Introduction to Second Life

Computer Literacy1 Lecture 27
20/11/2008

Announcement

- NEXT TUESDAY (25th November) and THURSDAY (27th November) we will have invited speakers in CL1:
- Tuesday 25th: "**Cookie Monsters, star fish and glowing pumpkins: the bizarre world of learning in Second Life**" a talk by Judy Robertson and Nicole Cargill-Kipar

NOTE: ROOM CHANGE FOR ABOVE TALK!!! We will be in AT Lecture Theater 5 !!!!

- Thursday 28th: "**Ph@ttsessionz**" a talk by Christoph Draxler

---

Topics

- Second Life (SL)
- Client
- Virtual Reality
- Avatars
- Technology used for Second Life
- Second Life at Universities

Second Life Introduction

- Released on 23 June 2003
- Created by Linden Labs
- Second Life is the name of the virtual world they created online
- To interact with this world the user needs to download a client program: Second Life Viewer

Client program

- A client program allows you to access a remote service to a server
- Web browsers for example are clients
- Online chats are using clients e.g. Skype

What is Second Life?

- It's a social network
- A very advanced social network
- And its also a metaverse = virtual world
  - Metaverse implies that the virtual world appears as an urban environment to its user
- Second Life is said to be currently the only three-dimensional virtual world

Virtual Reality

- Virtual reality allows the user to interact with a computer simulated environment
- Currently most virtual experiences are made visually, only a few can add sound or other sensory information
- Where is it used?
  - Computer games, surgery simulation in medicine, phobia treatment in therapy, etc.

Second Life Terms

- Resident:
  - Every user of Second Life is a resident
- Avatar:
  - The basic avatar is of human appearance, in the beginning of SL one default appearance looked cat- or fox-like (neko avatar)
- Linden Dollars (L$):
  - Is the name of currency in SL

Second Life Terms

- Real Estate:
  - You can buy, own and sell land in SL. To do so you need a Premium account costing about $10. SL provides you with 512m^2 of land
- Tier (Land Use Fee):
  - To own more land you have to pay Land Use Fee called Tier since Linden charges you in monthly rates
- Teen Second Life:
  - Since Second Life is restricted to users over 18. TSL was created for users age 13 - 18

Avatars

- With a basic account you have limited resources to edit your avatar
- As soon as you have a Premium account and some L$ you can buy skins, hair, eyes, clothes, just everything you want
- Or program your own avatar

Female Neko Avatar

http://secondlife.com/whatis/avatar.php

What can Avatars do?

- They can communicate with each other!
- They can use chat or instant messaging (IM)
  - Chatting is used in public places or everywhere were more avatars are coming together
  - IM is usually used for private conversations between two avatars or an object and an avatar
- For chatting you must be in close range, for IM that's not necessary
- You can decide if you want to type or speak

What else?

- Avatars can teleport to any place in SL as long as they have coordinates
- They can walk in any direction
- They can also fly
- They can also for example work
- Actually they can do everything what their alter ego in the First Life can do and a bit more…

Difference between Avatars in a virtual world and AI

- An avatar in second life a character or virtual representation of a player her in SL
- Hence the avatar is controlled by its player and acts on its player's commands without learning anything since it is not programmed that way
- While an AI agent would evolve independently from a player and learn from its own experiences made in SL

http://www.itnews.com.au/News/72057,childlike-intelligence-created-in-second-life.aspx

AI in SL

- Rensselaer University is testing AI in SL
  - At the moment they have an AI in SL who is resembled by a child avatar since "Edd" behaves similar to a child that age
- Example for false belief: http://www.cogsci.rpi.edu/research/rair/asc_rca/20070810.SL.Cog.FalseBelief.Failure.mov
- Article: http://news.rpi.edu/update.do?artcenterkey=2410&setappvar=page(1))

Technology of Second Life

- Viewers for main OS (Windows, Mac OS X, Linux)
- Soon there will be Second Life mobile (having a limited numbers or areas)
- Each area in Second Life is stored on a single core of a multi-core server
- Software used is Debian
  - A multipurpose OS that can be used as a server operating system
  - It currently includes over eighteen thousand software packages for eleven computer architectures

More Technology

- Every item in SL is referred to as an asset
- Each asset is referenced with a universally unique identifier
- All assets are stored in their own dedicated MySQL server farm (collection of servers)
- Each server instance runs a physics simulation to manage the collisions and interactions of all objects and in that region
  - For this SL uses a Havok 4 physics engine (a computer program that simulates Newtonian physics models)

Linden Lab attitude

- They try to use open standards technology as much as possible
  - Meaning they use free and open source software such as Debian, Apache, MySQL and Squid (a proxy server caching information)
- Goal is to move everything to open standards
- When this move proves successful and SL is stable
  - SL client and server will be released as free and open source

Inside Second Life

- Second Life has 16,008,517 residents
- Most of the are in Second Life to meet friends but there are many who also run businesses
- Any of these makes SL interesting for companies and advertisement
- Some countries have even embassies in SL (Maldives, Sweden, Estonia, etc…)
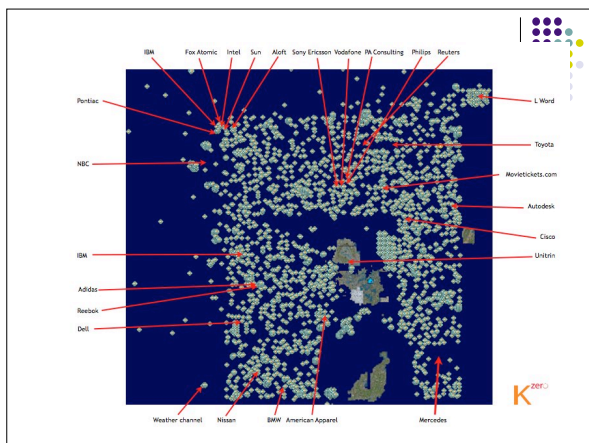
Second Life at University of Edinburgh

- http://secondlifegrid.net/

- http://secondlife.com/

- http://www.aiai.ed.ac.uk/project/i-room/

Key Points

- Second Life is a metaverse/virtual world
- It is kind of a copy of the real world
- Residents/users are represented by avatars
- These avatars are different to avatars/agents in AI
- Edd, an AI agent in SL
- SL is build from free and open source software and Linden Labs are aiming to make SL free and open source itself
- SL in education and research