



More Serious Games: Recruitment, teaming and experience

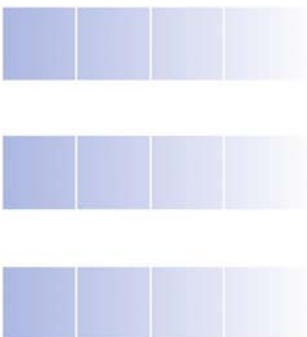
July 2006

Executive summary – Simulated environments are becoming second homes for millions of people worldwide. And it isn't just for kids. Businesses are using these environments for training and recruitment. Conferences are being held. Ideas are being tested. People are learning to work in a virtual space. It's too early to understand the full implications of Massively Multiplayer Online Role Playing Games and their online cousins, but there is little question that this will go beyond just entertainment. As games scale up to millions more participants and generate billions of hours of human activity per year, these environments may foreshadow an emerging business environment. Think of them as constructs of innovation, for connecting, reorganizing and redeploying hundreds of thousands of players around specific endeavors; and enabling them to self-organize, based on their capabilities, interests and reputational capital.

In this Executive Technology Report, Peter Andrews interviews Chuck Hamilton, who works in the IBM Centre for Advanced Learning (CAL) from Vancouver, British Columbia, our internal IBM team dedicated to learning excellence. CAL supports the drive toward the On Demand Learning Strategy as defined by learning leaders across IBM.

Peter Andrews To begin, what's happening within IBM in the area of Serious Play?

Chuck Hamilton IBM has begun to see Serious Play for Learning and Work as an important theme to consider across many lines of business. In 2006, the Global Innovation Outlook¹ sponsored deeper investigation of this space through IBM Research, supported by the Center for Advanced Learning. All of a sudden, this theme is getting on everyone's calendar.





Peter Andrews Any guess on why?

Chuck Hamilton Two reasons, I think. The first is that gaming is the social phenomenon of our time, where five out of every ten Americans, or about 145 million consumers and employees, play video games in one form or another.² The video-game market alone accounts for US\$22 billion of the US\$1 trillion global entertainment industry, growing to US\$55 billion in 2008.³ Approximately 92 percent of children ages two to seventeen in the U.S. have access to video games, and the mean age of the Massively Multiplayer Online Role Playing Game (MMORPG) player is rising steadily, to between 21 and 29 years of age.⁴

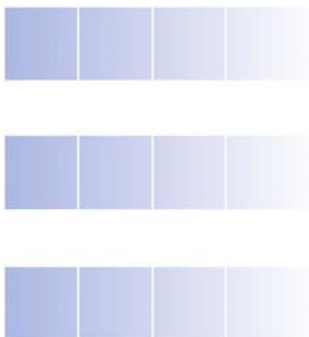
So most of us intuitively understand that when we play, we learn. The four great chords of mental health are the ability to love, to work, to play and to think soundly.⁵ It is remarkable how closely tied each [of] these chords is with one another.

The second big factor is that we are witnessing widespread organizational changes – that [result in] business increasingly [being] conducted by virtual, massively distributed, global teams undertaking multiple endeavors, rather than by a single command and control-based enterprise. This phenomenon is challenging established industrial-age organizing principles.

And we can quickly observe that games, as constructs of innovation, are connecting, reorganizing and redeploying hundreds of thousands of players around specific endeavors and enabling them to self-organize based on their capabilities, interests and reputation capital.

Peter Andrews OK, I'm hearing two big interest areas, learning and collaboration. Let's explore each. First, what can you tell me about the quality of learning in this space?

Chuck Hamilton Well, we know what sorts of things make for great quality in learning, and it seems that emerging play spaces mirror quality learning spaces. We are observing various play tactics in use that mirror tactics we are applying in our own learning design and delivery. Approaches that leverage self-representation, reputation creation, use of narrative, timely and frequent feedback, use of ranking and levels as guides, creation of new marketplaces, deep collaboration communication, far-flung teams, reaction to simulated and realtime pressures, simple and complex rule structures, shared task resolution, asset reuse and the use of virtual worlds are all explored in learning at work.





Peter Andrews That shows the potential. What about the limits?

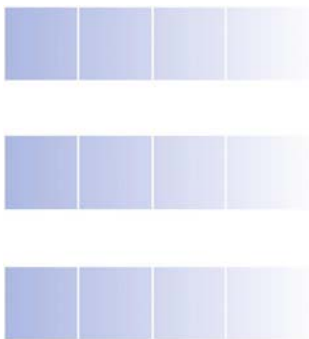
Chuck Hamilton There are limits here, as there are with all learning delivery options. First and foremost, the “garbage in, garbage out” principle still applies. Under engaging, poorly constructed play spaces yield little value. In addition, we need to watch for the “gotchas” of play like the trivial factor, exhibitionism issues, personal exposure concerns, as well as gender, geographic and other cultural biases, which can happen in all spaces.

