Virtual Worlds, Virtual Environments, & the 3D Web

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Agenda

• What are virtual worlds and environments
• Examples of virtual environments
• Classifications of virtual environments
• Second Life
  – Business presence in SL
  – Why SL and entrepreneurship?
  – Academic presence in SL
  – Issues with using Second Life for Business & Education
Virtual Environments & Virtual Worlds

- A virtual world is a computer-generated simulated environment designed to allow users to navigate in and interact with objects and components in the virtual environment.
- Many virtual worlds are designed as multi-user environments, allowing multiple users to meet and interact.
Virtual World Denizens

• Most virtual worlds are designed to represent inhabitants using avatars
• Avatars are object used to represent the embodiment of a user
  – Avatars can be represented in humanoid form, as an animal, a mythical figure, and/or an imaginary or contrived figure or object
  – Avatars can be represented in 3-D, 2-D, text, or some other computer-generated form
  – Avatars are not limited to use in virtual worlds; they are found in text-based and 2-D environments (e.g., instant messaging and forums)
Virtual World Denizens

• Most virtual worlds are designed to represent inhabitants using avatars
  – The term avatar is derived from Hinduism and refers to an incarnation
  – The term was first used in computer games to represent the player in the game Ultima IV

Source for some content: http://en.wikipedia.org/wiki/Avatar_(computing)
Virtual World Denizens

- The term avatar was closely associated with the concept of virtual worlds in the book *Snow Crash*, written by Neal Stephenson, who grew up in Ames.
  - Stephenson applied the term avatar to the graphical representation of residents of the Metaverse.

Source for some content: http://en.wikipedia.org/wiki/Avatar_(computing)
Virtual World Concepts

• The term Metaverse was introduced to connote a virtual world where users are represented as avatars and navigate and interact in a virtual representation of the world.
Virtual World Concepts

- The term *Virtual World* is somewhat broad, but generally includes ...
  - Massively Multiplayer Online Role Playing Games (MMORPGs)
  - Multi-User Virtual Environments
Virtual World Concepts

- MMORPGs are role playing games that are, by definition, games
  - Games have no significant real-world consequence
- MMORPGs generally are directed, thematic, and interactive
  - Most are created and hosted by a game developer (e.g., Electronic Arts)
  - Most are persistent
Virtual World Concepts

• A few examples of MMORPGs include...

  – Eve
  – Entropia Universe
  – EverQuest
  – Guild Wars
  – Habbo Hotel
  – Lord of the Rings Online
  – Pirates of the Caribbean Online
  – Star Wars Galaxies
  – Stargate Worlds
  – The Sims Online
  – World of Warcraft
  – More can be found at http://www.mmorpg.com/
Eve

• Set in a sci-fi universe where players navigate through a variety of solar systems using jump gates. Players build content, engage in trade, and wage war and combat.
EverQuest (EQ)

- First released in 1999 and based on earlier MUD themes, EQ allows players to engage in exploration and combat in Norath using an avatar representing one of several “races” present in the game (e.g., dwarves, elves, ogres, etc.). The game has levels that can be reached by engaging in quests and raids.
Guild Wars

- Set in a fantasy world called *Tyria*, Guild Wars allows players to either compete with other players or cooperate on tasks. Unlike many MMORG games, there is no subscription fee for online play.
World of Warcraft (WOW)

- Set in a fantasy world called *Azeroth*, WOW allows players to either compete with other players or cooperate on tasks. WOW is the most popular MMORPG and boasts more than 10 million subscribers.
MMORPGs

- Of course, there is competition...
Multi-User Virtual Environments (MUVE)

- Virtual worlds that are open, role playing environments
- Generally include...
  - user-created content
  - Thematic
  - Include capabilities for socialization, collaboration and interaction with objects in the space
  - Do not have specific game outcomes (i.e., not focused on defeating an enemy or obstacle)
Multi-User Virtual Environments

- A few examples of MUVEs include...
  - ActiveWorlds (1997)
  - There (2003)
  - Kaneva (2004)
  - Qwaq (2007)
  - Google Lively (2008)
Multi-User Virtual Environments

• Active Worlds: first introduced in 1995 as AlphaWorld
Multi-User Virtual Environments

- There: introduced in 2003
Multi-User Virtual Environments

- **Kaneva**: introduced in 2003
Multi-User Virtual Environments

- Qwaq: introduced in 2007
Multi-User Virtual Environments

- Google **Lively**: introduced in the summer of 2008
Multi-User Virtual Environments

• Second Life: introduced in 2003
Multi-User Virtual Environments

• Let’s look at the most popular MUVE, Second Life, a bit more closely.
What is Second Life

• Second Life is a multi-user, fully integrated, 3-D virtual world (VW) that is built as an open economic environment and social network.
  – Users can build, own, buy and sell goods/services that exist in the game
  – The environment uses an in-game currency (i.e., Linden Dollars) that can be converted to real-world currency
What is Second Life

• At a fundamental level, Second Life is a 3-D environment that can be used for communication and interaction
• It’s often called the 3-D web
Who is in Second Life?

- Individual “Players”
- Educators
- Small Businesses
- Large Businesses
- Non-profit organizations
- Political actors
Individual Players

- The majority of players are average users who want to...
  - Explore
  - Play
  - Interact
  - Promote goods and services
  - Be entertained
  - Be educated
Small Businesses

- The vast majority of businesses in Second Life are small to medium sized businesses
  - Sellers of virtual goods
  - Providers of services
  - Brokers and information providers
  - Entertainment operators
  - Entertainers
  - Software and content developers
  - Non-profit services
Large Businesses

A number of medium and large-sized firms have presence in SL. Interestingly, many of those that entered early have now left.

