness of iTunes, the new Napster (now completely above board), and the Yahoo! Music Engine²⁹. Digital downloads still comprise only a small part of sales revenue. The music business has been temporarily bolstered³⁰ by some DVD business, explorations into other realms like placing music in videogames and a renewed interest in the film soundtrack business. New business arrangements with music acts themselves are being struck. Perhaps most significant to the future of the digital music business, there is a move into successful new media like ringtones³¹ which, along with a very small amount of video material and track downloads, are being targeted at mobile phones. The traditional players in the music business are destined in the near term to continue to be revenue challenged unless they can adapt to a new way of doing things.

One medium that is nearly completely dependent upon the music production industry as one of the key distributors of music experience is radio. With the proliferation of platforms and commercial free user driven music systems, radio is severely challenged and will become something quite different in the next 10 years from what it has been for the last 80. The "iPod phenomenon" of exceedingly capable portable media platforms will continue to challenge

²⁹ Canada has its home-grown Puretracks and Archambault services.

³⁰ Current retail revenues globally for music are estimated by the IFPI to be about \$37 billion dollars CDN based upon March 2006 numbers from the IFPI, <http://www.ifpi.org/site-content/press/20060331a.html>

³¹ Ringtone, ringtunes, ringbacks and other customized products actually represented 10% of the European music industry revenues in 2004-5.

broadcasters (of radio) whose historical role is of packagers of content. When the audience is packaging their own media on their own terms the broadcaster's role is much more diminished. This business, in order to save itself, will have to invest more in original content production if it is to remain viable. No amount of protective regulations can save an enterprise whose audience has gone elsewhere and whose original premise for being regulated³² has disappeared. Audience follows desirable programming and advertising money follows audience.

3.3 TV - Déjà View

The main mass medium for visual entertainment in terms of audience and affect remains to be television. Television will face the same challenges as the music industry and radio as bandwidth increases, re-distribution schemes abound, and regulatory systems based upon geographic boundaries of states disassemble themselves. There have been a number of notable schemes that herald the change that will come. Back in 2000 a Canadian entrepreneur tried to fly iCrave TV, which streamed live prime time television shows to a near postage stamp sized viewing window. It was shut down by legal action from US interests after only a couple of months of operation. Today it appears that some television executives have been paying attention to their audiences. After observing the popularity of Internet video access sites such as Google Video and Youtube and while considering legal action against the latter for copyright infringement, NBC executives decided to instead start posting promotional materials³³ on the Youtube site. ABC has incorporated new thinking as well into their distribution strategies. They are currently "disintermediating" their local broadcast affiliates by posting current episodes of their most popular shows within hours of their prime time broadcast on normal channels to the network's Web site at no charge. Additionally many producers of TV are making shows available on iTunes for download on a pay-per-view basis.

Large media companies and broadcasters, like many other companies engaged in modern commerce are discovering that interactive media is a major additional channel to engage customers through. Quality content becomes a key component of this conversation and represents sizable competitive advantage. US TV network sites are filled with digital paraphernalia associated with their properties. Much of this material is available for direct sale through downloads and directed at PCs, mobile phones and media players. Canadian broadcasters,

³² These premises have been spectrum allocation and promoting a Cultural mandate through content regulations. There is now unlimited spectrum for all practical purposes allowing every channel that wants to exist a path to consumers. Promoting a Cultural mandate through content regulations in this environment only remains viable if those people who are the subjects of such remedies choose to participate in it.

³³ "NBC Strikes Deal with Youtube", c/net news, June 26, 2006 (http://news.com.com/NBC+strikes+deal+with+YouTube/2100-1025_3-6088617.html). Current estimates of the monthly traffic to Youtube are as high as 20 million unique visitors.

most of which rely upon repackaging American programs, are noticeably uninvolved in this type of digital marketing.

The television industry seems particularly sensitive to the number of viewing options available. They have been dealing with systems with incrementally more choice over the years as over the air broadcast moved to cable and then to digital cable and other DTH and VoD systems have come along. Viewer choice is something they know about³⁴. Perhaps the addition of more complete user control in the form of “timeshifting³⁵” systems like TiVO and increased choice beyond the 500 channel universe with IPTV³⁶ are more conceivable progressions for larger producers of TV shows.

This leaves TV broadcasters (and cable companies) a bit “in the lurch”. They remain predominately re-packagers and producers of localized content mostly in the form of news and public affairs programming. Digital distribution changes them as they in turn are “disintermediated” by producers going direct to audiences and using new channels. The subsequent flight of advertising dollars will change them much more. Finally, both producers and packagers of television remain at the mercy of a fickle audience with a fixed amount of media attention time to spend and an increasing array of distractions to spend it on. Innovation is fundamental to the changing ways of producers and it remains to be seen whether it is possible for broadcasters to follow suit as their audiences begin to evaporate.

It is likely only a matter of time before direct “television” programming sales through the Internet catches on in a larger way. Ease of use is usually what convinces a consumer to “tip” into a new way of doing things. Once such a service arrives, as it will, Canadian re-packagers of U.S. content will become just another channel to acquire programming. They will have to figure out new ways to maintain audiences.

3.4 Film

The film industry has weathered changes to their business since 2000. The changes brought about by digital technologies for them have been most dramatic on the production side of the equation. Computer generated digital effects, digital audio and non-linear editing have had a tremendous effect on how films are put together³⁷. Many believe that 2006 is the year of digital cinematography.

³⁴ “Grey market” satellite systems are still abundant in Canada proving yet again that people will go to great lengths to get media served to them the way in which they desire it.

³⁵ Is the notion that people no longer set aside set times to view media à la prime time. They have the programming come to them through devices that record shows for later consumption at convenient times for the viewer. The same recording machines bring digital attributes the analog VCR never had. They are simple to program and allow for instant “zapping” of commercials.

³⁶ IPTV – Internet Protocol TV or “broadcasting” delivered via Internet to PCs and TVs

³⁷ “Studios Shift to Digital Movies, but Not Without Resistance”, Scott Kirsner, New York Times, July 24, 2006.

In a recent article the CEO of Panavision, Robert Beicher, said that a typical big budget production could save \$600,000 USD alone on film and processing costs using digital cameras. Aside from production, the film industry has used digital media mainly in the form of DVDs to replace the VHS analog delivery medium in retail and rental distribution.

Previously we mentioned that only recently has wired distribution of film to the home been started commercially and theatres have been moving to interconnectivity to allow digital projection and direct distribution. In some ways film has been granted time to adapt over the music industry by virtue of sheer file size. Large files mean laborious downloads. This and perhaps the fact that audiences appear to have been quite happy to rent or buy film wares for use with home theatre systems from numerous outlets. They have maintained their value proposition, in other words, through meeting their customer's needs.

Another factor to consider that is a fundamental difference between the media businesses of music and film is the level of rights control. A typical music deal in the year 2000 likely wouldn't cover all aspects of digital media applications that have arrived since that time. They would likely cover uses of the recording associated with traditional retail, using likenesses for promotion, music video, and sales of whatever tracks for use in commercials and movie soundtracks. Since then any number of digital permutations on new platforms have come along. Any one of these would be grounds for a complete renegotiation of a label's contract with an artist. In the film world it is very straightforward. If you produce a film property, you own the property and anything that you want to do with it after that is yours to decide. Clear title has a tremendous advantage when considering embarking on new enterprises with your content.

We can't stand in the way and can't allow tradition to stand in the way of where the consumer can go or wants to go. Windows in general need to change. I don't think it's out of the question that DVDs could be released in the same window as the theatrical release. All the old rules should be called into question because the rules of consumption have changed so dramatically. - Robert Iger, CEO, Walt Disney Company³⁸.

The most recent challenge for film to their core business of first run movies in theatres appears to be that people just aren't that interested in going to the theatre as they once were. This could be due to a number of things, some of them may have digital roots and may also be related to the number of media choices that people have. Likely the experience price point is relatively too high and therefore the first run value proposition is fading³⁹. This shift of market is being addressed in some interesting ways including one that would have been

³⁸ Walt Disney Company also owns the ABC television network.

³⁹ An often heard criticism of the movie experience particularly in urban areas is that dinner and a movie can cost a couple well over \$100 with all the peripheral charges factored in (parking charges, babysitting, the cost of a meal).

considered movie marketing heresy until it was announced. Disney has announced an intention to explore multi-platform simultaneous release dates. This would place a first-run film in the marketplace on DVDs, available for download and also have it in theatres the same day. This would have a tremendous impact on the 100 year old movie theatre business.

MovieBeam versus Cinemanow

The Making of a White Elephant or The Limitations of Proprietary Systems

The MovieBeam (www.moviebeam.com) concept was first unveiled in 2003 in a few trial markets. Developed by the Walt Disney Company it is a proprietary movie to home rental system. Shelved in 2005 it was revitalized after a technology upgrade and re-launched in early 2006 after raising \$48.5 million USD in investment. The system is a special box like a set-top box that cost \$199 US at retail. It has restricted availability in 29 US urban areas, it is a wireless service that also requires a connection to a telephone line to confirm pay-per-view billings. The box stores 100 titles at a time that are refreshed at the rate of 10 per week over the airwaves which suggests an addressable mobile phone like device or perhaps a broadcast to all devices at once arrangement. The drawbacks and critics are many it seems. Film selection is small and not as current as DVDs at a local rental outlet. It is functionally little different from any pay-per-view service available through a digital cable system, perhaps with even less choice. Launching in 2006 this device was obsolete before it hit the stores.

Consider this alternative service launched in early July, 2006:

Cinemanow (www.cinemanow.com) is a distribution site that distribute films and a software-based player that can be installed on any Internet connected PC. It can deliver over a thousand titles for a set monthly or annual subscription fee. They can be played on a PC or burned to a DVD for use in any DVD player. The benefits to the consumer are obvious. There is much greater choice. No additional hardware or connections beyond your usual Internet connection are necessary and an all-you-can-eat subscription model is available. The only drawback to the user experience might be that it requires a 30 minute wait on movie downloads.

This company got user control, convenience and value proposition exactly right. No expensive hardware manufacturing or hardware distribution, no expensive arrangements to handle the wireless transmissions to the set-top boxes, no difficult sales proposition as to why a consumer needs yet more hardware.

Cinemanow -type systems are the way of the future that has been indicated for some time now. MovieBeam, according to one analyst's estimates, is not much more than a \$100 million tax write down waiting to happen.

3.5 Mobile Phones – Constant Connectivity

Mobile phones have been with us for a while now. It is difficult for an urban dweller perhaps to remember a time when they didn't have the electronic fetish status they do now. Next to the PC they are likely the other indispensable platform of the aspiring digital media maven. Feature and capability rich, they are an interactive device that has transformed global communications thanks again to digital technologies. In countries where there is no landline

infrastructure they have provided a communications infrastructure where none existed⁴⁰. While only a portion of mobile phone users use the device's multimedia capabilities, they do represent an intriguing platform for commerce and media consumption. They already are a major contact point with the Internet in places where portable PCs aren't as prevalent.

A sizeable slice of newly found revenue has come to media owners who are focusing on mobile delivery channels. Newer phones are capable of performing all of the multimedia functions of a PC and they are naturally smaller and portable. They can serve as communications platforms transmitting and receiving text, voice, stills and video. They can also handle incoming streaming media⁴¹ and act as a media player with stored media such as MP3s as well as perform as a simple gaming platform. They are secure transaction devices. The "mobile phone" category also includes more expensive specialty devices such as PDAs and BlackBerries which tend to excel in one particular function, are also phones that have subsequently added all the other multimedia functions of more general purpose media devices. Kitchener, Ontario's Research In Motion recently announced⁴² plans for the beloved "crackberry" to become more of a media platform to handle more than voice and email.

One attribute that is worth noting about mobile service providers in Canada is that they operate "walled gardens". They are closed systems in that services provided to Rogers' customers are only available to Rogers' customers. If you are a media producer attempting to provide content and/or services you must apprise yourself of a whole new way of bringing media product to market. You must be prepared for the service provider to take a substantial share of the asking price for your product. Also, an intermediary in the form of a digital services provider or aggregator must be involved to prepare your content product for use in this closed system. Aggregators and, in some cases, handset manufacturers can be instrumental in connecting producers to opportunities with services providers. It is a complicated undertaking and is reminiscent of trying to get content produced for the Web in 1994⁴³. There are only minimal standards, complex systems, no refined business models, and a lot of talk about all the money to be made providing content and services to consumers. Much of this is being made by foreign service providers in Canada who have developed products for more sophisticated mobile markets such as the ones found in Europe and the Far East.

⁴⁰ China has a 375 million handsets in operation according to eMarketer

⁴¹ Rogers' and Telus (and to a lesser degree Bell Mobility) offer streaming and downloading media services. Services include satellite radio services and video sports highlights.

⁴² "RIM sees media features building BlackBerry market", Reuters, July 18, 2006.

⁴³ For instance, there are over 200 individual handsets that must be considered when formatting content for use on mobile phones. There are a great number of other technical considerations when planning to launch a mobile based service.

There is currently a bit of a global gold rush mentality reminiscent of the World Wide Web activity during the mid nineties. There is a great deal of Canadian development activity directed at mobile opportunities. It remains to be seen whether there are many viable business models for producers. This market presents many interesting challenges in attempting to figure out what works and what doesn't with the mobile audience⁴⁴. It has spawned some interesting content formats and services that include things like mobisodes which are short films designed specifically for the mobile phone⁴⁵ and streamed video highlights for events like the FIFA World Cup Tournament.

Development in North America for mobile phones tends to lag behind other parts of the world such as the Far East and Europe where customers have a heavier daily reliance upon the devices for their communications needs. We are in the very early days of development of these devices. Likely they represent the early prototypes of what will eventually become a person's digital companion, a device that is capable of connecting a person to communications networks as well as their personal dataspheres⁴⁶, conduct transactions and to relay all manner of media. Currently the mobile phone is one of the premier enabling devices for digital media though what that may mean to media businesses long term remains largely undiscovered.

3.6 Internet Applications – Killer Apps

Without a doubt the most dramatic changes in media programming and services for Canadians since 2000 have been delivered courtesy of "The Internet". It is the most well known and heavily used manifestation of interactive digital media. The Internet, technically speaking, is the network of networks⁴⁷ that connects computers to each other. Internet based media are actually an array of software programs running using standard protocols *through* the Internet. The media characteristic we are interested in centers around the primary digital media attribute of the Internet, that of interactivity, allowing user navigation and choice over vast amounts of media of all kinds.

The technical characteristics of computer media are that any information that can be converted into a digital format can be stored, accessed and manipulated. The

⁴⁴ 99 cents appears to be the acceptable upper price point for a single track of music downloaded to home PCs for use there or on mobile players while at the same consumers think nothing of spending \$3.50 on a 20 second slice of the same tune for use on their phones as a ringtone. The consumer moves in mysterious ways.

⁴⁵ See <http://www.mobifest.ca/> for information on one of Canada's short film festivals for this format and an array of the entries from the 2006 festival.

⁴⁶ This is a FAD Research term for a remote and secure place where a person's work information and personal data would be stored and accessed at will.

⁴⁷ It is important to note here that modern networks are all digital networks. This means that telecommunications networks of all kinds can become a part of the Internet. In practical terms this is what allows mobile phones to browse the Web and for a person to be able to send an email to a BlackBerry from any computer.

Internet is the connecting thread for digital media. This is why the Internet is the great enabling technology. It allows all information in a digital state that adheres to Internet protocols (IP) to be relayed to any device connected to these systems that “speaks” these protocols. Control for accessing media and information is now found in the hands of the consumer. This coupled with the exponential growth in the number of “channel” choices is the problem/opportunity for companies trying to reach consumers. The challenge of the day is for businesses and social institutions to discover how to use this new interactive medium most effectively by studying the developing habits of consumers.

Email and Web browsing remain the most popular activities for people. For media business there has been an incremental and gradual shifting of effort to utilize the Web channel for their media undertakings. Most telling perhaps from a business point-of-view is the move to use the Web for promotion, branding and ultimately, direct sales.

Advertising monies directed towards Internet activities have increased about 500%⁴⁸ since 2000. While they still only represent a small portion of total advertising expenditures there is an obvious recognition that “e-marketing” is an essential part of a multi-channel, multi-platform media campaign. The particulars of e-marketing and e-commerce tactics and strategies are beyond the scope of this report. It is sufficient to appreciate that a good deal of consumer media time is being spent on “the Net” and that a great deal of effort is going into how to reach this audience to sell media.

When speaking about the Internet and reflecting upon its impact on the media and how people communicate, it is important to pay particular attention to what are known as the “killer apps”. These are what an Internet user would describe as the indispensable applications that allow them to do things digital. Email is a killer app. The World Wide Web is a killer app. Expectations about what non-killer apps should do are shaped by the user’s experience with their killer apps of choice⁴⁹. In this section we will mention a few other killer apps and potential KA’s to consider for as further examples in digital media developments.

Finders & Filters

Search engines are worthy of mention at the start of our discussion as they address the need to effectively navigate the near unlimited choices in information/media options and to zero in on the precise items being looked for. They cut through the deluge of seemingly useless information, the data smog. They enable effective choosing and reflect one of the major attributes of

⁴⁸ This is based upon US market numbers supplied by eMarketer (“US Ad Spend Predicted to Top \$150 Billion”, June 28, 2006)

⁴⁹ Designing to these expectations has given birth to a whole media discipline called “Usability”. The usability design of an interactive application is as important as the editing and continuity roles in making a film.

computer access - the ability to sift mind-numbing amounts of data in a fraction of a second. The company that has become synonymous with this activity is Google. "Googling" has become a part of the English language since 2000 and this illustrates its importance as an activity for Internet users. Search engines are the "finder" applications. Understanding them and how they work has become fundamental to producing media that is to be Web distributed. They are the primary means through which people locate material and they have become a primary target for allocating advertising dollars. There are initiatives currently underway by both Yahoo! and Google to be in the video (television) business. These two interests are rapidly becoming media conglomerates utilizing the Internet as a channel to explore new killer apps in new media⁵⁰.

