Usage and Virtual Worlds

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Agenda

- Introduction to 3D Virtual Worlds
- Facts & figures
- Usage of 3D Virtual Worlds:
  - Education and training
  - Collaboration
  - Marketing
  - Real-estate
  - Commerce
  - Government and politics
  - Tourism
- Evolution and challenges

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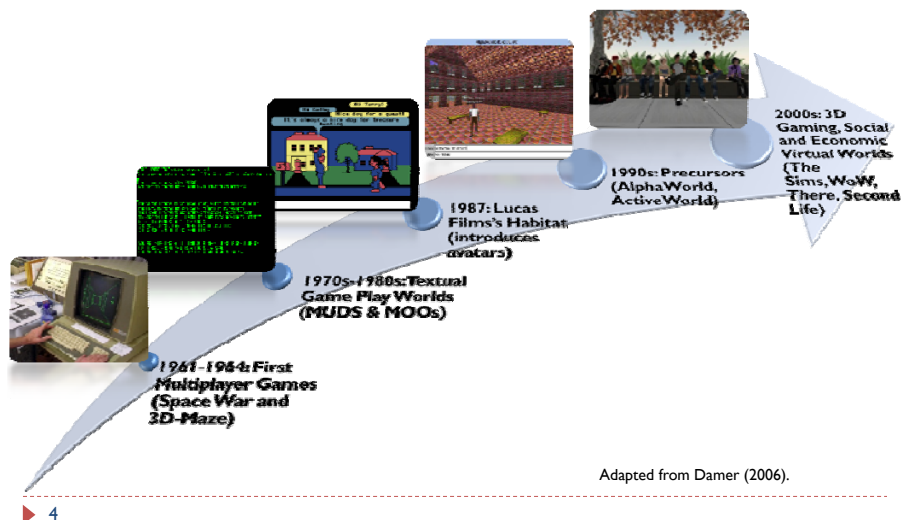## Introduction to 3D Virtual Worlds

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Genesis of a phenomenon

1941-1964: First Multiplayer Games (Space War and 3D-Maze)

1970s-1980s: Textual Game Play Worlds (MUDS & MOOs)

1987: Lucas Films's Habitat (introduces avatars)

1990s: Precursors (AlphaWorld, ActiveWorld)

2000s: 3D Gaming, Social and Economic Virtual Worlds (The Sims, WoW, There, Second Life)

Adapted from Damer (2006).

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Virtual Worlds include…

MOGs & MMORPGs	3D Open Virtual Worlds	2.5D Worlds
• World of Warcraft • Everquest • Ultima Online • EVE Online	• Active Worlds • Second Life • There • Hipihi • Home • Kaneva	• CyWorld • Gaia • Habbo Hotel

Mirror Worlds	3D Chat Places	B2B 3D Virtual Worlds
• GeoSim • Amazing Worlds • Twinity	• IMVU • WeeWorld • Weez • Just Leap In	• Forterra • Innov8

Source: Hendaoui (2009)

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Definition of 3D Virtual Worlds

Persistence	Avatar-based	Synchronous	Place
the world continues to exist and evolve even if you leave it	Users are represented by and are in control of their digital egos	activities are done in real-time	a tangible 'physical' environment

Source: Hendaoui (2009)

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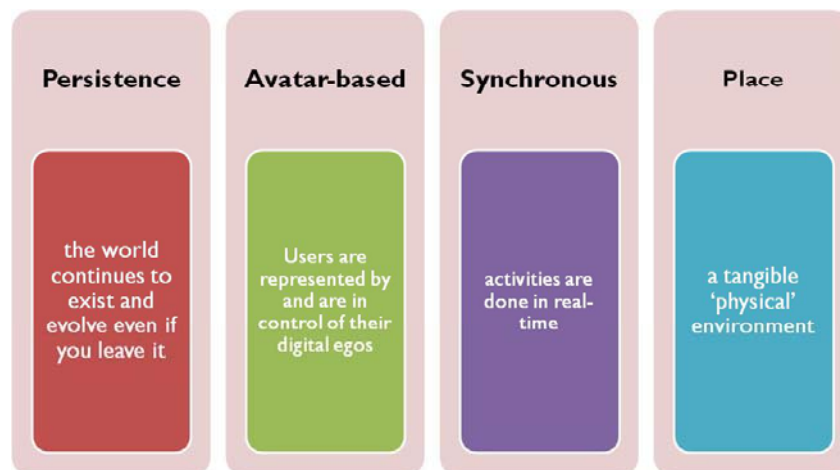
Possible features of 3DVWs
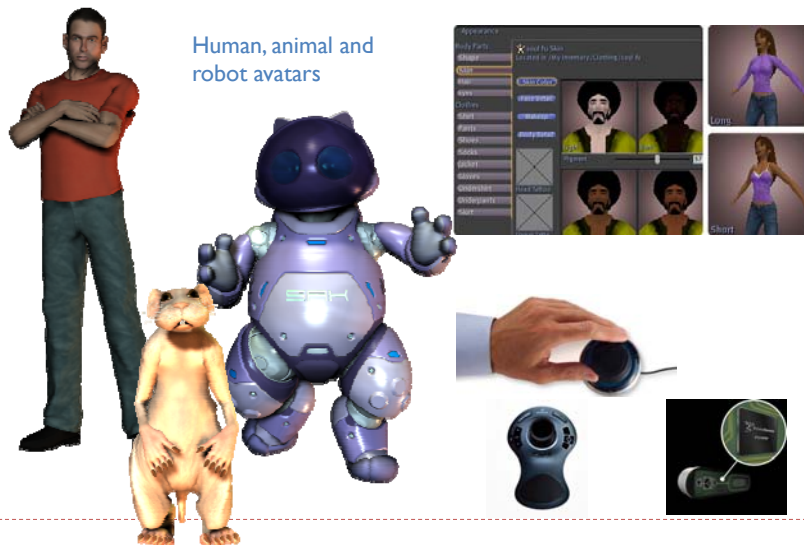

