

Digital Consumerism



An analysis of the development of online businesses and the future of the Internet.

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Executive Summary

The Internet was born out of the goal to be able to share information with anyone. Since those early days, as the Internet has come into the mainstream it has turned into what every successful industry is about – money. Today the Internet is driven by consumerism. eBay, Amazon, Grocery Gateway, Dell, Apple and Microsoft are all using the Internet to make money. The way consumerism in general has changed over the last 20 years has changed drastically.

Consumers in the pre-Internet era were limited to a selection of products available close to their physical proximity. The few digital goods available were contained in a non-transferable medium, with limited competition.

Today, digital goods are a hot topic online, with pirated music, movies and television shows running rampant. Industries are trying to stop this piracy in its tracks; however it is a futile battle. The entire concept of digital media is its transferability, and as such the industry has not taken advantage of the Internet as a distribution medium.

Companies have taken advantage of the Internet for the sale of physical products. The dot-com boom and bust brought many companies all fighting for a piece of this brand new market, which was largely overestimated. The survivors have emerged, and several industry leaders have taken form. Amazon.com, eBay and Apple's iTunes are some of the few successful online businesses.

The reason for their success is largely because of a solid business model, with the advantage of them being the first in the industry to provide their specific services.

Consumer products are just now starting to be developed that use the Internet as a purchasing marketplace, and as they continue to be developed there are many challenges that face the industry when it comes to compatibility between products and services.

The Internet continues to grow with a focus on consumerism, and as the future brings more innovative products geared toward this high-tech society, developing standards will be key to its success.

Consumerism – Circa 1990

In order to fully appreciate what the Internet as a distribution medium has done to consumerism, it is necessary to revisit a time before it's widespread existence. Looking back 15 years ago to 1990 gives us a very different perspective.

In 1990, virtually all purchases made by consumers were done in person. That is, by visiting a store and standing in line. The selection available to the consumer is effectively limited to what is available in their area.

This is the method of purchasing physical goods - items that have a physical presence, and perform a function. *Electronic goods* such as television shows, movies, music and software in 1990 were either contained in a physical medium, or distributed in a format that was constraining for the consumer.

Television service is a great example. To watch television, you had to pay for cable-TV or satellite service. For this monthly subscription, the consumer was able to plan their evening around the television shows that they wanted to watch, even then with perhaps 10 minutes of actual content before being besieged with advertising. This scheduled TV model led to the universally known phrase of "What's on?". In 1990, it was not possible to watch a television show that you missed, unless the network decided to play it as a rerun or you planned ahead to record the show.

Music CDs, although not asphyxiated with commercials, or constrained to scheduling, still severely tie the consumer down. Music purchases are driven by consumers hearing that one catchy song on the radio. Often a CD is purchased simply for the want of the single song. In this way, the music industry has required bulk-purchasing of songs. In 1990 however, consumers were happy with this method, as there were no alternatives.

Consumerism – Circa 2005

Let's jump ahead now to present day. Physical goods can still be purchased at your local Wal-Mart, CDs can still be purchased at the music store, and television shows are still broadcast on their weekly schedule. The majority of consumers still come home from work and say "What's on?" to their family member watching TV. On the sidelines however, and increasingly gaining momentum is a landslide of change. Physical goods are now being bought, sold, and advertised using electronic mediums, while electronic goods are increasingly becoming *digital goods*.

One thing that needs clarification is the distinction between electronic goods versus digital goods? The term *Electronic goods* is used to describe anything that is distributed in an analog format. Cable television, cassette tapes, VHS movies and telephone service are all electronic goods. Digital goods include things such

as DVD movies and satellite television. Digital goods have several advantages, the first and foremost being transferability. Music CDs were one of the first digital goods, and as such were easily copied off the CD to other portable music devices.