Peter Andrews Role-playing is a classic technique in education. Are there any qualitative differences in using role-playing in a gaming environment for education?

Chuck Hamilton That is a current and topical research question, and the verdict is not in just yet. It appears that role playing helps avoid some of the “gotcha” items I mentioned, as you can play any role you like, regardless of who you really are. Secondly, you can fail in one role, reconnect and try another role, learning from each. I personally like that I can see highly collaborative connections between roles and players, making for deeper engagement.

Peter Andrews Speaking of collaborative connections brings us back to the self-organization you spoke of. Self-organization implies a high level of teaming in this kind of a virtual space. Is there any evidence that the teaming carries over to “real life”? That people become comfortable with essential practices and etiquette? That genuine social capital is built?

Chuck Hamilton Yes, the evidence is beginning to show that this form of self-organization transcends boundaries. Let’s take the game “America’s Army,”⁶ for example. This was once just a realistic glimpse of actual army work, carved into a play environment. But once the U.S. Army learned just how many skills were being developed and to what level, they have begun to use the game as a recruiting tool. Now the U.S. Navy is doing the same thing with its “Navy Training Exercise.”⁷ The self-organization skills applied within a virtual world carry through to our real world, and there are other examples.





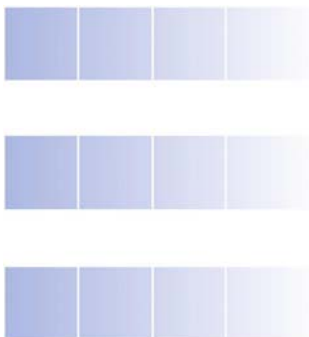
Closer to home, we need only look at the self-organization principles of the Open Source Community and how software gets built today to understand just how credible self-organizing virtual communities are becoming. We (IBM) already "get" this one and support it. Another real world example is L'Oréal, the cosmetics company, that uses a global recruiting game to bring people up to speed on products and services before they enter the interview process.⁸ L'Oréal wants to see people work locally and think globally, before engaging them deeper. L'Oréal has been doing this sort of play-based interview process for four years.

Peter Andrews More generally, could you update me on what's been going on in this arena? Do we know anything more about serious uses, for business and government, now than we did a year ago?

Chuck Hamilton Yes, we are beginning to understand a lot more about application, while at the same time I honestly can say that [the] more we know, the more we feel we need to know. The space is evolving at lightning speed. To gain an understanding of some of the options see the "Related references of interest" section at the end of this paper.

Peter Andrews On the topic of environments... There's a lot of buzz around Second Life, even a *BusinessWeek* cover story.⁹ Could you tell me a bit about it and some competing platforms?

Chuck Hamilton Sure. It's interesting that we now see more and more people talking about Play versus games, because of spaces like Second Life (www.secondlife.com). Second Life is an immersive world or Metaverse¹⁰ experience (meaning an online representation of reality, more play words for our lexicon) that is not really a game, although there are plenty of games going on within the worlds created there. It's about having a second life, another persona and representation in another space or world, over which you can have a much greater influence. We have a growing list of platforms and we have some new partnerships with companies to help create new platforms.¹¹ Hoplon is one such example.





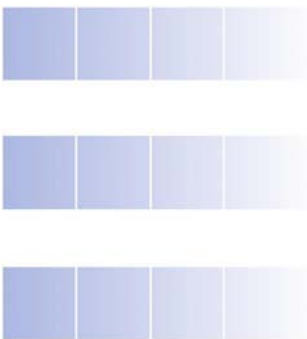
Peter Andrews Does gaming have a role in enabling innovation?

Chuck Hamilton Well, you have hit on a big topic with that question. If I was to circle one word on a chart, from everyone talking about Serious Play, it would be the word “innovation.” First, everyone already believes that there is plenty of innovation happening in these play spaces. Numbers suggest that games like EverQuest and Worlds of Warcraft may be among the largest economies in the world, and yet they don’t even exist in a real-world setting.¹² There are innovative business models going on here. Secondly, there is a real opportunity to teach innovation through a game and hopefully change behavior. If you meet up against barriers to innovation in play space and overcome them, you will recognize these characteristics in the real work space and overcome them [there] as well. This represents a catalyst for innovation.

Peter Andrews Any final thoughts? Ways people should participate?