Source: Hendaoui (2009)

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Enhanced behavioral and visual capabilities for avatar customization and control in recent 3DVW

Human, animal and robot avatars

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Second Life is a 3DVW, not a game

- Created by Linden Labs in 2003
- Entirely built by its residents (open VW)
- About 19 millions registered accounts (Linden Labs, September 2009)
- "230.000 users enter to SL every week" (HSBC, 2007)
- About 1.5 million US$ spent every day (HSBC, 2007)
- 8 billions minutes of voice communication (Linden Labs, 2008)

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What experts say about 3DVW…

- "eighty percent of active internet users will have a 'second life' in the virtual world by the end of 2011" (Gartner Group, 2007)
- By 2012, Gartner estimates that 70 per cent of organisations will have established their own private virtual worlds (Gartner Group, 2008)
- "3D virtual worlds will, in the near future, be pervasive interfaces for the Internet" (B. Moore, Sociologist, PARC)
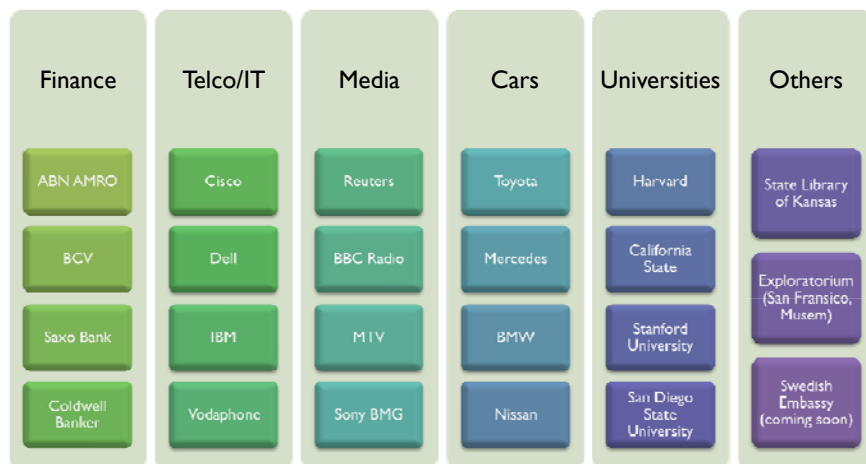
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Facts & Figures

▸ IBM's CEO announced that his company will invest 10 million dollars to help build out the "3D-Internet".

▸ Universities (e.g. Harvard) and educators are setting up talks and classes in SL.

▸ Several companies (e.g. Wal-Mart Stores, Intel and American Express) are thinking about SL strategies to foster corporate collaborative learning methods.

▸ Governments and policitian built up virtual representations (e.g. Sweden) and used SL to promote compaigns (e.g. Obama)

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Companies "in-world"…

Finance	Telco/IT	Media	Cars	Universities	Others
ABN AMRO	Cisco	Reuters	Toyota	Harvard	State Library of Kansas
BCV	Dell	BBC Radio	Mercedes	California State	Exploratorium (San Fransico, Musem)
Saxo Bank	IBM	MTV	BMW	Stanford University	Swedish Embassy (coming soon)
Coldwell Banker	Vodaphone	Sony BMG	Nissan	San Diego State University	

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Usage of 3D Virtual Worlds

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Virtual Education: Harvard's Cyberone

- Course launched in Fall Semester 2006
- Free access for Harvard students, HE students and internet users.
- New way of teaching: use of 3D interaction.
- Lectures, events, assignments are held "in-world" and online.

