



Business in Second Life: an introduction

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Version: General Distribution

Date of Publication: May 2007

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Established and supported under the Australian Government's Cooperative Research Centres Programme



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Executive Summary

Due to its unique range of creative, experimental and commercial possibilities, the online persistent virtual world *Second Life* is attracting significant interest from business and service industry sectors throughout the world. Big name brands such as IBM, Dell, ING, Philips Electronics, Telstra, and the Australian Broadcasting Corporation have entered this immersive environment.

Though return-on-investment is not readily measured, canny early adopters are realising the potential in understanding how virtual worlds work, particularly in regard to social networks and peer-to-peer exchange. For this reason, active engagement with residents, one which goes beyond merely establishing a shop front, is advocated.

Second Life is emerging as test bed for new ideas, where real world prototypes can be released at low cost, with direct feedback from users significantly enriching the design process and leading to innovative or unexpected results. The process is enhanced by the nature of its residents who, typically, are techno-savvy, playful and demonstrate a high receptivity to new ideas.

Many residents are classified as user-producers, which is why the lead innovation models come not from real world companies hoping to import their services but from the in-world eco-system where virtual start-ups have sprung up to support residents. The demand for virtual products and services, underpinned by a digital rights management arrangement where creators of in-world content retain their IP, has spawned new businesses in the area of content creation, retail, conference and event hosting, land development, media services and financial services.

While virtual businesses can be profitable, few are significantly so, as they deal in Linden currency which amounts to mere micro-payments (L\$275 = approx US\$1). However in-world service providers deserve close attention as their methods shed light on ways in which social networks and peer-to-peer exchange drives trade. This points the way ahead for real world businesses seeking to monetise services in today's 'pull-driven' consumer environment. Virtual-to-virtual business methods may well lead the thinking in devising business models for future 3D web-based services, particularly as add-ons to the 'mirror worlds' of *Google Earth* and Microsoft's *Virtual Earth* emerge.

1. Second Life in Context

Snapshot

Second Life is a persistent, permanently editable, 3D online world. User uptake is growing at around 20% per month. Since its release in 2003, over six million people have downloaded the 30 MB client, registered and logged on. Of these, a significant number look around, never to return. Failure to find relevance, impatience with interface issues, and lack of 'hours at the wheel' all conspire against the uptake. Yet for those with sufficient interest and skills, and there are currently over about 600,000¹ of them, activities and participation equate with the diverse practices afforded by the World Wide Web - but with the added value of three dimensional visual representation and immersive, shared experiences.

Second Life (SL) is terabytes of information, objects and activities, almost entirely user-generated. It has become a complex virtual world with its own economic and cultural practice. At the busiest times, there can be upwards of 35,000 people 'in-world' at the same time. They represent a diverse community ranging from curious onlookers to special interest groups, educational institutions, media companies and global corporations.

Self-reported data assembled from user registrations show that over one hundred countries are represented, the largest community coming from the European Union, with Germany now exceeding the United States in number.² 'Residents'' average age is 33. Women comprise around 40% of the virtual population.³

Because the user base represents many cultures with different value streams, Second Life's creator, Linden Lab, is absolving itself of the role of policeman and overseer of civil codes. Linden recognises that with Second Life's growing internationalism it does not wish to impose a "California-centric set of rules on the virtual world". Rather, it states, "we want to facilitate residents banding together and creating their own civic centres around their unique ideals and ambitions".⁴ This is becoming feature driven, with groups given the ability to fine

¹ The explosive growth in registrations is not a true indicator of SL's user rates. Retention rates are a contentious issue. Technology theorist Clay Shirky and journalist David Kirkpatrick (Fortune Magazine) are amongst those who have pursued the statistical aberration. Clarification from Linden shows that people who have logged in more than 30 days after their account creation date varies from 15% - 23 % on a month to month basis. Of the 3.75 million registrations to February 2007, about 10% -15 % are considered 'active' users. Up until 2004, when Second Life was in its first phase of adoption, retention rates were as high as 43%. At time of writing there are regularly 25 -30,000 concurrent users at any one time.

<http://www.valleywag.com/tech/second-life/a-story-too-good-to-check-221252.php#c730781> and
<http://money.cnn.com/blogs/browser/2007/01/why-second-life-numbers-do-matter.html#comments> and
http://nwn.blogs.com/nwn/2006/11/new_world_numbe.html

² <http://www.comscore.com/press/release.asp?press=1425> March 4, 2007

³ Reuters 'Europe takes lead in Second Life users' (blog) Feb 9, 2007
<http://secondlife.reuters.com/stories/2007/02/09/europe-takes-lead-in-second-life-users/>
also 'State of the Virtual World - Key Metrics, January 2007'
<http://blog.secondlife.com/2007/02/09/state-of-the-virtual-world-%E2%80%93-key-metrics-january-2007/>

⁴ Town Hall Meeting, Nov 16, 2006
<http://blog.secondlife.com/2006/11/16/todays-town-hall-with-philip-now-available/#more-519>

tune the rights and responsibilities of their members. Users can establish ban lists, make their land parcels invisible, estate owners can assign a covenant to their land that explains the rules they wish visitors and residents to abide by. In short, Linden wants its users to set their own values, rules and goals. A growing number are deeply engaged in the wider debate as to how this virtual world runs and for the advent of multiple virtual worlds. Whilst users must agree to Linden Labs' terms of service there are no prescriptions. Technical limitations and hitches aside, Second Life is a place for doing stuff; as the Second Life's mantra goes, 'your world, your imagination'.⁵

This is Serious Mum

Second Life is not a game. Categorised as a multi-user virtual environment (MUVE), SL is closely aligned with massively multiple-player online role-playing games (MMORPGS) populated by such titles as *World of Warcraft*, *Everquest*, *Ultima II* and the *Sims*, but it diverges from them in three key ways:

- Users create the content. Virtually every object, terrain and animation is the creative work of its membership. They use the built-in scripting tools to construct objects or actions from their imagination.
- Users retain the intellectual property of their creations and are free to trade, copy or exploit it in the virtual or real world environment, resulting in a robust virtual economy with real world consequences.
- There is no top down game plan or overarching narrative. Users determine their activities, ways of grouping and social codes. Second Life 'residents' therefore eschew the notion that they are playing a 'game', (although games may be created and played within the construct) and prefer to identify themselves as citizens of a synthetic world, a 'metaverse'.⁶

Web 3.D

In the evolutionary map of web practice, the advent of virtual worlds such as Second Life is a logical next step. Consider the trajectory of web-enabled communication, evolving from the 2D text and graphics web pages of the 90's, then to audio and video streaming and the advent of always-on chat rooms and instant messaging. More recently, the rise of 2.0 web applications such as blogs, wikis, Flickr, YouTube and MySpace, have produced the mediate-yourself phenomenon, providing not only user-generated content but also the means to build massive social networks, the effect of which is only just beginning to be understood. Second Life represents the next level in these practices for it allows socialisation and collaboration to

