WOULD YOU CONSIDER USING ONLINE VIRTUAL WORLDS FOR MEETINGS?

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Technology analysts Gartner have made a number of noted observations about the move of 3D virtual environments into mainstream online use. Two years ago they predicted that 'by 2011, 80 percent of active Internet users would have a 'second life' but not necessarily *in* Second Life' (Gartner 2007). Knowing the focus of Gartner on business, this is a very strong statement about future corporate use of the virtual world. However, more recently they plotted the path of virtual worlds in the hype cycle, and determined that it was sitting at the bottom of the 'disillusionment trough'. (Virtual Worlds News 2009) The good news is that in Gartner's world, hyped expectation gives way to real benefit. Out of the nadir comes what Gartner calls the 'slope of enlightenment', indicating that mainstream adoption is less than five years away. It asserts that virtual worlds, in the company of Web 2.0 and cloud computing, are firmly set on this path.

For the moment however, many potential users consider virtual worlds are 'not there yet'. And whilst the education and training sector is marching in with more than mere curiosity, the true believers are asking why take-up in the enterprise sector is lagging behind. So would you consider meeting your customers and colleagues in a virtual world? This paper looks at why you might consider it seriously.

FIRSTLY, LET'S CONSIDER FACE-TO-FACE

In spite of the plethora of communication tools available in 2010, a face-to-face meeting, be it over a cup of coffee, at the boardroom table, or in a public assembly – has maintained its status as the pinnacle in human-to-human communication. Indeed, contemporary communication theory underpins what many instinctively believe: that the multi-modal, multi-sensory communication signatures of real life interaction put mediated communication modes and practices in the shade.

Social psychologists such as Howard Giles and Robert St. Clair (Giles and St. Clair 1991) have documented the social significance of speech; the way people adjust their manner to mesh with those whose approval they seek. Studies conducted by ethnographers Clifford Geertz and Michael Pacanowsky (Pacanowsky 1988) showed that a company's sense of corporate culture was formed by a deeply embedded mix of stories, rites, and symbolism. And as recently as August 2009, a *Forbes Insights* survey (Forbes 2009) of more than 750 business executives concluded that 'business executives overwhelmingly agree that face-to-face meetings are not just preferable but necessary for building deeper, more profitable bonds with clients and business partners and maintaining productive relationships with co-workers' (Forbes 2009, 2).

Physical meetings draw on all our senses: the gaze, the strength of a handshake, the tone of the voice, our demeanour and attire; a host of non-verbal cues, an embodied cultural historywhich allows us to read, decode and contextualise not only our fellow participants, but the organisation which we represent. Such perceptions create deeper layers of understanding that confirm, elevate or perhaps diminish values we place on each other. In terms of optimising collaboration and decision making, unmediated human-to-human communication is as good as it gets. Right? Well not necessarily. Often, face-to-face meetings are not possible, and indeed may not be preferable.

This paper presents the immersive web as an important component in the contemporary toolbox of business communications; further, it may, in some circumstances, be the 'best fit' option.

We are facing, or even have entered into, a period of new threats. Many of these threats have an impact on travel: carbon footprint, petrol price and swine flu, to name three of them. With the global financial crisis apparently on the wane, smart business leaders are looking to make decisions today which will help companies manage their businesses tomorrow, and one key success factor is the ability to transform a company into a collaborative mode, in order to better manage the increasing complexity of the world. How to combine the contradiction, on one side, of increasing and managing collaborative work – while on the other side, decreasing travel, whilst of course remaining (or expanding into) a global company? Might not virtual world applications have a role to play here?

A TIME FOR INNOVATION … BUT WHY, WHEN AND WHICH ONE?

Let us briefly recall what a virtual world is. It is a technology, either installed in situ or delivered as a service, which offers a 3D environment created by users, which allows people to move themselves, through representations called avatars, interact with each other through multiple channels (voice, chat, physical contact, etc.), and which enables common content to be shared in a synchronous manner. A virtual world is not merely a 3D interface to the web if it is without interaction; nor is it a merely a social network, which is barely synchronous; and it is not an online game (MMORPG), which retains the intellectual property of all objects created.