Removing the limitations of being constrained to a specific medium opens the doors to a host of new developments. Today's Internet is the perfect distribution medium for digital content. No longer are separate physical mediums required to transport the information, and no longer must the content be bundled together. Users don't need to buy an entire album on a CD, they can buy *just* the music they want.

When we try to examine business models for this, we see that the industry hasn't recognized this advantage and provided a way for users to buy just the content, without the physical medium. The result is that users have taken it upon themselves to provide just the digital content at no cost.

Music was the first media to be widely distributed by users online. This was in part due to the industry providing music in an already digital format, thus making it simple for users to take music off the CD, and put it onto their computers. Peer to Peer file sharing became the norm, and it took the music industry a time to react.¹

It took longer for television and movies to reach the Internet, due to the fact that it was difficult to convert the analog content (streaming television and VHS tapes) to digital content. With the advent of DVDs, and the rollout of high-definition digital television, it has become simple to create a perfect digital copy of movies and TV shows. Additionally, the explosion of high-speed internet access has enabled users to download this content in almost real-time.

The music industry has begun to come out of the shock that hit them, and many business models have popped up that take advantage of what drove the consumer to this model. These businesses, such as Apple's iTunes music store, show that consumers aren't simply thieves, stealing music because they can. They prove that consumers were driven to online downloading because of the "on-demand" factor, more so than the "free" factor.

The television and movie industries have obviously not realized this by looking at what is available online today. At the writing of this paper, on a single P2P file-sharing web site, there are 10,345 TV shows available.² Consumers are freely able to watch these shows on their television already, so why are there so many shows available online? Simply because it allows consumers freedom from

¹ Brian Burkhalter, University of Florida - <http://iml.jou.ufl.edu/projects/Spring01/Burkhalter/Napster%20history.html>

² Torrentspy P2P File Sharing Network – <http://www.torrentspy.com>

schedule-based television networks. Indeed, some believe that P2P file sharing traffic now accounts for approximately 1/3rd of all internet traffic.³

Digital Rights Management

To go along with this great new digital content world, there must be mechanisms in place to limit theft. Traditional mechanisms to prevent theft have benefited from the materials' physicality to provide some protection from theft. To steal something, you used to have to physically remove it from where you are taking it from. Not so with digital media. If you can read ones and zeroes to play back a movie, what mechanisms prevent a computer from writing those ones and zeros to a new file, to create a duplicate of the content?

Digital Rights Management (DRM) is an umbrella term for mechanisms that attempt to limit the unauthorized duplication of digital content.⁴ Currently there is no standard, and different companies have attempted to create different forms of DRM. Microsoft's DRM for their Windows Media audio format is an entire platform that allows content providers to require users to acquire a "license" for playing content.⁵ DRM is generally implemented in two ways, either having the DRM applied to the content itself, or applied to the device attempting to play back the content.

For now, DRM suffers from one major setback, being that regardless of what locking mechanisms are being placed on the content, if it's available in a non-DRM format, such as DVDs and Music CDs, users will be able to post those items for download online. Until all content has DRM applied to it, piracy will continue to plague the recording and movie industries.

Online Business Models

So in this amazing new world of digital consumerism, how do physical goods fit into this new distribution model? The Internet has not revolutionized what people buy, but it has revolutionized how people buy it.

When we look back at our 1990 example and examine what were the most constraining factors for consumers, it comes down to two things: the consumer must travel to a location to purchase the good, and the consumer is limited to the selection that is available at the physical location.

³ Robin Good, Cost Effective P2P - http://www.masternewmedia.org/news/2004/12/18/costeffective_p2p_distribution_of_rich.htm

⁴ Digital Rights Management, Wikipedia - http://en.wikipedia.org/wiki/Digital_Rights_Management

⁵ Windows Media DRM, Microsoft - <http://www.microsoft.com/windows/windowsmedia/drm/default.aspx>

The Internet gives users the ability to make their purchasing decisions not based upon the selection at a single store, but upon the selection available online. It's common place now, when looking to make a purchase of a digital camera, to browse different web sites, comparing prices and reading reviews of the product. Consumers are much more aware these days then they were in the past.