Civic Centre, see http://secondlife.com/newsletter/2006_12/html/civiccenter.html
Terms of Service, see <http://secondlife.com/corporate/tos.php>;
<http://blog.secondlife.com/2006/11/16/todays-town-hall-with-philip-now-available/#more-519>

5 Second Life homepage. <http://secondlife.com>

6 Stephenson, N 1993 *Snow Crash* Roc Books : London

take place in an online spatial world, with users co-located on the screen, seeing the same thing.⁷

Concurrently, the ‘flat web’ is being challenged by ‘3D Web’. We see this in the mirror-world technologies of *Google Earth* and Microsoft’s *Virtual Earth*. Both are being primed for the development of location specific information and 3D object layering. This development comes at a time when social network web sites too, are becoming increasingly graphic; Korea’s *Cyworld* and Australia’s recently launched *Cooeey*⁸ supply digital personas and virtual accoutrements such as furniture and clothing accessories to help users differentiate themselves and better define their presence on the Web. These are purchased with tokens which have been bought with real money. Users ‘gift’ objects to friends, or use them to dress up their home page. Originally designed for women, *Cyworld* is embedded in the national consciousness, having penetrated 40% percent of the entire population and 96% of Koreans in their twenties.⁹

It is not hard to foresee a time when Digital Earth along with social network sites may well mimic 3D synthetic worlds like Second Life, particularly if avatars were to enter the picture. If the technological challenges could be overcome, it would blur the conceptual boundaries between Second Life’s metaverse and other virtual environments, furthering the prospect of such worlds becoming interoperable, with services such as education, business and media flowing across them. It also points to a mass uptake of 3D online digital services.

2. Doing Business in Second Life

Fundamental to the evolution of business activity in Second Life is user access to the ‘architecture of participation’, to use Tim O’Reilly’s term.¹⁰ Just as the combination of the handy-cam and the video upload capability of YouTube has resulted in thousands of user-generated film clips (disrupting established production and distribution practices of Hollywood and networked television in the process), so providing Second Lifers with free 3D modelling and scripting tools has enabled creativity and ideas to flourish.

The 3D building blocks, ‘prims, are assembled with mouse commands and onscreen menus. Highly flexible, prims can be manipulated into new shapes or imbued with physical

⁷ See Gary Hayes’ analysis at Personalize Media (Blog)
www.personalizemedia.com/index.php/2006/08/27/virtual-worlds-web-30-and-portable-profiles/+gary+hayes+MUVE+3D+web&hl=en&ct=clnk&cd=1

⁸ <http://www.cooeey.com/>

⁹ Dr. Hyun-Oh Yoo, President & CEO, SK Communications (Keynote) MILIA 2007
<http://www.miptv.com/App/homepage.cfm?appname=100526&moduleid=288&campaignid=12338&iUserCampaignID=37787366>

¹⁰ O’Reilly, T 2004 *The architecture of participation*
http://www.oreillynet.com/pub/a/oreilly/tim/articles/architecture_of_participation.html

characteristics such as gravity and inertia. Textures (image files applied to objects), can be added by using or modifying templates, or imported using standard graphic files such as .jpegs. Content can be constructed at any time on the Grid, either on the user's own land or in public building locations, known as sandboxes. Scattered throughout regions, sandboxes provide space for large or shared projects.

Almost everything other than unformed terrain is created by SL residents. Cory Ondrejka, Chief Technical Officer at Linden, puts their contribution into perspective. In September 2006, he told the Austin Games Conference, "The idea that (SL) could be created by a centralised team is untenable. A different way of looking at it: 160,000 user hours per day and quarter of that time is creating content... If we had to pay them, we'd be paying users \$720 million to make content per year". Noted Microsoft blogger Robert Scoble describes Second Life as "platform within a platform" within which you can "store files ...build a video game ...a music store... a dance studio... a city...a helicopter...or a video screen that plays whatever content you want... or a fountain that spits blood."¹¹ Content creation, which creators own and are free to monetise, is driving the in-world economy, with spending on virtual products during May 2007 amounting to more than 1.5 million US dollars per day¹².

Not all commercial activity involves monetary exchange. Eric Von Hippel points out in his 2005 book, *'Democratizing Innovation'*, that direct feedback from users can significantly enrich the design process and lead to innovative and unexpected end results.¹³ Real world companies are finding this to be the case with Second Life by releasing virtual prototypes at a low cost in order to gain an in-depth understanding of its impact. *Starwood Hotels* for example, launched 3D designs of its new boutique hotel series 'Aloft' and monitored the response and comment from the SL community whom it believed was representative of the new product's target market. Similarly, Philips Electronics has set up in Second Life with a view to scouting the innovation niches. It believes that harvesting data may lead to a rethink or even an entirely new approach in their modes of practice and product development and that the future of design is in the co-creation of products.¹⁴

IBM, has joined the Second Life user-innovator brigade with an eye to developing 'v-business' applications. Using Linden Lab's modelling, simulation and graphics capabilities it has set up an island where the tools can be used to explore what it calls 3rd Generation User

¹¹ <http://scobleizer.com/2006/03/27/second-life-is-an-os/>

¹² <http://secondlife.com/>

¹³ Hippel, E V 2005 *'Democratizing innovation'* Available under creative commons licence at <http://web.mit.edu/evhippel/www/democ1.htm>

¹⁴ <http://www.newscenter.philips.com/About/News/article-15577.html> 29 Nov 2006

Interfaces (3GUI) which the Big Blue believes will lead to more intuitive ways of handling complex government and enterprise back-end systems.¹⁵

The demand for virtual products and services, underpinned by a digital rights management arrangement where creators of in-world content retain their IP, has spawned new businesses in the area of content creation, retail, conference and event hosting, land development, media services and financial services. Leading design company in the EU region, *Rivers Run Red*, caters to real world businesses wanting to explore virtual environments. Calling itself a 'virtual worlds portal', Rivers Run Red stages major events such as BBC's 'One Big Weekend' music festival and Duran Duran's live concert. More recently, it is the machine behind ING's ambitious 'Virtual Holland' project. High profile US market leader *The Electric Sheep Company*, who event-managed live broadcasts of keynote speakers at the 2007 World Economic Forum at Davos inside Second Life, is building a suite of information services to enhance virtual world experiences, such as trending and measurement tools, e-commerce, and social networking.

Enter, Real World Business.

The potential that immersive interactive environments hold for real world business was highlighted by Gartner Inc's analysis of the hype and reality around virtual worlds, presented at its April 2007 'Gartner Symposium/ITxpo 2007: Emerging Trends'. The technology research group forecast that "by the end of 2011, 80 percent of active Internet users (including Fortune 500 companies) will have a "second life," but not necessarily in Second Life", alluding to the anticipated proliferation of virtual worlds in general.¹⁶

Gartner's vice president Steve Prentice asserted that "The collaborative and community-related aspects of these environments will dominate in the future" and that "the majority of active Internet users and major enterprises will find value in participating in this area in the coming years". Less concrete was his assessment of the commercial opportunities in virtual worlds, describing them as 'significant' but 'limited to niche areas, which have yet to be clearly identified'. He surmised that companies should investigate and experiment with virtual worlds but advised limiting investment until greater stability and maturity ensues.