So much for technology. On for usage side, putting aside the social elements, corporate companies are becoming increasingly interested in the extraordinary facilities provided by virtual world platforms, amongst which, collaboration, training and learning are more and more commonly used.

After all, meeting in a virtual world not only cuts down expensive travel costs, associated down-time and reduces energy consumption (which 'ordinary' collaborative tools can do too, but cumulative experience demonstrates that virtual worlds bring much more to the virtual table than these), but also enables a distributed work force to come together in a unified, branded space and to interact with one another using their own voice or text chat, to upload and collectively edit documents, to live-stream audio and video, and to create or manipulate objects. Events can be recorded and monitored.

In addition, an important if not crucial part is the impact of the spatial element combined with the close human interaction that a virtual world experience engenders. The 3Dworld, coupled with immersive audio, provides strong cognitive cues that enhance collaboration. Voice itself has spatial qualities, dimming at a distance and getting louder when collaborators are located closer together. This allows people to intuit whom they can talk to at any given time, enabling multiple conversations to occur simultaneously. Likewise, the arrangement of the objects within the space provides a conversational context. If other avatars are mingling before an event, it is natural to engage one another in conversation, just as it happens in the physical world. This kind of small talk can often be a more effective relationship builder than the formal content of the event. And users' call cards can easily be dropped into one another's inventory. In terms of data sharing, looking at objects together is a natural activity. A group leader has visual cues of a participant's position in the room, what they can and can't see, or if they need help. Virtual

World advocates argue that utilisation of virtual environments leads to stronger relationships, effectively building better business practices.

Another primary characteristic of virtual worlds is 'persistence', an important consideration. It is the idea that even when an event is over, authorised users can access the virtual space any time. Team members in another time zone may wake up to find the results of real-time collaboration that occurred during the night.

So why wouldn't every company want to avail themselves of this opportunity?

In fact, an increasing number of Fortune 500 Companies are doing just that – including IBM, Sun Microsystems, Intel, Johnson & Johnson and Michelin. Sun is using the Wonderland platform to address the needs of the 50% share of its workforce who work remotely from home, on the road or at a customer site. Sun's virtual workplace, MPK20, is modelled on its physical Menlo Park campus, known as 'MPK', and whilst there are none of the physical limitations of bricks and mortar, workers can still meet informally in what Sun terms 'unplanned encounters' replicating the often valuable 'corridor' or 'water-cooler' chat that takes place in a physical office environment (Sun Microsystems 2009).

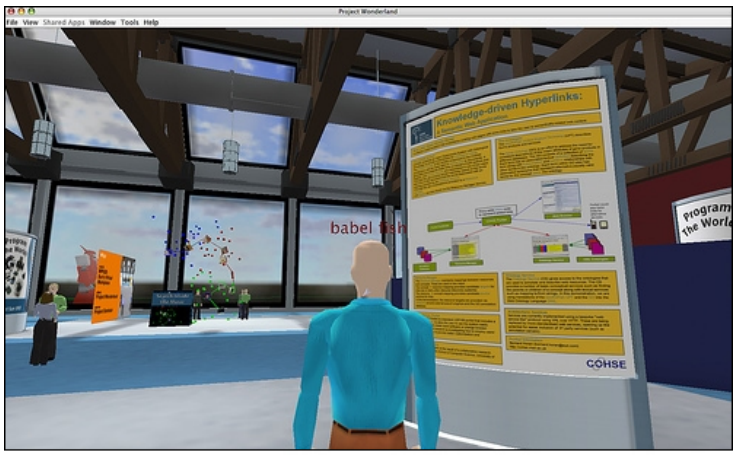

Figure 1 Sun Microsystems MPK20 uses the Wonderland Platform
Source: http://www.flickr.com/photos/bblfish/525394542. Permission granted under CC licence