The years leading up to the dot-com bust brought countless new, innovative services and products all trying to find out how to make money from this amazing creation called the Internet. Unfortunately the majority of them did not succeed. Examining a few of the successful online stores will allow for an appreciation of what drives consumers, and how other businesses can live long and prosper.

Amazon.com

Amazon.com was one of the few pioneers in online purchasing. Launched in 1995, the company began as an online bookstore. Jeff Bezos, the founder saw a unique opportunity: while the largest brick-and-mortar bookstore might be able to provide upwards of 200,000 titles, an online bookstore would be capable of providing many times more. Not needing a physical store to display the titles would allow them the ability to provide the huge selection.

Amazon's business plan was also unique, in that they did not expect to turn a profit for a good four to five years after it's inception. This slow paced strategy turned out to be a sound one after the dot-com collapse, as other online stores which had expected profits quickly ended up failing. Amazon.com ended up turning its first ever profit in the fourth quarter of 2002. It only totaled \$5 million US, however it was an extremely important event for a company that had been losing money for 7 years.

Since 2002, Amazon.com has continued it's slow and steady climb, and in January 2004 posted a profit of \$35.3 million on revenues of \$5.65 billion. Recognizing Amazon.com as the pioneer of online websites, Time Magazine named Jeff Bezos its 1999 Man of the Year.⁶ Today Amazon.com is the online equivalent of Wal-Mart, selling everything from electronics, toys, food products, housewares, sporting equipment and much more.

Ebay.com

eBay was founded in 1995 as "AuctionWeb", which originally was created as a way for collectors to buy and sell PEZ dispensers.⁷ After growing to include many more sections, eBay became a huge success. The business model was based

⁶ Time 1999 Man of the Year - <http://www.time.com/time/poy/intro.html>

⁷ Magnus Bjornson, eBay, A Concise Analysis - <http://www.cs.brandeis.edu/~magnus/ief248a/eBay/>

upon auctions. Each item was auctioned off, with the seller setting the starting price, and letting online users drive the price up based on demand. eBay was a revolution in consumerism. No longer were people limited to products that were available in their local store. The amazing growth rate was due to the fact that users were able to find items for auction at much lower prices, and with much wider selection than they would pay in stores. Additionally, hard to find items not available in the customers area were a huge incentive to use eBay.

Why is eBay so successful? Simply put, eBay doesn't sell any products. eBay just provides a forum to connect buyers and sellers. eBay's revenue is generated from fees charged to the sellers, which is generally a percentage of the final selling price. As eBay grew, they also wisely expanded into an array of more upscale markets where the average sale price is higher. This in turn helped boost eBay's revenue.

Today eBay's model has allowed countless new online businesses to come into existence, without any infrastructure, servers, or extra web sites. These "virtual stores" use eBay to market and sell their goods and as such have virtually zero startup costs. This key element may well be the trend of future online consumerism – a common framework for businesses to sell goods; a virtual mall of sorts.

Digital Consumer Products

This future of online consumerism will no doubt bring an onslaught of consumer hardware devices. Just as digital music brought consumers the MP3 player, so will many other digital goods bring us new products. The concerns regarding these hardware products are how vendors will integrate online purchasing methods.

One of the first and quite incredible digital consumer products to integrate Internet access is LG's "*Internet Refrigerator*". This is a fridge which essentially has a personal computer with an LCD monitor built into the door. This refrigerator can monitor expiry dates of food, notifying you when products will expire. It can also browse the Internet, and perform email and calendar functions.⁸ This first generation of Internet-enabled products gives just a glimpse of what they are capable of.