Undoubtedly, Second Life's many teething problems - including lag time, lack of security and infrastructure challenges that are causing teleports to fail, inventory to disappear and transaction loops to stall - are cause for such caveats. In spite of this, the business worlds' fascination for Second Life continues to grow. Many well known brands have jumped in; some perhaps having been pushed by PR advisors all-too-aware of the publicity such a move

¹⁵ Wladawsky-Berger, I http://irvingwb.typepad.com/blog/2006/11/irving_in_a_vir.html

¹⁶ 'Gartner Says 80 Percent of Active Internet Users Will Have A "Second Life" in the Virtual World by the End of 2011' April 24, 2007
http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId=news_view&newsId=20070424006287&newsLang=en

affords. High status stakeholder IBM has expanded its interests and is now running two dozen islands, some private and some public. The buzz around AOL's new site, still being trialled at the time of writing, suggests that interactivity is being taken to a new level.¹⁷ And Second Life has instituted a corporate business council, a group of 30-40 big businesses including Cisco, to help it address the problems of doing business in-world.¹⁸

Stanford Research Institute Consulting - Business Intelligence (SRIC-BI) has established a 'Virtual Worlds Consortium', further evidence of business' serious intent. The Consortium has been set up to provide in-depth analysis and evaluation of virtual worlds. It sees the nascent platform as a way for business organisations' to 'increase the level and scope of their innovation activities, attract and retain talent from Generation Y employees, and provide more engaging and attractive learning environments'.¹⁹

Selected Business Activity in Second Life 2006 -7

Company	Activity
Major League Baseball	Held a simulcast of its home-run derby within Second Life, with video streams of the event shown on screens within a digitized baseball stadium. The decision to experiment in this way was due to MLB.com's robust online community and chat rooms.
Sun Microsystems	Established Sun Pavilion on Sun Island. Holds press briefings, runs development conference and training for Java Technologies. Island open 24/7 with pointers and videos. Also, in-world launch of 'Project Blackbox', a server packed into a shipping container. Virtual versions available in-world.
Intel	Retail branding exercise: 'Live without Boundaries', to launch its Duo-Core Centrino processor. Message: that Laptops powered by Intel's new product sets new standard for power and battery life. A renowned virtual builder occupied a Madison Ave computer shop window for 72 hours. Using SL scripting tools, the scripter recreated the scene outside her real world window into Second Life. The event was uploaded on YouTube, resulting in thousands of hits. The blogosphere was buzzing. http://www.nyclivewindow.com/ http://www.youtube.com/watch?v=WTNGcmPKseI
IBM	Holds workshops for developers on a private island using Second Life scripting tools. Held a block party for its alumni of past and present employees. IBM have replicated two of their Real World sites: their R & D Centre Hursley Labs in England, and the Almaden Research Centre in California. One of its pubic islands hosts the electronics store Circuit City where customers can browse and explore features of new equipment.

¹⁷ Talamasca A, 'AOL gets it' <http://www.secondlifeinsider.com/2007/02/02/aol-gets-it/> Feb 2, 2007

¹⁸ Wagner M, 'Using Second Life as a business- to- business tool' (Blog) April 26, 2007 http://www.informationweek.com/blog/main/archives/2007/04/using_second_li_2.html

¹⁹ <http://www.sric-bi.com/vwc/>

Toyota	Product launch of 'Scion XB', aimed at hip young market. Virtual version of the car dropped onto people in Second life. Cars initially given away in-world were then offered for purchase, 300Linden (1.25USD). Users can fully customise the model by building new features. Why? Driving in-world carries a certain cache as most residents fly or walk. http://video.google.com.au/videoplay?docid=-3443834733977158362&q=second+life
Reuters	Bureau has dedicated SL reporter who files lead stories, profiles and economic activity (appears as blog). In-world location houses videos screens and discussion areas where residents commune and exchange views. http://secondlife.reuters.com/ .
BBC	Purchased island and staged its annual 'One Big Weekend rock concert in-world. Attendees were able to see avatars of their favourite artists, as well as watch and listen to live streams of the bands on stage in Scotland. Organisers agreed this added a new level of interactivity for those who were unable to attend physically.
Amazon	Is exploring new technologies for integrating in-world searching with real world purchases. 'Life2Life' combines search in Second Life with Amazon's Remote Shopping Cart system.
Warner Brothers	Has pioneered 'The Listening Party', an interactive promotion of artist's music. For Regina Spektor's new release Warners built a chic Manhattan loft. As Spektor's music played, the loft's lighting and décor changed to roughly illustrate the song lyrics: a new marketing experience that was part video game, part music video. Avatars were able to hang out, chat and listen. The in-world release pre-dated the actual release.
Adidas	Avatars visiting its shop could try on virtual versions of its real world range. The 'Microride' model offered "bounce and flexibility with minimum weight". Avatars found themselves pogo'ing whenever they took a step.

The Virtual Business Eco-system

Arguably, the lead innovation models come not from real world companies hoping to import their services into the virtual environment but from the in-world eco-system where virtual start-ups have sprung up to support residents. Though profits may be tiny in real world terms²⁰, (L\$275 = approx US\$1), Linden surveys have determined that 90% of such businesses have a 'Positive Monthly Linden Dollar Flow' (PMFL) relative to the cost incurred in participating.²¹ Virtual-to-virtual businesses commonly re-invest in-world rather

²⁰ A noteworthy exception is Ansche Chung Studios, the Chinese based virtual property development company that creates idyllic lifestyle precincts within Second Life and on-sells to virtual retailers and residents. Recognised as the most successful virtual company, its land holding equates 8,800 acres and in November 2006, the company released news of a one million US dollar net profit http://www.anshechung.com/include/press/press_release251106.html

²¹ This does not include Linden Lab Charges such as membership fees and land acquisition. Typically this would include the cost of content creation such as stock and showroom fit-outs, marketing, business and finance applications employment of avatars and the employment of other avatars. The amount of time invested was not measured. See http://secondlife.com/whatis/economy_stats.php

than transfer any gains into real world currency, and instead are experimenting with new business models such as building incentive structures for scouting, and introducing reward systems for producer-users.²² These ideas may point the way ahead for virtual world business models over time - with likely flow-on effects to real world business need of new ways to monetise services which 'pull' consumers demand, when and how they want it.

