

Macro Trends in Media and Entertainment

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Work in Progress, Revised Aug 1, 2006

As I look around and think about the important trends that might provide some insight into where our industry is headed in the future, I believe the most significant trend is that end-user ideas have had more impact on the evolution of media technology and practice over the past several years more than ever before.

The role of the audience is changing. Important new developments that come to mind include: podcasting, video blogs, RSS feeds, Flickr, YouTube, BitTorrent, de.licio.us¹, etc. These developments have come from hackers, viewers, listeners, artists, young people at play, etc. through the sheer enjoyment of trying and creating new things. We've seen many new video cameras and digital audio recorders enter the marketplace offering excellent quality at steadily declining prices, however, what's more significant is the use people are putting them to with audio and video podcasting.

The qualitative difference in today's media technology landscape is that innovation is becoming the domain of end-users and is being guided by human needs, creative expression, social activities, and intellectual pursuits; rather than sales goals, quarterly profits, corporate research agendas, and marketing initiatives.

Walled-gardens give way to the cornucopia of the commons

Most of the innovation we're seeing in our industry is based in and around the internet and for good reason: there are practically no barriers to people creating new things and putting them out there for others to try out and provide feedback. Most internet standards have been developed around openness and inter-connectedness, which is the opposite of the

proprietary standards that have dominated our industry since its inception.

While the radio and broadcast spectrum, cable, satellite, and theater chains are balkanized and closed to innovators, the internet is wide open to anyone who has access to a web browser at home, their public library, or local café. Furthermore, most of the software tools people need to create new services are based on open source and thus free to anyone who wants to use them.

While electronics manufacturers and the FCC have been focused on issues of spectrum allocation and the upgrade from standard definition to high definition broadcast and "improving" the television experience, young people are spending less time in front of the tube and are instead communicating with friends through mobile phones, instant messaging, and hanging out in online communities like MySpace.com. The networks have seen their audience share drop, and the same is true for movie theaters with declining attendance.

In the 1980s MTV was the place to learn about exciting new music, today MySpace and legions of podcasters provide exposure to new musicians who would never get played on radio group stations. Filmmakers are using the internet and MySpace to promote their films, build a direct relationship with their audience, and evolve the medium, all at the same time. A notable example is Susan Buice and Arin Chumley and their film, *Four Eyed Monsters*. When their film failed to find a distributor, they started a video podcast, built a direct relationship with their audience, and now they are booking theaters around the country to show their film.

The media and entertainment distribution ecosystem is changing. The control of the rudder steering the

¹ These are described in the "Web Site" section later in this document

industry is slowly shifting from the boardroom to the wired teenager's bedroom.

Successful new companies and media makers are talking with their audience rather than at them

The flexibility of digital technology allows us to invent almost anything we can imagine and to re-invent the works of others. Because the rate of migration from research lab (or dorm room, garage, or even internet café) to the public is rising rapidly, end users become an early partner in the development process, not only as consumers, but as re-inventors.

An example of this is Flickr, a wildly popular online photo sharing community. The developers were originally creating an online game. Then they noticed that people were using the photo sharing features more than playing the game. Rather than follow their original objectives, they listened to their end users and engaged in a feedback loop. Developers would put out new features, end-users would comment on them and suggest others.

Recently YouTube came on the scene offering video sharing and they have clearly taken many lessons from Flickr. While YouTube's wild success merits mention in this article, their licensing terms are disturbing. For anything you post on YouTube they have the right to exploit it commercially. Other video sharing sites are not so greedy. The Creative Commons license was developed to allow sharing of media but not giving away your rights and preventing others from commercially exploiting your creative works without your permission. Read the terms of service of any media sharing site before you place your media on them.

The business model secret for a successful media businesses working in this new landscape of digital bits is counter-intuitive to business people used to dealing with physical atoms: you have to give something away in order to get something back from the community.

Convergence is old news

In the early 1980s the MIT Media Laboratory convinced early sponsors to hedge their bets and support the lab's research program. The lab predicted that the entertainment, information technology, and publishing industries were going to converge as a result of everything moving to digital bits. Today there is overwhelming evidence that we are well along the convergence trend. Current research at the Media Lab and other media research institutions indicates acceleration of the convergence phenomenon. Andy Lippman, Associate Director of the MIT Media Lab has said, "eventually every company in some way will become a communications company."