- Adidas
- IBM
- Best Buy
- H&R Block
- MovieTickets.com
- Reuters
- Sears
- Dell
- CNet
- Coldwell Banker
- Pontiac
- Scion
- Wells Fargo
- Wired Magazine
Companies and organisations in Second Life - Portal

Business Hub - you can link directly to these companies' Second Life locations from here

- 1-800-flowers.com
- ABN AMRO
- Adidas
- AJAX football club
- Aloft Hotel Suites
- Amazon
- AMD
- American Apparel
- American Cancer Society
- Australian Info Ind Assoc (AIIA)
- Autodesk
- Bain & Company
- Bantam Dell Books
- Battle Bobig Hegarty (BBH)
- BBC Radio 1
- Best Buy Co. Inc.
- Bigpond
- BMW
- Calvin Klein
- IBM
- Infinite Mind
- ING
- Intel
- Village
- Iwantoneofthose.com
- JK Travel
- KAWG&F
- Kelly Services
- Kraft Food
- Kwells Brownstone
- Lacoste
- Leo Burnett
- Life Heart Beat
- Logica CMG
- Make Magazine
- Major League Baseball
- Manpower Inc.
- Marketing Magazine
- Mazda
- Renault (Formula 1 Team)
- Reuters
- Sapphire Technologies
- Save the Children Charity
- Saxo Bank
- Scion
- Sears
- Semper International
- SirsiDynix
- Sky News
- Softlab Group
- Sony
- Sony-Ericsson
- Springer Verlag
- Sprint
- STAA (Student Travel Assoc)
- Starwood Hotels
- Sun Microsystems
- Sundance Channel
- SupermarketSun.com
Business and Second Life

Why Second Life and Business?

- Second Life is designed with rules that allow an economy to operate
- Players own the items they create; that is, they have property rights
- This has resulted in the development of a vibrant economy with a large number of small businesses and entrepreneurs
Why Teach a Course Using a Virtual World?

- The Rationale: Timely and Pertinent
  - Avatars are everywhere
  - VWs abound
  - Google is doing it
  - It’s Even on TV
Second Life: A Way to Engage Students

- A summary...
Educational Uses of SL

- Distance and Flexible Education
- Presentations, Panels and Discussions
- Training and Skills Development
- Self-paced Tutorials
- Displays and Exhibits
- Immersive Exhibits
- Role-plays and Simulations
- Data Visualizations and Simulations
- Libraries, Art Galleries and Museums
- Historical Re-creations and Re-enactments, Living and Immersive Archeology
- Computer Programming
- Artificial Intelligence Projects
- Artificial Life Projects
- Multimedia and Games Design
- Art and Music Projects
- Literature, Composition and Creative Writing
- Theatre and Performance Art
- Photo-stories and Photo Scenarios
- Treasure Hunts and Quests
- Virtual Tourism, Cultural Immersion and Cultural Exchange
- Language Teaching and Practice, and Language Immersion
- Social Science and Anthropological Research
- Awareness/Consciousness Raising and Fund Raising
- Support and Opportunities for People with Disabilities
- Politics, Governance, Civics and Legal Practice
- Business, Commerce, Financial Practice and Modeling
- Real Estate Practice
- Product Design, Prototyping, User-testing and Market Research
- Interior Design
- Architectural Design and Modeling
- Urban Planning and Design

http://sleducation.wikispaces.com/educationaluses
Second Life: A Way to Engage Customers and Partners

• A summary...
Issues with the use of Virtual Worlds in Education and Business

• Most Virtual Environments are open environments with...
  – Few rules
  – Few controls
  – You may run into anyone from anywhere
Issues with the use of Virtual Worlds in Education and Business

- SL is owned by a private company, Linden Lab
  - TOS
  - Privacy
  - What happens in SL, stays with SL
Issues with the use of Virtual Worlds in Education and Business

• SL content is created and posted by users
  – Different stripes
  – Adult content
  – Bizarre behavior
  – Griefers
  – Turning corners
Issues with the use of Virtual Worlds in Education and Business

- SL allows anonymity
  - Who did that?
  - Is that my student or his twin?
  - Student accounts
But, Virtual Worlds will evolve

- There are numerous virtual worlds; more every week
- Virtual worlds will evolve like the Internet evolved; proprietary → ubiquitous
  - We have virtual worlds mounted on our servers in engineering and business
- 3-D applications exist in a number of applications (e.g., Google Earth)
Applications for virtual worlds

- Communications
  - Meetings
  - Conferences
  - Collaboration
  - Team work
- Education
  - Training
  - Virtual spaces and models
  - Contextual learning
Applications for virtual worlds

- Marketing
  - Showcase content
  - Branding
  - Viral marketing

- Product Development
  - Prototyping
  - Proof of Concepts
  - Product testing
Applications for virtual worlds

- Public relations
  - Politics
  - Public education
  - Advocacy
- Entertainment
  - Virtual World Entertainment
  - Socialization
  - RL entertainment
Second Life and TOS

- Are the Terms of Service for Second Life unique?
- Not really, consider other tools commonly used in education…
  - Google
  - Linux
  - Facebook
  - OpenOffice
  - SharePoint
  - YouTube
  - Various Commercial Products
Of course, Second Life has its technical problems too.