In the case of IBM, the potential power of virtual worlds is revealed. IBM embraced what it calls 'the 3D Internet' in late 2006, allocating millions without factoring in a return on its investment. According to Forrester researcher Connie Moore, IBM's strategy was to experiment, develop usage organically and to assert itself as a forward-thinking company (Moore 2008). These aims have borne fruit. IBM's 'Virtual Universe Community' currently numbers 6,000 members, with its globally dispersed alumni jamming regularly to mentor, exchange ideas and pursue business leads. Software is being designed collaboratively. Significantly, IBM's virtual world experiences have placed the company at centre stage in the development of visualisation tools for monitoring complex, real world systems remotely.

IBM has made a very interesting study about the benefit of replacing a physical corporate meeting with a meeting in *Second Life*. (http://work.secondlife.com/successstories/case/ibm). Some 200 participants of the IBM Academy of Technology were trained to create their annual

meeting inworld, with keynote speakers and breakout sessions. The cost saving, including taking into account the cost of creating the world, was huge: $US 320 000; and on top of this, IBM had happy employees.

IBM not only demonstrated, in highly innovative terms, the way virtual worlds can be used, but earned the dubious honour of experiencing the very first workers' strike in *Second Life*, when some employees, critical of new regulations imposed by their managers, went inworld to demonstrate.

More recently, the Big Blue's reach has extended its interest to 'serious games' partnering with Stanford University professor and author of the seminal 'The Media Equation', Byron Reeves (Reeves 1996), to explore massively multiplayer online role-playing games (MMORPGs). They are particularly interested in Guilds, the agile decision-making teams that underpin the game-play in World of Warcraft. IBM is of the view that the way Guilds set goals, assemble, function and then disassemble, all remotely, provides important clues to future business management structures (IBM; Seriosity 2008).

Figure 2 IBM workers strike, 2007; the first in a virtual world
Source: http://www.flickr.com/photos/uniglobalunion/2373255111. Permission granted under CC licence

WHAT ABOUT TECHNICAL FEATURES?

Of course there is only one IBM, so where do SME's or even sole proprietors' needs fit into the emerging virtual world schema? Well, some of them have already acted, like *Implenia*, a Swiss based company which monitors buildings. It has created a virtual world for its operator to monitor the systems within buildings such as heating, cooling, security and electricity. Not only is the 3D interface considered to be a superior way to follow complex data, but the transmission of knowledge from one operator to the other (they are located in Australia, Europe and the US) has proven to be much more efficient, leading to a 30% cost saving on building maintenance. Interestingly, Implenia used *Second Life* to create a mock-up, but moved to its open source project, *OpenSim*, for the production.

Yes, there is a life outside *Second Life*. Linden Lab created the buzz, and in so doing, set up a launch pad for many competitors: *Olive, ReactionGrid, There, Metaplace, ProtonMedia, Croquet, RealXtend, Multiverse, Teleplace* (formerly Qwaq), *Unisfair, Unity, VastPark* to name but a few. Most virtual world platforms are delivered as services, or sold as software. Some are open source.

Second Life fits into the service model. It has a telecommunications operator-like architecture – that is to say, it is based on three components: the servers (one island is one server), the client (which is open source) and the authentication server. *Second Life* sits outside the firewall, thus preventing the full scope of an intranet application.

