Real Virtual Worlds SOS *(State of Standards) Q3-2008*

By Yesha Sivan, Shenkar College of Engineering and Design & Metaverse Labs. Ltd.

This is a brief essay, we call "think-pieces", designed to stimulate a discussion on a particular topic. For this series of essays we propose the following question:

"Consumer behavior in virtual worlds, is it really any different to the real world, or is it simply a case of 'old wine in a new bottle'?"

Keywords: consumer behavior; data mining; surveillance

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The purpose of this think piece is to call for inputs for an emerging worldwide effort to develop standards for virtual worlds. Such inputs will go into the build up of MPEG-V (Moving Picture Experts Group Virtual Worlds Standard) in the next three years. The MPEG group is part of the International Standards Organization (ISO). (This is a short summary of a presentation I gave in the Virtual Worlds London conference in October, 2008[1]).

Assumptions

Let's establish a few assumptions:

1. Virtual worlds are destined to become big, in the sense of meaningful, influential, and making money for various current and new players. Every aspect of our lives will be affected by virtual worlds. Virtual worlds are not only going to be part of our lives, they are going to enhance, improve, and better our quality of life. Much like the Internet, virtual worlds will allow us to do "older" things more effectively, and do other things anew.

2. Real virtual worlds are defined as an integration of four factors: 3D view of the world, community, creation, and commerce (3D3C).[2] The more we have in these factors the closer we get to real virtual worlds. In that sense IMVU, Second Life, and Entropia are more real virtual worlds than Club Penguin, World of Warcraft, and SIMS online.

3. Standards, as a concept and mechanism, are often misunderstood. People often link standards with competing concepts: open and free on one hand, propriety patents and limitation of creativity on the other hand. Like many other human constructs, standards are not inherently good or bad – it is what you do with standards that gives them value, be it good or bad.

4. Currently the virtual worlds industry operates more like the computer gaming industry than the Internet industry. Each developer, be it private (e.g., Linden, Forterra) or an open source (e.g., Sun Darkstar, OpenSim) is developing its own server, client, and rules of engagement. The inherent rationale of these efforts is a combination of "we know best" and "we will conquer the world." While this may be the case (see Microsoft Windows, Apple iPod, or Google Search), the common public good calls for a connected system like the Internet where different forces can innovate in particular spots of the value chain.

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[1] See http://www.dryesha.com/2008/10/virtual-worlds-sos-q3-2008-state-of.html (Retrieved October 11, 2008)

[2] Sivan Y. (2008). 3D3C real virtual worlds defined: The immense potential of merging 3D, community, creation, and commerce. *Journal of Virtual World Research*, *1*(1). Retrieved from http://jvwresearch.org/

5. On a personal note: I have a specific take on this work that should be disclosed. I am part of the EU based Metaverse1 project. It is a consortium of 35 organizations mostly based in Europe to set "Global standards between real and virtual worlds." This work will feed into the previously mentioned MPEG-V effort. Having said that, the efforts to develop standards for virtual worlds are just starting. It will take time. At this point, we are defining the path. We have a long way to go.

The Promise of Standards for Virtual Worlds

I just got new 3D goggles (Vuzix iWear VR920 3D goggles for US$400). This relatively inexpensive device allows you to view a virtual world by simply turning your head around. When you look up, you see the sky, when you look down you see your legs (your avatar's legs). When the item arrived, I had to install a special driver for Second Life. Even then, it did not work with the latest version of Second Life, which means an older version had to be installed (not a simple task if Second Life has mandated the latest version). Furthermore, it did not work with IMVU nor with Sun's Darkstar/wanderland.

In contrast, almost any computer screen that you connect to a computer works. Any mouse works by simply plugging it in. Standards mean better connectivity, ease of use (no need to install, follow versions, etc.) More so, standards mean more users will buy the 3D goggles and prices could go down to perhaps $200 or $100. Once standards are common, maybe other firms will find it lucrative to go in, thus raising competition, lowering cost, and gaining features and quality (which may not such good news for Vuzix).[3]

This is the most important value of standards. Standards allow innovation in specific points of the value chain, innovation that we need if we want to arrive the full potential of virtual worlds.