In "*The 6th Day*", a movie that takes place some 15 years in the future, Arnold Schwarzenegger wakes up to have breakfast. As he puts the milk back into the fridge, the LCD monitor on the door informs him that the milk is running low, and gives him a prompt to purchase more milk. He clicks OK and an order is put in for

⁸ LG, Internet Fridge -
<http://www.lge.com/products/homenetwork/internetproduct/refrigerator/introduction.jsp>

more milk. He goes on to enjoy the rest of his day, oblivious to how this purchase will go through.

How will an invention like this work in the future? The most reasonable thought is that the fridge will put in an order for milk to an online grocery store, such as the currently popular Grocery Gateway. The payment would be made automatically by credit card, and the delivery would happen the next day. How the fridge communicates with Grocery Gateway's servers is a technical matter that would involve some sort of standards for Internet enabled appliances to operate with online stores.

Interoperability and Competition

The issue that arises with competing consumer products and online stores is interoperability. More than likely in the development of this future fridge, LG will be approached by an online grocery company that may wish LG to have their fridge interoperate with only their online store. In this instance, the consumer would end up having a limited selection of where and what to purchase due to limitations of the device they are using.

This is just the case with Apple's iPod music player. Apple designed their iTunes online music store to only function with the iPod. Users are unable to purchase music from the store unless they own one. Apple in fact is being sued by a consumer group for just this reason, stating anti-competitive behaviour.⁹ Apple's iTunes store sells music with their own proprietary DRM-wrapper on music, such that it is incompatible with other music players.

The Future of Digital Consumerism

By looking at the issues described above, it is obvious that now, and increasingly in the future there will be concerns over monopolization of online services, and consumer products that tie into these online services. Regulation is one possible answer, however perhaps not the best. Earlier in this paper, eBay was described as a framework for many online businesses. This model could be very successfully applied to digital consumer products in the future. If all consumer products were integrated into a common framework for online purchasing, it would allow any company to set up a virtual store, and provide any type of content they wish to consumers. Just as Google has emerged as the focal point for finding information online, a single location for finding products may be how the future of online consumerism will develop.

⁹ Andrew Orlowski, The Register - http://www.theregister.co.uk/2005/01/07/apple_itunes_antitrust_suit/

We can compare this in similar ways to the deregulation of the telephone market. With the telecom deregulation, consumers were freed from the constraints of only having one option for long distance and local service. In a particular geographic area, you didn't have the option for which provider you subscribed.

Today, you still have the same telephone lines going into your house, but you can subscribe for many different services. The telephone lines are the common framework for delivering different services from different companies. The same concept applies with online purchasing. A common framework will allow consumers to purchase many different products from competing vendors, even if the hardware device they are using was produced by a competitor.

In the future, if all hardware devices connected to a common purchasing framework, consumers would have the ultimate choice, and the market could be almost fully deregulated. LG's Internet Fridge would connect to this framework, so a consumer could purchase their fresh vegetables from one company while purchasing their canned food from another.

Portable music players would also connect to this common framework, and allow consumers to purchase one song from Apple, and another from Sony. All these would be compatible because they use a common framework. Countless other devices from home entertainment centers, to game consoles would also connect to this framework.¹⁰

At present, eBay is the closest thing we have to such a framework. eBay allows businesses to sell products without requiring any type of startup capital or separate system. eBay is limited however, in that no hardware applications have been developed to take advantage of eBay's unique framework as *the* online store. Additionally, no automated systems have been put in place to allow users "instant access" to their digital goods, once they have been paid for.

Conclusion

As the Internet continues to develop, and the world switches to everything digital, the Internet is becoming the way to do everything from shopping to watching movies. Piracy has become rampant, only because industries have not provided users a way to legally and efficiently obtain these products. Interoperability between products and vendors is another issue also that must be dealt with.

Regardless to whether these industries realize the audience it can reach, not just with online marketing, but actual development of a global common marketplace, consumers will force this new economy upon the world, and cause quite a stir in the process.

¹⁰ Tony Smith, The Register - http://www.theregister.co.uk/2005/01/27/sony_psp_music_service/