"Filters" are technologies that perform an additional functionality in that they are applications that record user preferences and also screen and prioritize information. In a user driven medium where it is possible to highly personalize your media preferences as to how actions are performed. Filters help align new choices with your previous choices. Amazon.com was one of the earliest sites to deploy this kind of function. The site will remember what has been viewed or purchased in the past and make suggestions to consumers based upon this profile information.

⁵⁰ Google Earth (<http://earth.google.com/>) and the Yahoo! Music Unlimited (<http://ca.music.yahoo.com/unlimited/>) both represent impressive examples of these.

New Kids on the Block

It seems that business reporting hasn't changed as much as may have been expected after the dotcom bust. "Web 2.0" anyone? There exists what appears to be significant hype around several new phenomena that seem to be cases of "new and improved" in that what was old can be made new again. These technologies have been embraced as they have become effortless to use and they have been refined and more widely adopted.

"I think that the main effect of the Web and all its ancillaries is going to have is that there will no longer be the pretence that there is a mass audience. That the idea that there was a mass audience was also kind of an invention of the industrial revolution. Art forms earlier on were really considered elitist... art was always created for patrons ...now we have a sort of democratized version of that."

David Cronenberg on Rocketboom 2.0, July 19, 2006

Social software is the term for an area of interactive media use that allows the participation of people in highly personalized and/or community activities. Some years ago these were predominately comprised of forums or personal Web pages but now have expanded to include the phenomenon of blogging (Weblogs, blogs, video blogs), social networking sites and even the realm of Massively Multiplayer Online Games (MMOGs). All three of these have been the focus of media and even investor attention as interested parties attempt to figure out how to make the dynamics of these virtual communities work for their purposes. Blogs are of particular interest as they have become the new repositories of the lion's share of another media phenomenon, that of *user generated content*. Blogs have had some readily apparent impacts upon news and information gathering enterprises and perhaps some not-so readily apparent impacts upon other media.

Flickr A Canadian Success

Founded by Caterina Fake and her husband programmer Stewart Butterfield from Vancouver, Flickr (www.flickr.com) initially came about as the duo was trying to save photos as part of the design of an online game. Eventually the game was scrapped and in 2004 Flickr was launched.

Although the site wasn't the first to allow users to post and share photos, Flickr's design and innovative features have made it such a popular choice for posting photos that the 11 person company was recently picked up by Yahoo for an estimated \$35 million.

Favoured by bloggers, Flickr allows users to view and interact with other people's photos. Its user-friendly tools, the opportunity to interact with others and a feature that visitors can use to search photos sets it apart from other similar sites.

The search feature works using a photo-tagging system that has utilized thousands to "tag" or classify photos allowing others to search and link. This new method for cataloging photos on the Internet some argue could revolutionize Web search. If Yahoo can use Flickr's community-based technology for broader use then it may be the competitive edge Yahoo needs to take on Google.

Flickr's traffic grew 448% to 3.4 million from December 2004 to December 2005, according to Internet measurement firm Nielsen/NetRatings. And in the nearly 12 months since Yahoo purchased it, the site went from 250,000 registered users to more than 2 million. About 100 million photos have been posted at the site.⁵¹

As Julian Dibbell observes in an article about Flickr in *the Village Voice* (March 24, 2005), "Flickr has also won a devoted following of users hungry to explore the possibilities its Web-centric toolset opens up. It's a place not just for self-display, but for an emergent visual conversation... The frozen moment proliferates here, as it has done increasingly since photography was invented, but never before has its social life been such a party."

Like blogging, another phenomenon often mentioned in the press is "podcasting". The technology used to create audio files posted upon the Web is not new here but the proliferation of small portable audio players and the creation of repositories to locate interesting listening material for them (iTunes) certainly is. They are mostly a kind of timeshifted talk radio on demand. What often occurs in new technology and appears to be an interesting thing to do for gadget engineers and hobbyists fails miserably when launched as a product. This can be due to a couple of considerations 1) the technology is too complex for wide use and addresses no consumer need or 2) there is no value proposition (revenue model) that people are willing to support⁵². Whether podcasts are anything approaching a killer app for audio remains to be seen but Canadian media outlets, including the CBC are experimenting with them.

There is a service that has only been around for a couple of years that does have all of the trappings of a new killer app. Skype is an Internet Protocol telephony application or VoIP (voice over IP). It uses the Internet to allow chat (another killer app with the under 25 demographic) and also audio AND video telephony – both local and long distance – for free. It was recently purchased⁵³ by eBay (the Internet auction KA). It originally was setup to operate from PC computer to PC computer but is presently offering connections to landline phones from PCs and now its protocol is being included on some WiFi enabled mobile phone handsets. This has extraordinary implications for the telephony industry for both landline based and mobility call providers.

iTunes is also a killer app where media consumption is concerned. It is the pre-eminent site for downloading music, video and podcasts to the very successful iPod media player which currently has a 75% market share. It is likely that this pre-eminence will be short lived as player competitors are moving into this market (most notably Microsoft's Zune product). This challenge retells an old

⁵¹ Graham, Jefferson, "Flickr Of Idea On Gaming Project Led To Website", USA Today, February 27, 2006, http://www.usatoday.com/tech/products/2006-02-27-flickr_x.htm

⁵² Rule 1 in developing technology products: just because you *can* do something does not mean you *should* do something to turn it into a business.

⁵³ eBay paid \$2.6 billion USD in 2005 for Skype, a Netherlands based company that was founded only 3 years previously.

story in digital technology that of open vs. closed systems. Apple's iPod is a closed system in that it does not allow media formats other than its own to be played on it. Microsoft's player will be an open system in that it allows a variety of formats. This is true of players from other manufacturers as well. As a rule, the technologies that succeed in the long run are those that are open systems. Closed systems restrict the options of the consumer and with user driven media this is almost always not a good thing.

Media has become cheaper to produce due to digital technology but the same technology has affected consumers in such a way that it is much more problematic to circumscribe a predictable market. Canadian producers must think in terms of a broader range of product offerings. For a film producer they need to consider alternative delivery means for their movie title as well as licensing out the rights to make an interactive videogame, wallpaper downloads for cell phones and getting promotional clips released to video blogs. The business of media is more complicated now than it ever has been and all bets on traditional practices are coming off. While digital distribution constitutes only a fractional part of the revenues of media companies presently, this situation is destined to change. Once the combination of devices and services to them reaches the magical tipping point, determined solely in the digital world by consumer "ease of use" and the customer value proposition, the change will have irrevocably occurred.

In closing this section, we hope that the brief tour of developments brought into being through digital media technology has conveyed the following:

- The medium – digital media – is the message. The technical characteristics determine what can be done with it and how people end up using it is changing the way society functions. Interactive is a discrete media characteristic.
- Media that is interactive needs to be thought about in different ways from media distributed through traditional channels. Audiences are very different when armed with a "lean forward" media and they are driving the sales equation.
- The consumer has a fixed amount of time in the day for media and that the choices for how to occupy that time are expanding rapidly⁵⁴.
- Media enterprise no longer occurs primarily utilizing a single medium or single delivery or promotional channel.

⁵⁴ Increasingly they are even spending it creating their own media.

- Protected regulated business environments circumscribed by national borders are dissolving.
- Change is constant and accelerated in digital media again because this is an inherent characteristic of the medium - to do things faster, make things smaller, give more choices, to store more information.

4. Interactive New Media Industry in Canada

The primary focus of this report is related to the situation currently facing Canadian independent producers due to the technological changes in audiovisual media. Again, digital media is affecting the way traditional media companies are producing, distributing and marketing their content. While the technology of digital media is changing the way traditional media companies do business the “new media”, as it is often called, is being generated by companies grappling with the interactive characteristic the technology allows. We have briefly described some of the areas of change in the media business and some of the platforms that allow interactive media. In this section we will describe the Canadian interactive media industry.

The interactive media industry in Canada is one that has proven very difficult to describe. It is both a part of the Cultural sector and also a part of the Information and Communications Technology sector when trying to affix an industrial classification. It is much like an industry such as Tourism, as it has been initially difficult to quantify in absolute terms. Many separate undertakings contribute to the whole industries output and they are often difficult to clearly delineate and quantify. Definitions and categorization have proved elusive as the industry’s activities touch so many parts of the media economy and they continue to be complicated as the evolution of digital media continues.

In Canada, there are many businesses that have an interactive media component to their business activities. The Royal Bank could be said to be an interactive media content creator as it maintains a massive online presence that Canadians encounter as much as other media outlets. For the purposes of the present discussion we will discuss enterprises whose primary business is in creating interactive media content or in enabling its creation. These are the companies that Telefilm believes are worth supporting in an effort to create a vibrant new media industry.

As a result of a recent Telefilm sponsored measurement initiative, conducted by the Canadian Interactive Alliance⁵⁵, the industry can be presently described as having the following attributes:

- Current estimates place the number of companies involved in interactive media at around 3000 companies. At least half of these are small enterprises of less than 5 people.
- Most firms are engaged in fee-for-service work that typically makes up the majority of their business.

⁵⁵ *Canadian Interactive Industry Profile 2005*, a report prepared by PriceWaterhouseCoopers for the Canadian Interactive Alliance. This is the national trade association of interactive media producers in Canada.

- There are slightly over 30,000 Canadians employed producing interactive media.
- Total revenues for the sector have been estimated to be approximately \$4.8 billion. The majority of this revenue (\$3.12 billion) is generated by very large firms in the games sub-sector.
- Over 65% of interactive media companies are engaged in export activity.

Interactive media companies are engaged in both fee-for-service work and intellectual property (IP) creation. Many companies are engaged in both types of activity and an agency such as Telefilm naturally has an interest in promoting their overall health. Telefilm mandate is largely to support content production companies that are bent upon telling stories and creating services from a Canadian perspective. This perspective comes from the particular understanding that Canadian producers have of the new audience for digital entertainment, information and educational resources. The success of these companies is a key component of Canada's strategy to ensure the vitality of successful knowledge based industries leveraging innovation applied to media. Successful strategies in promoting IP production whereby Canadian companies maintain royalty revenues through copyright retention should remain a top priority.

The challenge of maintaining rights to IP in interactive media is reminiscent of other Canadian media undertakings such feature film and television. Canadian companies are actively pursuing opportunities in creating assets while performing extensive amounts of service work for other businesses including many large foreign interactive media companies.

While the majority of activity in service business and content creation is centered in Canada's major cities (most notably, Vancouver, Toronto, Montreal [and Calgary]) there are vibrant companies in communities right across the country. The enabling characteristics of digital business allow proximity to customers to be less of an issue than it is for other industries.

Many jurisdictions in Canada and around the globe have created support programs and incentives to assist and lure new media business to their locales. We have compiled an inventory of representative programs in [Appendix 1](#). We are very aware that Telefilm has been involved in supporting new media development on its own and in cooperation with other federal agencies since the Canada New Media Fund pilot program started in 1996.

Attracting and maintaining the health of new media business has been promoted as the cornerstone of many economic development strategies. Media companies employ creative talent with relatively high paying jobs and require highly educated people. This feature is good for a community's tax base. Lucrative

innovative businesses tend to create spin-off companies, which in turn, up the demand for more investment and talent. These demands lead to the development of additional service businesses and a demand for further training and educational resources. All of these aspects of knowledge based industry contribute to creating vibrant urban communities.

The rise in demand for interactive audiovisual technologies has revitalized the Canadian interactive media industry in the last couple of years. Most of these businesses are Small and Medium sized Enterprises (SMEs) that are struggling with ways to grow their businesses in what is more than ever before, a global market.

The elements of the challenge for interactive media companies, when producers are asked, fall into several areas.

Finance

Creative industries typically have difficulty raising capital. Content projects, which in interactive media involve the media concept of “program”, may mean a game, an educational offering, or innovative service (sometimes partnered with other media), which are very difficult to raise money for. By nature, these are very high-risk ventures. We have currently in interactive media largely unproven business models (outside of games), changing technologies, emerging markets and tremendously intense competition. Independent producers must rely upon larger media interests, content or distribution partners, venture capitalists, angel investors and self-financing from fee-for-service business. Typically if they are able engage interest they must surrender a large portion of the IP rights that they have associated the project.

Pure content projects have the hardest time with raising capital. Some companies create enabling technologies for which they are able to secure a patent. Using these they then create content to accompany the enabling technology as generally investors appreciate protected intellectual property in the form of software over pioneering content. In Canada, there are more readily available funds for technological innovation over cultural products where products with storytelling or educational components are more likely to be classified. It seems that if there can be R&D activity in technology products that can receive special dispensation in funding and taxation then similar allowances need to be found for R&D in new cultural industries for products like interactive media content.

Ultimately, for there to be success stories in Canadian new media more capital must be found. Current production funds of all kinds, but particularly those associated with new media, are oversubscribed. New media product development is risky and expensive. The production budgets for entertainment products like games have grown to \$5-10 million USD. In order for Canadian

producers to get out of the fee-for-service treadmill of gaining project experience on properties owned by large (usually foreign owned) entities it is crucial for them to gain access to private capital. The alternative is in living hand-to-mouth producing under-funded content projects with little prospect of them ever achieving a market. In new media time-to-market is a serious consideration that can only be addressed by allocating sufficient expertise and resources. Figuring out how producers might gain access to additional capital seems all the more urgent as we are heading towards an end of protected markets with their secured audiences for most media. In the “Future of Media” section we will discuss some possibilities as to how this may be achieved and how current limited public funds for cultural industries might be better applied.

Human Resources

Specialized human resources for new media operations fall primarily into four categories:

1. Technical talent – programmers, quality assurance, usability specialists, interface designers, information architects, engineers, network specialists
2. Creative talent – graphics artists, animators, writers, designers
3. Support talent – marketing, sales, legal affairs
4. Managerial talent – entrepreneurs, project managers, finance specialists

When times are good, as they are now, there is a constant need for all varieties of interactive media talent. The abilities of a company's employees are its greatest resource in a business that relies on creativity, technical ability, and innovative problem solving. Canada is fortunate to have exceptional talent in all of these main areas. We have educational institutions that turn out superior people with entry-level skills for all new media related occupations.

Supply of senior talent becomes a major problem in an expanding market. Project experience on major productions is a pre-requisite for any company's staff that hopes to compete on the world stage. In the early days of an upswing, companies can call upon an abundant supply of freelance talent. As business heats up these talented freelancers are apt to take more permanent positions. Unfortunately, as happened in the last boom time, many of our most talented individuals end up leaving Canada to find challenging well paid work. The only lasting solution to this situation is to create more substantive Canadian companies.

Training of all kinds is important in a business that has rapidly changing technologies and business practices. Canadian new media companies find it a challenge to provide this kind of ongoing education. Technical, business (hard and soft skills) and managerial skills are most in demand. Government agencies can help alleviate the costly nature of specialized training for SMEs and this would include assistance to attend conferences. Consideration should be given to assign training credits to companies based upon their size and fund a proportion of training costs.

Obtaining and Maintaining a Viable Business Model

This last challenge is actually a number of problems rolled under one heading. These are all aspects of conducting a focused business in interactive media. Smaller companies with limited resources quite often find through either design or budget or available talent to stay up on current developments. In new media

it is absolutely critical to stay apprised of potential markets, monitor current ones, develop partnerships, and to gauge competition and developments in technology. Much of this information is highly specific to a company's niche enterprise and requires them to conduct information gathering via specialists. Other vital activities include management and staff attending networking events, conferences and pursuing export market relationships.

There are indications that the interactive media industry is taking the initiative in organizing itself. The Canadian Interactive Alliance (www.ciaic.ca) obtained its charter this year bringing together a number of regional new media associations with the able participation of the Canadian Film and Television Production Association to form a national trade association for content producers. It along with the Canadian chapters of the International Game Developers Association (www.igda.org) serve as important consultative bodies to reach Canadian producers of new media.

To date government agencies, including Telefilm, have assisted Canadian media companies with funding and support initiatives to help them meet their challenges in the creation of programming for Canadian audiences. This funding has been directed at production funding with additional monies being allocated to development, marketing, training and export initiatives. Canadian government should examine the effectiveness of these measures when it is evident that changes in audiovisual technologies brought by digital media are disassembling the foundation upon which the current support initiatives have been predicated.

In the television environment, the foundation has been a regulated and closed system with audiences consuming in predictable known patterns with a mandated proportion of Canadian content. The Film environment has been structured by an orderly marketplace dominated by a few multinational interests. Operating outside these distribution channels, the games industry has shown the greatest innovation in adapting its distribution strategies by exploring new technologies.

With Canadian audiences turning to an array of unregulated media sources the choice seems clear when attempting to strategically enable Canadian media enterprise for success in a global market. Success in the marketplace is the only lasting measure if the objective of government is to build a vibrant media industry that produces Canadian original programming.

5. Business Models – Elements of New Media Business

Digital technology, in affecting what forms media takes and how people are able to access and consume it, also changes the business models related to selling media products. When considering start-ups either in companies or new services, much is made of the “first-in” advantage. This has been an important consideration in designing technology- influenced business as “new” and can carry a heavy advantage. As we are experiencing new rounds of investment perhaps another adage carries at least the same amount of weight in planning - “the second mouse gets the cheese”. The iPod has “first in” advantage but Zune (Microsoft’s new player and media service⁵⁶) may still get the cheese.

Digital entrepreneurs, and traditional media businesses looking to leverage digital, need to perpetually examine every aspect of their businesses. This is in part because of the speed of change in the sector and the evolving understanding of consumption habits.