Goods can be purchased on site or through virtual trading posts such as SLXchange and SLBoutique. Popular items include building components, in-world games, avatar apparel, furniture, weaponry, animation such as dance moves, mouth movement, even interactive body parts. As in the real world, users love to have their avatars meander through retail precincts and try demo's of animations, hairstyles or clothing, even entire avatar skins. Many malls are equipped with ATM amenities where users can top up their Linden accounts. The name of the creator hovers above the object. Clicking on it involves a debit of Lindens from the purchasers account and unlike ordering online, the goods, albeit virtual, arrive the instant a payment is made. Trading need not take place in a retail environment. Sometimes desirable objects are found in unexpected locations. There is plenty of free-ware, with scripters giving away content as a marketing tool, or for altruistic reasons. The wild card for small scale developers is that 'cool' designs are much in demand. A small idea can catch on and spread rapidly, with its creator having the right to fabricate and exploit it in the real world.

Content creation drives innovation. Entrepreneurs abound, developing in-world services to enhance resident life. Virtual newspapers can be picked up at newsstands. One click and they lodge in your inventory. Graphically luscious magazines, dedicated to SL business, fashion, design and arts/culture are strategically located at popular shopping areas. One intriguing business tool is the 'Sales Droid', a fully customisable sales assistant which seeks out avatars, starts a conversation with them and gives out the items related to a product/business. The Droid then emails its owner with an inventory of contacts for follow-up business. The cost of the Droid' is \$1000Linden.²³

Residents can also put their avatars to work. They can become employed as mannequins, or 'campers', unmanned avatars who rest at an appointed site to make it appear more populated. Club owners or events with promotional tie-ins are likely employers. The campers may have animations assigned to them such as browsing a shop, cleaning windows or dancing in a night club. This adds appeal to a location and boosts traffic to the site, as avatars flying overhead see groups assembled and presume there is something interesting going on. Like Google, higher traffic also raises a site's profile on the events and locations menus.

In-world entrepreneurs tend to take an opportunistic approach to the 'extra legal' environment where there are no clear guidelines about trade practices such as real-world brand protection. Unauthorised in-world use of real world intellectual property is being used to attract

²² Analysis by Raph Koster <http://www.raphkoster.com/2007/01/24/second-life-under-an-economic-microscope> and <http://www.cydeveys.com/blog/index.php/2007/01/25/is-second-life-really-just-a-pyramid-ponzi-scheme/>

²³ http://www.slboutique.com/index.php?p=buy&itemid=130359&user_avatar_id=15748&nh=1

customers to sites where they are then offered other services.²⁴ This unregulated environment might be off-putting to established business, but risk should be measured against the flipside. They are for the most part, a free thinking cohort with many skill sets, inventive in their problem solving, playful and highly receptive to new ideas. They are prepared to immerse themselves in discourse, much like the Web's early breed of 'netizens', as the proliferation and activity of SL related blogs and podcasts attest. Finding solutions to close the gaps of exploitation or misuse comes to those who choose to understand rather than discount the communities that use them, a lesson which the entertainment industry is learning all too slowly. Savvy corporate early-adopters therefore see Second Life as a lightning rod to identify the habits and needs of participants within 3D collaborative social worlds.

CASE STUDY: Timeless Prototype, In-world Entrepreneur.

Master scripter 'Timeless Prototype' has created the popular 'multi-gadget' a kind of PDA utility worn as an ear piece. Multi Gadget is available at various shopping sites for around \$230 Linden. The once-off purchase entitles users to receive updates and add-ons free of charge. He has created a system to do this entirely in world. The product is user-led, with residents suggesting their ideas. His scripting skills are such that new features can be quickly incorporated into the device. They include a multi-chair feature to enable groups to sit down, a private sky station to zoom up to at call, (people like to use these at clubs with select friends) super fast avatar flight speeds, language translation tools and thought balloons which tell other people that you are busy. Prototype shows how a high tech start up might work in the virtual world; he is a market researcher, developer, factory and distributor all in one. His business required no investment or materials other than a computer and bandwidth. Time, technical skill, and being in touch with users were his assets.²⁵ This business model opens the way for a new breed of entrepreneur. Because virtual business lacks significant economic or physical limits, technically skilled individuals in developing nations could participate earning US dollars in the process. To do so they would need access to broadband and PayPal, services not widely available outside the OECD. However the rule of "infinite shelf space and infinite shelf life", described by Chris Anderson in his book 'The Long Tail', applies, permitting scripters, in theory at least, entry into a previously prohibited industry²⁶.



Timeless Prototype and his Timeless Gadget Shop - a workshop in Second Life that leverages the combined talents of Second Life scripters to promote more sales by being under one roof ²⁷

²⁴ Article on illicit use of Apple logo in Second Life at Steve Rubel's blog 'Micro persuasions'
http://www.micropersuasion.com/2007/02/visit_the_apple.html

²⁵ Au, Wagner James 'Business Model Prototype' New World Notes (blog)
http://secondlife.blogs.com/nwn/2005/06/business_model_.html

²⁶ Anderson, C 2006 'The Long Tail' Hyperion

²⁷ <http://www.timelessguru.com/development>

3. Linden: The Company behind Second Life.

The creator of Second Life is the San Franciscan outfit Linden Lab, a unit of the privately held Linden Research Inc. Investors include the venture capital firm, Benchmark Capital, and Jeff Bezos, chief executive of Amazon.com. At the helm are entrepreneur, physicist and developer of streaming-video Philip Rosedale, Linden's chief executive, and Mitchell Kapor, software pioneer (Lotus), venture capitalist and founder of the Electronic Frontier Foundation, the Board's chairman. Linden Lab raises revenue from land sales and monthly maintenance fees which premium subscribers pay. (See appendix). Some revenue is raised from its currency exchange the LindeX on which the Linden Dollar, floats.

In January 2007, Linden open-sourced the download client, the upshot being that users can improve, add on and modify the platform to better service their individual needs. If Linden's strategy is correct, open sourcing will lead to killer apps. Its February 2007 purchase of a proximity-based voice application that allows users to speak to one another in-world with spatial verisimilitude may well be the first of these.²⁸

Ultimately, CEO Rosedale thinks Second Life will grow into a 3D web browser and according to Kapor, liaisons with Mozilla are afoot²⁹. Already, there is a strong web presence in Second Life: web pages can be displayed on objects ('HTML-on-a-prim'); snapshots taken in Second Life can be posted on Flickr; SLurls, a location based link from a web page to Second Life 'teleports' users directly to an in-world location providing they have Second Life installed and 'click-through to the web' is common place, particularly for accessing library resources and conducting e-business such as book purchases.³⁰

Linden is looking at management tools linking in-world and real world financial services and casting further a field, is aiming to port Second Life to other platforms such as mobile and Internet Protocol Television (IPTV). Reuters reports that Spanish company *Comverse* has advanced this goal, having developed software which integrates SMS and instant messaging and the streaming of mobile video directly in-world.³¹

The move to Open Source paves the way for users to host their own servers (represented as land sims) rather than have them centrally housed. Linden believe that in time, a hundred million servers would be required to handle traffic and acknowledge they cannot service this demand themselves. Whilst the licensing and Digital Rights Management (DRM) consequences of this long term plan is problematic, (arguably, if individuals hold the API everything in-world could be copied), Linden see this as the only way forward, given the platform's growth trend of 20% per month. Thus the current main business model consisting of land sales and maintenance, (de facto, servers and bandwidth), would change. Some