Often, the first example that comes to mind when talking about virtual worlds standards is the concept of "Travatar," an avatar that allows you to travel from one world to another. The discussion about Travatars that travel from Second Life to World of Warcraft and back is hiding a much deeper issue. What I want is one avatar (maybe two or three avatars), all mine, all walking in worlds that share the same basic interface, basic creation tools, basic friends list, and basic commercial system. I want to use the money I make from selling songs in Second Life to buy space to hold meetings in Qwaq. I want to build a sword in Second Life and use it in World of Warcraft. I want the same sword to be used in a rehabilitation treatment for Parkinson patients.

Standards do not mean uniformity. In the same manner that we have specialized web sites (Amazon, eBay, and YouTube) we will have special firms that deal with specific aspects of virtual worlds. These firms will compete on speed, cost, quality, service, and features. They

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[3] For 3D goggles see http://www.vuzix.com/ (Retrieved 10:59, October 11, 2008).

could decide what to focus on. At this point all the firms have to develop all components; they all develop avatar technology, access, servers, clients, etc. The market is not efficient.

Could you imagine having to use a different browser each time you need to go to eBay, Amazon, or CNN? People will not even start using the Internet. This is the current case with virtual worlds. It is no wonder that Second Life, at one time, had 1 million new users a month – only to keep less than 5000 of them 6 months later? (I'm being generous here).

Today virtual worlds use the **monolith approach** model. This model works for the gaming worlds (World of Warcraft, etc.). Each gaming firm develops its own stack. By controlling the client, the server and the rules of the world, the gaming firm used to gain value in terms of game play. In contrast, the Internet has a **stacked approach** with protocols (e.g., HTML, TCP/IP, DNS, Flash).

One key benefit to a stacked approach is enhancing "innovation points." Each firm can focus on specific points of the chain and innovate. One challenge: virtual worlds are much more complex than the internet (x 100) and more intertwined. (Avatars need to wear clothing in different islands and still communicate with their friends).

Current Status of Standards in Virtual Worlds

Thinking about standards for virtual worlds is a daunting task. The following set of charts depicts some of the concepts, names, and efforts that need to be examined and their methods of analysis. After I pressed this in the Virtual Worlds London Conference in October 2008, I received even more concepts and additions. The goal here is not to present an exhaustive list but more a method of thinking.

We list the concepts involved:

How to present the issue?

Lively   Microsoft Earth   IBM Standards on
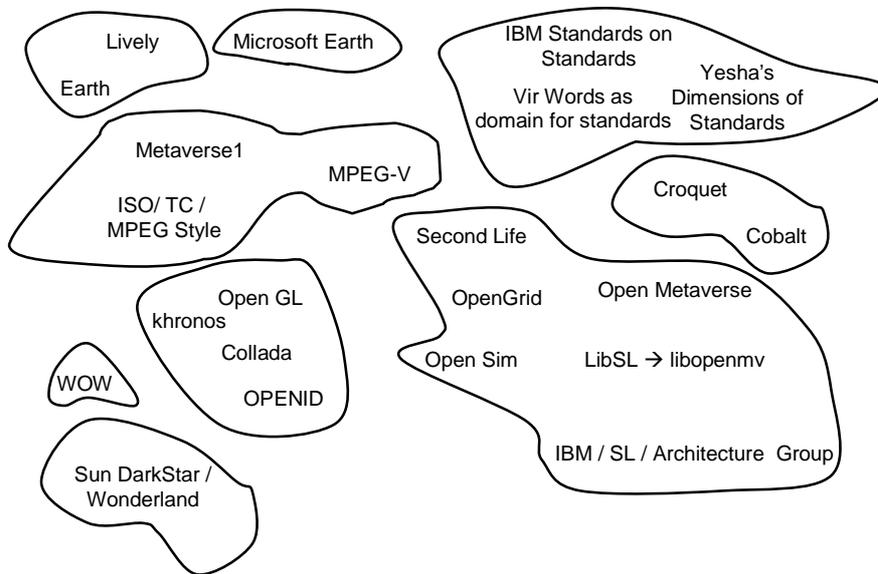   Standards   Yesha's
Earth   Dimensions of
                                         Vir Words as   Standards
                                      domain for standards   Standards

          Metaverse1
                              MPEG-V
                                                              Croquet
     ISO/ TC /
     MPEG Style   Second Life   Cobalt

