Virtual Worlds

A Second Life beginner's guide

UOC Summer University Course

Max Senges

MSenges@uoc.edu

Thomas Praus

thomas.praus@email.de

Peter Bihr

peter.bihr@gmail.com

Table of Contents

1.   Introduction

In this section the functionalities and practices of the course's learning environment are presented.

1.1.   Course tools and practices

In this section the functionalities and practices of the course's learning environment are presented. Students who have taken other UOC courses will be familiar with most of the tools and can focus on the elements wiki and in-world-space (whenever the term "in-world" is used it refers to a space or action within Second Life) as well as the social aspects of this course's design.

1.1.1.   Tools

The **UOC virtual campus** is the access-hub to all information and activities. The aula is comprised of three areas: the forum, the resource library and the calendar.

The **Forum** is where you can ask practical questions, coordinate activities and engage in discourse and debate. For this purpose you will find three topic areas dealing with these themes and we ask you to classify and post your messages in the adequate threat.

In order to ensure effective communication, we recommend you to address the students who have been participating in the conversation you are contribution to directly by putting their addresses in cc.

In the **Resource Library** you will find links to all the core material listed in the course book. Please be aware that a more **extended list of recommended and annotated resources can be found in the course wiki**.

The aula's **Calender** contains the dates of all activities related to the course.

The **Wiki** is the central knowledge base of this course. [A wiki is the kind of software behind collaboratively written and maintained website such as wikipedia. It is a tool that allows for easy editing and creation of web-content. If you have never used a wiki before please go to the "How to Wiki" tutorial which will give you the possibility to learn how to write and edit wiki pages.]

In the wiki you will find a three kinds of information: (1) the digital version of the course book which you are invited to amend and extend, (2) planning and scheduling information about course activities, and (3) an internal glossary and FAQ meant clarify and discuss common problems as well as to give definitions for the terminology used in the context of virtual worlds.

As raised, the wiki is a collaborative space and it is essential that you feel comfortable navigating, editing and creating its content.

We also have a **Second Life In-World Space** which mainly serves two purposes. We can use it as a meeting space to gather for our in-world classes or for independently organized explorations and other in-world activities. Secondly the space contains a so called 'sandbox' an area where you can practice your skills in creating virtual objects (such as houses, tools or sculptures).

1.1.2.   Support, supervision & mutual assistance

The professor of this course is always available to support and assist you in all questions you might have. Rather then contacting him individually, we propose you to send your question – no matter whether practical or concerning the course content - to the forum, because this allows others also to benefit from your clarifications or help you to solve the issue.

Also questions that are likely to arise frequently are added to the wiki FAQ/glossary and

students are requested to search this resource before posting a question.

One added value of the 3D space Second Life is that it creates a much more social space than the traditional web. We encourage you to team up with other students and explore and investigate in Second Life!

One last point: We believe you are in this course because you are interested and want to learn. The professor will not police your participation. The main role of the professor is in assisting you when you experience problems and coaching you and your team mates during the implementation of the learning project (see next section).

1.1.3. Course assignment and collaboration

During this course you are meant to select one topic of special interest to you and engage in a self defined learning project dealing with this theme. We expect that many students will choose to learn about similar subjects and you are welcome to partially or completely collaborate during the assignment. Under learning project we understand that you define the scope, timeline and results of your exploration of your topic of interest. You have until the end of the second week to write the document describing your assignment, which you will then publish in the wiki for review, discussion and coordination of possible collaboration with your peers.

The following is a list of typical elements (products and activities) of learning assignments:

- Exploration and description and analysis of in-world practices and locations (environments).
- Definition of terminology
- Amendment and extension of the current course materials
- Creation of a virtual object or behaviour (including topical customization of avatar)
- Exploration, description and analysis of topics related to the phenomenon of virtual worlds (media coverage, Linden Lab practices, etc.)
- Proposal for a business model or business plan

However none of these are mandatory nor are assignment limited to these components. Feel free to come up with your own creative ideas for assignments topics and outputs.

1.1.4. Course schedule

The course is structured in two phases. In the first week all students are meant to read the first three introductory chapters of the course book which explain the basic features and conditions of Second Life. You will also have to download the Second Life client from http://www.secondlife.com, install it on your computer and make sure it runs correctly. In the forum all questions regarding basic in-world presence can be dealt with. During this time we will also have an in-world session where you can familiarize yourself with your avatar, the movements and make first steps regarding the virtual object creation interface.

During this first week you are also meant to choose the general topic of your individual learning assignment. During the second week you and your peers who are interested in the same topic will begin to investigate, collect information and engage in discussion. During the last week you are meant to refine your assignment work and to prepare some final products of your assignment.

The course ends with an in-world session where we will review results of interesting learning assignments, draw some conclusions and gather some feedback regarding the course.

1.2. Getting Started: Virtual Worlds, Cyberspace, Metaverse

Throughout the course and this reader we will look at the various aspects that make virtual worlds – and particularly Second Life - so interesting, and at the implications of our interaction within this virtual world. But what exactly are virtual worlds?

Virtual worlds are complex pieces of software which allow their users to project a non-physical representation of themselves – an avatar - into a generated three-dimensional reality, and there to interact with other participants.

The internet has fueled ideas of virtual reality ever since computers started to connect and produce pictures. But while science fiction literature (like *Snowcrash* by Neal Stephenson, *Neuromancer* by William Gibson), and movies (like *Tron*) created a vision of what a virtual reality might look like and how it would affect people, reality had to wait longer to see the first online realities emerge.

There are a number of virtual worlds, and new ones are being created all the time. In this course, we will focus on Second Life (SL): It is at the time the most advanced virtual world, but more importantly it has the most participants and also a very lively community.

Thus, Second Life in this course will be a blueprint for what virtual worlds can be and for which purposes they can be used. By entering this world we want to create practical knowledge which will be discussed on a theoretical level to explore the possibilities and problems of virtual worlds, especially considering education.

Even though we will mostly use cases and examples from Second Life, most of the topics we will cover throughout the course, and many ideas you will develop will be applicable to other virtual worlds as well. In other words: What you learn here will not be limited to Second Life, but will prove useful for most other virtual worlds as well. Many topics are not limited to virtual worlds either, but are relevant to a wide range of interactions in the non-physical space (like the World Wide Web) in general.

1.2.1. History of Virtual Worlds

> *"Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts… A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding."*
> *(William Gibson, Neuromancer, 1984)*

To look at the history of virtual worlds, a distinction is necessary between the history of the *idea* of virtual worlds on the one hand, and their actual implementation on the other hand.

Historically speaking, before cyberspace became a technological possibility, many philosophers suggested the possibility of a virtual reality similar to cyberspace. In *The Republic*, Plato sets out his allegory of the cave, widely cited as one of the first conceptual realities. He suggests that we are already in a form of virtual reality which we are deceived into thinking is true. True reality for Plato is only accessible through mental training and is the reality of the forms. These ideas are central to Platonism and Neo-Platonism. Another forerunner of the modern ideas of cyberspace is Descartes' thought that people might be deceived by an evil demon which feeds them a false reality. This argument is the direct predecessor of the modern ideas of brain in a vat and many popular conceptions of cyberspace take Descartes' ideas as their starting point.

Thus, Second Life lets us rethink possibilities of virtual realities anew, and building on concrete environments which we consider to be more or less true. The people we meet there and the things we do have a link to what we call real world. To what extent this happens is a matter of sincerity and trust.

In recent time, the idea of a virtual world was most pointedly articulated from authors in the Science Fiction genre, and its even more technology-centered subgenre *Cyberpunk*. While many academic papers, novels and movies dealt with similar ideas, two *Cyberpunk* authors stand out: In his best-selling novel *Neuromancer*, William Gibson phrased the term *Cyberspace*, Neal Stephenson created a similar concept he dubbed *Metaverse*. While there are minor differences between both concepts, they are structurally very similar insofar as they constitute a virtually unlimited, non-physical space in which humans (through their avatars) interacted with other humans and computer programs. This is what we will refer to throughout this course as virtual world or virtual environment.