Radio and television are undergoing as radical a change as the computer industry did after the advent of the personal computer and print media did after the introduction of the web and the rise of blogging. And the change is happening at an exponentially faster rate. Consider the speed with which podcasting went from the realm of geeks in 2003 to making recent headlines in *Business Week* and *The New York Times* and catching the attention of advertisers and venture capitalists.

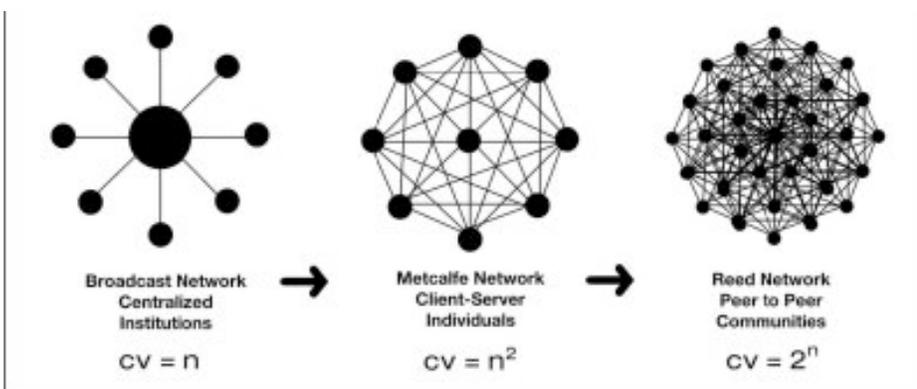
Media and entertainment is becoming decentralized, embedded in everyday objects, personally owned, and incrementally changed: a consumer industry versus a top down infrastructure. Disruptive innovations are emerging from surprising places and from new players, consider the challenge and/or opportunity podcasting presents to the radio and music industry, and BitTorrent and its ilk (wide-scale peer media distribution without the need expensive centralized servers and bandwidth) presents to broadcasters and the movie industry.

Why spend hundreds of thousands in ad production and millions in media buys when your target audience is fast forwarding over commercials with their TiVo and downloading media through the internet rather than tuning in the radio or watching television? You can make more organic, relevant media right at home or sponsor those who do. I am not sug-

gesting the end of radio and television advertising, but current trends indicate changes of great magnitude creating both threats to those who resist, and opportunities to those who embrace the change.

The key factor in these trends is Reed's Law and community effects

The philosophical position behind this article stems from the seminal work of David Reed, who articulated what is known as Reed's law. The law asserts that the community value (cv) of large networks--particularly social networks--scales exponentially with the size of the network. The reason is that the number of possible sub-groups of network participants is 2^n , where n is the number of participants. This grows more rapidly than the number of partici-



pants in a Metcalfe Network (e.g. the telephone system and early computer networks, in which value is a function of the possible connections, or n^2) or a Broadcast Network (e.g. radio and television, in which value is a linear function of n). This is why adding an additional 100,000 viewers to a television audience of 1 million is no big deal, but adding 100,000 network participants to a 1 million participant social network has a significant effect of the value of participation in the network.

I use the term community value because it's almost impossible to monetize fully the increase in value at the same rate as the value itself grows. Value may

grow rapidly as the community grows, but there are limitations to what people are willing to pay for products and services regardless of their value. The significance of Reed's law is that eventually the network effect of potential group membership can dominate the overall economics of the system.

Consider the rapid adoption rate of podcasting compared to the adoption rate of faxes or television. Auctions on eBay and social networking sites like MySpace and LinkedIn provide examples of sites that demonstrate the value of group forming. Networking pioneer J.C.R. Licklider wrote in 1968, "we form communities of common interest, not common location." Howard Rheingold's book, *Smart Mobs*, is interesting reading for anyone who wants to explore these ideas.

The revolution will be decentralized

Today's telecommunications companies follow a hierarchical broadcast communications model. In contrast to this, the trend is towards more decentralized applications (e.g. BitTorrent), lower innovation threshold (Mashups, open APIs), viral adoption (e.g. podcasting, music sharing), and accept-

able imperfection (e.g. the perpetual beta of Flickr and many Google and Yahoo! projects). Just like television did not displace movie theaters completely, the trend is individual nodes are playing a more active role in the communication process as devices (e.g. iPods and smart phones) gain more processing power and communication infrastructure evolves to support them within decentralized, self organizing systems of production and distribution.

The difference between today's media technology developments and the introduction of television is that no one is telling end-users and hackers what to do. Creativity thrives in an open and free environ-

ment. The entertainment industry continues to invest in suspect technology like content protection. The recent news about Sony's CD content protection scheme² unwittingly becoming a host for spyware comes to mind. After the whole ordeal they had to recall it, back to square one. Imagine if that money had been spent on new product or service development.