               Open GL   OpenGrid   Open Metaverse
          khronos
                    Collada   Open Sim   LibSL → libopenmv
     WOW
                    OPENID

                                              IBM / SL / Architecture Group

     Sun Darkstar /
     Wonderland
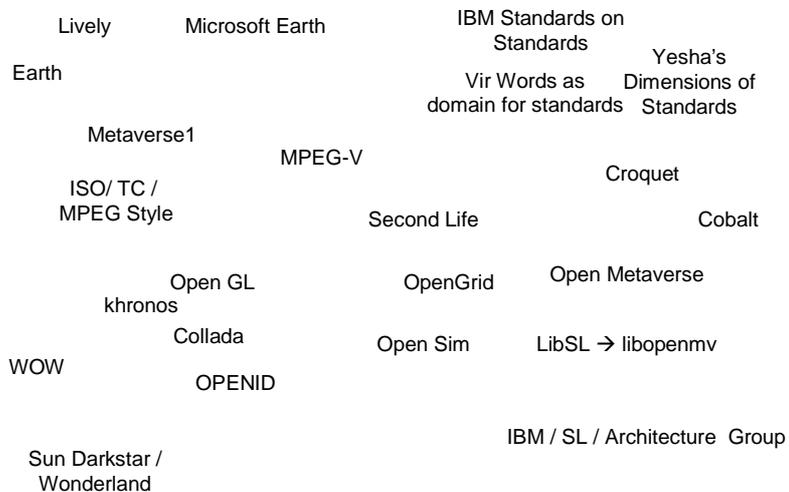
We cluster them in areas:

How to present the issue? – One Cluster Scheme

Lively   Microsoft Earth   IBM Standards on
                                         Standards   Yesha's
Earth   Dimensions of
                                         Vir Words as   Standards
                                      domain for standards   Standards

          Metaverse1
                              MPEG-V
                                                              Croquet
     ISO/ TC /
     MPEG Style   Second Life   Cobalt

               Open GL   OpenGrid   Open Metaverse
          khronos
                    Collada   Open Sim   LibSL → libopenmv
     WOW
                    OPENID

                                              IBM / SL / Architecture Group

     Sun DarkStar /
     Wonderland

The bottom line of this initial analysis is:

1. There are many players in the field, all with various goals and takes on the world. Some of these players may have a direct and meaningful contribution to the field.

2. Standardization itself is shifting. The recent spat between IBM led OpenDoc[4] and Microsoft ECMA OpenXML[5] (Blind, 2008[6]) has exposed – again – the tension that this process generates. I assume that tension means value. In that regard see IBM Standards on Standards.[7]

3. Currently the Open-second life ecosystem has potential to turn into *the* standard. The co-opetition (a new word that mark both a competition and cooperation) between Linden and Open source work seems to advance the state of the art. Yet, some voices look at this endeavor as Linden's attempt (planned or not planned) to stall the larger goal of standards. (Standards are not always about technical value; they are more often about business models).

### *Conclusion: A Call for Participation in MPEG-V*

MPEG-V is a new effort under ISO (the exact label is ISO/IEC JTC 1/SC 29/WG 11/N9902). MPEG is a deadline driven process (final deadline is October 2010 for publication of ISO standard). The current top level MPEG-V architecture is now in its third version. We do not expect this to change much. Real work must take place now.

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[4] OpenDocument. (2008). *Wikipedia, The Free Encyclopedia*. Retrieved November 8, 2008, from http://en.wikipedia.org/w/index.php?title=OpenDocument&oldid=250404349

[5] Office Open XML. (2008). *Wikipedia, The Free Encyclopedia*. Retrieved November 8, 2008, from http://en.wikipedia.org/w/index.php?title=Office_Open_XML&oldid=250256848

[6] Blind K. (2008). *A welfare analysis of standards competition: The example of the ECMA OpenXML standard and the ISO ODF standard*. Paper submitted to the 6th ZEW Conference on the Economics of Information and Communication Technologies.