Looking at implementations of virtual worlds, you get a much longer list which would not be practical to list here completely. Some of the milestones are worth being mentioning though: In 1979, first Internet-based multi-player games became increasingly popular within the universities that had Internet access at all. These so called MUDs (Multi-User Dungeons) were mostly based on fantasy role-playing games and widely lacked graphical elements: The user interface consisted mostly of text. Also, the players could not change elements of their world as Second Life users can do. In the mid-1990s, the online multi-player game *Ultima Online* fascinated hundreds of thousands of users by enabling gameplay within a virtual world that featured ground-breaking graphics, which levelled the path for the emergence of complex real-time massively multiplayer online role-playing games (or MMORPGs in short) like *World of Warcraft* in the early 2000s.

All these platforms have in common that they were first and foremost games – unlike Second Life, where users do not follow any game plot, but just interact for the interaction's sake. The company behind Second Life – California-based Linden Labs – just provides a platform for their users' interaction, which is loosely modelled after the physical world, but with fewer physical restrictions. Additionally, users can build and modify this world to a large degree: Second Life is the first successful approach of building a world that is built by its inhabitants for its inhabitants.

So Second Life is just one of many virtual worlds, although the most popular with more than 5,8 Mio. registered accounts (in April 2007). (The number of users is slightly lower, since some users have several accounts.) So Second Life is indeed a very popular environment, but by far not the only one[1].

1.2.2. History and structure of Second Life

Second Life started in 2003, already running than on 16 different servers with 1000 users. In the meantime, there are more than 3000 servers that store the virtual world and control the movements of the many thousand users who are online simultaneously.

Second Life consists of SIMs (short for simulator, which represents a region) and Prims (which are objects that form things and avatars). Every user in Second Life is represented by a virtual character called avatar. Every avatar you see is shaped and controlled by a human being.

Prims can assume any shape you want and they come in a variety of shapes to make transformations easier. Moreover you apply textures to the surfaces of the Prims you create. Also, they can be given certain qualities and features (such as transparency or the ability to flex or bend with the wind), they can be linked together and they can be made to do things by a script written in Second Life's scripting language. For example in Second Life a dog that moves and barks is an animated object made of linked prims, scripted to move in a certain way and play custom sound effects. In the two chapters called "Building your own world", we will discuss the possibilities of building and scripting in a more detailed way.

---

[1] http://slgames.wordpress.com/2007/03/05/alternatives-to-second-life/

1.2.3. Resources

Additional reading:

- Gibson, William (1984): Neuromancer Trilogy (Novel)
- Stephenson, Neal (1992): Snowcrash (Novel)
- Mayer-Schoenberger, Viktor and Crowley, John R. (2005): "Napster's Second Life? - The Regulatory Challenges of Virtual Worlds", Part 1: Virtual Worlds, 6-15. KSG Working Paper No. RWP05-052. Available online: http://ssrn.com/abstract=822385

2.   First steps in Second Life

"From the moment you enter the World you'll discover a vast digital continent, teeming with people, entertainment, experiences and opportunity. Once you've explored a bit, perhaps you'll find a perfect parcel of land to build your house or business." (Secondlife.com)

Everything inside has been built by Second Life residents: Houses, streets, cafés, bars, landscapes, tools, games and so on. Second Life offers many possibilities to build things in-game (that is, while you are moving your avatar through Second Life) and to program interaction scripts, e.g. for steering cars or helicopters, playing cards or instruments and so on.

Everybody owns what he or she has created in Second Life. People can give their creations away or they can sell it for the virtual currency Linden Dollars (L$) which can be exchanged back and forth for real dollars. There are actually people who make a living just by building things in Second Life and doing trade with real estate or e.g. clothes. You can read more about the economic aspects in Second Life in chapter 6. But let's start with the basic steps: Registering and creating an avatar.

2.1.   Creating an account

The first thing you need to do is download the software and install it. The Second Life software especially requires are a new video card which is able to reproduce three-dimensional graphics. The second is already a very identity-defining step: Choosing a name. While Second Life offers a range of surnames, your first name is your own choice. Then you chose a basic avatar type. While you can change the appearance of you avatar later, it will not be possible to change the name. Choose it carefully! If you think about gender switching e.g. you might want to use a unisex name. Many issues concerning decisions before signing up are discussed in the Second Life knowledge base[2].

Enter your email address, fill in your name (or another pseudonym) and the code to prove you are human. The final step is to decide if you want to have a pro-account. You'll need one if you want to own land but of course you can decide to upgrade later. Than you will receive an email with an activation link. After clicking that you are a proper member of the Second Life community.

You are now ready to enter the Second Life world. Start the program and log in with your avatar's first and last name and your password.

In General: Second Life can be a bit challenging to begin with. There so many features and possibilities what you can do with your character and what places you can visit that it requires a good time of learning until it will give the fun it actually can.

2.2.   Logging in

Upon logging in into Second Life, you're presented with a login screen that contains an important button: "Preferences". Many of the presented options you will understand better once you have explored Second Life, e.g. Chat, Input & Camera or Audio & Video.

You can also adjust the graphics resolution here. If you think that Second Life runs slow, you might want to lower the graphics quality to speed up the experience although you will lose some visual details. You can access the preferences anytime via the "Edit"-menu.

---

[2] "Before you sign up" http://secondlife.com/knowledgebase/category.php?id=5

2.3. The Menus

Second Life's main screen features a top bar and a bottom bar. Both are packed fairly tightly with features. Many of the functions you can access via shortcuts, in the appendix you'll find a list of these shortcuts.

Top bar: "File" is mainly for uploading stuff and for saving, like taking snapshots, saving textures or recording movies. "Edit" are standard edits options like undo or copy and paste, also about your appearance and preferences. "World" has some diverse functionalities, e.g. set landmark if you want to remember a place you have been or additional information about the land you are on right now. "Tools" is mainly about building and scripting. It also contains the useful command "Stop all animations" which you need when you want to stop all animations that currently run on your avatar. In the "Help" menu you have many links that will open webpages like the Second Life knowledge base or the scripting wiki.

To the right of the pull-down menus, you'll see icons showing whether any activities are disallowed in your avatar's present location, e.g. "no build". Moving farther right, you'll see a clock displaying Pacific Standard Time (which is also SL time) and the current amount of L$ you have.

The bottom line features the most important functions in Second Life:
"IM" – send messages to other members in Second Life. If they are offline, the will read them later.
"Chat" opens the chat window just like pressing "Enter".
"Friends" opens a panel listing all the SL people who agreed to be your friend. Here you can send them messages, see if they are online or offer teleports to your current location. You should make friend with all the other UOC people from the course!
"Fly" – of course, makes your avatar fly as described above.
"Snapshot" opens a panel for taking a picture of your current location.
"Search" is for finding events like classes or concerts, specific locations, people or groups-Results can take a while, be a little patient. "Build" opens the buildpanel. It is deactivated in areas where building is not allowed. You can only do that in special places like sandboxes or on land you own. More about that in chapter 0 and 11.
Moreover you have "Map", "Mini-Map" and "Inventory" which contains all of your belongings, even gestures (moves), landmarks, objects and clothing.

2.4. Moves and views

The easiest way to move around is to use the arrow keys. Pressing "F" will make your avatar fly, "E" (or Page Up) brings you up, "C" (or Page Down) down, press "F" again to stop flying. Another way of moving is teleporting. You can offer teleports to other people so they will come to your place or accept offers to go somewhere else. A special way of teleporting is via webpages. You can find addresses there, called SLURLS which are in-game locations. Clicking on them brings you there.

To zoom in and out, and to rotate the camera around an object or avatar, hold down the Alt key and left-click-hold on the object or avatar, then move the mouse up and down to zoom, and left and right to rotate around in a circle.

"Esc" brings the camera back to the standard position right behind your avatar. To orbit around an object or avatar in all directions, hold down Ctrl+Alt and left-click-hold on the object or avatar and move the mouse. Hold down Ctrl+Alt+Shift and left-click-hold on an object or avatar, and move the mouse. This will move the camera directly horizontal and vertical, no rotation. These features are particularly useful to control changes of your appearance or objects you have built.

2.5.   Library and Inventory

While the Inventory contains the things you personally own, the Library is a set of things that are available to all Second Life residents. The Library is just a folder in your Inventory which is why many new residents fail to check its contents. But you find plenty of interesting things in there, not only textures and clothes, but also a house, furniture a cars and landscaping items.

You can move items between the Library and the Inventory, just drag and drop. You can also give things to other avatars, just drag and drop them onto the other. However, some items are not transferable – find out by right-clicking on an item and selecting Properties.