The facets of a business that need to be considered are:

- **value propositions:** The company's offers which bundle products and services as value for the customer. A value proposition creates utility for the customer.
- **target customer segments:** The customer segments a company wants to offer value to. This describes the groups of people with common characteristics for which the company creates value.
- **distribution channels:** The various means the company uses to get in touch with its customers. This describes how a company goes to market. It refers to the company's marketing and distribution strategy.
- **customer relationships:** The links a company establishes between itself and its different customer segments. The process of managing customer relationships is referred to as customer relationship management.
- **value configurations:** The configuration of activities and resources.
- **core capabilities:** The capabilities and competencies necessary to execute the company's business model.
- **partner network:** The network of cooperative agreements with other companies necessary to efficiently offer and commercialize value. This describes the company's range of business alliances.
- **cost structure:** The monetary consequences of the means employed in the business model.

⁵⁶ www.comingzune.com Demonstrates some oblique messaging from Microsoft for their new venture.

- **revenue model:** The way a company makes money through a variety of revenue flows.⁵⁷

Business models are typically crafted after examining a customer's needs. In media this means monitoring closely the consumption habits of audiences. Each shift in behaviour can represent a potential opportunity. We have mentioned some of these elements so far in this report – they are *all* important – but perhaps some of it bears repeating in order to begin an appreciation of some of the nuances of digital media enterprise.

Determining a value proposition is fundamental to any business. The value proposition can be verified with research. It can be quite astounding sometimes when products make it to market and have obviously been created with inadequate or non-existent market research (see [MovieBeam example](#)). This is perhaps the most asked question by venture capitalists, “What’s the value proposition?” Again, just because one *can* build something or produce something doesn’t mean that it should be built. Any agency working with producers should be asking the same fundamental question when presented with project plans. These need to be examined by someone who understands how to discern a true value proposition from a notion that something may be interesting to do but that holds little value for a potential customer.

Targeting customer segments in a digital world has been relegated to a fine art. It is what the combination of search engines and Internet deployed services (Web and email) can do extremely well. It is now possible to make a global business selling what were previously obscure, unpublished or unavailable bits of media. Skills in e-marketing to find and address market segments are indispensable when using the Web in promoting anything. Market research is indispensable to determine who the audience is and where it is congregating.

Distribution channels are the way media product and information is conveyed to customers. Currently they are the subject of much focus, as the traditional channels for this activity are starting (depending upon the medium) to be seriously disrupted. Any media production needs to feature a complete examination of the numerous digital delivery options as a part of arriving at a final business model. This again is a research activity.

Partner networks are increasingly important as digital allows a high degree of specialization in business. Why build something from scratch when there are a number of vendors providing just the bit of software or service that you need? This topic becomes related to the discussion of outsourcing which is a very hot topic in media production these days. Programming tasks and rote creation of elements for productions like animation are being re-located from traditional production centres to places with lower labour rates. This discussion includes

⁵⁷From information found here http://en.wikipedia.org/wiki/Business_model

film, animation, television and games production as they all utilize jurisdictionally based labour tax credits that have a profound effect on partnerships.

The last business model element we will discuss is the revenue model. This is sometimes confused with the term “business model” but it is the specific manner in which a business derives revenue from a product or service. All businesses need a revenue model. Sometimes digital media offerings have no apparent revenue model and their contribution needs to be assessed in slightly different manners. This is the important topic of ROI (return on investment)⁵⁸ which needs to be addressed through defining objectives, planning and assigned metrics. Metrics are a subject for another report but let it suffice to say that without measurement you have no means of assessing ROI or much of anything else. Measuring audience in media undertakings is crucial for securing revenue streams and, in interactive media, usage data. Metrics are an essential part of business and it is confounding as to how little attention gets paid to them⁵⁹.

When a media undertaking has a revenue model it is most likely to be one or more of a combination of the following:

1. Direct transaction fees - in the form of pay-per-use or outright purchase of a program.
2. Sponsorship or advertising – a sponsor supplements costs of producing or distributing content⁶⁰.
3. Subscription – customers pay fees based upon a period of access to material.

⁵⁸ One large Canadian media company we know reacted to the “dotcom bust” by decreeing that all of their Web sites from a given date forward would have to demonstrate a revenue model. This is an astonishingly short-sighted way of looking at interactive media. There are many ways to ascribe value to a Web undertaking and not all of them involve direct revenues. There are promotion and customer service just to name two possibilities. These services have value and affect a number of elements of our business model.

⁵⁹ FAD Research met with one of the world’s largest auto manufacturers several years ago to discuss what may be one of the largest Web undertakings for a single product line. When asked about traffic statistics for the site, the company confided that they had no ability to discern regular traffic statistics for the site. This system was an investment of over \$100 million dollars USD with no way to measure if it was being used or, if it was, how it was being used. Further there are some serious problems in media measurement statistics generated by firms specializing in this area. In researching this report we encountered a marketing industry article reporting on traffic for the popular site Youtube.com for the month of May, 2006. The two major measurement firms had a 75% discrepancy between the two of them in reported traffic to this site. For sites intending an advertising model, this is not a trivial issue.

⁶⁰ We are familiar with one new model in which sponsors cover the entire cost of a digital media bundle making it “free” to the customer. The customer need only be interested enough to get say a music track and it is theirs for the asking. This becomes an attractive arrangement for an advertiser of another brand in getting heard above the cacophony of noise of advertising media. The idea is to offer a highly desirable bit of media in exchange for a few moments of attention so that your own message can get through. “This track (and photo from last night’s concert in Calgary) is a gift to you from Telus.”

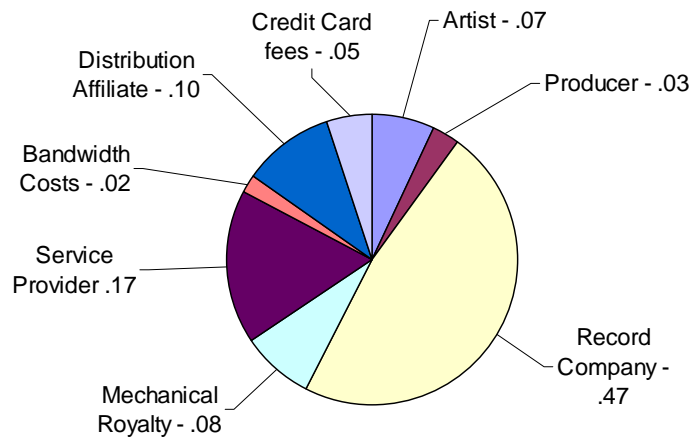
What determines which single or combination of these models is chosen is a case of value proposition and determining the company's cost structure. What is the perceived value by the audience and how much the product costs for the business to deliver it? Digital transaction models for music, for instance, have caused a return to a 'single' track as the main unit of consumption. In pay per download models their price is as low as 79 cents CDN retail. Service providers aren't making any money on a single track transaction. They are literally banking on the hope that a consumer will buy multiple tracks during a single buying visit. If not, the credit card facility takes a minimum transaction fee of 20 to 30 cents if the transaction is this small.

Cost structures vary wildly across media types and they are the source of much negotiation and re-negotiation with the happy end point of a) everyone gets paid (with some profit) and b) the customer doesn't feel gouged. While it sounds straightforward, ironing out cost structures to create decent revenue models is still hugely experimental. A number of interesting models have been proposed as remedies. One of the more interesting ones envisions media treated like a utility, like electricity. You would pay for it through a levy imposed upon Internet access providers. Rights holders would be reimbursed through a collected pool of capital.

Getting a price point right is a key component to a successful revenue model. Another interesting dynamic of Internet distributed media related to price point operates this way. The path to success may actually be to set a "lower" price point. Instead of 10,000 transactions at \$59.95 for a videogame, a price point of \$19.95 might actually garner 100,000 transactions because the price point is more broadly attractive. The difference in gross revenues is \$600k versus almost \$2 million. The audience is global after all and there is less consumer risk involved at the lower price. The current price point for single tracks is not working in music at the moment -it is set too low and isn't working for some of the players involved. Here is how the breakdown looks:

Cost Structure of a 99 cent digital audio track

Source - Billboard, Dec. 2003



A musician may sell 100,000 downloaded tracks (previously enough to “Go platinum” in a CD format) and only make \$7000. Musicians are not making much money in this model and neither is iTunes. Apple is in the hardware business, selling a proprietary piece of hardware and a particular file format of media. It is for now, a viable business model in which music and video content are mere commodities. Arrangements such as these force music industry (and film and video) producers to concoct other more lucrative business and revenue models. By paying attention to consumers they are discovering more profitable models using the same sales channel (the Internet) and dealing directly with their customers. Another way is to re-purpose media into new products such as selling ringtones for mobile phones. Necessity and digital capability become the “mothers of invention”.

This is an example of the kind of exploratory arrangements that are being tried. Most every attempt at digital media sales employing an Internet centric strategy remains experimental. It is the equivalent of research and development in technology except it is research and development in content. R & D is not something that traditional media operations allow for and it is a challenge for them to innovate as quickly as operations with no legacy business model to overcome. There is a constant struggle for control of channels and for quality content to draw audiences. At the moment, perhaps the power in the arrangement rests with distributors, gatekeepers of various descriptions and branded content.

Regulatory agencies and agencies attempting to assist media during current transitional times need to be aware of the new relationships between companies

and the evolution of what are largely experimental business models. A prominent feature of digital media capitalism is that it currently seems to promote infinite choices. Infinite choices are what are killing the immensely successful control models of traditional media conglomerates⁶¹. Media is perhaps no longer, as Canadian Senator Tom Kent once put it, “a license to print money”.

Sidebar – The Long Tail business model

Many Web 2.0 ventures are based on the familiar principle of the “long tail,” popularized by *Wired’s* editor in chief, Chris Anderson: that is, the idea that disparate, tiny, particular niche audiences can be stitched together or accumulated via the Web into a very large collective market.

This is in stark contrast to the way in which business models have traditionally been geared towards attracting a wide consumer group to a small variety of products. Now with the reduced cost of selling products online businesses don’t have to worry about the cost of physical shelf space and can focus more on providing a larger selection of products to consumers.

Chris uses Blockbuster as an example of the old business model – with less than 3000 videos to choose from in-store a wide audience is forced to choose from a small selection of films. Enter Netflix, an online business that provides thousands of titles you would never find in a video rental store with a special interest in documentaries and independent films.

Netflix’s success doesn’t depend on a particular number of consumers in a geographic area as the Blockbuster model or even a traditional cinema does – instead its wide selection of films attracts a much larger consumer group from a much larger geographic area. The greater the selection the more likely a consumer is to find what they are looking for. As Chris writes, “It has in short, broken the tyranny of physical space.”

By providing access to products that were previously unavailable (such as obscure documentaries) businesses are now creating markets that did not otherwise exist. For example, Netflix agreed to manufacture and distribute the PBS documentary *Daughter From Danang* (which otherwise would most likely not have been distributed). It now ranks in the top 15 on Netflix documentary charts. That amounts to a market of tens of thousands of documentary renters that otherwise would not have had access to the film.

With information from Wired Magazine, Issue 12.10 October 2004

<http://www.wired.com/wired/archive/12.10/tail.html>

⁶¹ Though this arrangement allows one to speculate about what a new media conglomerate would look like. It would certainly include a search engine company. Google may in fact be the primary new media gatekeeper at the present time.

5.1 The Roles of Gatekeepers and Promotion

As digital technology has affected how media is produced and distributed it has also affected the traditional role of the media gatekeeper⁶². Ten years ago consumer media destinations for media were well defined. For newspapers you bought a newspaper that was locally available to you. For television you tuned to a set number (likely 20 or 30) of branded channels available to your home. For music you went to the CD store or tuned into commercial radio stations broadcasting over parceled FM bandwidth. Media businesses were easily identifiable. A case could be made that cross media and concentration of ownership by media conglomerates was causing a constricting effect on the amount and variety of information and entertainment media. The Internet changed this. It happened very rapidly in relation to print media as they were affected first before the electronic media. Rather suddenly the Web enabled the news consumer to read newspapers from all over the connected world. Better than that, for some they could read the actual wire feeds or first hand accounts and opinion of news from people not working for news organizations. Changes for the other electronic media have followed quickly on. The role of the media gatekeeper was changed forever, but not eliminated.

People find comfort in branded media content. They like it packaged in particular ways. In an expanding media universe people appreciate having the sea of daily information filtered for them. What emerged in the early days of the Web were portals and aggregators representing trusted brands most Internet users found themselves gravitating towards. New media gatekeepers emerged that were mostly ISP provider portals and early aggregators like Yahoo! and hybrids like AOL⁶³. This trend has continued as the electronic media have come online,⁶⁴ though consumers have likely diversified their “finding” behaviour somewhat with the rise of search engine technology. However, while there has been much made of decreased costs of entry to get into media publishing and distribution using digital media, people still rely on trusted brands. While it has certainly become cheaper to produce and provide access to media, this in no way guarantees anything about gaining an audience for it. It is the ability of a media gatekeeper to deliver “eyeballs” that may make the outlet a business. Size of audience for a particular kind of content is what will determine their desirability as outlets for media productions.

⁶² Gatekeepers are entities that control access to information. They do this in two ways: 1) by controlling what gets prepared for distribution to an audience and 2) by controlling access to what is prepared for distribution. A gatekeeper is only as good as the audience it attracts and this usually goes hand in hand with the quality of the media it produces.

⁶³ Another surprise announcement occurred during the writing of this report as AOL announced August 4 that it is getting out its declining Internet access business and laying off 25% of its staff or 5,000 workers.

⁶⁴ Mark Cuban made a couple of billion US dollars selling his Broadcast.com to Yahoo! in 1999. It was simply an aggregation of links to Internet enabled media streaming operations.

In a world where online is providing more control and choice to audiences, the challenge for gatekeepers becomes landing a paying audience. This heavily underscores the need to engage in promotion. It is often said by people who understand interactive media products and services that “if you build it, people will not necessarily come”. Promotion is paramount. If content is king then promotion is the Supreme Being conveying the divine right for content to rule any market. Quality product promoted in a myriad of creative ways is how you gain audience and the audience is what makes content a business. Promotion in 2006 is very much a cross platform initiative as companies promoting brands of all kinds need to show up where their customers are looking for them. This includes places like Web pages, search engines, transit ads, TV, radio and cell phones. The new media have spawned a number of new businesses addressing the need to promote and advertise more effectively. Google Adwords (www.google.com/ads/), one major example, directs advertising messages directly to individual browsers based upon the search terms entered. This has become the main revenue stream⁶⁵ for Google. In fact, Google has become perhaps *the* most important gatekeeper to anything connected to the Web by virtue of their “killer” search application. Other new entrants include mobile phone service providers, iTunes, www.audiobooks.com, Winamp and iFilm.com (now owned by MTV) to name a very few.

Media markets and their gatekeepers, more than ever, are virtual and not tied to geography. They are defined more and more perhaps first by language, then by media type and then topical interest. The media market is better considered now as multiple mass markets or an array of viable consumption niches. This reality makes any Cultural media strategy considered by government exceedingly difficult to propagate if the proposed measures fail to mesh very closely with business priorities. The gatekeeper issue is of particular importance when digital distribution possibilities will lead to a forced de-regulation. This is a safe assumption; the real question is one of timing. In the new media world this is more of an opportunity or a non-issue. In the traditional Canadian regulated media world the dissolution will change everything.

Most Canadian gatekeepers are re-packagers of foreign content outside of news/information programming and mandated Cancon. For the purposes of considering viable Cultural strategies the issue of consumption habits amongst Canadians needs to be watched closely⁶⁶. In a broadband digital world the question of Canadian market for media is less about what is available through regulated channels and channels labeled as “Canadian” and more about where Canadians are *choosing* to go. This will naturally change how Canadian producers approach their businesses. The more that they understand about how

⁶⁵ Predicted by Saul Hansell of the New York Times to reach close to \$10 billion USD this year.

⁶⁶ There is no difference in capability or look to Google.ca as opposed to Google.com. Google.ca does allow checking of a radio button so that a user can display only Canadian based pages from a search.

gatekeepers and promotion can affect their productions the more likely they are to succeed.

6. What the Future Holds

As we stated in our introduction to this report, we are in the middle of the proliferation of digital and Internet enabled media. All of the ways media were developed and distributed and consumed in the past are in a state of flux. Examining things in 2006 tells us more than even a couple of years ago. Trends that will continue are the trends towards new business arrangements and new consumption patterns. Technology will continue to make things faster, smaller, more portable and accessible. People will develop new ways of dealing with these and ultimately determine the direction of the media business. People will take greater control of their media and likely continue to originate richer more widely distributed content of their own design. Entrepreneurs will continue to try innovative ways of engaging customers. Products will be media itself and services to make media easier to produce or access.

Virtual worlds will continue to entice larger audiences though the pre-eminence of a scripted story will continue. Gadgets will continue to integrate so that single devices will perform additional communications, storage and media dispersal functions. Devices may eventually become less technical and personalized and more generic. Individuals will be able to access their data profiles from anywhere and the device they use at the time will become “theirs’ only during the sessions they are utilizing them. Biometric security and encryption will control access to these profiles and they will accompany a person from cradle to grave – perhaps even being eventually inherited. These conditions will convey the state of ultramedia once and for all, where people will have access to any media and information⁶⁷, from anywhere, at any time.

A Few Predictions

- Media will continue to become increasingly interactive. Interactive enabled media will constitute an ever-increasing share of how consumers spend their media time.
- Eventually over the air broadcast channels will only be depended upon for “live” events, which will include news, weather, and sports events. All other programming will be able to be obtained through time-shifted access using an array of devices such as personal video recorders (PVRs) or on demand systems.
- Any kind of moving picture media can be distributed through an Internet enabled service. In the case of television programming the programming need not be limited to first-run shows. Entire

⁶⁷ This will naturally be based upon a person’s ability to pay unless capitalism is removed from media.

archives of programming will be put on line and viewed by global audiences. Film and TV will follow the on demand models that the music industry is already addressing.

