

The Search For Convergence

When two or more technology trends meet, they are said to *converge*. The actual specifics of that convergence, the why, what, where, who, which, when, and how of it, can be a very interesting and elusive thing. The only aspect of a convergence greater than its power is its unpredictability.

Drivers

In order to attempt prediction of convergence, it is necessary to understand what is driving convergence.

Synergy Drives Convergence

When the whole is greater than the sum of the parts, you have *synergy*. One compelling driver for convergence is to exploit the synergy that arises from a successful convergence. In fact, the magnitude of the resulting synergy is an effective early predictor for convergence. It's the reason for convergence and your convergence won't last without it. One synergy that drives most of the examples of convergence in this article takes place between story telling and audience participation. A story can be much more exciting if the audience gets to participate. The challenge is to keep the group focused and engaged simultaneously.

Convergence Leverages Marketing

Another driver for convergence is the multiplicative effect in marketing. Over time, a company encounters more and more resistance to increasing market share. It can open multiple product lines to increase overall market share; however, outside of brand building, resources spent increasing one market have minimal affect on the other. That rule changes when you reach successful convergence. Resources spent increasing one market also increases the other. If your company is heavily invested in one technology that is poised to converge with another, you may open up that second market for free.

Targeting the Individual

Let's look at some decade old attempts at convergence and how they have faired in the marketplace.

Organizing Smaller, Faster, Cheaper

One of the computer's most strongest traits is in organizing. Helping users collect and organize data is what computers do best. One of the trends in the history of computers is in their form factor as computers grow smaller and

smaller. They transitioned from building sized mainframes to room sized mini-computers to desktop sized Personal Computers to laptops. The last decade saw the introduction of the palm top computer known as the PDA or *Personal Digital Assistant*.

With the PDA, vendors were hoping to find the right convergence between the organizing power of computers and portability. Wouldn't it be convenient, especially in urban areas where transit time is unpredictable, if you could carry a portion of your data in a hand held device with a day long battery life? But nobody could get it just right for a long time. There were technical problems concerning battery life and PC compatibility. A lot of early adopters got burned. The biggest problem was a lack of synergy. It turns out that a convergence between computers and portability wasn't enough.

That is when the telecoms stepped in. Convergence between the networked computer, media player, voice communications (i.e. cell phone), and portability provided enough synergy for a successful market. **Apple Computers**, who failed so dismally with the **Newton** so long ago, became the clear market winner with the recently released **iPhone**. They partnered with **ATT** who provided the network. They also revealed another ingredient in the recipe for successful convergence, persistence.

The Games That People Play

As high-fidelity audio and video replay capability became ubiquitous on PCs, laptops, and palm devices and as Quality of Service focused streaming technologies and high capacity disk drives became more available and affordable on the servers, computer vendors started looking for opportunities of convergence between computers and the media.

Active reading is another convergence that has been unfolding for over a decade. The genre of the game and of the printed word has combined into a form of literature known as IF or *Interactive Fiction*. The structure of a traditional book is a hierarchy of chapters, sections, pages, and paragraphs. The reader can choose to skip around in the structural hierarchy but the author intends for the reader to traverse the book in sequential order. The structure of an IF piece is a connected graph of rooms with things and characters in them. The reader must actively issue commands to navigate between rooms, examine and take things, speak with characters, etc. There is no implicit ordering for the reader to passively follow. It is like a story the way any narrative prose is like a story. It is also like a game in that the reader has objectives to accomplish, puzzles to solve, and barriers to overcome in the navigation of the piece. Two of the most popular platforms for authoring IF stories are **Inform** and **TADS**.

Active video is the convergence of movies and games, specifically the type of game known as the FPS or *First Person Shooter*. The FPS gets its name from the perspective of the player which is first person and the predominant modality of interaction which is to run around shooting at things. The FPS game has sub categorized into two types, an arena style game and a story line game. In the arena style game, small groups of people attempt to defeat each other in melee, cooperative frag-fest, or capture the flag combat. In the story line game, an individual progresses through a somewhat linear series of levels or maps. In the arena style FPS, there is no plot, only action. In the story style FPS, the player consumes the story through investigating a series of back story artifacts and watching cut scenes earned through obtaining in-game goals. It is the story style game that is converging with movies.

Convergence here is an iterative and incremental process. Games become more like movies by becoming less linear, by blurring the distinction between in-game play and cut scenes, by having more compelling and engaging stories, by using professional actors while filming the cut scenes, by more realistic scene rendering, and by using more professional sound recording. The game **Bioshock** is a recent example of this.

Movies are becoming more like games in two ways. Movies, such as **Final Fantasy 4: The Spirits Within** or **Lara Croft: Tomb Raider** are based on games. Films that incorporate cinematics similar to the FPS is another way that movies are converging with games. A recent example of this is the movie **Children of Men**.

Targeting Community

The recent rise to power of social networking sites such as **LinkedIn**, **Facebook**, or **MySpace** have prompted entrepreneurs and visionaries to look for convergence amongst community.

Active Reading for the Rest of Us

A forum is a place where people get together to exchange ideas. The more people who collect and can exchange ideas without losing focus, the more valuable the forum. The Internet is great at this kind of thing because the cost of disseminating information across space and time is almost negligible. Organizations devoted to work, business, school, hobby, and professions all seek to augment their offerings with web sites that publish articles and invite public debate. The forum serves as the centerpiece for this convergence. When the articles are categorized using an established taxonomy, then you have a Content Management System. When the articles are primarily categorized on when they were written, then you have a blog site. When the users can provide feedback to the articles,

then you have a forum. When the users can write and collaborate on their own articles, then you have a wiki site.

Innovation and the virtual community have fueled this convergence recently by adding *Virtual Reality* and the *Massive Multiplayer Online Role Playing Game*, or MMORPG, to the mix. The problem that they are trying to overcome is the impersonal nature of forum based communication on the Internet. The original innovator for this is Linden Lab's **Second Life**, a consumer oriented MMORPG. Traditional MMORPGs, such as **Runescape**, offer users specific goals in a consistent environment, often of a fantasy or swords and sorcery theme. Second Life has no goal other than what you make of it but is designed for people to meet, discuss, and shop. **Google** and **IBM** are also working on their own 3D MMORPG platforms for online 3D forum discussions but with more corporate oriented purposes.

The Convergence Between the Media and the Web

At one time, pundits predicted that the Internet would bring an end to the print, radio, and television broadcasting media. What has come about is almost the opposite as newspapers, radio stations, and television networks produce and promote their own web sites to enhance and augment their more traditional delivery and distribution systems. This kind of convergence solves the problem of scarcity in a broadcast media. Space in newspapers and time on radio or TV is scarce and, therefore, expensive. Disk space is cheap so web sites can serve as a searchable repository for archived content. Traffic to the web site can be directed to the traditional media through advertising. If you surf to <http://www.nytimes.com>, then you will be reminded a lot to subscribe to the New York Times newspaper.

In each of these examples convergence between two or more technologies/vendors was explored, with varying degrees of adoption and success, in the interest of expanding markets and/or adding value to current product and service offerings. We looked at what worked and what failed when computer manufacturers and telecoms converged. We looked at the currently unfolding convergence between the gaming industry and the movie industry. We looked at the convergence between traditional facetime organizations and social networking web sites. Finally, we explored how publishing oriented web sites can converge with traditional broadcast media.

The high risk/high reward nature of convergence is not for the timid but for those who are persistent, intelligent, and lucky enough to find the elusive convergence lies riches, fame, and a whole lot of bragging rights.