²⁸ <http://blog.secondlife.com/2007/02/27/bringing-voice-to-second-life/#more-804>

²⁹ http://www.businessweek.com/innovate/NussbaumOnDesign/archives/2006/10/second_life_as.html and Reuters 'Interview with Mitch Kapor, Davos World Economic Forum' 26 Jan 2007

<http://secondlife.reuters.com/stories/2007/01/26/interview-with-linden-lab-chairman-mitch-kapor-in-davos/>
³⁰ <http://slurl.com/about.php>

³¹ see <http://www.babasucks.com/tag/mozilla/>, and <http://secondlife.reuters.com/stories/2007/02/08/comverse-demos-second-life-on-mobile-phones/>

pundits believe advertising will fill the revenue gap. New revenue streams might also include charging for avatars to bear user's real name (as with Web domain names) or scaling membership fees according to use and purpose. Then again, new business models, as yet unimagined for both residents and Linden, are likely.

What happens to Linden Lab over time is the subject of speculation. In 2006, a new chief financial controller came on board - with experience in IPO's - prompting the idea that Linden may become a public company.³² Gartner's Steve Prentice speculates that Linden could be taken over by a techno-giant such as Microsoft or Google which have the necessary search and server capacity.³³ Kapor and Rosedale both deny such a shift. Motivated by their success to date, entrepreneurial instincts and passion for the metaverse concept, they proclaim that (for the moment at least) Linden Lab is here to stay.³⁴

4. The Local Scene: Australians Working in Second Life

As of April 1st, 2007, Australians who *actively* participate in Second Life are thought to be close to 8,000, representing 2.43% of the overall SL active community³⁵, a rise from January's figure of 1.48 per cent.³⁶ Accurate numbers are difficult to establish, as is the case with the greater SL population due to the difficulty in distinguishing between those who merely register, and those users who continue to log-in on a regular basis. However there is ample evidence that Australia is increasingly involved, both institutionally and in business. According to Australia's lead developer, Gary Hayes, who is responsible for creating the Telstra, AFTRS and ABC sims, 'A cluster of Australian islands is important as a foundation and seed to learn from each other and build an Australian community and have brand fights at this experimental stage'.³⁷ According to Hayes, attendance at Australian sites is exceptionally high, with Telstra and the ABC regularly outpolling high profile international sites.³⁸

Amongst the expanding in-world activities of Australians are:

Austrade and Cattle Puppy Productions

The Australian Music Office at *Austrade* combined with new media producers, the Melbourne based *Cattle Puppy Productions*, to hold a large scale concert in Second Life as part of the

³²Walsh, T Clickable Culture(blog) Nov, 2006

http://www.secretlair.com/index.php?/clickableculture/entry/linden_lab_planning_for_ipo_or_buyout/

³³ <http://secondlife.reuters.com/stories/2007/01/04/gartner-says-second-life-hype-near-peak/>

³⁴ Reuters 'Rosedale: No plans to sell Linden Lab' Mon Nov 27, 2006

<http://secondlife.reuters.com/stories/2006/11/27/rosedale-no-plans-to-sell-linden-lab/>

³⁵ As at March 31, 2007 there were 3,177,434 unique residents (up half a million on the previous month) Using Linden's 10% rule as a rough guide to active users, that is 317,743 globally. 2.43% of that is 7721.

Source :Second Life Virtual Economy Key Metrics (Beta) http://s3.amazonaws.com/static-secondlife-com/economy/stats_200704.xls

³⁶ <http://blog.secondlife.com/2007/02/09/state-of-the-virtual-world-%E2%80%93-key-metrics-january-2007/>

³⁷ Interview SLOZ March 28, 2007 <http://www.sloz.info/2007/03/28/interview-gary-hazlitt-gary-hayes-part-2/>

³⁸ Gary Hayes (blog) The Project Factory <http://www.theprojectfactory.com/content/view/27/9/>

South by Southwest Music, Film and Interactive Conferences and Festival in Austin Texas. The event, “The Hoe-Down Under - Texas’ Aussie Music Party” was staged in March, 2007. One of the acts, Sydney based vocal group Kaya is well established in Second Life. They write “*Our Aussie band has now done five performances to over 100 different avatars from all over the world, all independent of any production company or government assistance. It has cost us approximately \$200 US to acquire the land and sign up for a year to get us started...*”.³⁹

Cattle Puppy set up an in-world television style-coverage, digitally recreating an island beach atmosphere with two stages, a dance area, swimming, Jet Ski rides and hot air balloons. The event incorporated back stage interviews and multi-camera coverage of the in-world performances. The virtual event has been archived for future exploitation on real world networks.

Cattle Puppy has launched SLCN, a virtual cable network station.⁴⁰ They produce ‘That’s Life’, a what’s-on-in- Second Life TV-style magazine program. They provided media coverage for the first in-world International Technology Expo (ITE) in April 2007.

Tringo

‘Tringo’ is a 3D combination of Bingo and the puzzle game Tetris, developed by a Brisbane based Kiwi-born Australian Nathan Keir (‘Kermitt Quirk’). A business programmer by profession, Keir built Tringo using SL’s built-in authoring tools. It was designed to be played in groups and proved amazingly popular in-world where word of innovation and creativity spreads quickly. Kier sold more than 300 copies at L\$15,000 (around AUS\$50.00) to players who would host multiplayer tournaments in their virtual mansions, with players putting in a gambling stake, and the highest scorer taking the kitty. Scanning Second Life, the on-line entertainment company Donnerwood Media picked up Tringo which has now been released on a number of platforms including Nintendo and Game Boy Advance. This year, Tringo is set to appear on several new platforms including as a download for mobile phones and PCs and as an interactive TV game in Australia and Asia and an interactive game show in Britain. Tringo is generally recognised as the first real world product created in a virtual world, highlighting Second Life’s distinctive innovation attributes: content creation and user ownership of intellectual property.