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Virtual Collaboration: the presence of IBM in SL

- ‣ Investment of 10 million dollars in Internet 3D
- ‣ More than 30 islands and 3000 employees "in-world".
- ‣ "like we set up a bricks and mortar business online, we could integrate a company's services in a virtual world…Integration with services, integration with data - exactly what we helped people do back in the days of e-business" (R. Reynolds, IBM, 2006)
- ‣ IBM uses of SL for :
  - ‣ Meeting
  - ‣ Recruitment
  - ‣ Training
  - ‣ Business

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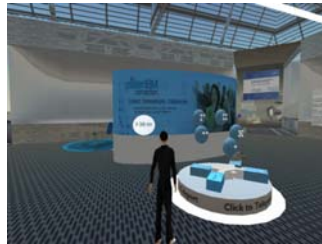
Virtual Marketing: L'Oreal's campaign

- ‣ Launched a virtual marketing campaign in SL
- ‣ Promotion of a range of real life and virtual world make-up looks across Second Life:
  - ‣ **Metabranding**
  - ‣ **Virtual retailing and distribution strategy**
  - ‣ **Media placement**
  - ‣ **In-world search engine marketing and other promotion**

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Virtual real-estate market : The success story of Anshe Chung

- Anshe Chung :
  - Pioneer of the Second Life economy
  - first avatar with a net worth exceeding 1 million US$ (2006).
- Anshe Chung studios: 80 employees full time.
- Rent and sell virtual property to residents in several virtual worlds.
- Owns Dreamland: 40 square kilometers of gated communities.
- "Her business now produces $2.5m in real-world annual revenues" (Financial Times, 2006).

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Virtual real-estate market : The case of Coldwell Banker

- US nation's largest real estate brokerage company.
- About 80% of recent home buyers used Internet to buy their homes.
- Coldwell Banker opened a virtual sales office in SL (mid-2007).
- Company's senior vice president for marketing: "In the end this is about buying and selling homes in the real world" (CNN money, 2007)
- Coldwell Banker owns property on the "mainland" of SL (subdivided into 520 individual houses and living units, half of which it will sell and half it will rent).
- Sell and build virtual houses for about 20 dollars/each.
- Recently introduced and sell real brick and mortar house into SL (visit, discuss, negotiate but not signing yet)
- Coldwell banker says it's a new way to interact and connect with home buyers.

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Virtual Commerce: Boulanger

- A retailing company specializing in leisure, multimedia and households products
- Virtual store opened in Oct. 2008
- In collaboration with IBM Research
- The goal is to complement Boulanger's physical stores and website with an additional distribution channel and additional services
- "Boulanger's use of the virtual worlds demonstrates the company's capability to transcend traditional boundaries to provide an immersive and interactive shopping experience for customers." (Colin Parris, vice president, Digital Convergence, IBM)

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Virtual Government: Obama & others

- Obama used Second Life to promote his campaign (conferences, discussions, etc.) during 2009 US presidential elections
- Obama's speeches in Ghana in July 2009 streamed on SL (CBS 2009)
- Sweden and other countries opened virtual representations in SL, essentially for communication and promotion purposes (Hendaoui et al. 2008).

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Sarkosy, Royal and Lepen use SL during the 2007 elections

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Virtual tourism: Starwood hotels & mirror worlds

▶ "Air Travel & Tourism is booming with the availability of budget airlines, consumers are beginning to be more world conscious, what is missing is a technology and a platform to showcase the World in 3D to a global audience" (Director of Virtual Worlds Asia, 2008)

▶ Starwood hotels uses SL to test 3D hotel prototypes. Starwood's Vice President says "We're saving money. If we find that significant numbers of people don't like a certain feature, we don't have to actually build it…" (NewsWeek, 2006)

▶ Currently, many "mirror worlds" (twinity, amazing worlds, GeoSim.) are under development or private beta, and propose realistic reproductions of real cities or even entire countries, where virtual tours, events, etc. are organized.

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Evolution and challenges

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Challenges

‣ When the laws progress much faster than the technology!

‣ When people no longer make a difference between virtual life and real life

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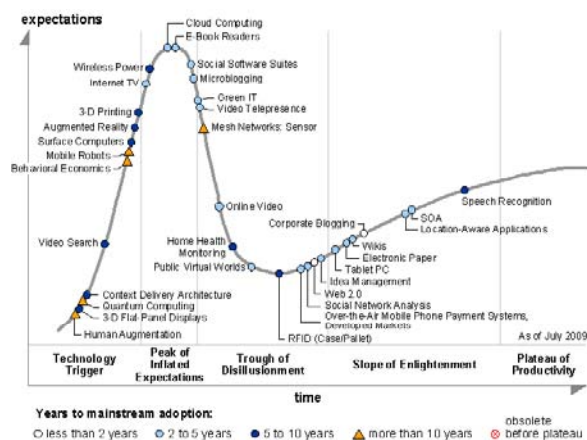
Other Challenges

▸ The limitations of 3DVW technologies still hinders wider acceptance.

▸ Development of a secure and performant business platforms within 3DVW to support macro-transactions for real world products commerce.

▸ Research is still limited on 3DVW and several questions remain unexplored (social, ethical, issues, see Hendaoui, Limayem and Thompson, 2008)

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Evolution of Virtual Worlds

Gartner Group (2008)

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