- Choice of media platforms will continue towards those that allow choice and optimal use of a selected media type. Specialist platforms will diminish in importance as media becomes more portable, accessible and ubiquitous.
- Content will continue to become more important as mechanisms improve to provide quality programming through new and more convenient channels. Programming will become delivered in a less discrete fashion in that it will be delivered across the multi-platform environment. Content will be largely platform agnostic and promotion will be the paramount component to ensuring success.
- Games will cater to a broader audience (including simulations, casual games, serious games and game used for education). Near term a flattening of revenues will occur for large publishers that will be turned around temporarily by the arrival of new consoles. Look for a proliferation of virtual online worlds.
- Mobile access systems will continue to evolve. Platforms will have extensive media capabilities and carriers will move to supply content. Price points for content will likely decline to match other platforms more closely. Cellular networks will eventually be challenged by WiFi in urban areas.
- Television programming will become even more on demand to match consumer preferences. Broadcasters will have to specialize more in what they offer (e.g. local programming).
- Radio will continue to struggle to maintain advertising revenues as options for advertising proliferate and audience fragmentation continues. WiFi will compound the troubles for radio in urban areas.
- Film box office receipts will continue their decline. Producers will attempt to leverage new technologies to provide more on demand services. New distribution strategies will include simultaneous releases.
- Music industry will continue current trends. Major labels will lose more of their pre-eminent status in bringing music product to market. Likely the Big 4 companies will become the Big 3.

The role (and power) of new gatekeepers (iTunes) will increase as the percentage of sales attributable to downloads rise. There will continue to be numerous opportunities for independents.

- Social software will continue to evolve and engage broader audiences beyond blogs and dating sites. Applications in this area will become increasingly sophisticated and help realize the connecting potential (and profitability) of interactive media that is audience centric.
- Canadian media companies will continue to be challenged to grow to meet global market conditions. Digital technologies will make Canadian films and television shows more accessible, perhaps solving some of the distribution issues from previous situations.
- Regulatory environment will be continually challenged with new digitally induced options to traditional consumption patterns. It will become increasingly irrelevant over the next 5 -10 years. The Canadian market will gradually open up to global media providers⁶⁸
- There will be a continued emergence of non-traditional global media brands (e.g. Yahoo! and Google) that may dwarf their traditionalist rivals.

⁶⁸ The thin edge of this wedge occurred May 26th, 2004 when Napster opened its services in Canada. Its streaming “radio” services are 100% American owned, not subject to Canadian Content regulations and indistinguishable from other regulated broadcast/streaming services like DTH or “radio” services like Galaxie.

Appendix 1

International Assistance Programs for Independent Production

Initiatives from Around the Globe

There are various strategies of intervention used by governments around the world to support and build domestic independent production. Sometimes these interventions focus on attracting a particular type of industry to a geographic area.⁶⁹ Other agencies focus on project funding limited in size and scope and with a clearly defined deliverable. And still others assist in building capacity - offering consultation and training services, forums to share ideas and resources and other services that help companies market their products domestically and internationally. Many jurisdictions have come up with a multi-pronged approach, dealing with issues such as IP protection while funding and supporting local content producers and actively working to attract international investment. Below is a selection of programs from around the globe that take various approaches to supporting independent production.

Digital Content Forum

UK

The DCF is supported through the British Government with aims to improve the competitiveness of the digital content sector through:

- furthering discussion on key topics for the industry such as Intellectual Property Rights, re-use of Public Sector Information, improving creative exports, Public Service Broadcasting, UK Internet Radio and digital learning
- ensuring an effective and efficient process of formal liaison and information exchange with Government and others
- facilitating improved information exchange through its members' organizations
- producing optimum, relevant and informed recommendations
- raising the awareness and discussion of issues within the digital content industries

Current membership includes representation from the music, film, web design, internet/periodical/newspaper publishing, computer games and advertising industries as well as book publishers, picture libraries, TV producers and others. Members work

⁶⁹ "New Media in PEI: Strategy Towards Economic Development and Export", FAD Research Inc., December 2005. Report discusses how cities such as Montreal and Austin have successfully attracted digital/new media companies in an effort to build the local knowledge based industry sectors.

through Industry Action Groups (IAG) which focus on particular industry issues such as intellectual property rights etc.

Website: <http://www.dcf.org.uk>

i2010 European Information Society 2010 European Union Commission

The i2010 initiative aims to foster growth and jobs in the information society and media industries. i2010 is a strategy for modernizing and deploying all EU policy instruments to encourage the development of the digital economy: regulatory instruments, research and partnerships with industry.

As part of the i2010 initiative the EU has launched the eContentplus programme focused on stimulating the development of digital content for services in areas of public interest - geographic information, cultural, scientific and educational content.

The eContentplus program aims to:

- contribute to creating better conditions for accessing, using, reusing and exploiting digital material, based on which added-value products and services can be built across Europe.
- help stakeholders realize the full potential of digital content: *content providers* will be able to increase the use and re-use of their material;
- content users will be able to find and use digital content, irrespective of location or language. This will create a better environment for investment and innovation.

While production of digital content is left to the market and, where appropriate, other specific Community initiatives, eContentplus focuses on methods, tools and processes related to the design, development, access and distribution of high quality digital content.

Websites: <http://europa.eu.int/econtentplus> and <http://europa.eu.int/i2010>

MEDIA European Union

MEDIA is a 6 year program of the European Union to strengthen the competitiveness of the European film, TV and new media industries and to increase international circulation of European audiovisual product.

MEDIA commenced on 1 January 2001 and will run to 31 December 2006. With a

budget of 513 million euro. MEDIA Plus supports professional training (screenwriting, business and new technologies); project development (single/slate); and the distribution and promotion of European audiovisual works.

As part of the MEDIA initiative independent production and distribution companies can apply for development or distribution funding in the form of grants and interest free loans. Financial assistance is available for training providers and organizers of markets and festivals. Individuals may also benefit from subsidized places on training courses and international markets.

Practitioners in the audiovisual industry such as producers of film, television, animation, new media companies, distribution and sales companies and also 'enabling' organizations such as training bodies or film schools, promotional events or festival organizers are eligible to apply.

A MEDIA Desk is located in each of the following countries: Belgium, Denmark, Finland, France, Greece, The Netherlands, Ireland, Italy, Luxembourg, Portugal, Spain, Sweden, United Kingdom, Germany, Austria, Liechtenstein, Norway, Iceland, Poland, Latvia, Lithuania, Estonia, Czech Republic, Bulgaria, Slovenia, Slovakia and Cyprus. The Desks are responsible for informing and advising the professionals in the film, TV and multimedia sector about the audiovisual policies and programmes of the EU.

Website: http://ec.europa.eu/comm/avpolicy/media/index_en.html

MFG Baden-Wuerttemberg Germany

MFG Baden-Wuerttemberg has been promoted as the centre of excellence for IT, media, and film of the federal state Baden-Wuerttemberg in Germany's southwest. With an annual business volume of 15 million Euro the centre encourages the creative industries to invest here.

The MFG Baden-Wuerttemberg consists of three state-funded divisions:

1. MFG Agency for IT and Media
2. MFG Foundation
3. MFG Film Funding.

As part of the MFG Film Funding division, funding is allocated to promote digital content.

<http://www.mfg.de/english/>

Jeunes Entreprises Innovantes France

As part of an incentive program to attract and maintain young innovative companies, the French government began providing an exemption from tax and social contributions for companies that were granted this status for 8 years. To be eligible, companies must be less than 8 years old, and spend at least 15% of expenses on R & D.

The initiative (Jeunes Entreprises Innovantes - JEI) has helped France attract new innovative companies to its shores as well as preserved the French development industry. The initiative was proposed to the French government last year as a way to support rapid and strong economic growth, half of which is coming from innovation.

The main Tax credit granted to the JEI is the reduction of corporate tax, resulting in no corporate income tax on profits for the first 3 profitable years (this exemption period can not exceed 36 months) and a 50% tax reduction on revenues over the next 2 financial years (provided that the company fulfills the conditions of the JEI).

For more information: http://www.europabio.org/articles/article_273_EN.doc
or http://www.igda.org/articles/tbarnes_govsupport.php

The Australian Film Commission Australia

Funded by the Australian government, the Australian Film Commission's goal is to enrich Australia's national identity by:

- Fostering an internationally competitive audiovisual production industry
- Making Australia's audiovisual content & culture available to all
- Preserving a national collection of sound and moving image

The AFC has funded interactive digital media since 1991. Interactive digital media programs are designed to support originality, diversity and creative ambition in the development of Australian interactive digital media practitioners and their projects.

These projects include the [Broadband Cross-media Production Initiative](#) (BCPI), which is a partnership between the AFC and ABC New Media and Digital Services. It seeks to fund innovative documentary projects for multi-platform delivery, particularly via digital television and broadband.

The [Podlove](#) initiative is a media package developed and funded by the AFC and SBSi. It combines five avant-garde documentaries of five minutes each, which will be broadcast

on SBS television and placed on an advanced interactive website that sets out to discover how recent advancements in communication technologies have added to and detracted from our lives, loves and relationships.

Past initiatives with the ABC have also included an online documentary project and a Broadband Production project.

Funding is also available for the following strands of digital media development and production:

- Strand V - Interactive Digital Media - Early Development
- Strand W - Interactive Digital Media - Matched Investment
- Strand X - Experimental Digital Production

Website: <http://www.afc.gov.au/funding/fd/digital/default.aspx>

Film Victoria Australia

Film Victoria is the Victorian State Government agency that promotes and supports excellence in screen-based content creation in Victoria.

Film Victoria funds the following projects under the Digital Media Fund:

- The **Digital Animation Program** aims to stimulate the creative development and economic growth of the animation industry by providing seed funding to Victorian based producers and animators to develop technical, innovative and creative animation concepts that are market driven. Concepts utilizing 2D & 3D animation software for project delivery across a range of digital media platforms such as Internet, Broadband, DVD, iTV, enhanced TV, wireless or hand-held technologies are considered. Concepts developing interactive elements and cross-sector synergies are highly regarded.
- The **Game Prototype Development Program** objective is to assist independent Victorian based game developers to produce market driven game titles in which they own the Intellectual Property (or a percentage thereof) and build stable businesses. Applications from new and small scale developers are encouraged.
- The **Innovative Digital Content** Program has two strands, which support a diverse range of projects for digital platforms such as Internet, Broadband, DVD and wireless technologies. Strand A

provides development funding to Victorian based producers and developers; Strand B provides production funding of up to \$30,000 to Victorian based producers and developers.

- The **Digital Media Internship Program** is in partnership with digital media companies based in Victoria. The objective of the program is to support individuals wishing to develop their digital media skills in key production companies under the supervision of skilled personnel. The program aims to develop career paths for individuals and increase opportunities for employment in the film, television and multimedia production industries in Victoria.
- The **Digital Audience Development Program** supports activity that promotes and enhances awareness of innovative digital media in Victoria. Strand A provides support for events and exhibitions and Strand B for organizations.

The Digital Media Fund also works to facilitate **industry networking, forums and discussions** to arm traditional filmmakers and new media developers with information about international trends in content, technology, business and revenue models and to assist them to build cross platform creative teams facilitating convergence.

Website:

http://www.film.vic.gov.au/programs/Program_Pages/DMF_Programs.shtml

The Multimedia Super Corridor Malaysia

The Multimedia Super Corridor (MSC Malaysia) is an initiative for the global information and communication technology (ICT) industry in Malaysia.

The corridor has been used to attract ICT companies of the world to locate their industries in the MSC Malaysia and undertake research, develop new products and technologies and export from this base.

As part of this initiative, The Malaysian government has equipped core areas in the MSC Malaysia with high-capacity global telecommunications and logistics networks. Emphasis has been placed on eco-friendly, yet sophisticated urban structures for businesses, homes, education and recreation. The MSC Malaysia is also supported by secure cyber laws, strategic policies; and a range of financial and non-financial incentives for investors.

To capitalize on the of the Creative Multimedia Industry in the MSC, a dedicated Creative Multimedia Department was set-up in the Multimedia Development Corporation (MDC), the corporation tasked to oversee the MSC's development. The department's main role is to attract to the MSC companies using multimedia and digital technologies to develop, create, add value to, and deliver content and to ensure a conducive environment exists for the creative industry to thrive.

The goals of the MDC include supporting:

- Economic wealth creation
- Bridging the digital divide
- Content and creativity driving technology applications domestically
- Local capability to “fill the pipes” with local content as vehicles for nation building and preservation of domestic arts, culture, and heritage

The strategies to achieve these goals include:

- Utilizing MSC designated areas as hubs for creative multimedia industry through the establishment of Digital Media Zones
- Strategic alliances with content distributors locally and globally
- Focusing on funding IP in creative content creation
- Providing comprehensive skills development programs for the creative content industry
- Providing accessible content creation infrastructure for local developers and entrepreneurs

This Initiative aims to support creative multimedia content companies by providing a sustainable environment via the implementation of the creative multimedia content framework. The framework hopes to not only benefit the traditional content companies but will create a new set of spin off industries.

Companies should be able to find affordable funding and access to infrastructure via the digital media zone. The industry will have a strong talent pool through the Human resource development programs and develop a larger consumer base via its market access programs.

Website: http://cmc.msc.com.my/about_smenu_aboutcmd.php

The Media Development Authority Singapore

The MDA was formed by the merger of the Singapore Broadcasting Authority, the Films and Publications Department, and the Singapore Film Commission (SFC), on 1 Jan 2003.

The creation of the MDA is in response to the convergence of different media that requires a consistent approach in developing and managing different forms of media.

The MDA has a dual-function role that contributes to developing Singapore into a vibrant global media city as well as a creative economy and a connected society. The first is to promote the growth of the media industry. The second is to manage content to protect core values and safeguard consumers' interests.

The five strategic thrusts of MDA are to:

- develop a state-of-the-art media city
- export made-by-Singapore content
- augment the media talent pool
- foster a conducive regulatory environment and culture

In addition to the strong IP protection provided by Singapore, the MDA provides funding in the following areas:

- capacity development
- local content development
- digital media content & development
- film development
- Internet public education fund
- market development encouraging international exposure and partnerships

Appendix 2 The Economy of Wonderland

Virtual Worlds & Digital Economy

Welcome to Virtual worlds...

With growth rates hitting 15% per month, one of the most fascinating spin-offs of the online gaming market has been the rise of persistent online worlds—also known as “virtual worlds”, “persistent online worlds”, or “MMORPG”, for massively multiplayer online role playing games, or less clumsily, “MMOs”.

A virtual world is a computer-simulated environment in which subscribers from across the globe simultaneously inhabit, play games and interact socially via two- or three-dimensional alter egos called avatars (from the Sanskrit for “incarnation”), which are characters created by these subscribers.⁷⁰ Sophisticated virtual worlds can emulate the real world, with virtual communities, scheduled events, businesses, an economy, a currency, thousands of eye-catching structures and physical landmarks, etc. As in the real world, when virtual communities flourish, group norms, institutions or phenomena like inflation spontaneously emerge. Similar to the real world, predatory behaviours, such as fraud, can also emerge in virtual worlds.

Origins

Part online chatroom, part special effects extravaganza, and part a game of ‘let’s pretend’, today’s virtual worlds date back to the late 1970s when two English computer science students invented a text-based, multiplayer role-playing computer game called MUD, for Multi-User Dungeon.⁷¹ This game offered many of the same allures as the older, tabletop role-playing game Dungeons & Dragons, which had developed a reputation for exerting a frighteningly powerful hold over its players. Over time, multiplayer games (with maybe a dozen players interacting) gave way to “massively” multiplayer games with subscription bases in the millions, and thousands of users online at any one time, spread over hundreds of servers. Text-based games were supplanted by graphical ones.^{72, 73}

Size

By some estimates more than 10 million people subscribe to online role-playing environments, with the number of subscribers doubling every year.⁷⁴ Millions more enter free sites, some of them sponsored by companies as brand-building initiatives. Originally dismissed as a niche phenomenon, persistent online worlds

⁷⁰ http://en.wikipedia.org/wiki/Virtual_world

⁷¹ Parloff, Roger, “FROM MEGS TO RICHES,” *Fortune*, November 28, 2005, pg. 184

⁷² Parloff, Roger, *ibid*

⁷³ Sharp, C.E., Rowe, M., “Online games and e-business: Architecture for integrating business models and services into online games,” *IBM Systems Journal*, Vol. 45, No. 1, 2006. Pg. 161

⁷⁴ Hemp, Paul, “Avatar-Based Marketing,” *Harvard Business Review*, June 2006, pg 48

made the leap from niche entertainment to global mainstream medium at some point in 2005.⁷⁵ Driven by: (1) the growing penetration of broadband; (2) the declining prices for home PCs capable of running 3D graphics; and (3) the entrance of renowned game developer *Blizzard* into the MMO space, subscribers have signed up in droves.⁷⁶ In terms of milestones, *Worlds of Warcraft* became the first game to surpass a million U.S. subscribers, while gaining a global audience of over 4.5 million and counting (with a third of that from mainland China).⁷⁷

Industry structure

⁷⁵ Au, Wagner, James, "Taking New World Notes: An embedded journalist's rough guide to reporting from inside the internet's next evolution," *first monday*, Special Issue #5: Virtual Architecture at State of Play III, 6–8 October 2005 (http://www.firstmonday.org/issues/special11_2b/au/index.html)

⁷⁶ Au, Wagner, James, "Taking New World Notes," *first monday*, Special Issue #5: Virtual Architecture at State of Play III, 6–8 October 2005 (http://www.firstmonday.org/issues/special11_2b/au/index.html)

⁷⁷ Au, Wagner, James, "Taking New World Notes," *first monday*, Special Issue #5: Virtual Architecture at State of Play III, 6–8 October 2005 (http://www.firstmonday.org/issues/special11_2b/au/index.html)

Within a virtual world, these are the key players.

(A) Game companies (the MMO operators)

Their main revenue streams are derived from charging monthly subscriptions—ranging typically from \$10 to \$15 for providing subscribers with a persistent presence in the game environment. Depending on the virtual world, ancillary revenue might also be earned from the sale of in-game currency, or the sale of specific virtual world attributes, like “land”. In turn, operators invest in dedicated servers (e.g. Second Life is a world simulated by 1,400 servers⁷⁸) equipped with a persistent database ensuring adequate network bandwidth is available to support the game-related traffic.