Two Way TV

Two Way TV is a publicly listed company which provides interactive applications and technology which can be deployed on television, mobile or Internet platforms. The Company is building a Second Life presence that would connect users in its virtual set-up with its website, offering them rewards and incentives. Two Way TV Australia, which has acquired the PC download and interactive TV rights to the aforementioned TRINGO is launching the new version of the game in-world. The facility is designed as a cross-platform portal where

³⁹ blog post comment : <http://www.sloz.info/?p=107>

⁴⁰ <http://slcn.tv/>

users will be able to play and buy the game in Second Life and purchase the PC download version via TwoWay's games website way2play.com.⁴¹

Hyro

Australian online services company *Hyro* has set up a recruitment office in Second Life to plug into the global employment market.⁴² Chief operating officer Richard Lord explains, "We think it will expose us to a new supply of candidates who may not be in Australia, and will also expose us to people who are familiar with and embracing these digital technologies."⁴³

'Wolfie Rankin', Content Developer

One of the burgeoning numbers of small business developers; owner of the Kookaburra Pub on the Eragon Island. Rankin has launched a range of t-shirts with 'Aussie' sayings like 'Strewth Mate' and 'Dead Dingos'. (Another site, not attributed to Wolfie, sells a range of AFL footy jumpers for the footy conscious avatar).⁴⁴

Telstra BigPond

Known as 'the Pond', where consumers can buy songs, watch movies, or hang out in the Billabong Bar, a tin of Fosters in hand whilst Aussie music favourites like John Farnham blare from the juke box. Telstra has eleven islands with iconic structures such as a scaled replica of Uluru and the Sydney Harbour Bridge. Virtual activities include shopping, car racing, scuba diving, ice skating and dancing at the Illusion nightclub. Spokesperson Craig Middleton told the Sydney Morning Herald "We know this is new territory... We're not shy to investigate new opportunities, which may in the months and years to come turn out to be getting in right ahead of the pack".⁴⁵

Australian Broadcasting Corporation

ABC Island launched in March 2007. It features an 'Info Dome' for news, the 'Eco House' which ties in with the Radio National program *By Design*, and an underground live music club 'Unearthed' with links to the ABC's youth network Triple J. The launch coincided with the network's flagship documentary series *4 Corners*' profile on Second Life. The episode can be streamed from within ABC Island on demand.⁴⁶ The ABC is looking to explore the 3D environment, test new ways of creating content and devise programs which build virtual experiences into a program's narrative. Launching the Island, Abigail Thomas, Head of Strategic Innovation & Development stated "Everything we have learnt - and will continue to

⁴¹ Daniel Barton <http://www.twowaytv.com.au/> Also Hutcheon, Stephen, 'Its all systems go-go for Tringo'. Sydney Morning Herald Feb 15th, 2007 <http://www.theage.com.au/news/games/its-all-systems-gogo-for-tringo/2007/02/15/1171405363940.html?page=fullpage>

⁴² <http://hyro-insights.blogspot.com/>

⁴³ <http://www.smh.com.au/news/biztech/heavy-push-into-tv/2007/02/12/1171128897511.html?page=2>

⁴⁴ see *Martinis Bargain Clothes* <http://slurl.com/secondlife/Menophra/75/172/31>

⁴⁵ Moses A, 'Second Life Bases virtual waste of time for firms.' 12 Feb, 2007 <http://www.smh.com.au/articles/2007/01/30/1169919283914.html>

⁴⁶ 'You Only Live Twice' ABC Four Corners, http://www.abc.net.au/4corners/special_ed/20070319/

learn - from our first foray into this virtual world will stand us in good stead for a time when 3D environments become commonplace online."⁴⁷

Business Analyst at Linden Lab, Chris Collins (aka Logan Linden).

Chris Collins' stated aim is to improve the data acquisition in respect to Australian users. He also observes, "*The thing about corporations going into Second Life – if you want to grow a presence in Second Life and if you want people to come back to something you've built in Second Life, you've got to think about building up a community. And to build up that community you need to have something there that's interesting for people to come back to, the ability to be able to contact those individuals – whether it's setting up a group that allows you to contact people interested in things you are having on your space or it's making people go out to your external website and find out about events you might be holding, and in doing that it helps to pick up the population*".⁴⁸

Fairfax Digital Productions

Aside from filing numerous reports on Second Life, Sydney Morning Herald journalist Stephen Hutcheon is an active resident. He created a short machinima (in world animation) report on Nathan Kier aka 'Kermit Quirk', creator of the aforementioned 'Tringo'.⁴⁹

SLoz.com.au

A dedicated Australian focussed news service in the form of a blog. The site contains events forums and interviews relevant to Australia. Established in November 2006, SLoz is widely referenced by Australian users. Its expanding presence includes in-world promotional events. The editor is David Holloway (aka 'Lowell Cremorne').⁵⁰

InsideThisWorld.com

Virtual world start-up, headed by 3D world marketing consultant Bret Treasure. Treasure has sound understanding of social software and 3D environments and posts his observations in his two blogs, <http://freebeer.com.au> and <http://reverseswing.livejournal.com/>. Treasure conducts specialist interest tours of Second Life, for example science, education, scripting and building. The company offers the use of its 'holodeck', a device which stores Second Life scenes and renders them from a menu whenever you want. The old scene is cleared and the new one appears. Scenes can include any prim objects including furniture, and environments.⁵¹ The company also offers the use of its conference island and hires out its virtual conference services.⁵²

⁴⁷ 'ABC a new destination in Second Life' (Media Release) March 19, 2007

<http://abc.net.au/corp/pubs/media/s1874876.htm>

⁴⁸ <http://www.sloz.info/?p=102> 26 Feb, 2007

⁴⁹ <http://video.google.com.au/videoplay?docid=-5715815261642989211&q=fairfax+digital+second+life>
also <http://media.theage.com.au/?rid=22643>

⁵⁰ <http://www.sloz.info/>

⁵¹ <http://insidethisworld.com/>

⁵² InsideThisWorld.com

The Education Sector

Under the auspices of its Laboratory of Advanced Media Production (LAMP), AFTRS has built the island 'Esperance', now well established. Project is led by LAMP director and former BBC Head of Digital Content, Gary Hayes. Hayes had a central role in developing Telstra and ABC's projects. He heads the 'multi-user virtual environments' division for the UK based The Project Factory and is an influential blogger.⁵³

Other educational institutions actively engaged in Second Life include:

CRC partner, the University of Wollongong, headed by Professor Farzad Safaei; RMIT (Creative Media); QUT (Creative Industries); Hobart College Tasmania; University of Southern Queensland; Sydney University where the English Department's Angela Thomas lectures in-world and has completed a study on avatars. Angela co-edits SLATE, an in-world culture and arts magazine with fellow academic and cross-media platform consultant Christy Dena.⁵⁴

Outback Online

A new virtual platform anticipated to vie with existing virtual worlds. Creating buzz via write-ups in widely read blogs *Scobleizer* and *3pointD*, the developers are claiming a sophisticated P2P networking facility and the ability to handle 10,000 concurrent users per sim. Driving the initiative is NICTA Business Development Director, Rand Leeb-du Toit.⁵⁵

5. Outlook: Key Opportunities and Threats for Business

Threats

- A risk for branded projects: historically, residents react more favourably to virtual start-ups than established business. Some members are resistant to real world commercial enterprises setting up in-world. Corporations can be viewed suspiciously, particularly if their programs are heavy handed.
- The societal impact of SL is uncharted. As much as Second Life is an experiment in 3D tools and applications, it is also an experiment in new societies, and carries with it an unknown social impact. Linden Lab explicitly states that it does not wish to govern or police Second Life, nor control its production and economy. They look to residents to devise a workable model. This is evolving.⁵⁶
- The 10% retention rate after initial log in reflects steep learning curve required to actively participate.⁵⁷
- Second Life's Content creation tools are not for everybody. Many users find building complex and not to their interest.