2.6.   Changing your appearance

Many articles and newspapers deal with the possibilities of being someone else in Cyberspace, changing gender or race. But many users actually stay pretty close to their real world appearance. A survey in the Second Life forums found out that 14,45% of all Second Life users are men who play women and 3,55% women who play men (Rymaszewski 2007). It would be interesting to run a survey to find out how the rest of the visual appearance corresponds with the real world persona behind the avatar. A short guess would be: somewhat close, but a little prettier, taller, stronger. (For some more information about the connection between avatar and identity, also see the corresponding chapter about "identity and trust".)

Changing your appearance is easy and surprisingly complex at the same time, you'll find all the options by right-clicking on your avatar and choosing "appearance". On Orientation Island, there is a short introduction about the possibilities of editing the appearance. In the freebie area on Help Island there are many different Avatar types you can take to re-model, moreover you'll find clothes, hairstyles and movements there. And if you check out the downloads section[3] or the forums[4] on you will find many things, including appearances or templates for free download. You can change bodyparts like shape, skin, hair, eyes, chin, brows, torso and many more. There is also a randomize function that sets the appearance together automatically. Do not hesitate to play around with that tool, it illustrates the possibilities and actually many random avatars are nicely put together and you can use them as base model for your own creation.

Moreover you can save different sets of your appearance and thus return to other looks you had had before. You might want to have a business look, a party look or even try out to be one the animal-like "furries". You can switch between the sets when you have saved them as outfits.

Clothes are a big issues in Second Life (like in real life) In the Library there are hundreds of items and you will collect many more during your trips, either you get them for free or you buy them from shops (also for symbolic prices like L$1). "As in real life, clothes mean a lot. There's a lot of garbage out there and some really nice things too. Don't be afraid to ask where people got their stuff. More often tham not, other people are willing to help, and once in a while you meet some cool people turn into friends."[5] You can edit clothes like your appearance while you were them like sleeve length, fabric, colour and so on.

2.7.   Catalunya - a nation in Second Life

As Manuel Castells (2000) has put forward, Catalonia is a nation without a state. He

---

[3] http://secondlife.com/community/downloads.php
[4] http://forums.secondlife.com/index.php
[5] Cannea Brentano in Rymaszewski 2007

continues to elaborate that, given the dispersion of the regions that speak Catalan, the only way to define who is a Catalan and who is not is the language and that he wants to be Catalan.

Figure 1: Catalunya in Second Life

In Second Life new identities are created, new communities are formed, but many people also extend their 'real' identities and their traditional communities into Second Life. Hence there are various Catalan pioneers and initiatives, some primarily commercial some with a certain cultural claim. We have compiled a first list of places and groups that have some connection to Catalonia. You are invited to investigate, describe, analyze and reflect about the actual practices and places as well as about possibilities to transpose what is Catalan into Second Life.

Recommended Reading:

Rymaszewski, Michael: Second Life – the official guide, ch. 1 – 5

Castells, M (2000) Nations without a state: Catalunya, in: The Power of Identity. Blackwell Publishing

3. Building your own world - 3D model creation in Second Life

The following section will introduce you to the basics behind building in Second Life. Although there is the possibility of exporting 3D objects out of 3D creation programs into Second Life, the actual results of such imports are poor. The best way is to build things from scratch, get free stuff or use items from the Library and then remodel and reshape it.

3.1. Terminology: Prims, Objects and Rezzing

In Second Life's 3D graphics, a primitive or "**prim**" is basic three-dimensional geometric object. Prims are the irreducible building blocks of Second Life and one of several basic 3D shapes: a box, a cylinder, a prism, a sphere, a torus, a tube, or a ring. I addition to these, there are two specialty objects that are not made up of primitives: grass and trees.

Objects are linked groups of individual prims. Objects can contain anywhere from 1 to 255 prims. Unlike most 3D software, SL's building tools are parametric models. Parametric modeling reduces the amount of data traveling between your computer and the Second Life server because it describes objects using a few simple parameters rather than explicitly describing every part. To create a prim or object is to "rez" it. This term refers to Disney's film *Tron*, in which the anthropomorphic inhabitants of a computer are forced to play video games until they "de-rez", or: die.

3.2. Getting started

If you have used other 3D modeling software in the past, adjustibng to Second Life's system mighte take a minute or two. It is a little different, everything in SL is made up of prims and they cannot be deformed as freely as they can in professional 3D software.

If you have never used graphics or modeling software before, it is not a problem, most residents pick up the building tools fairly quickly. Do not be discouraged if you don't hand of it right off, some new builders need to try several approaches before they find one that works. You can attend building classes in-game which you can find with the search option. But you should start to get a little familiar with the tool before hand so you can more easily follow the instructions. Once residents start to build more complex objects, everyone has a special strategy how to put the things together. Like Kisa Naumova who built a virtual copy of her several storeys containing building:

> *"To make this, I used PDFs from our architects as a base to trace all the walls on 11 layers in an Adobe Illustrator file, then exported each floor as an XML-based Scalable Vector Graphics file, each of which I ran through a PHP script to extract the object info and convert it to something I could paste in a notecard. Then I made 11 objects (the little cubes in front of me in the video) that scoot themselves off to a predetermined location, spew out prims based on the notecards, and send them to their appropriate positions. The next step, is to rez this on the ground, terraform, and then texture-bake every single prim…"[6]*

To be able to build you need to be either on your own land or in a space that allows building, like public sandboxes. Normally, these are cleaned up regularly, that is all objects are being deleted. If you want to keep your creation, remember to save it to your Inventory.

---

[6] Kisa Naumova on her website - watch the impressive movie on
http://www.sleeds.org/show.php?ref=506095_5eab3c

3.2.1. Create

So, let's start. Right-click on the ground or another object and chose "Create" (or press "B").

Figure 2: Create menu

Here, you can chose on of the basic prims, click on a position where you want to create and voilà, there's your first prim. Now you are in Edit-mode. When editing your object, you'll notice several red, green and blue cones and triangles attached to it. These are your object handles color-coded according to the following axes and real-world directions.

Rotate and Copy
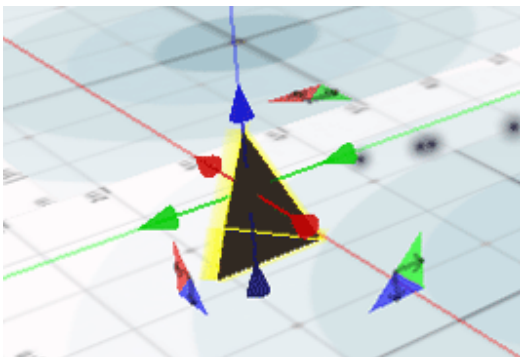
X: East/West (red)
Y: North/South (green)
Z: Up/Down (blue)

You can click and drag around and thus define your object's position. Holding down the control key allows you to enter Rotate mode, which replaces the object handles with a sphere inside three circles. Clicking and dragging the sphere allows you to manipulate the object's rotation in all three dimensions at once. While clicking and dragging one of the circles rotates the object on that axis alone.

If you hold Shift while dragging an object it will make a copy which you can drop when releasing the mouse button.

3.2.2. Stretch

Holding down Control and Shift puts you into Stretch mode. This places a white object handle on the eight corners of your objects, as well as a coloured one on each of the six sides. By clicking and dragging the sides handles you'll stretch the entire object along the associated axis, making it wider or narrower, taller or shorter. By clicking and dragging the corner handles, you'll stretch the entire object proportionately.

3.2.3. Build window

Hit "More" in the "Create" menu (as shown in Figure 2) to access other editing options. Here you can name your objects (which is important to find copies in your inventory later) and store additional information, like sharing options or price, position or size in x/y/z-meters or material, features like flexibility (to make soft and or round prims e.g.) or light, texture and contents.

3.2.4. Linking and unlinking prims

As you start becoming more of an experienced builder, you will want to use multiple prims to create an object. It is important to "link" these prims. Linking prims allows a multi-prim object to become one cohesive object. There are two ways of linking prims. First, hold down the shift key and left click on two or more objects that you would like to link (the prims should all be highlighted yellow). Then, click on "Tools" at the top tool bar and scroll

down to the option "Link". All the prims should turn blue except for one yellow. This lets you know that your prims are now linked therefore they will all move in sync and are dependent of one another. Once they are linked you can also change the size of the complete object which allows the building of very small and detailed things which can be comfortably built in large scale and the shrinked to the desired fit. The second and faster way of linking is to highlight the prims by pressing the shift key and left clicking on prims and then press the command key and the letter "L" and this will achieve the same effect. You can only link prims that you own.