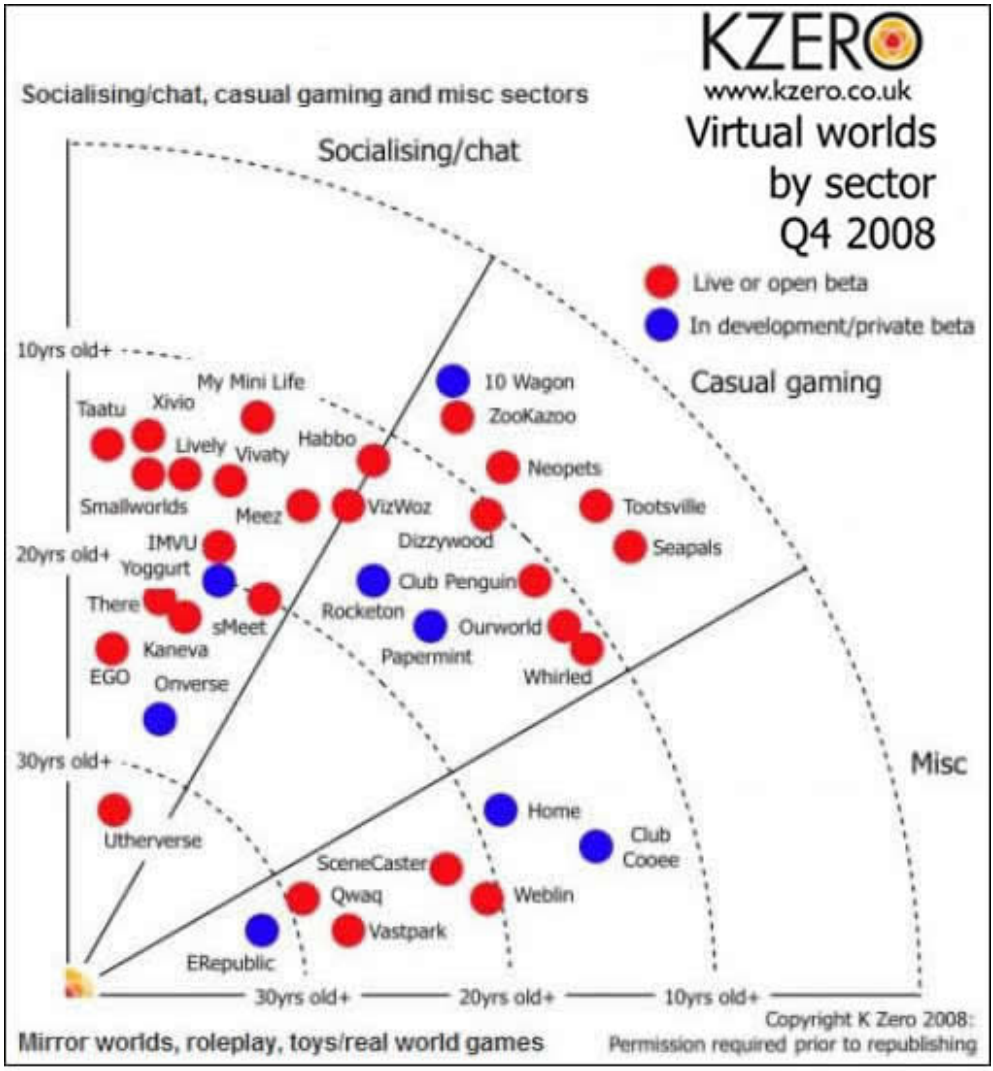

Figure 3 KZero Virtual Worlds Q4, 2008
Source: Nic Mitham, KZERO www.kzero.co.uk

Each virtual world platform is delineated by its own swag of features and there is probably no one single solution. Fortunately virtual worlds are inexpensive to run, with price points that reflect the level of service and support required. Many platforms offer free downloads, so theoretically, companies could be platform agnostic and try new products to their heart's content. However the down time required in becoming acquainted with each new world, plus the lack of avatar interoperability between platforms, may force companies to choose and stick to a given environment.

Some virtual worlds focus on a specific usage, like *Teleplace* which offers an environment allowing collaborative *work on documents. Both Teleplace and Forterra's* Olive have a feature for dropping and dragging documents directly onto a wall, the parallel being a white board or power point presentation. *Teleplace*, which has the US Airforce as a client, provides voice, text, and application collaboration scalability in the thousands range and operates both in the cloud and inside an enterprise firewall.