⁵³ <http://www.theprojectfactory.com/> ; <http://www.personalizemedia.com/>

⁵⁴ Relevant blogs: <http://www.christydena.com/virtual-worlds> ; <http://anya.blogsome.com/>.⁵⁴

⁵⁵ http://yoick.tv/?page_id=8

⁵⁶ Philip Linden Town Hall Address Nov 16th

⁵⁷ Tatero, N 'Two Million Steps Forward' in New World Notes (blog) 06/11/new_world_numbe.html

- Bandwidth and lag time issues hamper enjoyment and seamless use.
- Infrastructure limitations when doing business include:
 - o Limit to the number of avatars able to gather in one space (server constraints limit numbers to around 40-60).
 - o Unexpected grid closures or upgrades can interfere with scheduled events.
 - o Audio failure or visual lag times are common.
 - o Variations in users' computing systems (specifications).
 - o Variation in broadband speed.
 - o Potential for disruption to events by 'griefers' (known to flood events with replicating objects which also hogs bandwidth).
 - o Ongoing costs relate to investment in property, design and maintenance fees. Second Life is a low cost environment for experimentation relative to real world laboratories, equipment and infrastructure. However investments may not be redeemable should organisations or individuals decide to opt out.
- Whether in-world businesses would ever be able to realise the notional value of their "holdings" in the virtual world remains to be seen.
- With the explosion of media interest in Second Life, big business has reaped the promotional rewards of positioning themselves within it. Whether this translates measurably into real world financial gain has not been established.
- Open sourcing:
 - o Open Source opens new problems, not merely technical. Consideration needs to be given to social and economic issues such as making reputation and money portable between those worlds. In the legal domain, licensing, DRM and compliance problems will emerge.⁵⁸
 - o To gain wider use, any innovations would have to be officially cleared by Linden and would need to be updated in accordance with Linden's grid changes and upgrades.
 - o Companies might need to offer quality assurances to users who availed themselves to their enhancements.⁵⁹
- In Australia:
 - o Lack of available and widespread affordable bandwidth and high speed Internet limits uptake.
 - o Scheduling problems: SL time equates with Pacific time(US). Events held at 9.am in California will occur at 4.00 am in Melbourne. An evening concert

⁵⁸ Glyn Moody 'Second Life and open Source' Dec 15th 2006 in Linux Weekly Network.
<http://lwn.net/Articles/214426/>

⁵⁹ <http://blog.secondlife.com/2007/01/08/embracing-the-inevitable/>

held in the US will occur while many Australians are at work. An evening lecture held in Australia will find most Brits at work and most Americans asleep.

- o The Australian Tax Office (ATO), like its American counterpart the IRS, is concerned about what constitutes a taxable event in virtual worlds. The Joint Economic Committee of US Congress is studying public policy around virtual economies - how to regulate them and assess the taxation implications. It is of the view that “if a transaction takes place entirely within a virtual economy, then it seems there is no taxable event”.⁶⁰ Conversely, the ATO told the Sydney Morning Herald that “the real world value of a transaction may form part of your taxable income, even if it is Linden Dollars.”⁶¹
- Community collapse
 - o The risk is that Second life is over-hyped: the ‘Try me virus’ and massive media coverage in the second half of 2006 led many to log in but only 10% chose to stay and actively participate. It is possible that the inflated expectations, punctured by challenges to the platform may cause the current 15 -20% growth to plateau or decline with communities abandoning Second Life, drifting into other virtual environments or leaving such platforms altogether. This could jeopardise research objectives and programs and squander investments in content creation.
 - o The hype cycle may mean another virtual world could surpass Second Life in popularity and interest. Other virtual worlds may be better suited to the next swarm mentality or new communities of interest. Next generations will want to define their own worlds and distinguish themselves from users that go before them. (A generation may be a narrow time band, the age difference between siblings, for example).⁶²
- Should Linden decide to shut shop, the question arises, what would happen to all that virtual property? Any investment should be viewed as unsecured. (However any losses are offset by the small investment, relative to real world projects).

Opportunities

- Worst case scenarios about social dislocation, behavioural shifts and illegal activities are mitigated by the positive possibilities for communication, creation and connecting which the platform affords.
- The fact that Second Life is imperfect should be good news for technology companies as it presents many opportunities to research, develop and market IT solutions.

⁶⁰ Joint Economic Committee. Press Release Oct 17th 2006 Congress of the United States.

⁶¹ Miller, Nick ‘Virtual World: Taxman Cometh’ Sydney Morning Herald 30th Oct 2006
<http://www.smh.com.au/news/biztech/virtual-world-tax-man-cometh/2006/10/30/1162056925483.html>

⁶² Henry Jenkins, MIT Director Comparative Media Studies coined the phrase ‘Oh so twenty minutes ago’ in relation to MySpace’s 10% drop in users in December 2006. ‘Life after MySpace’ i/v with Henry Jenkins
<http://alwayson.goingon.com/permalink/post/10818>

- Upgrades and improved usability should see participant retention rates improve.
- Linden's announcement for a spatial voice application will reduce the complexities of keyboard commands.
- 'Bottom up' self styled governance in virtual worlds may provide valuable insights for real world civil codes.
- Those who can create content have a ready market for 'Lifers' who seek off-the shelf products and solutions. Because Linden Lab provides free-to-use modelling tools, technology companies have an immediate advantage should they want to pursue this area.
- The SL company line is 'Your World, your imagination'. In the virtual world there are few constraints on what can be built.
- Content created in Second Life is owned by the creator who is free to exploit it in other platforms and markets.
- Prototypes are cheap to produce. The investment is small in relation to real world development costs such as bricks and mortar, fabric and fabrication.
- New markets and new ideas can be tested and explored before they are 'commercial ready'.
- Tracking user innovators leads to real world product development.
- SL is a lightning rod for new marketing models: ideas travel virally, creating buzz.
- Live events are deemed more compelling than a webcast or MP3 recording as audience are able to chat/dance and commune with one another during an event.
- Low cost of staging events.
- Resources can be shared amongst like-minded, geographically distanced groups.
- Using Avatars to meet in active settings and interact with one another in real time is a new and refreshing experience for participants.
- With its own economy, it stands to reason that financial services are a growth area in Second Life. Areas for consideration are analysis, advice, advocacy, virtual loans for the development of virtual businesses and public policy in regard to virtual banking and finance.
- Second Life's 3D interfaces may yield valuable insights into current web services such as internet banking and provide clues for establishing better personal contact with customers.
- Open Sourcing:
 - o Gateway to customised versions and add-ons and potential killer-apps.
 - o Open protocols would allow distinct but interconnected virtual worlds to be created.