To unlink prims press shift and then click on the prims you would like to unlink and then go to "Tools" > "Unlink" or simply Ctrl+Shift+L.

Note: To build your objects correctly it is very important to use the view options intensely as described in 2.4. Especially to link prims correctly it is necessary to position them neatly to each other.

3.2.5. Editing individual prims in a linked object

Sometimes you'll want to manipulate individual prims within a linked object. To do so check the Edit Linked Parts check box in the Build windows Edit mode. This will let you edit each prim in a linked object as if it were a separate prim.

3.3. Conclusion

As you may have noticed, building objects in Second Life is a time consuming and in the beginning very difficult task. But if you like to play around with 3D modelling and graphics you will soon notice how satisfactory the creation of even simple objects can be. And you will pay much more respect to the creators of really complicated designs while soon wanting to advance in skills.

What we could give you here is just a very small extract on what is possible to build in Second Life. But in the forums, on the blogs and other sites, there is plenty of information, tutorials and manuals and moreover you can find building classes in-game.

The building chapters in this course are just meant to give you the right vocabulary and a starting point for digging deeper into the creative possibilities.

Suggested activities:
Watch the video tutorial "How to build a chair" on http://cter.ed.uiuc.edu/tutorials/SecondLife/chair4.mov and redo the steps. It will make you familiar with the most important building options.

Recommended Reading:

Rymaszewski, Michael: Second Life – the official guide, ch. 7

Links:

- Second Life Forums http://forums.secondlife.com
- Second Life video tutorials: https://wiki.secondlife.com/wiki/Video_Tutorials
- Spanish speaking sandbox: http://slurl.com/secondlife/Nueva%20Red/172/48/22

# 4. Who are you? Identities, trust and interaction in virtual environments.

"I think I need to see you more often, you are changing much lately."
"Just surface. Hair and skin only, baby. I will NEVER change my shape."
(Conversation between two Second Life avatars)

When we use a networked computer to interact with one another, we are usually not physically present. Instead, we – our bodies, our minds, our actions - are represented by digital placeholders: These digital representations can take many forms: Icons, avatars, online profiles, or just words. At the same time, we also experience other people just through their digital representations. This absence of a physical body to interact with is referred to as *disembodiment*.

The avatars we use when we move within the virtual environment of Second Life, for example, are very complex digital representations of ourselves: They can look like humans (or other beings, or even things) in the real world, they can move, talk, and pick up things.

4.1. Virtual Identities

Such a complex avatar conveys a whole set of information to the other participants watching him. You receive information about their gender, their body size, their skin color, their style. But this information is not necessarily an exact representation of the person behind the avatar – it is merely an identity that this person constructed for himself or herself: Digital identities allow (or force) us to actively choose or construct an identity or rather an impression of it. This is very much in contrast to the identities we have in the physical world, which we often perceive as given because they are influenced massively by our physical bodies.
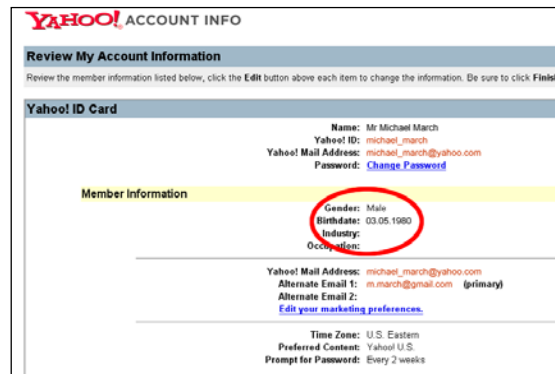
We use digital identities in all virtual spaces, from our email to complex systems like Second Life, and we have more than one such identity. We access them and switch between them on a more or less regular basis, and you should keep in mind that even though we ourselves know that these identities do not necessarily represent ourselves properly, the people and computers we interact with cannot know that: For our online interactions, the information we communicate to the others constitutes who we are. The information we put into our profiles defines who we are, because the others cannot know the difference: If our online profile shows our gender as "male", then in our online interactions we are likely to be treated as male, no matter what our physical gender is.
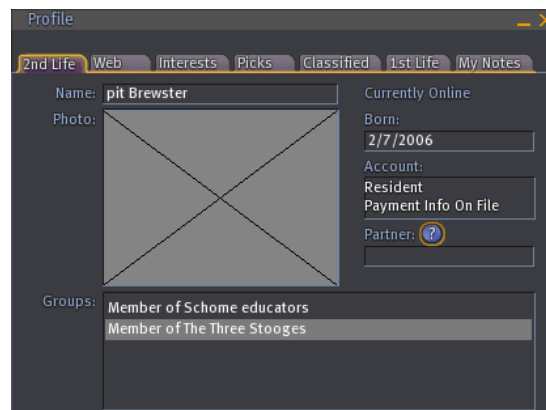
But even more than just your gender is given away by those profiles that you to describe

yourself in free text. This information is harder for computer to automatically interpret (i.e. to harvest your user data), but it can give a very detailed glimpse into your life situation:

This has a whole set of implications, some of which we should always keep in mind:

4.1.1. Digital representation vs. physical body

In online interactions, identity can overcome physical restrictions or "settings": We can switch gender (a male choosing a female representation or vice versa), ethnicity, hair or skin color, and any other element of physical representation that defines us in the physical world. For example, it is very common for people to switch gender to explore different variations of their online identities.
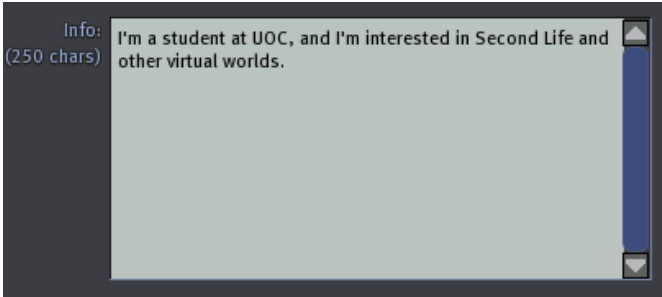
4.1.2. Multiple identities

Online, we choose and switch between identities regularly. Whenever we log into a service, game or virtual world, we take on another identity. The identities we choose from and switch between can be similar or very different, or they may even be contradicting. Still, apart from physical/ visual aspects, these virtual representations still represent aspects of ourselves. It is much harder to read information such as nationality, age, or in which kind of political system a person was educated, but all these elements are (to some degree) part of our identity. So even an identity we deliberately construct for ourselves will usually contain some elements of our social identities in the physical world.

4.1.3. Virtual identities are not without flaws

Just as our offline identities, our digital representations are not without flaws. They also have restrictions, just different ones: For example: In Second Life, your avatar can fly (which you cannot do in the physical world), but it can only interact with the rest of the world in a quite limited way (your avatar cannot put a nail into a wall unless the designer of the house explicitly allows you to).

4.1.4. Computer systems control parts of our virtual identities

Our identities are managed to a large degree by complex computer systems. We should always be aware, that such complex systems can show unexpected behaviour. There are known cases where bugs have wreaked havoc in the customer databases of online services. As a result, gender, age, or nationality of many customers were changed. While this seems trivial, it can have massive impact on our interactions in the virtual space: We could be denied access to parts of the service, we could receive wrongly targeted content or ads, or we could be unable to use the service because the interface language is automatically changed to match our new, wrong nationality.

4.2. Virtual identities & trust

When we interact online, we should keep these things in mind. Also, we cannot assume reliably that we are interacting with a real human: Many tasks are performed by computer programs, so-called "bots". These bots carry out repetitive tasks (like automatically collecting email addresses off websites), but they can also try to emulate human behavior.

During the 1930s to 1950s British mathematician Alan Turing developed the so-called Turing

Test to find out if a digital computer would be able to fool a human being into believing that the computer was itself a human being by answering the human's questions. (The test was based on a test based on finding out gender differences without seeing the test subjects: Another approach at identifying identities.) So far, no case is known where a computer has passed the Turing Test. However, computer systems are becoming more and more powerful and are increasingly able to "learn", i.e. to emulate human behavior: The interactive chat bot Jabberwacky[7] simultaneously chats with several thousand people and learns from their questions and answers.