(B) Subscribers

A subscriber has access to an avatar that may be developed over time, adding features that contribute towards a more enjoyable game experience. For example, with a better spaceship, one can move faster around the synthetic world and overcome more of its dangers. Subscribers can invest time: the longer one plays, the more time and skill devoted to producing things that other people value, the more imaginary features or equipment that can be purchased with virtual cash for their avatar, which then becomes more powerful.

Sidebar

The inception of property rights by some MMOs—allowing subscribers to retain full ownership of their virtual creations—makes for a thriving market economy and allows the things created within the MMO such as fashion, songs and so on, to be exported into real life.⁷⁹ One Second Life subscriber, Australian programmer Natha Keir (whose avatar is called Kermitt Quirk) created an online multiplayer game called Tringo played by avatars, which is a bit like bingo but more fun.⁸⁰ Tringo may have started as a game within a game but it became so popular that it was licensed to game publisher Donnerwood Media for a licensing fee in the low five figures, plus royalties. The game has now taken on a life of its own outside Second Life, soon to grace Nintendo’s Game Boy Advance and cell phones.⁸¹

⁷⁸ Parloff, Roger, “FROM MEGS TO RICHES,” *Fortune*, November 28, 2005, pg. 184

⁷⁹ Hof, Robert, D., “My Virtual Life: A journey into a place in cyberspace where thousands of people have imaginary lives. Some even make a good living. Big advertisers are taking notice,” *Business Week*, MAY 1, 2006

⁸⁰ Anonymous, “Survey: Wonders of the metaverse,” *The Economist*, April 22, 2006 pg. 12

⁸¹ Hof, Robert, D., “My Virtual Life,” *Business Week*, MAY 1, 2006

The majority of MMOs each offer some form of embedded trading mechanism that allows their game's subscribers to exchange wealth amongst them.⁸² Players can buy or sell their virtual property in exchange for virtual wealth, but this virtual economy is confined to the game world and is not a means for enriching the MMO.

Trading wealth in the game world has spawned an alternate business model. Players unable to--or unwilling to--devote the time, or who lack the skill, to acquire features and equipment for their avatar, are often willing to pay real money (above and beyond the subscription fee) in order to acquire these virtual properties. A real economy with fluctuating exchange rates has emerged in which artifacts of the virtual world can be bought and sold for real world money, either through auction functions provided by the MMO or through external agents like IGE (www.ige.com) or eBay.⁸³ For a perspective of the scale at which this is occurring, consider these points of interest. First, within the MMO *Second Life*, in January 2006 alone more than US \$5 million in real dollars was spent on these types of virtual world transactions, a figure estimated to be growing at 15 percent *every month*.⁸⁴ Second, the makers of Entropia Universe, a popular science-fiction MMO, plan to introduce a real-world A.T.M. card that will allow players to instantly withdraw hard cash automatically converted from their virtual game treasury.⁸⁵

Sidebar

A growing number of people are either making, or supplementing, their income through businesses catering to needs that arise in virtual worlds.⁸⁶ Anshe Chung, for instance is the avatar created by a German woman who teaches school near Frankfurt. Since March 2004, Chung has accumulated more than \$200,000 worth of in-game currency which is convertible into real U.S. dollars and land holdings by conducting business inside *Second Life*. Chung "buys" land there, build communities, using tools provided by the game developers, and then rents or resells plots of land to other players. To handle rampant growth, she recently opened a 10-person studio and office in Wuhan, China. Says Chung's owner, who prefers to keep her real name private to deter real-life intrusions: "This virtual role-playing economy is so strong that it now has to import skill and services from the real-world economy."⁸⁷

This willingness of subscribers to invest huge sums has far-reaching implications for film, television, and non-role playing computer games as a form of entertainment. That's

⁸² Sharp, C.E., Rowe, M., "Online games and e-business, IBM Systems Journal, Vol. 45, No. 1, 2006. Pg. 161

⁸³ Sharp, C.E., Rowe, M., "Online games and e-business, IBM Systems Journal, Vol. 45, No. 1, 2006. Pg. 161

⁸⁴ Ingram, Mathew, "Virtual economies could add real cash to the bottom line," The Globe and Mail, July 6, 2006, pg B8

⁸⁵ Schiesel, Seth, "Entropia Universe Players Can Cash Their Online Earnings at the A.T.M.," The New York Times, May 2, 2006

⁸⁶ Parloff, Roger, "FROM MEGS TO RICHES," Fortune, November 28, 2005, pg. 184

⁸⁷ Hof, Robert, D., "My Virtual Life: A journey into a place in cyberspace where thousands of people have imaginary lives. Some even make a good living. Big advertisers are taking notice," Business Week, MAY 1, 2006

because, instead of watching someone else's story unfold on the screen, MMO subscribers can create and live out their own stories.⁸⁸ This is powerful stuff. Consider San Francisco-based Linden Lab, the company which developed and runs Second Life, and which has so far invested about \$25 million in that environment.⁸⁹ If subscribers do indeed create 90% of the content, then the total investment in Second Life is in reality closer to \$250 million, which would set this virtual world on par with the budgets of Hollywood blockbusters.⁹⁰ Combined with ever improving production values, monthly payments and its addictive nature, Second Life signals the potential for virtual worlds to eventually disrupt the economics of mainstream filmmaking. Indeed some avatars have created cameras and are filming things that happen in Second Life. In effect, some avatars become actors for other avatars who become directors. These new directors then post their films to websites in real life. As Philip Rosedale, the founder of Second Life notes, "You can be the next Coppola here....Second Life reduces the cost of filming a movie to zero."⁹¹

(C) Marketers

Marketers are increasingly viewing the subscriber base of MMOs as an opportunity to reach engaged minds. Given the sums that subscribers are spending for in-world products and services, introducing real world brands is a step being explored by many companies with efforts aimed directly at the subscriber, as might be expected, but also at the avatar itself. The list of firms involved in virtual worlds Second Life, the Sims Online and There, include commercial enterprises such as Coca Cola, Corona, Budweiser, Evian, Levi Strauss, Nike, Kellogg. Non-commercial marketers would include the BBC, and the American Cancer Society who also make their presence known.

Marketers can either become residents of a virtual world and use their avatars to try out marketing initiatives for free, or they can become clients of companies like, Massive Incorporated, a New York City-based firm which sells real world advertising into a network of computer games and virtual worlds.⁹² Finally, technology constraints, strong resistance to real-world commercial encroachment, privacy concerns (about an avatar's purchasing history), and brand control, are all issues that marketers contemplating entering a virtual world need to consider.⁹³

⁸⁸ Hemp, Paul, "Avatar-Based Marketing," Harvard Business Review, June 2006, pg 48

⁸⁹ Anonymous, "Survey: Wonders of the metaverse," The Economist, April 22, 2006 pg. 12

⁹⁰ Anonymous, "Survey: Wonders of the metaverse," The Economist, April 22, 2006 pg. 12

⁹¹ Anonymous, "Survey: Wonders of the metaverse," The Economist, April 22, 2006 pg. 12

⁹² Hemp, Paul, "Avatar-Based Marketing," Harvard Business Review, June 2006, pg 48

⁹³ Hemp, Paul, "Avatar-Based Marketing," Harvard Business Review, June 2006, pg 48

Appendix 3

Latest Gears and Gadgets – Home Theatres, Portable Players, Mobile Phones, Next-Gen Game Platforms

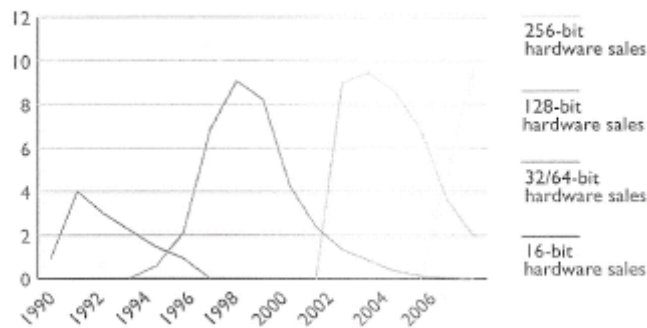
Next-Gen Game Platform

Until the mid 90's, the video game industry was characterized by boom-and-bust cycles dictated by the shelf-lives of the individual games' hardware platforms. Since then, the game market has begun to stabilize. This is partially the result of a dominating single hardware standard: the Windows PC (which is an open and ever evolving platform).

Today, next-generation game platforms usually follow a 6-year cycle (4+2 years), a pattern of 4 years of growth followed by a 2 year transition period. 2005-2006 marks the end of the 4 year growth and the beginning of the 2-year transition period.

The previous transition (2001-2002) negatively affected every publisher. But unlike the last transition which saw the global games software market decline for 2 years in a row, the next transition is only expected to decline in 2005, with growth resuming in 2006.⁹⁴

Console hardware cyclicality



Source: Screen Digest



Below is a list of the three major next-generation consoles available (or soon to be available) in the market:

⁹⁴ Source: ScreenDigest. "European Interactive Games: The 2005 State of the Industry Report" _March 2005.

Playstation 3

The original Sony Playstation was the first whole 32-bit console to make use of a CD gaming system and benefit from it. Although other consoles, such as the "mega CD" plug-in for Sega's own mega drive and the "Sega Saturn" had previously tried this they never took off. It seemed like the gaming industry was meant for cartridges and not CD's. It was not until 1994 when Playstation was originally released and hit the market almost without an impact.⁹⁵

<http://www.playstation.com/>

Console	 PlayStation 2	 PlayStation 3
Maker	Sony	Sony
Release Date	October 2000	November 2006
Hard drive	No built-in hard drive included. Sold separately (40GB)	Built-in 20GB or 60GB
CPU	128-bit "Emotion Engine" clocked at 294 MHz	3.2GHz (The Cell) That's 35 times the performance of the processor inside the current PlayStation 2.
Price	CAD\$455.99 (price at launch in North America)	CAD\$549 for the 20 GB CAD\$659 for the 60 GB (price at launch in North America)
Weight	5 lbs. 5 oz	11 pounds
Measurements	12"(W) x7"(H) x3"(D)	12.8"(W) x 3.8"(H) x 10.8"(L),
Remote Control	8-bit Motion Detector, plug-in console	10-bit Motion Detector, Wireless (Bluetooth 2.0 EDR)
Additional Info	When it was released, the PS2 had many advanced features that were not present in other contemporary video game consoles, including DVD-playback functionality, USB support, and IEEE 1394 expansion ports. It was not until late 2001 that the Microsoft Xbox became the second console to include USB support and DVD playback capabilities.	Communication interfaces have been upgraded and the PlayStation 3 will include three Ethernet ports, 802.11b/g wireless LAN and Bluetooth. In addition, there are six USB 2.0 interfaces and card slots for Memory Stick, Secure Digital and Compact Flash (CF) memory cards. The console also includes a slot for a removable 2.5-inch hard-disk drive. Supports HD games.

⁹⁵ School of Computing and I.T. (SCIT), University of Wolverhampton, UK.

<http://www.scit.wlv.ac.uk/~c0153091/uploaded/page3.html>

Xbox 360



The Microsoft Xbox is a sixth generation video game console first released on November 15, 2001 in North America, then released on February 22, 2002 in Japan, and on March 14, 2002 in Europe. The Xbox was Microsoft's first independent venture into the video game console arena, after having developed the operating system and development tools for the MSX, and having collaborated with Sega in porting Windows CE to the Sega Dreamcast console. <http://www.xbox.com/en-CA/>

Console	 <p>Xbox</p>	 <p>Xbox 360</p>
Maker	Microsoft	Microsoft
Release Date	November 2001	November 2005
Hard drive	8GB	20 GB
CPU	733 MHz Intel Coppermine Core	3.2 GHz PPC Tri-Core "Xenon"
Price	US\$299 (Launch Price)	US\$399 (Launch Price)
Weight	8.5 lb	7.7 lb
Measurements	12.5" (W)× 4"(H)× 10.5"(D)	12.16" (L) x 10.15"(W) x 3.27"(H)
Remote Control	8-bit analog action buttons, plug-in console	Wireless
Additional Info	The Xbox launched in North America on November 15, 2001. The greatest success of the Xbox's launch games was Halo: Combat Evolved, which was critically well-received and one of the best-selling games of the year. Halo still remains the console's standout title.	Supports HD games

Wii (pronounced "we")

Wii is Nintendo's seventh-generation video game console, and the company's fifth home console. Wii is unique in that the console's controller, the Wii Remote (or "Wii-mote"), may be used as a handheld pointing device as well as detecting motion in three dimensions. The console is scheduled for release in the fourth quarter of 2006 worldwide. Its Predecessor is Nintendo's GameCube.

<http://www.nintendo.com/home>

Console	 <p style="text-align: center;">GameCube</p>	 <p style="text-align: center;">Wii (pronounced "we")</p>
Maker	Nintendo	Nintendo
Release Date	November 2001	To be released at the last quarter of 2006
Hard drive	40MB	
CPU	PowerPC Gekko, 485 MHz	
Price	\$199.95 (Launch Price)	
Weight	5 lbs	
Measurements	4.3"(H) x 5.9"(W) x 6.3"(D)	
Remote Control	Eight-button plug-in console remote	
Additional Info	<p>The Nintendo GameCube is Nintendo's fourth home video game console, belonging to the sixth generation era—the same generation as Sega's Dreamcast, Sony's PlayStation 2, and Microsoft's Xbox. The GameCube itself is the most compact and least expensive of the sixth generation era consoles.</p>	

Personal Digital Assistants (PDAs) and Blackberries

Personal Digital Assistants (usually abbreviated to PDAs) are [handheld devices](#) that were originally designed as [personal organizers](#), but have become much more versatile over the years. The many uses and tasks of a basic PDA include: [calculating](#), use as a [clock](#) and [calendar](#), playing [computer games](#), accessing the [Internet](#), sending and receiving [E-mails](#), use as a radio or stereo, [video recording](#), recording notes, use as an [address book](#), and [spreadsheet](#) function. Newer PDAs also include color screens and audio capabilities enabling them to be used as [mobile phones \(PDA Phone\)](#), [web browsers](#) or media players. Many PDAs can access the [Internet](#), [intranets](#) or [extranets](#) via [Wi-Fi](#), or [Wireless Wide-Area Networks](#) (WWANs).

Palm Pilot



The

Pilot was the name given to the first generation of [personal digital assistants](#) manufactured by [Palm Computing](#) in 1996 (then a division of [U.S. Robotics](#), later a division of [3Com](#), and finally a standalone corporation). The first two generations of PDAs from Palm were referred to as PalmPilots. However, due to a trademark infringement lawsuit brought on by the [Pilot Pen Corporation](#), from 1998 handheld devices from Palm were known officially as Palm Connected Organizers or more commonly as "Palms". However, "PalmPilot" had already entered the vernacular as a synonym for [PDAs](#), regardless of the brand.

Palm handhelds are beginning to become more and more advanced, including the ability to become hard drives on computers via [USB](#) cables and merge with smartphones. The "[Treo 700w](#)" is the latest offering that combines a Palm handheld with mobile phone, e-mail, SMS, and instant messaging. It is the first Palm device to use [Windows Mobile](#) instead of Palm OS. It is widely expected that Palm handhelds as a PDA-only device will disappear as multi-function Palm handhelds like the Treo 650 decline in price. <http://www.palm.com/ca/>

Treo



The [Palm Treo](#) is a line of [smartphones](#) originally acquired and subsequently developed by [Handspring](#). However, after [Palm's](#) purchase of Handspring, they are now manufactured and maintained by Palm, Inc. The Treos are one of the most popular [PDA](#) mobile phones. They have a number of integrated features making it possible to check the calendar while talking on the phone, dial directly from your contacts, send emails, and recent models include a built-in camera.

Palm As of [May 2006](#), there have been thirteen Treo models. Palm has recently negotiated a licensing deal with Research in Motion (RIM) which

will allow Treo 650s and "other wireless devices" to connect to RIM's popular [BlackBerry](#) e-mail service with PalmSource Mail for BlackBerry Connect. Palm and RIM have announced that they expect to roll out BlackBerry enabled Treo devices in early 2006.

Blackberry



*BlackBerry
8700*

The BlackBerry is a [wireless handheld device](#) introduced in [1999](#) which supports [push e-mail](#), [mobile telephone](#), [text messaging](#), [internet faxing](#), [web](#) browsing and other wireless [information](#) services. It was developed by Research In Motion (RIM) and delivers information over the wireless data networks of [cellular telephone](#) companies. BlackBerry made headway in the [marketplace](#) by first concentrating on e-mail. RIM currently offers BlackBerry e-mail service to non-BlackBerry devices, such as [Palm](#) BlackBerry Connect software.

Sony CLIÉ

The Sony CLIÉ is a series of personal digital assistants running the Palm Operating System that are unique from other PDAs by such features as a jog-wheel interface, a Memory Stick slot, ATRAC3 audio playback, and high-resolution displays, though earlier models did not include all of these. Many other Palm OS devices have since caught up with Sony's standard for high-resolution screens, though Sony was an industry leader at the time of introduction



The CLIÉ handhelds were distinguished from other Palm OS models by their emphasis on multimedia capabilities, including photo, video, and audio playback long before any other Palm OS PDAs had such capabilities. Later models have been credited with spurring competition in the previously stagnant Palm market, closing many of the gaps that existed between Palm OS PDAs and those powered by Microsoft's Windows Mobile operating system - particularly on the multimedia front, but also with Sony's proprietary application launcher interface.

*Sony's Clie has been
discontinued
worldwide in 2004*

In the spring of 2005, Sony announced the total termination of its CLIÉ line of products.