Chuck Hamilton Consider this. We may only ever be in three spaces in our lives. They are: *at work, at home and at play*. Increasingly, many of us experience these spaces in the same physical or virtual spot. Think of play as a complement to work, and I think you will see endless opportunity.

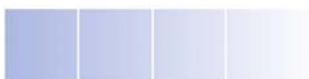
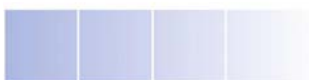
Technology to watch
Massively multiplayer online games (MMPOGs)
Presence awareness
Simulation
Web 2.0





References

- ¹ Global Innovation Outlook 2.0: Innovation opens up. IBM Corporation. http://domino.research.ibm.com/comm/www_innovate.nsf/pages/world.gio2004.html
- ² Beck, John C. and Wade, Mitchell. *Got Game: How the Gamer generation Is Reshaping Business Forever*. Harvard Business School. October 2004.
- ³ Ibid.
- ⁴ Ibid.
- ⁵ Blatner, Adam and Allee Blatner. *The Art Of Play: Helping Adults Reclaim Imagination and Spontaneity*. Brunner/Mazel. 1998.
- ⁶ The Official U.S. Army Game. America's Army. <http://www.americasarmy.com/>
- ⁷ Guttridge, Luke. "U.S. Navy Game Sets Sail: 'America's Navy' announced." Ferrago Intelligent Gaming Option. July 12, 2005 <http://www.ferrago.com/story/6230>; "Navy Training Exercise. <http://nte.navy.com/index.jsp>
- ⁸ "Graduating to L'Oréal: Business Games." L'Oréal. <http://www.loreal.com/en/ww/index.aspx?direct1=00002&direct2=00002/00002>
- ⁹ "My Virtual Life." BusinessWeek online. May 1, 2006. http://www.businessweek.com/magazine/content/06_18/b3982001.htm
- ¹⁰ "Metaverse" was coined by Neal Stephenson in his novel, *Snow Crash*. 1992.
- ¹¹ "IBM joins forces with small and medium game companies around the world to accelerate innovation." IBM press release. March 21, 2006. <http://www-1.ibm.com/services/us/index.wss/summary/imc/a1023996?cntxt=a1002583>
- ¹² Castronova, Edward. *Synthetic Worlds: The Business and Culture of Online Worlds*. University of Chicago. November 2005; Summarized online by Russell Brown. "Virtual Cheating. The New Zealand Listener. "Castronova studied the results of more than 600 EverQuest-related auctions, averaged them out and determined that a platinum piece was worth about one US cent – more than the Japanese yen or the Italian lira. EverQuest players were creating wealth at a rate of 319 platinum pieces (\$US3.42) an hour. This, he noted, was higher than the minimum wage in most countries. EverQuest's GDP per capita was \$US2266, greater than that of India or China. Norrath, the imaginary world in which EverQuest is based, was the 77th richest country in the world." http://www.listener.co.nz/issue/3343/columnists/2067/virtual_cheating.html;jsessionid=5CCE598A195C98D587171F408E815372