It is important to keep in mind that these computer systems do not really think or learn – it is we, the humans, who tend to think of computers as similar beings if they emulate our behavior well enough. However, if you encounter avatars in Second Life or similar environments, you cannot always be sure who you are interacting with: A male or female, a child or an elderly person, or maybe even a machine.

4.2.1. Resources

Suggested activities:
- Have a chat with the chat bot Jabberwacky (www.jabberwacky.com), and check out its capabilities and limitations. What did you notice?
- Look at and/or chat with 3 avatars you encounter and try to think of a brief profile of the persons behind their avatars. What kind of information and characteristics could you derive from your chat? Were you able to determine their gender or nationality?

Recommended Reading:
- Berman, Joshua, and Amy Bruckman, 2001. "The Turing Game: Exploring. Identity in an Online Environment," *Convergence*, 7(3): 83-102, available as www.cc.gatech.edu/~asb/papers/convergence-tg-01.pdf

Additional Reading:
- Turing, Alan (1950): "Computing Machinery and Intelligence". MIND 59, October 1950. Available online: http://www.abelard.org/turpap/turpap.htm

Links:
- Jabberwacky: A smart, learning chat bot that emulates human behavior: http://jabberwacky.com/
- Alan Turing Homepage: http://www.turing.org.uk/turing/
- Stanford's Persuasive Technology Lab is a great resource on credibility on the web and how we perceive it: http://credibility.stanford.edu/
- The Gender Genie: A web tool that analyzes text and tries to determine if the author is female or male: http://bookblog.net/gender/genie.php
- Linden Labs: Implementing policy to allow users to confirm other users' identities: http://blog.secondlife.com/2007/04/05/advertising-policy-changes/

---

[7] www.jabberwacky.com

5. Code is Law - Rules, laws and boundaries of the game

5.1. Governance methods

Lawrence Lessig[8], one of the most eminent protagonists of the discourse about regulation of the virtual, has published a seminal book entitled "Code and other laws of cyberspace" in which he analyses the conditions and practices of regulation in cyberspace. He describes four mechanisms deployed to constrain human activity in all spaces. Theses are (a) social norms and values, (b) market based mechanisms, (c) legal regulations, such as laws and rights, and last but not least the (d) physical or virtual architecture of the space. Each of the mechanisms is now introduced, and then its implementation in Second Life is analyzed in the subsequent sections.

5.1.1. Norms and values

Regulation based on norms and values is the most natural form of regulation. There are two main forms of norms. The first group can be classified as practical or ethical and the second as aesthetical. Practical norms are based mostly on efficiency. There are certain norms regarding the use of an elevator (you do not stand in the doorway) which are mainly driven by practical concerns. However these kinds of norms regulating conduct all have a more or less dominant ethical character. A practice is generally thought of as ethical when it is still desirable if conducted by all stakeholders.

While growing up we learn what is aesthetically 'normal', and while there is a relatively high level of tolerance, we mostly agree with these social norms. Dress codes are one example where we allow for many expressions but basically all disapprove of non-normal behavior such as nudity in public.

All conduct compliance that has to do with the conjunction of normative regulations can generally be classified as 'good-mannered' or following a specific 'code of conduct'. Problems naturally arise when different cultures with distinct traditional customs and norms share a space.

Interesting about norms is that they are, in contrast to laws, always derived from an ideal of just or adequate behavior.

5.1.2. Market

The market regulates practices by putting a price to them. Mobility is one example regulated mostly by the market. Transportation has a certain price and the individual's interest and monetary capacity has to match the price set by the market if he or she wants to travel to a certain destination. Another example is the membership of a club or association which grants participants a certain status and usage rights.

5.1.3. Law

The instrument most naturally associated with regulation is: law. Laws are ex-post instruments developed to find practical (not ideal) justice in a concrete case. Laws are usually developed by experts who intend to codify 'normal' or positively discriminated behavior.

---

[8] http://www.lessig.org

One interesting and distinct form of legal regulatory instruments is: rights. Rights are usually defined in a country's constitution and similar documents such as a bill of rights, or in supra-national agreements such as the declaration of human rights. Rights are fundamental concessions 'guaranteed' by the issuing authority. As such they not negative but positive constrains.

5.1.4. Spatial Architecture

The last method of restraining behavior is spatial architecture. This method is so omni-present that one tends to fail to identify its relevance in many contexts. Most basically doors enable individuals to enter spaces. Maybe more conveying is the constraining nature of architecture when thinking about the availability of ramps which allow people in a wheel chair to enter a building. The distinction between natural and constructed architectural constrains is relevant especially in the context of virtual spaces. Naturally, not everybody can climb to the top of Mount Everest, but a 'speed bump' is a socially constructed method to reduce speeding. As we will see later, it is an important fact that virtual worlds do not have a natural architecture.

The following section will elaborate on how the different methods of regulation are created and how they are enforced.

5.2. Issuing and policing authorities in Second Life

In virtual worlds, just as in all traditional environments, there is dynamic competition between the regulating forces creating and policing the compliance with the regulation.

Let us take a look at the different actors participating in regulatory activities in virtual worlds:

First and foremost, the provider of the virtual world is responsible for the basic architecture of the space, as well as the market. The provider is also the main authority regarding the issuing of law-like regulation in the form of the service contract each user agrees to when signing what is called the "End user license agreement" (EULA). In this contract the user agrees to the terms and conditions under which he is allowed to use the service. Non-compliance leads to contract cancellation and subsequent exclusion from the virtual world.

Given the liberal environment out of which most virtual worlds, and Second Life in particular, emerged, the regulation role of the provider has been exercised only when need arose. We are basically looking at initially non-regulated environments where the 'rules of the game' are developed mostly by precedence. Linden Lab has stated that they want to exercise their authority regarding in-world governance issues as little as possible. But even though Linden Lab subsequently supports the development of user-driven governance architecture in the form of arbitration committees and similar institutions, it stays a private space where private rulemaking by the owner is the authority.

One result of the libertarian approach of the providers is the importance of self-regulation in the form of norms established by the users. And as virtual worlds are such a rather recent phenomenon, norms - which depend largely on tradition and culture - are not very developed, leading to a perception of personal freedom and anarchic conditions. Nevertheless, some first user groups interested in, and debating about, governance mechanisms have gathered. For the meantime, a "my home is my castle" attitude is prevailing. The owners of the spaces set the norms within their territory. To a certain

degree, this practice is supported by Linden Labs, who hand over executive powers such as excluding and black-listing users from their territories.

At this point, virtual world providers are commercial enterprises. Hence, it is their primary goal to maximize the profit of their company. The optimization of the economic market environment will therefore retain central importance for them. Consequently, the regulation of economic activities, especially the selling and buying services from the provider, but in the case of SL also the exchange of services and virtual products between users, is the most developed aspect of governance.

The market is an interesting regulatory aspect of Second Life, as Linden Labs is the first provider who has chosen to implement an intellectual property regime granting property rights initially to the creator, who can subsequently sell them to users. Other virtual worlds, such as the popular World of Warcraft, do not grant property rights to users and economic transactions, such as eBay auctions. In this case, the virtual objects 'owned' by the users in-world can not be legally sold, and have thus been banned from e.g. eBay (see e.g. ZDnet news[9]). Second Life's unique practice of granting property rights to the users/content-creators has motivated many users to engage in creative activity and sell their virtual goods and services. (See chapter on economics for more details.)

Linden Lab's pricing of the premium membership and the land is one regulative instrument to constrain the user practices and presence development. The liberal intellectual property regime allows for capitalistic free market based valuation and subsequent manipulation of practices.

Governmental regulation in the form of laws applies to virtual worlds just like any other media. Hence, laws dealing with fraud, illegal content etc. are subject to legal regulation. However, as is the case with other internet-based legal cases, the relevant legal authority and thus the legal canon that has to be applied is decided on a case by case basis and depends to a large degree on the politics involved in the case.

The last possibility of regulatory methods - architecture - brings us back to the absolute powers and control over the virtual world held by Linden Lab. As mentioned when introducing the regulation methods, in a virtual world there are no natural architectural constrains. The only dimension of architecture that sets a similar constraint is technology. Your bandwidth and – even more relevant in the case of Second Life – your client computer influence whether you can access the world at all, and also your user experience to a great degree. But these technological constrains are also constructed and decided upon by Linden Lab. They define the

Linden 'Headquarters' in SecondLife

minimum requirements and it is mainly an economic decision whether certain products are supported or not. This omni-potent power of Linden Lab is also present when it comes to content creation.