Mobile Media Players



Sony's NWE005 MP3 Walkman® 2GB Digital Music Player with FM Tuner

Available in a series of colours, the ultra-portable and lightweight NW-E005 Walkman MP3 Digital Music Player combines outstanding sound quality with a new and streamlined look. Sony's NW-E005 Walkman MP3 Digital Music Player stores up to 1,350 songs or audio tracks with its embedded 2GB flash memory. Switch from personal digital audio files to local radio stations using the built-in FM Tuner.

Recharge the NW-E005 Walkman MP3 Lithium-ion Battery on partial power without worrying about degradation; full charge provides up to 28 full hours of continuous playback.

The NW-E005 allows you to carry documents, photos, and data thanks to the Walkman MP3 Digital Music Player's enhanced PC Transfer and Storage features. Just plug the Sony Walkman MP3 to your desktop or notebook PC.

MusicGremlin's WiFi MP3 Player



The US\$300 music Gremlin has two features that play well together: wireless connectivity and subscription content. Whenever you want a new tune, you order it right from your Gremlin when you are in Wi-Fi range and play it back right away, no computer required. Once you've signed up for a \$15 monthly subscription, you can download most tracks available at the MusicGremlin store. The 8-gigabyte Hard Disk player (roughly 2,000 tracks) also allows users to send and receive music to and from other users wirelessly. To-date, Music

Gremlin is the only computer-free download technology of its kind.

Founded in 2003, MusicGremlin has taken the next step in the evolution of digital audio devices and technologies that enhance the user experience in an increasingly digitized world—all shaped by a strong commitment to creatively meeting the needs of consumers, content owners, and consumer electronics makers.

Pioneer Inno XM Satellite Radio and MP3 Player



Pioneer Inno is the latest in XM Satellite Radio receivers and it leads the industry in versatility, with storing ability to include MP3, WMA, and Napster capabilities. It is cutting edge, highlighting both programming of Live XM Satellite Radio content and the ability to save MP3 and WMA files. Also, XM Radio and Napster have teamed up to offer a legal and safe way to purchase MP3s. The Inno comes with a home docking station, cables, carrying case, antenna, earbuds, and XM + Napster CD. XM Radio has also formed alliance with Samsung to offer the [Samsung Helix](#) portable receiver. The Inno is not supported by Windows 95, Windows 98, Windows NT, Windows ME, and Mac OS.

Archos Gmini 402 (20GB)



The Gmini402 Camcorder is the only portable media player with a built-in camcorder/camera, which allows users to make high-quality VGA movies and take pictures, in addition to playing movies, music and playing video games. A speedy USB2.0 port enables the downloading of movies, pictures, music and pre-recorded TV shows using Windows Media. The hefty 20GB hard drive has plenty of space (approximately 5000 Songs). It plays MP3, WAV, WMA, MP3 VBR audio files and MPEG-4video files.

Creative Labs Zen Portable Media Center (20 GB)



Creative Zen Portable Media Center puts all your favourite videos, music, and photos at your fingertips wherever you are. Take digital entertainment from your PC with you on the go, including recorded TV shows, downloaded videos, home movies, music, and photos. With Windows Mobile software featuring an easy-to-use, familiar Windows Media Center Edition interface, Portable Media Centers let you enjoy immediate access to all of your favourite entertainment - anytime, anywhere.

Available in a sleek and spacious 30GB model, with the capacity to store tens of thousands of photos, 120 hours of movie screenings, or even 15,000 songs. Tune in to the radio, record talk shows, or make personal voice memos.

Samsung DVD- Player L1200

The largest screen in Samsung's portable DVD players gives you a higher quality picture and makes it easier to share the DVD experience. Watch DVDs in either widescreen 16:9 format or conventional 4:3 format on a player that is about 1" thin. The Adaptive Image Control provides four different screen modes that allow users to easily choose the best screen condition under different viewing situations. Three built-in headphone jacks let up to three people enjoy movies and music without disturbing others. Plays DVD, CD, MP3, WMA, JPEG playback. 3 hour lithium ion rechargeable battery.



Portable Game Platforms (PGC)

Nintendo DS

The Nintendo DS is a [handheld game console](#) developed and manufactured by [Nintendo](#), released in [November 21, 2004](#) (in Canada and the US). It is visibly distinguishable by its horizontal [clamshell](#) design, similar to the [Game Boy Advance SP](#), and the presence of two displays, the lower of which acts as a [touch screen](#). The system also has a built-in [microphone](#), and supports wireless [802.11b \(WiFi\)](#) standards, allowing players to interact with each other within short range (30–100 feet, depending on conditions), or over the [Nintendo Wi-Fi Connection](#) service.



The name "DS" stands for both Dual Screen and Developers' System, the latter of which refers to the features of the handheld design to encourage innovative gameplay ideas among developers. The system was known as Project Nitro during development. On [March 2, 2006](#), Nintendo released the [Nintendo DS Lite](#), a redesigned model of the DS, in Japan. It was later released in [North America](#) and [Europe](#) the following June.

Sony's PlayStations Portable (PSP)



The PlayStation Portable (most commonly abbreviated PSP) is a [handheld game console](#) produced by [Sony Computer Entertainment](#). The PSP was first announced during [E³ 2003](#) and was unveiled on [May 11, 2004](#) at a Sony press conference during [E³ 2004](#). It was released in the United States and Canada on [March 24, 2005](#).

The PSP can connect to a [wireless network](#) through [Wi-Fi IEEE 802.11b](#) which allows it to surf the [web](#) or connect to other PSP units for multiplayer gaming world-wide. Sony has also stated that the PSP will be able to connect and interact with its new console, the upcoming [PlayStation 3](#). The PSP can access the internet the same way that a laptop does. It picks up the signal of a Wi-Fi unit that must be attached to a computer of some kind (not including laptops). If the signal strength is under 50%, then the PSP will not connect. Above 50%, then you can connect. Ad-hoc wireless networking allows for up to 16 PSPs within range of each other to communicate directly to each other (typically for multiplayer gaming).

Sony's PlayStations Portable (PSP)

New research from The Diffusion Group (TDG) suggests that Microsoft will likely leverage its Xbox franchise to enter the portable game console (PGC) market in late 2007 or early 2008. According to TDG's latest report, *[On the Future of Portable Game Consoles: Analysis & Forecasts](#)* "Microsoft is expected to embed a portable multimedia player in a handheld gaming platform similar in many respects to Sony's PSP in Late 2007/Early 2008".

<http://www.tdgresearch.com/press072.htm>

On Demand Media Services

Video on Demand (VoD)

Video on demand (VOD) systems allow users to select and watch video content over a network as part of an interactive television system. VOD systems either "stream" content, allowing viewing while the video is being downloaded, or "download" it in which the program is brought in its entirety to a set-top box before viewing starts.

All download and some streaming video on demand systems provide the user with a large subset of VCR functionality including pause, fast forward, fast rewind, slow forward, slow rewind, jump to previous/future frame etc. Users can usually watch videos requested via VoD for 24-hours, after which the video is no longer available.

In Canada, most cable TV distributors offer VoD services. Charges range from \$4.99 for new film releases, \$2.99 Classics and rerun, up to \$1.99 for documentary and children's movies and more.



TiVo

TiVo (pronounced *tee-voh*) is a popular brand of digital video recorder (DVR). It is a consumer video device which allows users to capture television programming to internal hard disk storage for later viewing. TiVo systems function similarly to VCRs, but use non-removable hard disk storage, and contain much more sophisticated software to record programs—not only those the user specifically requests, but also other material the user is likely to be interested in. Additionally, programs being watched live can be paused or rewound to repeat a sequence just watched. Unlike tape-based recorders, a recording can be viewed while it is being recorded.

A TiVo DVR allows a user to specify which programs to record by time, by program title, and by specifying combinations of genre, actors, directors, etc. Based on a database of programs available to the user — dependent upon his or her location and/or cable/satellite services he or she uses, and updated roughly once a day via phone or network connection to TiVo headquarters — it selects and records the desired programs. Programs may be stored until internal storage is filled, at which time the unit will dispose of older programs (unless flagged to be saved until manually deleted), to allow for new programs to be recorded. The program information is supplied by Tribune Media Services and the TiVo has data for approximately two weeks into the future.

TiVo's revenues come from its service subscribers and from the sales of DVRs. The company hopes to overcome the low-adoption rate, caused by the cost of the TiVo box, by offering a free 80-hour TiVo® Series2™ DVR. Other TiVo DVRs can be purchased by US\$30, US\$130 and US\$180. Subscription to TiVo can be paid on a monthly (pro-rated to 1, 2 or 3 years), yearly, biannually or triennially basis.

In October 7, 2005 DirecTV, TiVo's partner, announced that it was releasing its own line of DVRs and service, representing a large competition to TiVo.

At this time, the TiVo service is only available in the 50 United States of America, the District of Columbia, Puerto Rico, Canada, and the United Kingdom (via the TiVo partnership with BSkyB).

Appendix 4

Latest Destinations – Sampling of Media Consumption Sites

Napster

Napster is an online pay-per-song music service which was originally a file sharing service. Napster was the first widely-used peer-to-peer (or P2P) music sharing service, and it made a major impact on how people, especially university students, used the Internet. Its technology allowed music fans to easily share MP3 format song files with each other, thus leading to the music industry's accusations of massive copyright violations. Although the original service was shut down by court order, it paved the way for decentralized P2P file-sharing programs such as [Kazaa](#), [Limewire](#), and [BearShare](#), which have been much harder to control. Napster continues to live on with pay services today. The popularity and repercussions of the first Napster has made it a legendary icon in the computer and entertainment fields.

Napster's revenues come from its paying subscribers. There are two types of memberships: Napster Membership (CDN\$9.95/month) and Napster Membership To Go (CDN\$14.95/months). In addition members can purchase individual songs or entire albums for lifetime use.

www.napster.ca



iTunes and iTunes Store

iTunes is a proprietary digital media player application, launched by Apple Computer on January 9, 2001. The program is also an interface to manage the music on Apple's popular iPod digital audio player. Additionally, iTunes can connect to the iTunes Music Store.

The iTunes Music Store is an online music and video service run by Apple Computer through its iTunes application. Opened on April 28, 2003, the iTunes

Store was the first online music store to gain widespread media attention. Today, users can download 2,000,000+ songs, 3000+ music Videos, hit TV shows, 20,000+ Podcasts and 16,000+ audiobooks. Each song can be downloaded for 99 CDN cents. Free 30-second previews are available of every song. Most albums are priced at 9.99 CDN dollars. The user can transfer downloaded songs to an unlimited number of iPods, and burn compact discs from playlists up to seven times.

iTunes files are encoded using FairPlay-encrypted 128 kbit/s AAC streams in an mp4 wrapper, using the .m4p extension. In practice, the sound quality is roughly comparable to songs encoded at 160 kbit/s (CBR) using Fraunhofer MP3 or 160 kbit/s using Microsoft's WindowsMedia Audio WMA format.

www.apple.com/itunes



Kazaa

Kazaa is commonly used to exchange MP3 music files over the Internet. It is also increasingly used to exchange movie files. The official Kazaa program can be downloaded free of charge and is financed by attached adware and Spyware (despite the "No Spyware" message displayed on Kazaa's website). Over the past years, Kazaa's parent was the target of many copyright-related lawsuits.

After many controversial lawsuits, Kazaa decided to offer a pay-per-song service where user pays US\$ 99 cents for the right to download "AltaNet" high-quality files. Kazaa's profits derive from the payment for distribution of Rights Managed content (AltaNet files), advertising (delivered by Cydoor and The Best Offers) and sales of products and services(e.g. BullGuard, MatchNet)

www.kazaa.com

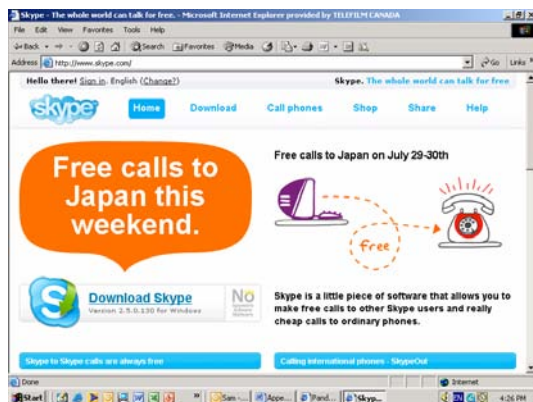


Skype

Skype is a proprietary peer-to-peer Internet telephony (VoIP) network founded by the entrepreneurs Niklas Zennström and Janus Friis, also founders of the file sharing application Kazaa. It competes against existing open VoIP protocols such as SIP, IAX, and H.323. The Skype Group, acquired by eBay in October 2005, is headquartered in Luxembourg, with offices in London and Tallinn. It has experienced rapid growth in both popular usage and software development since launch, both of its free and its paid services.

The Skype communications system is notable for its broad range of features, including free voice and video conferencing, and its ability to use peer to peer (decentralized) technology to overcome common firewall and NAT problems. The use of end-user bandwidth in the form of supernodes, and the closed source nature of its software which routinely encrypts all network traffic generated by the program, have led to slight concerns by some parties. Independent analyses of the software addresses the latter to some degree.

www.skype.com

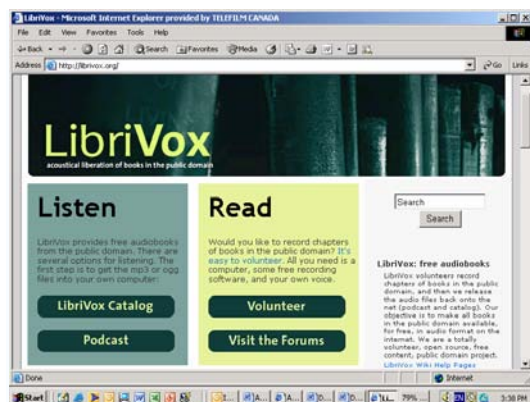


Audio Books

An audio book is a recording of the contents of a book read aloud. Some Audio books come as fully dramatized versions of the printed book, sometimes calling upon a complete cast, music, and sound effects. It is usually distributed on CDs, cassette tapes, or digital formats (e.g., MP3 and Windows Media Audio). The term "audio book" has been synonymous with "books on tape" for roughly twenty years. Cassette-tape sales still comprise roughly 40% of the audio book market with CDs the other dominant format type. As of early 2006, downloadable audio books accounted for approximately 6% of the market.

The popularity of portable music players such as the iPod have made audio books more accessible to people for portable listening. This has led to a boom in the creation of free audio books from Librivox and similar projects that take works from the public domain and enlist volunteers to read them.

In the United States, the most recent sales survey (performed by the [Audio Publishers' Association](#) in 2004) estimated the industry to be worth 800 million US dollars. Current industry estimates hover at around two billion US dollars per year.



Some audio book services are free and downloadable (<http://www.librivox.org/>), while others are available for ordering on-line (<http://www.audiobooks.com/>)

Streaming Media Services

Streaming media is media that is consumed (read, heard, viewed) mostly in the form of clips while it is being delivered (e.g. downloaded). Streaming is more of a property of the delivery system than the media itself. The distinction is usually applied to media that are distributed over computer networks; most other delivery systems are either inherently streaming (radio, television) or inherently non-streaming (books, video cassettes, audio CDs).

IPTV (Internet Protocol Television)

IPTV (Internet Protocol Television) is a system where a digital television service is delivered using the Internet Protocol over a network infrastructure, which may include delivery by a broadband connection. For residential users, this type of service is often provided in conjunction with Video on Demand and may be part of combined Internet services such as Web access and VoIP, where it may then be called Triple Play or Quad Play, and is typically supplied by a broadband operator using a single infrastructure.

IPTV has two major architecture forms: free and fee based. It is estimated that there are over 1,300 free IPTV channels available. This sector is growing rapidly and major television broadcasters worldwide are transmitting their broadcast signal over the Internet. These free IPTV channels require only an Internet connection and an Internet enabled device such as a personal computer, iPod, HDTV connected to a computer or even a 3G cell phone to watch these IPTV broadcasts. Many of the free IPTV files are preceded by paid advertising.

In the past, this technology has been restricted by slow download speeds. In the coming years, however, residential IPTV is expected to grow at a brisk pace as broadband is now available to more than 100 million households worldwide. Many of the world's major telecommunications providers are exploring IPTV as a new revenue opportunity from their existing markets and as a defensive measure against encroachment from more conventional Cable Television services.

wwiTV

wwiTV is an independent guide to streaming media available on the web. While wwiTV does not provide streaming content, the website offer links to over 1300 websites that provide free IPTV videos, including several TV channels from across the globe. The site was designed to enable users of personal computers and other consumer electronic devices to easily find and access media content over the Internet.

<http://wwitv.com/portal.htm>



TV Central

TV Central provides access to millions of movie files, TV Shows, series, video clips as well as music MP3s, software programs for downloading to a hard-drive. In order to access this service, users must pay a service fee (lifetime, unlimited access fee US\$ 27.80). While TV Central offers access to millions of files, it actively discourages its users to upload or download copyrighted material. Tv central advert that the “Uploading or downloading of copyrighted material without the permission or authorization of the copyright holders may be illegal and could be subject to civil and/or criminal liability and penalties”.

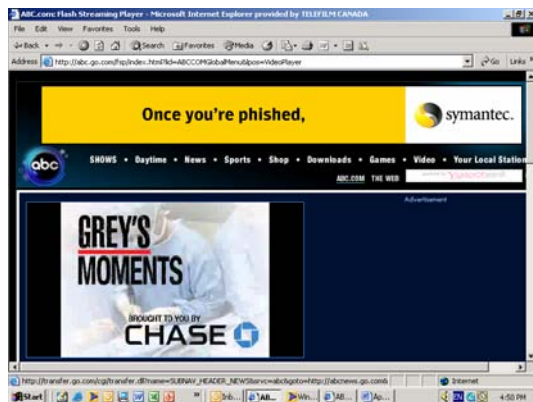
www.tv.org



ABC TV

ABC’s website provides a wide variety of free IPTV files such as snippets of TV series (i.e. Desperate Housewives, Grey’s Anatomy), sporting events (i.e. Indy 500) as well as trivia games and cell phone wallpapers, screensavers, and ring tones. Files can be accessed or downloaded free of charge. Most ABC TV series previews seen on IPTV are preceded by paid advertising.

www.abc.go.com



RealPlayer

RealPlayer is a media player, created by RealNetworks, that plays a number of multimedia formats including MP3, MPEG-4, QuickTime, as well as multiple versions of proprietary RealAudio and RealVideo codecs. The first version of RealPlayer was introduced in April 1995 as RealAudio Player, one of the first media players capable of streaming media over the internet.