The theory of the long tail

Chris Anderson, editor-in-chief of *Wired*, wrote an article titled "The Long Tail" which appeared in the October 2004 issue of *Wired* (this evolved into his new book, *The Long Tail*). Anderson suggests that our culture and economy is shifting away from a focus on a relatively small number of mainstream products and large markets ("hits") at the head of the demand curve and toward a huge number of niches in the tail. As the cost of production and media distribution falls, there is less need to group products, services, and consumers into one-size-fits-all packages.

The internet provides us with a distribution infrastructure without the constraints of physical retail space and other limitations of distribution. Narrowly-targeted media is becoming economically attractive. Anderson predicts that the demand for products and services not available in traditional retail outlets is potentially as big as for those that are. The potential aggregate size of many small markets may rival that of the current market. You see evidence of this with services like the Film Movement DVD subscription service, niche market DVDs available through CustomFlix, and independent film distribution by IndieFlix and new digital distribution efforts like The Distribution Lab from Without A Box.

A brave new world

The media and entertainment industry has not been this exciting since the introduction of small 16mm cameras and a new culture gave birth to the cinéma

vérité movement around 1960. This time we've got not just a handful of privileged filmmakers and journalists with new tools in their hands, but hundreds of thousands, if not millions of producers of all ages and socio-economic backgrounds creating media and redefining the medium. These are exciting times and the opportunities are bounded only by our imagination and desire.

I'm optimistic that many key players in our industry are moving in the right direction rather than fighting the change. For example, David Kiley of *Business Week* wrote about Paramount Studios' success with *Hustle and Flow*, a niche film that was promoted through weblogs and fan sites. According to Kiley, thirty five percent of moviegoers surveyed said they were motivated to see the film through discussions on line. There are many more examples of this.

Related Web Sites

BitTorrent (<http://www.bittorrent.com>) is a peer-to-peer (P2P) file distribution architecture that makes it possible to distribute files on the internet without using large amounts of centralized server and bandwidth resources. When users download media using BitTorrent, they become part of a distribution network making portions of the file available to other users, creating a "torrent of bits." The software is infamous for its use for sharing copyrighted files, however, it has many legitimate uses as an efficient media distribution system.

Brave New Films (<http://www.bravenewfilms.com>) combines MySpace-like community oriented interaction with powerful tools for independent filmmakers to bypass standard distribution channels and reach their audience. They are also developing a network of volunteer field producers who are willing to lend their skills to host screenings, shoot video, email friends, research, hand out flyers, distribute DVDs etc. The firm was founded in the wake of the 2004 election after the spectacular success of Robert

² "Inside the Spyware Scandal" *Technology Review* (http://www.technologyreview.com/read_article.aspx?id=16812&ch=biztech), May/June 2006.

Greenwald's documentaries *Outfoxed* and *Uncovered*.

Creative Commons (<http://creativecommons.org>) offers flexible copyright licenses for creative works based on open source philosophy while retaining certain rights.

CustomFlix (<http://www.customflix.com>) provides independent filmmakers with on-demand DVD publishing and order fulfillment. When customers order your DVD, CustomFlix handles the duplication and ships directly to the customer. This reduces up-front costs, reduces risk, and avoids the exclusivity required by distributors.

del.icio.us (<http://del.icio.us>) is a social bookmarking site that allows you to share your favorite web pages, blogs, music, reviews, and more with friends, family, and colleagues using the del.icio.us and access them from any web browser. Users can add tags to links so you can search for your own and other people's favorites by tag like "HD" or "film."

Film Movement (<http://www.filmmovement.com>) was started by Larry Meistrich and offers film lovers a film festival in their living room through a monthly DVD subscription of films that have screened at top film festivals in the U.S. and around the world, most of which have won awards.

Flickr (<http://www.flickr.com>) is an online photo sharing community that enables members to view, upload, tag, and share their personal photos through the web. Images on Flickr can be included in blogs and linked to from web sites and an open API allows programmers to build new applications that interact with images on Flickr.

IndieFlix (<http://www.indieflix.com>) is similar to CustomFlix in terms of on-demand publishing and fulfillment but taking on more of a distributor's role. Unlike traditional distributors, IndieFlix signs non-exclusive deals with filmmakers, allowing them to distribute their film on their own as well.