Figure 4 Teleplace Inc meeting space and document wall
Source: http://www.flickr.com/photos/metafuturing/2232817106. Permission under cc license

But in *Teleplace* and *Olive*, the avatars are undeniably basic, whereas the Canberra-based Simmersion's virtual world platform *Mycosm*, creates a look-a-like-avatar from photos of the user. In the open social world of *Second Life*, some users take avatar customisation to an extreme that can be alienating to the uninitiated. Status is obvious and for the first-time user, dubbed 'newb' this can be unsettling. Yet it is *Second Life's* continuously editable environment that has driven the success of the platform. Users create almost everything inworld, now thought to equal in virtual terms, one billion square metres. *Second Life*'s bevy of 'extreme users' who can trade and set up businesses, are a lightening rod to future virtual world modes and practices, especially in the way virtual economies might evolve.

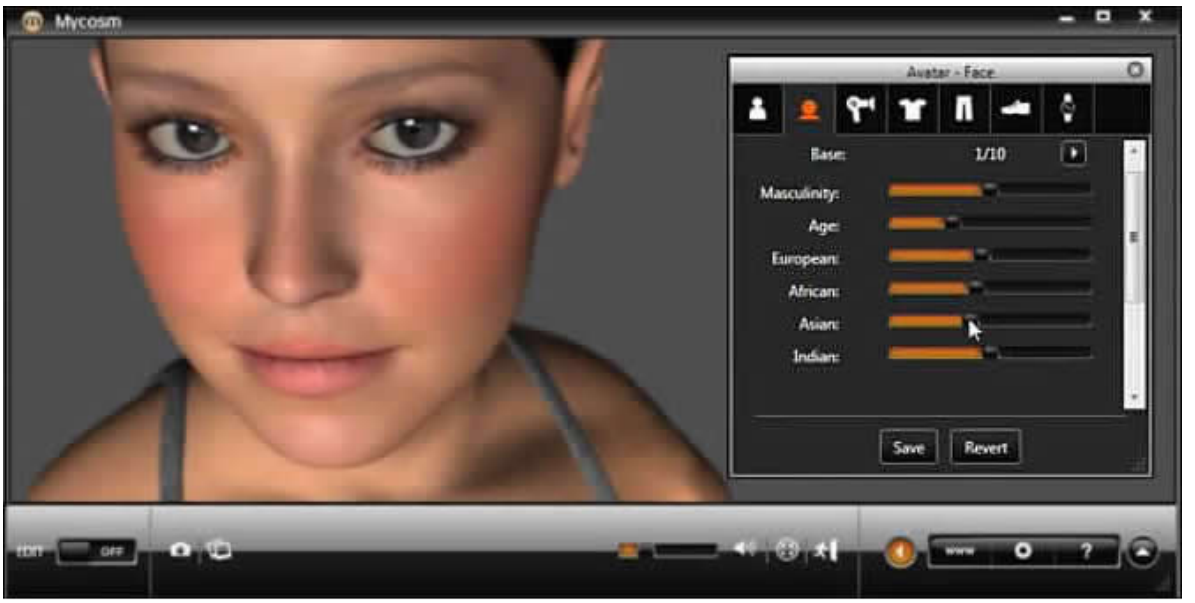

Figure 5 Simmersion's *Mycosm* features photorealistic avatars
Source: www.simmersionholdings.com. Printed with permission

Figure 6 A *Second Life* Newbie
Source: http://www.flickr.com/photos/yukali/2510267650. Permission with accreditation CC: photo by Yukali

Figure 7 Many seasoned *Second Life* Residents carry high status avatar skins and accoutrements
Source: http://www.flickr.com/photos/hosho/2927472363. Permission granted under CC licence

Second Life is a major actor, with its online service delivered as a closed space. On the other side, Melbourne start-up *VastPark*, offers an open-source product made of four components: the server, the publisher, the creator, and the client. The architecture is the opposite of *Second Life*: everything in *VastPark* is a mashup which is stored elsewhere and can be re-used virtually anywhere. Technology analyst Serge Soudoplatoff makes the point that this feature gives the home-grown product a distinct advantage over *Second Life*, in that almost everything is a plug-in. Soudoplatoff notes that connectors to Twitter, Flickr, eBay and Skype are already available (Soudoplatoff 2009).