The current version for Windows, RealPlayer 10.5, contains audio CD burning capabilities, PVR-style playback buffering, multimedia search, Internet radio, a jukebox-style file library, an integrated web browser (based on Microsoft Internet Explorer) and the ability to transfer media to a number of portable devices, including Apple's iPod, MP3 players and Windows Media devices.

The RealPlayer software can be purchased for a US\$19.99 one-time fee. Users can also purchase songs in MP3 format, subscribe to one of 90 RadioPass premium stations with no commercial interruptions and high sound quality stream.

www.real.com

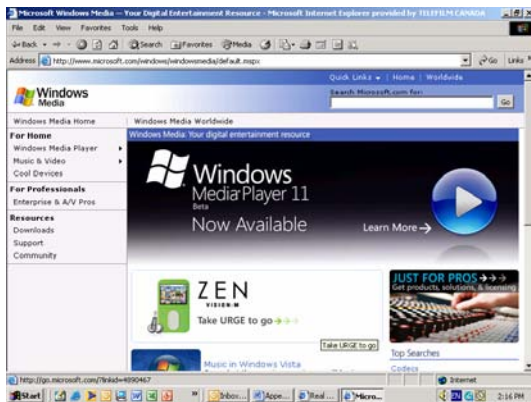


Windows Media Player

Windows Media Player is a proprietary software digital media player and media library application developed by Microsoft that is used for playing audio, video and images on personal computers running the Microsoft Windows operating system, as well as on Pocket PC and Windows Mobile-based devices. Editions of Windows Media Player were also released for the Apple Macintosh and Solaris operating systems, but have since been discontinued.

In addition to being a media player, Windows Media Player includes the ability to rip music from, and copy music to compact discs, synchronize content with a digital audio player (MP3 player) or other mobile devices, and let users purchase or rent music from a number of online music stores.

<http://www.microsoft.com/windows/windowsmedia/default.mspx>



Winamp

Winamp is a multimedia player made by Nullsoft and eventually acquired by America Online. It is a skinnable, multi-format freeware / Shareware. Winamp was first released in 1997. It also now plays streamed video content – both live and recorded, authored worldwide.

Winamp has grown in the past year (2005) from 33 million monthly users to over 52 million monthly users, making it by some counts now the third most actively used media player globally. Winamp's strength comes from a very active user community who continue to develop new features, visualizers and skins.

Winamp has focused on four primary design tenets that drive its success: continued focus on the size and performance of the player itself, support for the widest range of audio and video formats of the major players, unique features for the audiophile looking for the highest quality output from a digital media player and a design architecture that allows as much community-driven extensibility as possible.

Users can download Winamp for free or pay a one-time fee of US\$19.95 for Winamp Pro. The paying version of Winamp allows users to rip to HE-AAC at 128k bitrate, burn CDs up to 48 time faster, and encode music into aacPlus, AAC, MP3, and WMA.

www.winamp.com



Primary Search Engines

Yahoo

Yahoo! Inc. is an American computer services company with the mission "to be the most essential global Internet service for consumers and businesses". It operates an Internet portal, the Yahoo! Directory and a host of other services including the popular Yahoo! Mail. It was founded by two Stanford graduate students in January of 1994 and incorporated on March 2, 1995. The company is headquartered in Sunnyvale, California.

According to [Market Watch](#), Yahoo! Sites attracted over 130 million users in May 2006 in the US alone, which represents 74 percent of the online population in the world's biggest Internet market. Yahoo! is the most visited website on the Internet today with more than 400 million unique users worldwide.

www.yahoo.ca



Google!

Google is a popular Internet search engine first incorporated in September, 1998. The name "Google" originated from a misspelling of "googol", which refers to

10¹⁰⁰ (a 1 followed by one-hundred zeros). Google has become well known for its innovative, clean products, and has a major impact on online culture. The verb "google" was recently added to both the Merriam Webster Collegiate Dictionary and the Oxford English Dictionary in July, 2006, as a verb meaning, "to use the Google search engine to obtain information on the Internet."

According to Media Watch, Google sites received over 104 million of visitors in the U.S. alone during May 2006. Google is known to be the world's most popular search engine. It is simple and easy to use. Google supports more than 104 languages or dialects and offers a personalized version of the engine in 113 countries.

www.google.ca

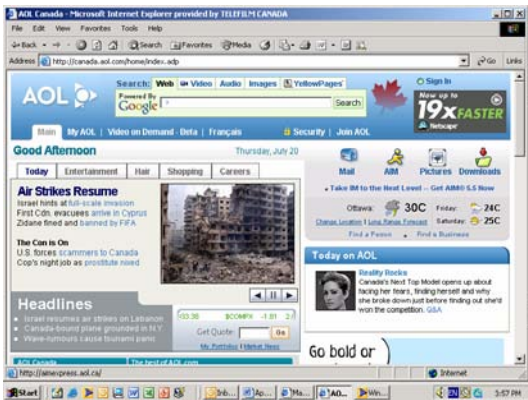


AOL

AOL (formerly America Online, Inc) is an American-based online service provider, bulletin board system, and media company operated by Time Warner. For many Americans through the mid-to-late-1990s, AOL was the Internet, but the rise of high-speed Internet access from cable and telephone companies as well as the increasing sophistication of the public in handling browsers and other Internet utilities has cut into its user base.

AOL website attracts a wide variety of users of all ages due to its wide content. The website is the equivalent to a TV family channel, delivering "safe" information to children, youth and adults.

www.aol.com

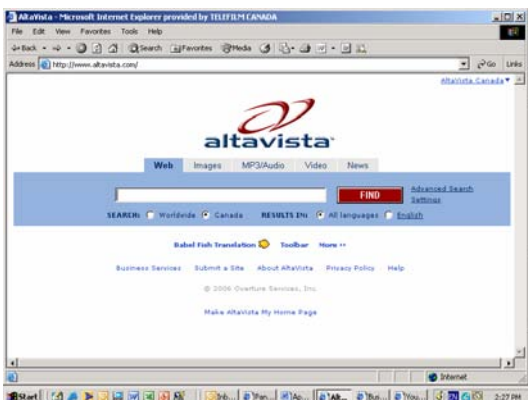


Alta Vista

AltaVista, a business of Overture Services, Inc., is a provider of search services and technology. AltaVista continues to advance Internet search with new technologies and features designed to improve the search experience for consumers. Based in Sunnyvale, California., AltaVista has a rich history of innovation embodied in 61 search-related patents.

Alta Vista was a popular search engine before the appearance of Google. Today, Alta Vista is mostly known for BabelFish, the Web's first Internet machine translation service that could translate words, phrases or entire Web sites to and from English, Spanish, French, German, Dutch, Portuguese, Italian and Russian. Babelfish is still one of the most popular free translation tools online.

www.altavista.com

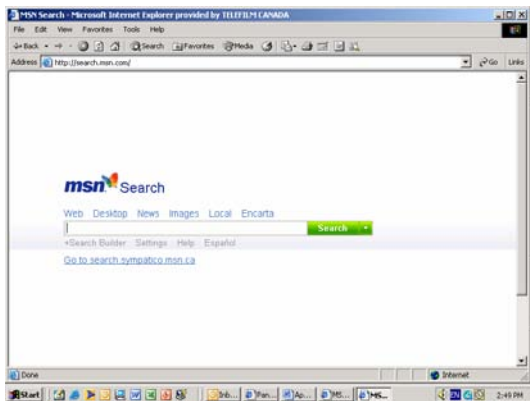


MSN Search

MSN Search is a search engine by Microsoft that comprises of a search engine, index, and crawler. This offers one the ability to search for specific types of information using search tabs that include Web, news, images, music, desktop, local and Microsoft Encarta. MSN Search aims to make its over 2.5 billion worldwide queries each month “more useful by providing consumers with improved access to information and more precise answers to their questions.”

In the past the service relied on different search engine companies as sources, such as Inktomi. Since then Microsoft upgraded MSN Search to provide its own Microsoft-built search engine results. MSN Search's search engine index now includes more than 5 billion documents, 400 million images, and 3 million instant answers. The service has also recently changed its look and started providing its search results to other search engine portals in an effort to better compete in the market.

www.search.msn.com



Social Networking Sites and Blogs

MySpace

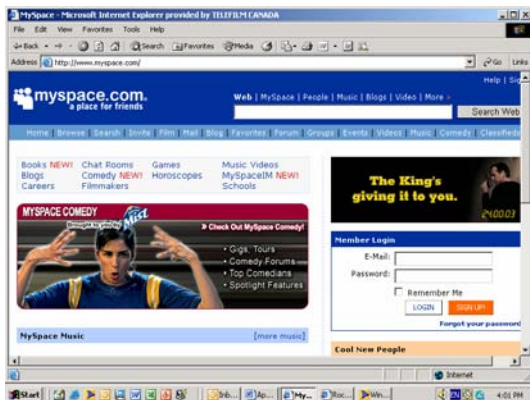
According to Internet traffic measurement firm [Hitwise](#), MySpace.com accounted for 4.46 percent of all U.S. Internet visits for the week ending July 8, 2006, pushing past Yahoo Mail for the first time and outpacing the home pages for Yahoo, Google and Microsoft's MSN Hotmail.

MySpace is a social networking website that offers an interactive network of blogs, user profiles, groups, photos, MP3s, videos and an internal e-mail system. Myspace is believed to be the world's fourth most popular English-language website and the sixth most popular in any language. MySpace has gradually gained more popularity than similar sites such as Facebook and Friendster to achieve 80 percent of visits to online social networking websites. It has become an increasingly influential part of contemporary pop culture, especially in the Anglosphere.

MySpace is also home to various independent musicians and independent filmmakers who post songs and short films directly on their profile. These songs and films can also be embedded in other profiles. Because of the high popularity, mainstream musicians and filmmakers alike have entered this trend as well.

MySpace was recently bought by News Corp, a company run by media mogul Rupert Murdoch. Since then the social network has heavily explored the use of paid advertising.

www.myspace.com



Facebook

Facebook is a social networking service for high school, college, university, corporate, non-profit, military and geographic communities primarily in English-speaking countries. As of December 2005, it has the largest number of registered users among college-focused sites (at over six million US college student accounts created with an additional 20,000 new accounts being created daily.)

Anyone with access to a valid e-mail address from 2,000+ universities can register for and access the site. This includes university students, alumni, faculty, and staff, although the vast majority of Facebook's users are students. Facebook is also available at 25,000+ American and Canadian high schools as well as 1,000+ corporations and non-profit organizations, such as Microsoft, Pepsi and Teach for America.[The site is free to users and generates revenue from advertising including banner ads and sponsored groups.

www.facebook.com

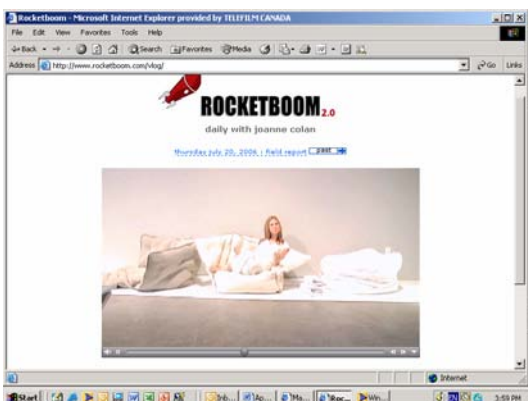


Rocketboom

Rocketboom is a three minute daily videoblog based in New York City covering a wide range of information and commentary from top news stories to quirky internet culture. With a heavy emphasis on international arts, technology and weblog drama, Rocketboom is presented via online video and widely accessible through TiVo, cell phones and in MP4. Rocketboom is currently one of the most popular videoblogs on the internet with more daily subscribers for original syndicated multimedia content than nearly any other site, including podcasts.

Rocketboom differs from a regular TV program in many important ways. Instead of costing millions of dollars to produce, Rocketboom is created with a consumer-level video camera, a laptop, two lights and a map with no additional overhead or costs. Also, Rocketboom is distributed online, all around the world and on demand, and thus has a much larger potential audience than any TV broadcast. However, Rocketboom spends \$0 on promotion, relying entirely on word-of-mouth, and close to \$0 on distribution because bandwidth costs and space are so inexpensive.

www.rocketboom.com

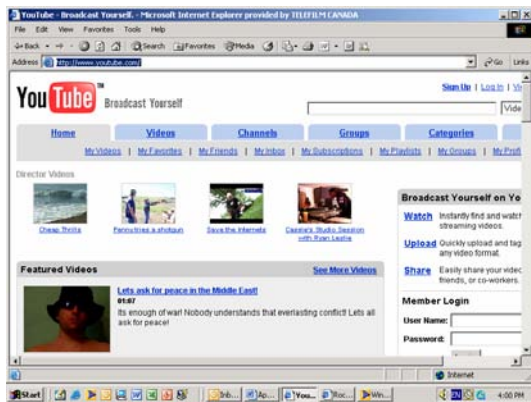


YouTube

YouTube is a website that allows users to upload, view, and share video clips. It was founded in February 2005 by three early employees of PayPal. YouTube uses Adobe Flash to serve its content, which includes movie and TV show clips, music videos, and homemade videos. Video feeds of YouTube videos can also be easily embedded on blogs and other websites. YouTube prohibits the posting of copyrighted video by anyone but the copyright holder; however, restriction of copyrighted material has proven difficult.

Gary Stein, director of strategy at [Ammo Marketing](#) in San Francisco says that user-generated video sites such as YouTube are attracting “a large and hotly sought-after audience: males between the ages of 18 and 34”. Currently, controversial discussions about allowing for advertising in YouTube have been prominent in the media.

www.youtube.com

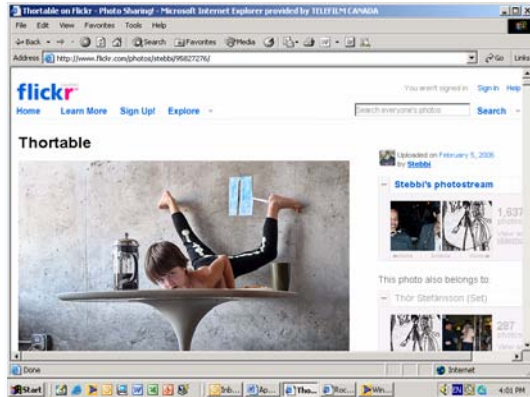


Flickr

Flickr is a digital photo sharing website. In addition to being a popular Web site for users to share personal photographs, the service is widely used by bloggers as a photo repository. Its popularity has been fueled by its innovative community tools that allow photos to be tagged and browsed by folksonomic means.

On Flickr, users can post their photos and visitors can leave comments on every photo. Users can make many photo sizes, such as thumbnail, medium and large, rotate photos, set privacy levels on each photo and decide who can see them and comment on them, upload photos by email or from your cameraphone and post photos to just about any blog (LiveJournal, Blogger, Moveable Type, Typepad, Manila).

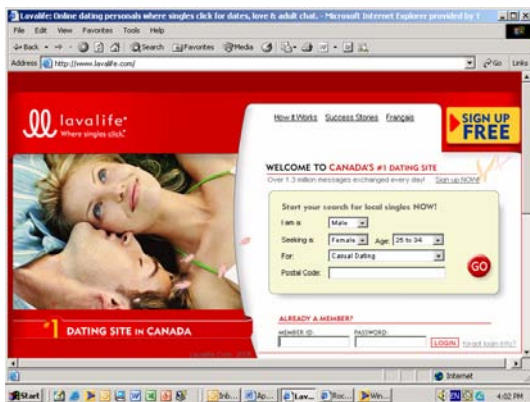
www.flickr.com



LavaLife

Lavalife is a one of the most popular dating websites in North America. This website allows individuals, couples and groups to meet online and possibly develop a romantic or sexual relationship. Such dating websites generally allow people to provide personal information, then search for other individuals using criteria such as age range, gender and location. Most sites allow members to upload photos of themselves and browse photos of others. Sites may offer additional services, such as webcasts, online chat, and message boards. Sites sometimes allow people to register for free but may offer services which require a monthly fee.