Even though Linden Lab has chosen to provide a very open architecture including a scripting language that allows users to create all sort of objects and functionalities, the final question whether an innovation is possible or not lies with Linden. By providing and defining the interfaces with the server architecture, they decide about the feasibility of all

---

[9] http://news.zdnet.com/2100-9595_22-6154372-2.html

in-world practices. To put forward an extreme example: When Linden decides one day to eliminate the teleporting feature, there is no way users as programmers can recreate that feature.

This responsibility and also many other liabilities would change if the software which runs the server and the client ceased to be proprietarily controlled by Linden Labs. In January 2007, Linden Lab took the first step in that direction and released the code of the client software which is needed to access the virtual world.

Open-sourcing the client software allows programmers around the world to further develop it. By open-sourcing the client software, Linden Lab have also given up, to a certain degree, the responsibility to perfecting the software, like for example making the world accessible to visually or otherwise impaired users, or to guarantee certain aspects of technical compatibility. Linden can now always refer to the open source community, which tackles issues following their specific mixture of market logic (all development can be done for a certain price) and value-based motivation (many features are programmed by enthusiasts implementing their ideas and ideals).

Linden Lab as announced several times that in the long term they will also open-source the server software. According to un-official statements this move is to be expected once Linden has gathered experience and feels comfortable with leading the development framework and practices. If this strategy will be implemented, it will be another one of the few examples (like Sun's efforts to control Java) of a company to keep the leadership of an open source project.

5.3. Practical cases of virtual world governance

5.3.1. Complaints Management

As mentioned, rather than providing one frame of governance, Linden allows the individual landowner to design and implement governance structures for their territory, thereby creating a multiplicity of governance frameworks, or several layers of governance. There is a very lean framework for practically handling complaints, however not for their resolutions.

There is an abuse-reporting functionality which can be accessed by all users via the help menu. According to Linden Lab[10], "abuse is when anyone violates the Terms of Service (TOS) or the Community Standards (CS)." However, recently Linden has decided to simply forward these complaints to the owner of the region where the alleged abuse took place. It is up to the region's owner to decide whether and how to react to the complaint. So what if a region's owner tolerates or even engages in malconduct? Chadrick Linden confirms: "If people are reporting [abuse by] a region owner, it's up to the region owner to decide what to do; [...] If a region owner is being abusive to the point of you having to report him, well he can run his region the way he wants, you should probably not hang out there."

So once again there is no official dispute resolution system put in place by Linden Lab, and they are promoting decentralized private legal regimes and private judicial execution. All you can do is follow their "Guide to Filing an Abuse Report[11]" and see what happens. This anarchic state can be roughly compared to the internet of 1995, where legal regulation was nearly non-present. Following this example, it might take a while before the legal authorities will consider virtual world-specific legal issues or their implementation. Until then, virtual world pioneers will mostly have to find solutions for themselves.

---

[10] http://secondlife.com/knowledgebase/article.php?id=085
[11] http://secondlife.com/knowledgebase/article.php?id=085

5.3.2. The giant toilet and the hacking hippo

One such story of a pioneer who, back in 2003, found a very innovative solution to a dispute that Linden Lab decided not resolve, is the story of a land owner, who one day found his neighbour had constructed what he called a sculpture of a gigantic toilet bowl.

The user who preferred to have a sea-view rather than a view of a giant toilet intended to have the artist remove the piece. When the artist declined and Linden wouldn't help, a neighbor with excellent scripting skills (and whose avatar was a hippo) helped by programming an 'invisible barrier'.

The invisible barrier is virtual object that essentially made the toilet transparent when seen from the offended user's property (see picture). Even though this example can not be considered a case of virtual world governance but rather of its absence, it is an excellent case to highlight that it would be single-minded to replicate real world legislation into virtual worlds. The conditions and possibilities in virtual worlds are very different and need different governance mechanisms.

5.4. Resources

Recommended reading
- Mayer-Schoenberger, Viktor and Crowley, John R. (2005): "Napster's Second Life? - The Regulatory Challenges of Virtual Worlds", Part 1: Virtual Worlds, 6-15. KSG Working Paper No. RWP05-052. Available online: http://ssrn.com/abstract=822385

Additional Reading
- Lessig, Lawrence: Las leyes del ciberespacio.

- La arquitectura de la privacidad (Lessig)

- Galloway, A. R. (2004). *Protocol : how control exists after decentralization*. Cambridge, Mass. ; London: MIT.

- Lessig, L. (2001). *El código y otras leyes del ciberespacio*. Madrid: Taurusesdigital.

- PROPERTY AND DEMOCRACY IN VIRTUAL WORLDS AE Jankowich

- Virtual World Governance: Digital Item Trade and its Consequences in Korea
  Ian MacInnes, YJ Park, Sang-Min Whang

Links and In-world
- Architectures of Control, online: http://architectures.danlockton.co.uk/

6. Economy: Business, Micro-entrepreneurship, Advertising

Economy in Second Life has a strong impact on how the world works, since from the beginning it has been thought to be a basic part of Second Life. It has its own currency, Linden Dollars, which can be bought and sold for real-world dollars on Slexchange.com or other exchange markets on the internet. One can assume that the idea of building currency and the idea of ownership of everything people create in Second Life is a strategy to give people more control, responsibility and commitment to their engagement in Second Life, and has been one of the key success factors for its growth. The fact that people really feel like they own parts of Second Life makes them owners of the whole game. They can start businesses there, which can have impact on their real life, or even make a real living just by participating in the virtual economy. So to speak: Building a digital house to buy milk and bread.

In the beginning, Linden Lab charged a tax for the things you own. But this lead to a revolt referred to as "The Second Life Tax revolt"[12], so Linden Lab changed the system to charge for the most scarce resource in Second Life: land.

Figure 3: L$ Exchange rate on sl.reuters.com

Economy in Second Life has been mainly discussed on two levels: Micro-economy, and real in-game business and marketing for real life goods. While the first has much more importance to the inhabitants of Second Life and thus is discussed in forums, blogs and in-game, the latter has been a major subject for mainstream media, which might also be the result of good public relations of the concerned marketing departments.

6.1. Micro-Economy

Everything you build in-game is yours. It is attached to your avatar, only you can decide what should happen with it, from the most basic cube to the most complex inhabited areas. You can assign a price to an object and sell it, give it to friends or just reproduce it infinitely and give it away for free.

There are companies already, who only deal with developing land in Second Life, owning many islands and building landscapes, houses and infrastructure. Their business is to rent the places to people who want to have a space in Second Life to meet people, hang out or start their own shop or bar, just like in real life. One of the most prominent companies is the real estate agency run by Anshe Chung, who serves as the prime example for successful entrepreneurship in Second Life and has even made it to the business week's cover page - as an avatar.

Anshe Chung is of course only her Second Life name. Her real name is Ailin Graef, she is 33, grew up in China and used to be teacher in Frankfurt, Germany. In 1999 already she engaged in the MMORPG *Asheron's Call* and started to use the character of Anshe Chung. Now, together with her husband, she owns a whole company, Anshe Chung Studios Ltd.,

---

[12] Grimmelmann, James, "The State of Play: Free As In Gaming?,"
available online :
http://research.yale.edu/lawmeme/modules.php?name=News&file=article&sid=1
290, December 4, 2003.

based in Wuhan, China, with more than 60 employees who constantly develop land. She has been called "Rockefeller of Second Life" by Philipp Rosedale himself.

Anshe buys up Second Life land, develops it and sells or rents to other Second Lifers, who pay good money to inhabit her creations. As in the real world, prices vary by location. She's done more than 10,000 real estate deals. According to Ms. Graef, her Second Life empire now includes virtual real estate equivalent to 36 square kilometers, supported by some 550 servers. In November 2006, she declared that collectively, her virtual assets are worth more than $1 million[13] (real dollars).

Chung found out that players wanted fixed prices for built houses, and neighborhoods that amounted to more than drab slabs of virtual turf, and that they wanted some order. So she began creating the equivalent of gated communities, complete with zoning rules. She doesn't allow malls or clubs in certain regions, for instance, and limits the heights of buildings. One of her agents is always available in-game to consult people who are interested in owning or renting land and houses.