One drawback is that IT departments may worry about opening ports and exposing security vulnerabilities for platforms that sit outside the corporate firewall.

As for the social element to virtual worlds, some users may feel uncomfortable with the concept of having themselves depicted as an avatar, especially given the media's florid reportage of people who use virtual worlds for relationship and recreational experiences. However, experience has shown that the adaptation effort is not huge, and that, after few hours of intensive training, corporate users 'get it', seeing the power of virtual worlds, the financial and energy savings, and the benefit of better collaboration.

Erica Driver, from Thinkbalm (2009a), a U.S. consultancy focussing on the enterprise sector's take-up of virtual environments, believes that the technology has moved from the innovator phase to the early adopter phase. Even so, she acknowledges that the inhibitors remain. In Thinkbalm's report 'Business Value Study, Q2 2009' (http://www.thinkbalm.com/wp-content/uploads/2009/05/thinkbalm-immersive-internet-business-value-study-final-5-26-092.pdf) inhibitors to wider take-up. These include inadequate hardware, corporate security issues, training and budget approvals. Organisations will need a champion within the ranks to drive the idea.

Thinkbalm coordinates over 320 such champions, under the banner of 'Innovation Community', an international cohort of lead users and developers who regularly network and trial different platforms and applications.

One challenge is how to use the immersive web's intrinsic and unique attributes as compared to merely transposing physical world ways to it. To this end, Thinkbalm established their 'Datagarden', (Thinkbalm 2009b) in *Second Life*. Here, visitors can experience rather than merely read reports. A visceral example of the Datagarden is 'The Chasm' (I know because I have tried it).

Erica explains,

> '… you can't quite see what is on the side. And you just take the risk and jump off. And as you walk up this parapet, you see there are a number of barriers which pop up in front of you. And the size of the barrier reflects the number of survey respondents who selected that barrier as something they are facing, in the research we did'.