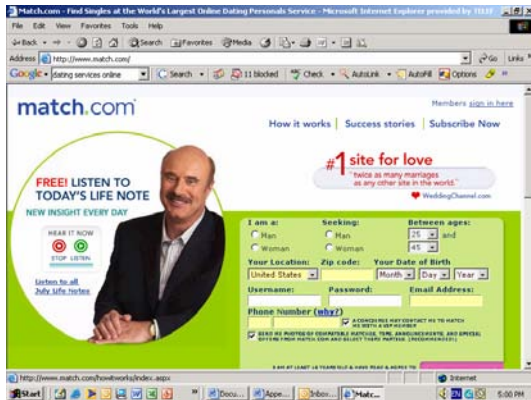
www.lavalife.com



Match.com

Match.com is one of several online dating sites. The endorsement by American TV star Dr. Phil continues to grant Match.com the status of one of the largest dating sites in the world. Match.com, Match.com International, and other affiliated businesses span six continents, operating more than 30 dating sites in 18 local languages. Match.com currently employs more than 800 people worldwide. It has headquarters in both Dallas, TX, and London, with other offices in Sydney and Tokyo.

www.match.com



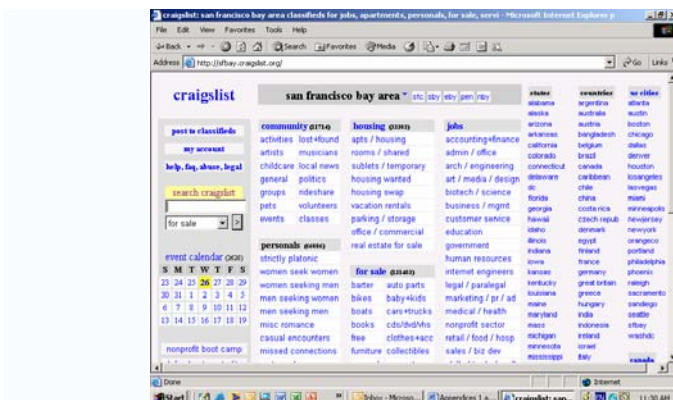
eCommerce

Craigslist

Craigslist is a centralized network of online urban communities, featuring free classified advertisements (for jobs, housing, personal ads, for sale/barter/wanted, services, community, gigs and resumes) and forums sorted by various topics. It was founded in 1995 by Craig Newmark for the San Francisco Bay Area. After incorporation in 1999, Craigslist expanded into nine more cities and as of June, 2006, Craigslist had established itself in approximately 310 cities in the U.S., Canada, U.K., Ireland, continental Europe, Australia, New Zealand, South Africa, Asia, Israel, and Latin America.

Craigslist's sole source of revenue is paid job ads in select cities (\$75 per ad for the San Francisco Bay Area; \$25 per ad for New York and Los Angeles), and paid broker apartment listings in New York City (\$10 per ad). It serves over 4 billion page views per month and hosts over 10 million new classified ads each month, Craigslist is the leading classifieds service in any medium. The site receives over 500,000 new job listings each month.

www.craigslist.com



eBay

eBay is the world's biggest online marketplace. This website offers an online platform where millions of items are traded each day on a local, national and international basis.

eBay generates revenue from a number of fees. There are fees to list a product and fees when the product sells. The eBay fee system is quite complex and, in the US based ebay.com, takes \$0.20 to \$80 per listing and 2-8% of the final price (as of 2006). The Swiss based ebay.co.uk (ebay.co.uk offices) takes from GBP £0.15 to a maximum rate of GBP £3 per 100 for an ordinary listing and from 0.75% to 5.25% of the final price. In addition, eBay now owns the PayPal payment system which has fees of its own.

The company's current business strategy includes increasing revenue by increasing international trade within the eBay system. eBay has already expanded to almost two dozen countries including China and India. The only places where expansion failed was Japan and Hong Kong where Yahoo! had a head start.

www.ebay.ca



Amazon

Amazon.com is an American electronic commerce company based in Seattle, Washington. It became one of the first major companies to sell goods over the Internet soon it was launched in 1995. After the bubble burst Amazon faced skepticism about its business model, but it made its first annual profit in 2003. Amazon also owns Alexa Internet, A9.com, and the Internet Movie Database (IMDb).

Amazon.com began as an online bookstore, though it soon diversified its product lines, adding DVDs, music CDs, computer software, video games, electronics, like mp3 players, apparel, furniture, food, and more. Amazon has established separate websites in Canada, the United Kingdom, Germany, Austria, France, China and Japan and it ships globally.

www.amazon.ca

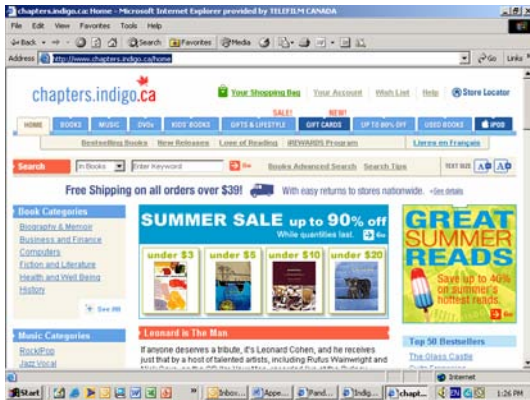


Indigo and Chapters

Indigo Books & Music, Inc. is the largest bookstore chain in Canada. The first Indigo opened in Burlington, Ontario on September 4, 1997 and it was called Indigo Books, Music & More. Indigo merged with Chapters Inc., their largest competitor, on August 14, 2001. The Company sells books and related items through its website Indigo.ca, and in stores.

In 2001, the store generated controversy by removing Adolf Hitler's "Mein Kampf" from the shelves. Similarly, the company chose in 2006 not to sell the June issue of Harper's magazine which featured an article by Art Spiegelman, in which he reprinted and discussed controversial cartoons that had sparked violent demonstrations around the world.

www.chapters.indigo.ca



Future Shop

Established in 1982, Future Shop's first store was located in Vancouver, British Columbia and showcased 4,000 square feet of consumer electronics products. During the late 1980s, Future Shop followed an aggressive growth strategy, quickly expanding operations into the provinces of Alberta, Manitoba and Ontario. By 1990, Future Shop had become Canada's largest electronics retailer.

Today, Future Shop employs over 10,000 people in more than 110 stores accross Canada. Clients can also shop online. The store offers a wide selection of brand-named televisions, computers, audio, entertainment software and hardware plus appliances.

www.futureshop.ca

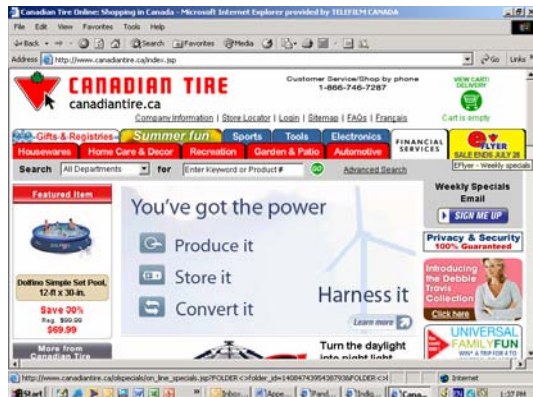


Canadian Tire

Canadian Tire is a Canadian retail hardware and home goods chain. It has a large selection of hardware, automotive, sports, camping, gardening and electronics products, and through its network of gas bars, it is also Canada's second largest independent gasoline supplier. Virtually all stores have a full auto service department. Its head office is based in Toronto, Ontario.

Canadian Tire has more than 455 stores from coast to coast. The store's website offers Canadians the opportunity to shop online and is among the country's top three busiest e-Commerce sites.

www.canadiantire.ca



General Motors (GM)

General Motors of Canada presently employs 20,000 employees working in manufacturing, marketing, engineering, customer support and other staff areas. General Motors of Canada has seven assembly and component plants within Ontario as well as several branches located across Canada. GM is the largest automaker in Canada. Its annual production capacity is over 1 Million vehicles in 3 assembly plants. 28% of Canadian vehicle sold in Canada in 2005 were GM cars. In addition to that, GM has the most vehicle dealerships and retailing outlets in the country.

Through the GM website customers can explore a wide variety of features, products and services offered by GM as well as build their own vehicle, locate a vehicle, contact a dealer, schedule a test-drive and request a quote.

www.gmcanada.com



Key Traditional Media Sites

CBC

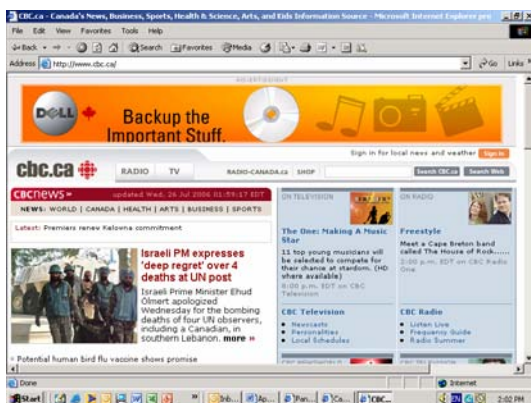
The Canadian Broadcasting Corporation (CBC), a Canadian crown corporation, is the country's national radio and television broadcaster. In French, it is called la Société Radio-Canada (Radio-Canada or SRC). The umbrella corporate brand is CBC/Radio-Canada.

The CBC is the oldest broadcasting service in the country, first established in its present form on November 2, 1936. Radio services include CBC Radio One, CBC Radio Two, La Première Chaîne, Espace musique and the international radio service Radio Canada International. Television operations include CBC Television, Télévision de Radio-Canada, CBC Newsworld, le Réseau de l'information, Documentary Channel and CBC Country Canada. The CBC operates services for the Canadian Arctic under the names CBC North and Radio Nord Québec. The CBC also operates digital audio service Galaxie and two main websites, one in each official language, and owns 40% of satellite radio broadcaster Sirius Canada, which airs additional CBC services including CBC Radio 3 and Bandeapart.

CBC delivers media contents in a variety of platforms via CBC Cable services (specialty television channels), radio (four separate services: two in English, known as CBC Radio One and CBC Radio Two, and two in French, known as La Première Chaîne and Espace Musique), satellite radio (Sirius Satellite Radio), Internet (offering 24-hour live streaming of its radio services using RealAudio and IPTV clips) and Podcasting (as of 2005).

CBC's budget comes from the Parliament of Canada, from the exploitation of its productions and from advertising.

www.cbc.ca



BBC

The British Broadcasting Corporation (BBC), founded in 1922, is the largest broadcasting corporation in the world. It produces programmes and information services, broadcasting on television, radio, and the Internet. The mission of the BBC is to inform, educate and entertain, and the motto of the BBC is Nation Shall Speak Peace Unto Nation.

The BBC is a quasi-autonomous Public Corporation operating as a public service broadcaster. The Corporation is currently run by a board of governors appointed by the government; however, the BBC is, per its charter, to be free from both political and commercial influence and answers only to its viewers and listeners.

Its domestic programming and broadcasts are primarily funded by levying television licence fees (under the Wireless & Telegraphy Act 1947), although there is also money raised through commercial activities such as sale of merchandise. In order to justify the licence fee the BBC is expected to produce a number of high-rating shows in addition to programmes that commercial broadcasters would not normally broadcast. The BBC is not permitted to carry advertising or sponsorship on its public services.

www.bbc.com



The New York Times

The New York Times is a newspaper published in New York City and distributed internationally. It is owned by The New York Times Company, which publishes 47 other newspapers, including the International Herald Tribune and the Boston Globe.

The internationally respected newspaper offers information in print and Internet formats (including videos). Revenues are collected from a variety of services including newspaper sales and advertising (both print and internet).

www.nytimes.com



The Economist

The Economist is a weekly news and international affairs publication of The Economist Newspaper Ltd edited in London, UK. It has been in continuous publication since September 1843. As of 2006, its average circulation topped one million copies a week, about half of which are sold in North America.

The Economist.com provides opinion and information on international news, world politics, business, finance, science and technology, as well as overviews of cultural trends and regular industry, business and country surveys.

Economist.com publishes all articles from *The Economist* print edition (including those printed only in British copies) plus a searchable archive of all *The Economist's* articles back to June 1997. Links to other articles and to relevant sources on the web are included with many of the stories. Other Economist.com services include Global Agenda (continual analysis on major stories and issues as they unfold), Web feeds (news headlines from around the web), Mobile Edition (a downloadable version of Global Agenda for PDA users).

www.economist.com



Comedy Central

Comedy Central is a cable television channel in the United States, aired in Canada via cable TV. As its name implies, the channel carries predominantly comedy programming, both original and syndicated. While once a small cable network that few watched, in recent years it has grown to be one of the most popular cable channels, earning the praise of many entertainment-based media along the way.

Comedy Central website offers a variety of information including video snippets of TV shows, schedules, games, and mobile ringtones, wallpapers and games.

www.comedycentral.com



Sirius

Sirius Satellite Radio is a satellite radio service based in New York City that provides 68 streams (channels) of music and 55 streams of sports, news and entertainment to the United States and Canada. Music streams on Sirius carry a wide variety of music genres, broadcasting 24 hours a day, commercial free. A subset of Sirius' music channels are included as part of the DISH Network satellite television service. Sirius channels are identified by Arbitron with the label "XS" (e.g. "XS120", "XS9", "XS17"). With any Sirius-enabled radio, the user can see the artist and song information on display while listening to the stream. The streams are broadcast from three satellites in an elliptical geosynchronous orbit above North America.

Sirius business model is to provide pay-for-service radio, analogous to the business model for premium cable television, in which music channels are free of commercials. Subscription costs for Sirius range from \$12.95/mo. to \$499.99 for a lifetime subscription (of the receiver, not the subscriber). A \$10 activation fee (\$15 if activated by phone) is also required. Sirius currently has fewer subscribers compared to competitor XM Satellite Radio, with 4.7 million, less than XM's current audience of roughly 6.89 million (as of July 6, 2006). However, Sirius is gaining new subscribers at a faster rate than XM.

www.sirius.com



XM sites

Founded in 1992, XM Satellite Radio Holdings is a satellite radio (DARS) service in the United States and Canada. XM provides pay-for-service radio, analogous to premium cable television. Its service includes 69 different music channels, 39 news, sports, talk and entertainment channels, 21 regional traffic and weather channels and 23 play-by-play sports channels. XM channels are identified by Arbitron with the label "XM" (e.g. "XM175", "XM4", "XM32"). Meanwhile, AOL Radio, a division of America Online's media sector, offers select XM Satellite Radio channels streamed live through Winamp, AOL Instant Messenger Triton, and AOL Radio, free of charge.

www.xmradio.com



CBC Radio

CBC Radio offers live streaming for both Radio 1 and Radio 2 stations.

www.cbc.ca/listen

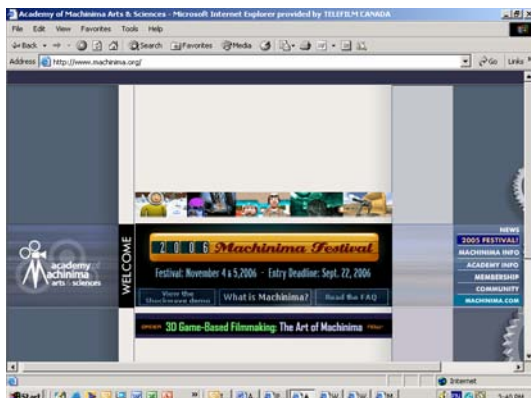


Machinima

Machinima or machine cinema is both a collection of associated production techniques and a film genre (film created by such production techniques). As a production technique, the term concerns the rendering of computer-generated imagery (CGI) using real-time, interactive (game) 3D engines, as opposed to high-end and complex 3D animation software used by professionals. Engines from first person shooter video games are typically used. Consequently, the rendering can be done in real-time using PCs (either using the computer of the creator or the viewer), rather than with complex 3D engines using huge render farms. As a film genre, the term refers to movies created by the techniques described above. Usually, machinimas are produced using the tools (demo recording, camera angle, level editor, script editor, etc.) and resources (backgrounds, levels, characters, skins, etc.) available in a game.

Machinima is an example of emergent gameplay, a process of putting game tools to unexpected ends, and of artistic computer game modification. The real-time nature of machinima means that established techniques from traditional film-making can be reapplied in a virtual environment. As a result, production tends to be cheaper and more rapid than in keyframed CGI animation.

www.machinima.org



Wikipedia

Wikipedia is an international Web-based free-content encyclopedia project. It exists as a wiki, a website that allows visitors to edit its content; the word Wikipedia itself is a portmanteau of the words wiki and encyclopedia. Wikipedia is written collaboratively by volunteers, allowing articles to be changed by anyone with access to the website. Wikipedia's main servers are in Tampa, Florida, with additional servers in Amsterdam and Seoul. Wikipedia is a free service.

Wikipedia began on January 2001 as a complement to the expert-written (and now defunct) Nupedia, and is now operated by the non-profit Wikimedia Foundation. Midway through 2006, Wikipedia had more than 4,600,000 articles in many languages, including more than 1,200,000 in the English-language version. There were more than 200 language editions of Wikipedia, fifteen of which had more than 50,000 articles each. The German-language edition has been distributed on DVD-ROM, and there were also proposals for an English DVD or paper edition. Since its inception, Wikipedia has steadily risen in popularity, and has spawned several sister projects.

http://en.wikipedia.org/wiki/Main_Page



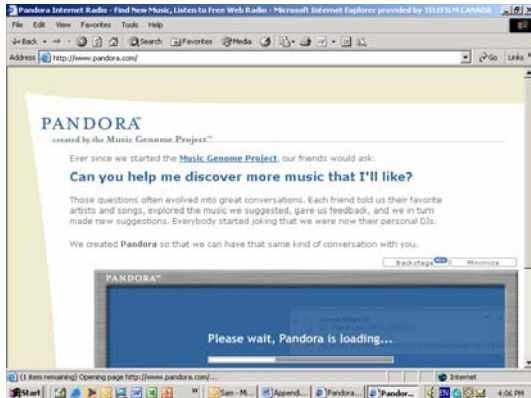
Pandora

Pandora is an automated music recommendation and Internet radio service created by The Music Genome Project. The Pandora media player is based in Flash, allowing for simple cross platform portability. Users begin by entering a song or artist that they enjoy, and the service responds by playing selections that it thinks are musically similar. Users are then able to provide feedback on the individual song choices—approval or disapproval, which the system takes into account for future selections.

Over 400 different musical aspects are considered when selecting the next song. Examples of these are rhythm syncopation, key tonality, vocal harmonies and displayed instrumental proficiency. The service has two subscription plans: a free subscription supported by ads, and a fee-based subscription without these ads.

Since Pandora opened its free memberships to the general public I November 2005 it has been adding as many as 25,000 new listeners a day. The company is currently hiring people to build its advertising sales, which is the company's chief source of income, outside of some paid memberships in return for no advertisements.

www.pandora.com



Blogger

Blogger is a weblog publishing system that enables blogs to be hosted on its own servers. It was started by a tiny company in San Francisco (Pyra Labs) in 1999. In 2003 Blogger was bought by Google.

www.blogger.com