But Chung is only one example of many entrepreneurs who seek to succeed economically in Second Life. There are fashion designers who sell clothes or jewelry, there are people to be contracted as builders on in-game labor markets. And of course there is the huge business of the many red light districts with dancers and hookers who sell virtual love for virtual money. Businessweek[14] even published a list of the Second Life moguls, people who make more than US$ 5.000 a month with their Second Life activity. While more than US$ 1.5m are exchanged within Second Life daily, there are about 500 people that actually make a living in Second Life.[15]

The strong importance of the economy has also been subject to criticism: Since everything is commercialized, the world is flooded with cheap advertising and dubious erotic services. But it has some funny breeds, too: Some people will just pay you L$ for sitting on a chair or hanging out in a club.

6.1.1. Marketing and Branding for Real Products

Another aspect that has gotten more attention from the media is marketing, or branding. By owning a virtual branch in Second Life, many companies expect positive outcomes for image and awareness. Since other advertising models become less and less effective, a virtual world where people spend time to have fun and engage heavily with their surroundings seems like a dream for any psychologically ambitioned marketer. Adidas and American Apparel own shops in Second Life and sell virtual clothes to the Second Life inhabitants. Mercedes have built a whole island, give away racing suits for free and let people drive cars on their racing circuit. So do Sony, Coca Cola, IBM, Nissan, BMW and so

---

[13]

http://www.redherring.com/Article.aspx?a=19927&hed=Second+Life%25e2%2580%2599s+First+Millionaire

[14]

http://images.businessweek.com/ss/07/04/0416_richlist/index_01.htm?chan=technology_special+report+--+virtual+life_virtual+life

[15] numbers from Secondlife.com

on. They all try to build interactive spaces that are fun and where people like to hang out. Especially the car companies have a big advantage: They offer virtual cars that people ride on special circuits.

Moreover, brands hope to meet a very open and innovative crowd in Second Life, one that can multiply the brand messages by passing it on to their own social networks. And being in Second Life does not only create a rich experience with virtual worlds in general, but it is also a conversation starter – a fact proven by the heavy press coverage about brands like Adidas or American Apparel, who were among the first to enter Second Life with virtual shops.

Figure 4: MTV's Laguna Beach in Second Life

For media companies, Second Life is an opportunity to create a community around products like movies or TV series. One of the most popular places in Second Life is MTV's Laguna Beach, the virtual extension of the TV show, with events and avatars who represent the actors.

But selling and creating engaging brand spaces is not everything big companies are interested in in Second Life. There are also scenarios like prototyping for products and architecture that people (focus groups) can try out and give feedback on long before real prototypes are made. Starwood hotels, for instance, offered a new type of hotel to try out in Second Life, and the company claims to use the user feedback for the actual hotel which is about to be built[16].

Mass customization is another way how value can be added to products in Second Life, and the produced goods are sold to the customer in real life. The traditional American mail order shop Sears is trying this right now with kitchens[17] (with poor results still, but it is merely an experiment). For instance, there are companies who look for cool clothes in Second Life to produce them for real life. In that case, Second Life serves as a tool for digital trend and market research.

So, while companies try to engage potential customers in their brand spaces, ordinary people try to make a living by designing clothes and tools, develop land, play music in a club or work as escorts. Despite the criticism, the economy in Second Life is probably just fun for most of its users: Just like playing monopoly.

Suggested activities:
- Write a business plan! No matter if you sell your expertise and consulting skills for marketing managers or use your in-game skills to develop land or tools to sell. Write down a concept of one or two pages, sketching out your main idea, the required resources including staff, a timeline with milestones and expected cash flows.
- Alternatively: Make some cash. Look for an easy job in Second Life like sitting on chair. It will get you some L$ you can spend for e.g. clothes.

Recommended Reading:
- Cory Ondrejka: Aviators, Moguls, Fashionistas and Barons: Economics and Ownership in Second Life http://papers.ssrn.com/sol3/papers.cfm?abstract_id=614663

---

[16] http://www.virtualaloft.com/
[17] http://www.3pointd.com/20070108/ibm-brings-sears-to-second-life-at-ces/

Additional Reading:
- Harrison, Randolph: SecondLife: Revolutionary Virtual Market or Ponzi Scheme?
  http://randolfe.typepad.com/randolfe/2007/01/secondlife_revo.html

Links:
- Second Life Economy statistics http://secondlife.com/whatis/economy_stats.php

7. Second Life as teaching and learning space

Over the last years computers have become used more and more in education. On the one hand they serve in their primary function as information and communications tools[18], which has by now been implemented in most education institutions in the form of an e-learning platforms.

But more recently, there is also a mounting interest in using them for simulations, and what has been named serious gaming environments. Simulations can be characterized in the given context as digitized replications of scenarios that engage the user in problems and activities with correct solutions. In serious gaming environments, especially when set up as massively multi-player online role playing game (MMORPG), the learner has a wider array of opportunities. Generally there is not one correct solution, but knowledge is constructed in a combination of social interaction, collaboration, exploration and experimentation. Second Life is both: It is a platform on which interactive simulations can be presented, but scenarios for serious gaming can be set up as well.

In the past, simulations have been almost exclusively used for professional or vocational training, e.g. for pilots, or military controllers. These simulations had a high development cost and were rather static products once they were developed. The virtual worlds we see emerging today are evolving platforms rather than finished products. As such, they host a multitude of simulations at the same time. In the case of Second Life, some are primarily for entertainment, some for commercial purposes and some for education. Furthermore, the nature of the simulation is not static anymore. Users develop the virtual elements of the simulation themselves within the platform, and thus they can also amend these elements according to their needs[19].

In the following paragraphs we will first review some key aspects of virtual worlds, both positive and negative, particularly in comparison with traditional e-learning environments. Then we will look into some interesting applications of Second Life for teaching and learning.

7.1. What makes virtual worlds different?

In the following you find a number of aspects that provide for a different user experience in virtual worlds.

One element that makes serious gaming environments an interesting complement to traditional learning spaces is the entertainment and curiosity many learners experience when given the chance to explore and learn in virtual worlds. This entertainment and curiosity translates directly into motivation. Learners have reported that their motivation is positively influenced in serious gaming environments because of the sense of challenge, the realism of the experience, as well as the amount of opportunities to explore or discover new information.

While play is a stimulating activity for users of all ages, it also stands to reason that younger learners are more prone to feel an immediate attraction towards the playful elements of serious gaming environments.

---

[18] Essentially is used to complement or replace traditional media such as books and to liberate learners discourse from the constraints of location and, in the case of asynchronous communication, time.

[19] The modular construction method facilitates these kinds of improvements.

Virtual worlds provide an enriched virtual identity and a sense of presence. The three-dimensional, realistic or fantastic representation which the user creates, and which represents him- or herself, carries much more visual information than a textual representation.

Additionally, the avatars are capable of gestures and other movements that can be used for communication. This personal representation as an avatar, combined with the spatial experience, results in a much more immersive experience called presence. Because the user feels (emotionally) more involved, the space is better suited to act out conflicts or to engage in other social activities, such as collaborative assignments.

One last positive aspect of today's virtual worlds has already been touched upon in the introduction: They are highly versatile platforms, which enable small institutions and even individuals to develop creative, or even fantastic objects and simulations - because the costs involved in doing so have dropped so dramatically.

In fact, once an educational tool is built, it can be shared with colleagues from all over the world thanks to the fact that Second Life is a platform that provides inter-operability across the simulations. The emphasis here lies on the catalytic function of these environments with regards to creativity. Above all, Second Life is a contest of ideas. The 3D web is a new frontier of cyberspace, and it depends on the pioneers to transform this opportunity space into fertile land.

Let us also review the negative aspects: On the negative side there is first and foremost the cost involved in providing the technical equipment to access and run the virtual world. Today, the technological requirements to access Second Life with an optimal user experience are 1 gigabyte of RAM and 128MB of video RAM (and the corresponding up-to-date graphics card) as well as at least an ADSL broadband connection. This is far beyond the average private user. It is also well beyond the equipment provided to students at many educational institutions. This makes Second Life an exclusive environment, whose services are accessible only to the very well equipped.