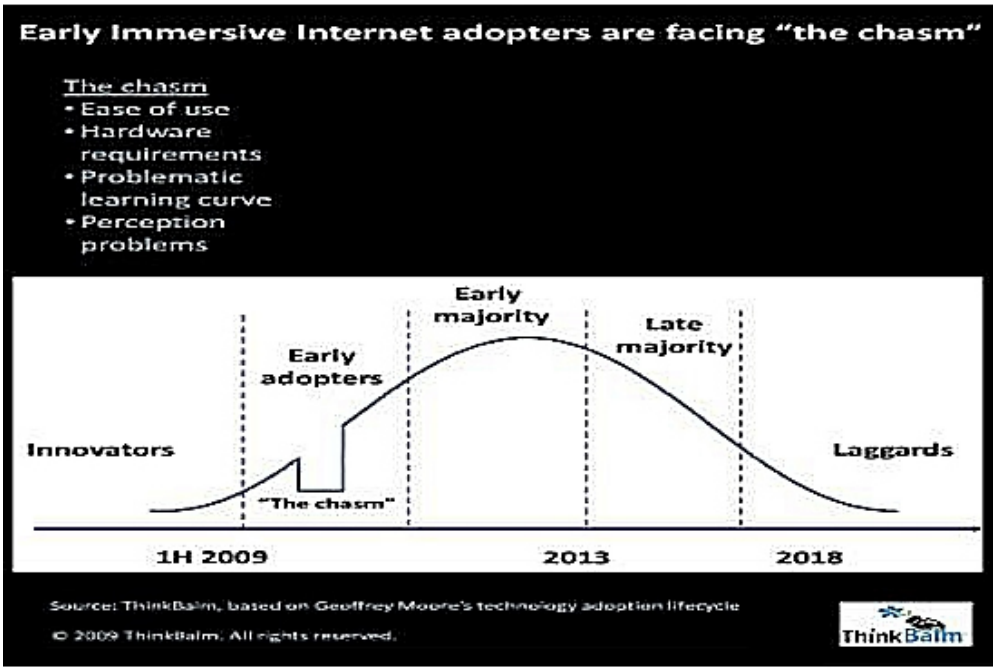

Figure 8 Thinkbalm's written report on slide share: to be read, not to be experienced.
Source: Erica Driver www.Thinkbalm.com

Figure 9 Thinkbalm's visual report using *Second Life*: to be experienced, rather than read,1. Facing The Chasm in Thinkbalm's Datagarden
Source: Erica Driver www.Thinkbalm.com

Figure 10 2. Once in Thinkbalm's Datagarden, users face 'The Chasm' in which , barriers to uptake pop up as obstacles in your path.
Source: Erica Driver www.Thinkbalm.com

SOME THOUGHTS ABOUT WHERE WE ARE HEADING …

But if a stumbling block in this early-adopter phase is deciding which specifications best suit, and how to route around internal corporate strictures, CTO's need also to ask if immersive worlds in themselves are indeed the right kind of solution for the task at hand. If the main focus is on, say, collaboration, then competing solutions might well be the more conventional ones such as email, telephone or even *ye olde worlde* face-to-face. Skype, in partnership with third party developers like Yugma, hosts free to low-cost web-conferencing, webinars and shared desktop views. Google Apps, Cisco's Webex, and Microsofts's Sharepoint utilise the storage facilities of the data cloud; and the new kid on the block, Box.net 2009, is working hard to carve a significant slice of this market with its mantra 'it should be easy for people to access, work with, and share all their content, wherever they are.'

In fact cloud computing promises to spin online collaboration into a new dimension. John Battelle and Tim O'Reilly, the technologists who gave Web 2.0 its name, have identified that the combination of data cloud, search and global positioning sensors on mobile devices, working in concert is delivering the Internet's next powerful rupture.

In their white paper, 'Web Squared: Web 2.0 Five Years On', they explain:

> 'Our phones and cameras are being turned into eyes and ears for applications; motion and location sensors tell where we are, what we're looking at, and how fast we're moving. Data is being collected, presented, and acted upon in real time. The scale of participation has increased by orders of magnitude'. (Battelle and O'Reilly 2009, 1)

Just as Google's page rank algorithm has evolved to provide more targeted outcomes, so the more we utilise these tools, the more useful they will become. The sum effect, they argue, will be the delivery of ubiquitous, ambient collective intelligence. It's not hard to divine that from that scenario,that powerful new organisational and cultural modes and practices will evolve.

This 'big picture' setting suggests what we might expect from online virtual environments in the near to short-term future. With the bulk of virtual world users aged between 4 and 12, (they play in age-specific worlds such as Neopets, Club Disney and Barbie World), today's first generation virtual worlds platforms will grow up alongside its constituents.

Upcoming generations will have a lifestyle of integrated virtual and physical world experiences. The sense of 'stepping into the Internet', as we now might term it, will be replaced by living in an increasingly sensor-ed environment. The immersive web will be a part of our web future, but certainly not all of it, as evangelists might have argued at the height of the hype cycle.

Virtual environments will continue their use for meet-ups, collaboration and trade events. Standards will come into play that will enable interoperability between different worlds, and we will use visualisation tools to represent the many complex systems that will augment our daily lives. This might include real time mapping in the car, the monitoring of our body systems and our environments or the personalised visual narratives that might appear on surfaces as we walk by. In fact, it will be cloud-based social applications that will drive the much-vaunted 'metaverse', and the immersive web, as we currently think of it, will reside within that. At that point it will be too late to ask 'when shall we move the Company to a new way of thinking and doing?' Better to ask it now.

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