Lulu (<http://www.lulu.com>) provides DVD publishing and fulfillment services similar to CustomFlix and IndieFlix, but also handles books, calendars, images, and music.

MySpace (<http://www.myspace.com>) is an online community that lets members meet friends and share photos, journals, music, and their personal interests. Members can see who knows who and how they are connected. Musicians, writers, artists, and filmmakers, are now using MySpace as a way to find their audience and establish a relationship with them.

Democracy Player (<http://participatoryculture.org/>), The Democracy internet TV platform provides a free and open source way to watch, share, and broadcast video on the internet. Their goal is to provide an open source set of video distribution tools and provide the audience with a new way to watch internet television. The Democracy Player sports a built-in Channel Guide which features hundreds of free channels. You can subscribe to podcasts, videoblogs, and Bittorrent RSS feeds.

Withoutabox (<http://withoutabox.com>) currently offers filmmakers the definitive one-stop-shopping festival submission site. They announced in January the launch of The Distribution Lab, a new program that will offer a suite of services to support filmmakers who plan to release their films themselves in various ways, including theatrical, DVD and on demand distribution. As part of the new program, participants will have access to ticketing, catalog management, accounting and online social networking and marketing solutions. A plan to offer DVD fulfillment and download distribution is also in the works. Up to six films will participate in the new Distribution Lab as part of a pilot program to establish and shape the new initiative.

You Tube (<http://www.youtube.com>) is a popular online community enabling members to watch, upload, tag, and share personal video clips through the web. Sharing is accomplished through blogs, e-mail, and personal video networks. You should be aware

that their licensing terms have come under fire by many video bloggers, read their terms of service and the commentary available online on this topic. There are many other competitors in the marketplace including Google Video, blip.tv, and the ongoing efforts of the Participatory Culture Foundation.

Glossary

Creative Commons License is a flexible copyright license for creative works based on open source philosophy while retaining certain rights, see Creative Commons (<http://creativecommons.org>)

Group Forming, for more information on this and related writings visit David Reed's web site (<http://www.reed.com/dprframeweb/dprframe.asp>)

Mashup is a term (derived from similar use in popular music) that describes web applications that combine content from more than one source into an integrated experience, typically accomplished using a public interface or API. An example is housingmaps.com that combines house listings from [craigslist](http://craigslist.com) with Google Maps.

Open API (Application Program Interface) enables you to write your own user interface to a web site or service. For example, Google Maps, Flickr, del.icio.us, and many others all allow programmers to build applications using data from their sites and even updating information with proper authentication. See Mashups.

Open Source is both a philosophy and a methodology in which developers of software or media share, rather than protect, their work. The source code is made available to the public, enabling anyone to copy, modify and redistribute the source code without the requirement of paying licensing fees or royalties. Open source evolves through community cooperation. Notable examples include Linux (a popular operating system), Apache (Web server used by a majority of web hosts on the internet), Firefox (the most reliable and secure web browser); WordPress (a

popular blogging and podcasting platform) and Wikipedia (the free encyclopedia).

Podcasts are audio or video content provided on a subscription basis and implemented as an RSS feed using a media file enclosure. A "podcatcher" like iTunes (<http://www.apple.com/itunes/>) or Juice (<http://juicereceiver.sourceforge.net>) is used to download and listen (or watch) the content. There are thousands of podcasts available including everything from personal rants to popular radio shows produced by NPR, PRI, WNYC, etc. In contrast to streaming media that download and play synchronously in real-time, podcasts are downloaded asynchronously prior to being played.

RSS (Really Simple Syndication) is an XML file format that allows Internet users to subscribe to web sites that provide access to their content on a subscription basis. This makes it possible for end-users to read news headlines from many different web sites using a single news reader or aggregator like NetNewsWire (<http://ranchero.com/netnewswire/>) for Macintosh users or FeedDemon for Windows users (<http://www.bradsoft.com/feeddemon/>) rather than surfing to many different web sites.

Video blogs (or vlogs) are weblogs that include video attachments, for example, see Rocket Boom (<http://www.rocketboom.com/vlog>), Steve Garfield's video blog (<http://stevegarfield.blogs.com>), and Four Eyed Monsters (<http://foureyedmonsters.com>)

Meta

This is a work in progress, please send comments, suggestions, and corrections to the author: David Tamés <david@kino-eye.com> Special thanks to Tim Andrews for the many conversations that inspired this article.

An earlier version of this article was published as "Macro Trends in Media and Entertainment," *Imagine*, Vol. 9, No. 90 (December 2005/January 2006).

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