- In Australia:
 - Products can be designed with needs of local real world communities in mind, informed by shared national and cultural identity.
 - Delivery of services is not impeded by international time zones.
 - Scope for development of local market research services within Second Life.
- If Second Life were to collapse:
 - Even if the Second Life bubble were to burst, there are many signposts in the current web environment that indicate a move towards a 3D Web. How much longer will web users be content with the 2D realm of pages, pictures and text? By experimenting with content creation, production and services in Second Life, users are developing a 3D literacy that might become useful elsewhere.
 - Intelligence and experience in the virtual environment would enable us to migrate into other worlds such as *Multiverse* and *Aereae* and Australia's *Outback Online*.

In summary, the picture emerging is:

- An expanding, increasingly complex, hyper-networked, technologically articulate virtual society consisting of communities with both shared and divergent interests.
- Increased linkages with other web services.
- Enhanced communication and personalisation of web experiences via 3D interfaces.
- Evidence that SL is forerunner to a multitude of multi-user virtual environments, with interoperable capabilities. These include 'mirror' and 'overlay' worlds growing out of digitized real world Google Earth and Microsoft's Virtual Earth and add-ons such as geo-spatial positioning.

As the Koreans are showing with the enormous penetration of the hybrid social network/virtual world *Cyworld*, technologically advanced societies are conceptually ready to step into the virtual/parallel/augmented reality which immersive technologies afford. This is now acknowledged by leading business and technology analysts, including Gartner, whose research points to a mass migration into such worlds.

Second Life is a brilliant if imperfect early template for the promise such worlds hold. Participation is growing at close to 20% per month. As this paper goes to press, around 8000 Australians are at the cutting edge of this new experience and the numbers are growing; Marketers who scoff at the small population are missing the point. There are 8000 Australians who are working, building, entertaining, consuming, trading, making friends, having relationships and making money. Yet we know so little about them. What we DO know is that they are using the internet in an innovative, new way.

For business to grow and become viable within virtual worlds, it is vital that users are closely studied and that such worlds are experienced. The same care that is given to markets and customer needs in the real world must be applied to virtual ones, but it must be done with creativity and imagination for the same rules do not necessarily apply. Business must respect the virtual world order which places a premium on co-creation, participation and community building.

Ending at the beginning, this paper is subtitled ‘an introduction’ because virtual worlds are embryonic. Second Life is growing and developing every moment of every day. There is so much set to happen, yet to be known, or further imagined; deeper research beckons. It is envisaged that this paper will be the first of many CRC reports that track the virtual journey ahead.

6. Food for Thought

"Today virtual worlds are where video and VCRs were in the early 1980s, or where the Web was in 1993." *Irving Wladawsky-Berger, Vice President for Technical Strategy at IBMⁱ*

“Whereas in front of the television, the consumer is a passive receptacle, limited to selecting which finished good he or she will consume from a relatively narrow range of options, in the world of Second Life, the individual is treated as a fundamentally active, creative human being, capable of building his or her own fantasies, alone and in affiliation with others.” *Yochai Benkler, Professor, Yale School of Law. Author, The Wealth of Networksⁱⁱ*

“I have been watching the press reaction to Second Life with increasing confusion. Breathless reports of an Immanent Shift in the Way We Live® do not seem to be accompanied by much scepticism. I may have been made immune to the current mania by ODing on an earlier belief in virtual worlds”. *Clay Shirky, consultant, theorist and adjunct professor, NYU's graduate Interactive Telecommunications Programⁱⁱⁱ*

“The real world isn’t getting any better, our world is getting better at the speed of Moore’s law” *Philip Rosedale CEO Linden Lab^{iv}*

“We digitized audio and video, why can’t we just digitize, you know, Earth” *Philip Rosedale CEO Linden Lab^v*

“Second Life is disruptive technology on the level of the personal computer or the Internet.” *Mitchell Kapor, Chairman, Linden Lab^{vi}*

“Real and virtual are definitely on a collision course. I'm hoping that we can get more interoperability between the two, so that the streams of innovation merge like hydrazine and liquid oxygen, fuelling a rocket to the future.” *Tim O’Reilly, publisher, Open Source evangelist, accredited with devising the term ‘Web 2.0’^{vii}*.

7. Appendix: Costs

Membership

There is a sliding scale to the cost of becoming a resident.

- ‘Basic Membership’: free. Allows users to explore, build participate in events and purchase goods
- ‘Premium Member’: \$9.95 per month (discount applies if paid 12 months in advance). Users have the opportunity to buy or rent land. As well, they receive a \$1000 Linden bonus and a monthly stipend which they are free to spend on in-world items.

For a full explanation of membership fees see <http://secondlife.com/whatis/plans.php>

Land

Buying a presence in Second Life is like registering a Web domain. It buys ‘permanence’ on the Grid, allowing the user to set up a house or business and have storage facilities, a work space etc. Interested parties can either rent space on an existing island or simply buy their own. Like the real world, buying or renting existing land or land structures fluctuates according to location and the degree to which that land has already been developed. A waterfront house and land parcel of modest size rents for approximately L\$1500 per week and sells for between L\$35,000 and L\$50,000 depending on location.⁶³ This costs real money. Credit card or PayPal allows this transaction.

Private Island

An island is the representation of a ‘sim’ a dedicated named region which itself equates a server. Each sim is the equivalent to 16 acres (6.47 hectares). Linden conducts an auction system. Owning an island comes with the benefit of setting access restrictions if desired. US\$1,675 for initial set up and creation & US\$295 per month for maintenance. A discount rate for ‘verified real world educators and academic institutions’: US\$980 and US\$150 a month for maintenance. An order, once placed through the Land Store, takes around 14 days to become available. Payment is made via credit card or PayPal.

Developing land

‘Terraforming’ a sim with commercial developer such as Electric Sheep Company (ESC) costs upward of US\$10,000. The New Media Consortium paid ELS US\$13,000. PR firm Text100 paid US\$20,000 for their centre. Complex sites with large degree of interactivity, such as SonyBMG may cost as much as US\$200,000.⁶⁴ However companies could start with a modest outlay, using the expertise of the local scripting community or their in-house resources.

⁶³Rymaszewski, M, Wagner J A, Wallace M et al 2007 ‘*Second Life: The official guide*’ Wiley,241

⁶⁴ http://www.businessweek.com/innovate/content/oct2006/id20061030_869611_page_2.htm

For a full explanation of the land tiers, land use and land store see <http://secondlife.com/whatis/pricing.php> A comprehensive account of island purchase <http://secondlife.com/knowledgebase/article.php?id=054>

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Mandy is an established media practitioner, having worked as a journalist and commentator in radio, television, newspapers, theatre and documentary film. She has consulted widely with business, via the production company Red House Media. She holds a BA (majors in Drama and Visual Arts) and a Masters degree in Media and Communications. Based at Swinburne University, Mandy researches the social impact of new interfaces, innovative web practices, and user-led innovation. She joined the Smart Internet Cooperative Research Centre in 2006. Her current projects are in the area of emerging immersive environments, and in particular, Second Life. In-world she is Caliope Voss.

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ENDNOTES : 'Food for Thought' references

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