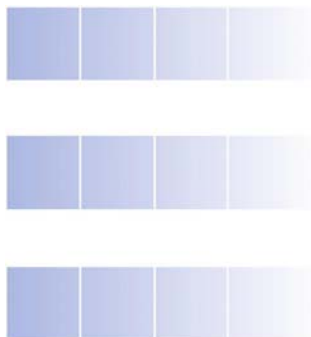




Related references of interest

Places, blogs and wikis

- Anarchy Online. A top ranked list of games. <http://www.mpog.com/index.cfm?bhcp=1>
- "Before 'The Apprentice' There Was L'Oreal's E-Strat Challenge." L'Oreal press release. September 9, 2004. <http://www.csrwire.com/article.cgi/3002.html>
- Boyd, Clark. "Games blur news and entertainment." BBC News, Discussion Points on Gaming and learning. September 16, 2004. <http://news.bbc.co.uk/1/hi/technology/3653294.stm> Definition of an MMORPG, see <http://en.wikipedia.org/wiki/MMORPG> and Web 2.0, see http://en.wikipedia.org/wiki/Web_2.0
- Brown, John Seely and Douglas Thomas. "You Play World of Warcraft? You're Hired!" *Wired*. April 2006. <http://www.wired.com/wired/archive/14.04/learn.html> Media X. Stanford University. <http://mediax.stanford.edu/index.html>
- "Games help you 'learn and play.'" BBC News, Discussion Points on Gaming and learning. January 18, 2005. <http://news.bbc.co.uk/1/hi/technology/4182023.stm>
- Jakobsson, Mikael and T.L. Taylor. "The Sopranos Meets EverQuest: Social Networking in Massively Multiplayer Online Games." Melbourne International Digital Arts and Culture Conference (MelbourneDAC), May 19 - 23, 2003, <http://hypertext.rmit.edu.au/dac/papers/Jakobsson.pdf>
- Mitchell, Alice and Carol Savill-Smith. "The use of computer and video games for learning: A review of the literature." Learning and Skills Development Agency, 2004. <http://www.lsda.org.uk/files/PDF/1529.pdf>
- PBS. "The Video Game Revolution – PBS Special project." September 2004. See The History of Gaming Interactive Timeline. <http://www.pbs.org/kcts/videogamerevolution/history/index.html>
- Prensky, Marc. "The Seven Games of Highly Effective People: How playing computer games helps you succeed in school, work and life." www.marcprensky.com/writing/Prensky-The_Seven_Games-FINAL.pdf
- Saveri, Andrea, Lyn Jeffery and Alex Pang. "New Entertainment Media: Transforming The Future Of Work." Institute For The Future, The Future Technology Horizons Program. August 2003, SR-813. http://www.iftf.org/docs/SR-813_New_Entertain_Media.pdf
- Second Life www.secondlife.com
- Serious Games - <http://www.seriousgames.org/about.html>
- Sailes, Paula. "An unconventional way to recruit." CNN.com International. May 25, 2004. <http://edition.cnn.com/2004/BUSINESS/05/24/go.e-strat.loreal/index.html>
- Social Impact Games - <http://www.socialimpactgames.com/>





Steinkuehler, Constance A. "Massively Multiplayer On line Games (MMOG) Research: Selected Papers & Presentations." University of Wisconsin.

<http://website.education.wisc.edu/steinkuehler/papers/Steinkuehler/CLS2004.pdf>

Stitt, Jason and Les Chappell, "Games that make leaders: top researchers on the rise of play in business and education." Wisconsin Technology Network. January 20, 2005.

<http://www.wistechnology.com/article.php?id=1504>

Terranova: Exploring Virtual Worlds. Commentary and another virtual world list.

<http://terranova.blogs.com/>

Books and magazines

Aldrich, Clark. *Simulations and the Future of Learning: An Innovative (and Perhaps Revolutionary) Approach to e-learning*. Pfeiffer, September 2003.

Buchanan, Mark. *Nexus: Small Worlds and the Groundbreaking Theory of Networks*. W.W. Norton. June 2003.

Gee, James Paul. "High Score Education." *Wired*, May 2003.

<http://www.wired.com/wired/archive/11.05/view.html?pg=1>

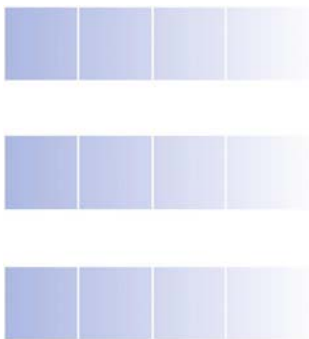
Michael, David and Sande Chen. *Serious Games: Games That Educate, Train and Inform*. Course Technology PTR. October 2005.

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Executive Technology Report is a monthly publication intended as a heads-up on emerging technologies and business ideas. All the technological initiatives covered in *Executive Technology Report* have been extensively analyzed using a proprietary IBM methodology. This involves not only rating the technologies based on their functions and maturity, but also doing quantitative analysis of the social, user and business factors that are just as important to its ultimate adoption. From these data, the timing and importance of emerging technologies are determined. Barriers to adoption and hidden value are often revealed, and what is learned is viewed within the context of five technical themes that are driving change:

Knowledge Management: Capturing a company's collective expertise wherever it resides – databases, on paper, in people's minds – and distributing it to where it can yield big payoffs

Pervasive Computing: Combining communications technologies and an array of computing devices (including PDAs, laptops, pagers and servers) to allow users continual access to the data, communications and information services





Realtime: "A sense of ultracompressed time and foreshortened horizons, [a result of technology] compressing to zero the time it takes to get and use information, to learn, to make decisions, to initiate action, to deploy resources, to innovate" (Regis McKenna, *Real Time*, Harvard Business School Publishing, 1997.)

Ease-of-Use: Using user-centric design to make the experience with IT intuitive, less painful and possibly fun

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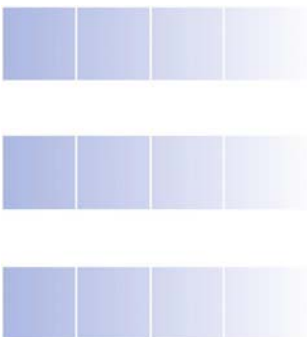
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