[7] See http://www.research.ibm.com//files/standards_wikis.shtml (Retrieved October 11, 2008)
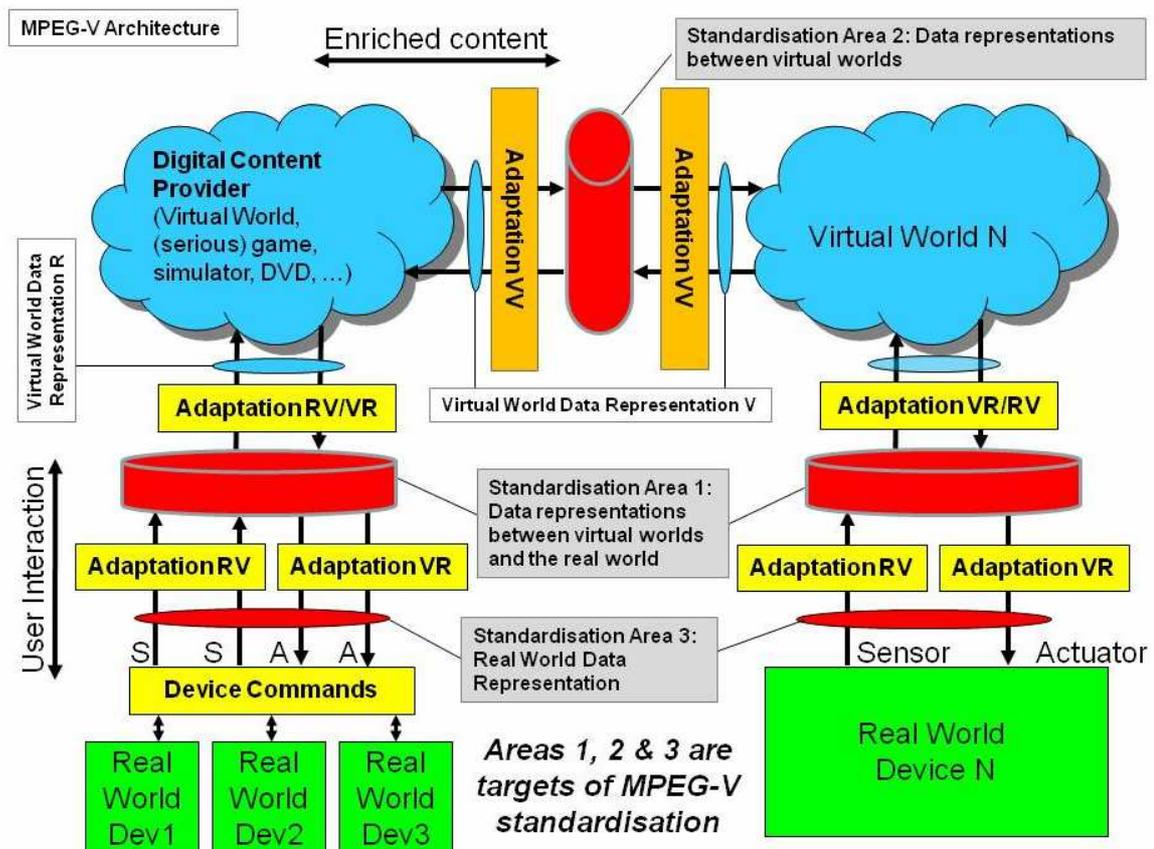
Currently, the Metaverse1 project (www.metaverse1.org) is a large contributor to MPEG-V. In fact, one of the core goals of Metaverse1 is to make the standards, and MPEG is the channel for that. In some ways, Metaverse1 strives to build the GSM of virtual worlds, allowing both features, and business value to its participants. Metaverse1 includes about 35 organizations, both big firms (Philip, Alcatel–Lucent, Telefonca) and small firms and research organizations (like my own Metaverse Labs, Ltd).

In the weeks following the MPEG-V publication we have received further inputs, specifically from Wonderland (https://lg3d-wonderland.dev.java.net/), Web3d (http://web3d.org/), Openmetaverse (http://www.openmetaverse.org/), and various business people in virtual worlds ("merchants"). We have also looked more closely at various building blocks such as OpenID (http://openid.net/) and Collada (http://www.collada.org).

There are many forces in this area, many competing technologies, business models, and personal, corporate, and public interests. The effort to develop standards is a political effort, in the sense of relevant and not relevant forces, in the sense of participation and leadership.

Let's make virtual worlds relevant. Be a leader – join the standards effort.