Furthermore, it has to be clear that Second Life is still an emerging platform and errors occur on a quite regular basis. Since the beginning, Second Life has followed the programmers' mantra "release early, release often", which results in piecemeal improvements and a semi-stable state of "permanently beta"[20]. The whole system goes down for maintenance for several hours almost every week, and while the client versioning has become less recently, a new client software has to be downloaded and installed every couple of weeks.

Basically, users have to be tolerant towards encountering non-functioning elements of the environment, up to the complete re-boot of the client system. As a result of this 'still under construction' state of Second Life, it is not ready for bigger scale formal teaching and learning initiatives, which would also be practically impossible because the individual simulations can only take a quite limited number of avatars.

Another last negative point is that because of the relative novelty of Second Life and serious learning environments in general, the practitioners can not rely on pedagogical practices adapted to this new teaching and learning space.

The interest of the education community in virtual worlds has been high since the very beginning, and at the time of writing there are more than 200 universities that are in some way represented within Second Life.

There are several mailing lists where practical experiences are exchanged and questions

---

[20] http://opensource.mit.edu/papers/neff-stark.pdf

are debated, and several research reports and publications dealing with how to create meaningful, effective and engaging learning experiences in virtual worlds. Nevertheless, exploiting virtual worlds for learning of content classified within the traditional educational canon is not that easy, and maybe the learning objectives of classes within virtual worlds have to be defined in different terms.

Let's look at, and analyze, some examples of what has been done in Second Life in terms of education.
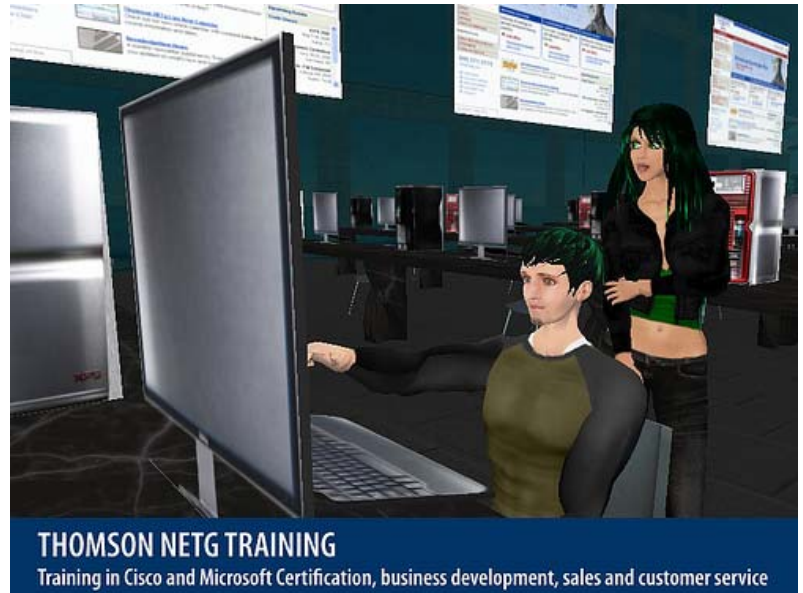
7.2.   Concrete Applications and Practices

7.2.1. Using Second Life to create a spatial experience for distance education

Thomson NETg is a well established private education provider, focusing on integrated enterprise learning programs with a commitment to technology education. In Second Life, Thomson is offering classes on Microsoft and Cisco products, as well as on database management and web development.

At Thomson NETg we find a classic case of transposing traditional classroom teaching into virtual worlds. Thomson has developed several teaching theatres where instructors explain technology and practices to the students, using an audio-stream which is complemented by slides and videos.

One idea that we would like to pull your attention to is the outside 'chill-out' area, where students can choose between a selection of podcasts which are played as in-world audio when the avatar sits down on the corresponding chair. Similarly, the students can go into a special building where they can

THOMSON NETG TRAINING
Training in Cisco and Microsoft Certification, business development, sales and customer service

watch video recordings of classes.

The latest educational space provided by Thomson is called The Lab. Here, avatars sit in front of virtual computer terminals and engage in the management of simulated technical equipment, like routers or servers. Thomson is probably one of the most advanced education simulation in Second Life. However, they have chosen to replicate traditional tools and methods. This is in accordance with the three stage technology appropriation and exploitation model put forward by Bates (2000).

First, the new technology is used to replicate the established form and practice. Second, the new media are used to improve traditional ways of teaching and learning. Only in the third stage, after experience has been gathered, educators make use of the true potential of a given technology. The 3D virtual worlds are still so new that Thomson is a great example of a stage one usage of Second Life for education.

An informative overview about Thomsons activities can be found in a video[21].

7.2.2. Second Life for Interactive Simulations

The National Oceanic and Atmospheric Administration (NOAA), and the Earth System Research Laboratory (ESRL) have set up what can be classified as best practice in building immersive simulations. The island developed by NOAA/ESRL contains several activities the learner can engage in while exploring their island.

Let's look at some of the simulations featured at the NOAA island. There is a virtual weather balloon. Avatars can hang on to the balloon, which will fly off and take the user up into the distinct levels of the simulated weather fronts while explaining what is special about them, and what instruments NOAA/ESRL use for their research.

Another simulation allows the learner to participate in a simulated mission of NOAA's hurricane hunters. Here, the avatar is taken on an airplane, which then flies into a simulated hurricane. During the flight, the various aspects of the work of the researchers are explained.

One of the most immersive simulations lets the user explore the causes of how tsunamis form, and what methods researchers employ to detect and warn people before they happen. After several interactions with the simulation, a virtual tsunami wave and its impact are experienced by the avatar.

Another sophisticated technological accomplishment is the "Science On a Sphere" (SOS) simulation. SOS is a simulation of the earth's weather system using real data, which is animated onto a virtual representation of our planet. SOS was first created in NOAA's real world museum and education center, and then later the dataset and the simulation were transposed into Second Life.

The simulations presented by the NOAA/ESRL are making good use of the immersing quality of virtual worlds (you are flying around etc. in contrast to reviewing a movie that shows the same pictures), but they are not particularly rich with learning opportunities to explore besides the 'main attractions'. Nevertheless NOAA/ESRL is one of the pioneers and has managed to produce a very convincing environment.

A nice video introducing the NOAA/ESRL simulation can be found on YouTube[22].

7.2.3. Serious gaming in Second Life

Hydro Hijinks is a diplomacy adventure style game. You are entering a scenario where the island's farmers are suffering a water shortage due to the operations of a newly built nuclear power plant. It is the learner's role to explore the island and follow a trail of information, reconstructing the educational narrative prepared by the project's creators.

Hydro Hijinks is especially encouraging for people interested in learning about Second Life as an education environment, because it is the work of a team of 12 university students who have created the whole game within the context of a first semester course.

A nice video giving a good overview of the Hydro Hijinks setting can be found online[23].

7.2.4. Language training

---

[21] http://www.youtube.com/watch?v=4HYiHOmaFyk

[22] http://www.youtube.com/watch?v=is8YX32GAyQ

[23] http://www.youtube.com/watch?v=JS2JT9IV3CM

One educational usage scenario, that is about to become much more attractive once the SecondVoice IP-telephony service will be released, is learning languages. Already many projects have embarked on realizing environments where learners can meet and find others to engage in tandem language learning. Given the special conditions of virtual worlds, learning can be embedded in realistic scenarios resulting in a much more task based and contextual experience. We have selected the language learning initiative of the Central Missouri State University to highlight some interesting ways how Second Life can already be used. The author has designed a little apartment in which objects are labelled with little tags giving the German word for them. When clicked a sound reproducing the correct pronunciation of the word is played. The learner can also read, and if he wants collect, a SL note card explaining the use of the word as well as its grammatical forms and exceptions.

You can visit the German apartment online[24].

7.2.5. Conclusions

In conclusion it can be said that Second Life has the potential to allow for rich and social learning experiences. The key value added in comparison to traditional online environments is the improved sense of presence and activity of the user. Following the saying "you understand what you have done" Second Life a suitable place for all learning activities where social interaction and doing are key aspects. The environment is not very suitable for traditional frontal teaching practices, especially frontal teaching of numerous students.

Second Life is a world that is only some very few years old and it still has many institutional and technological child sicknesses. Furthermore practitioners and institutions have to be aware that for now it is an environment controlled by one private company and that there are several competitors who might take over. In short it is far from sure that Second Life will be able to set the standard for 3D internet environments.

Nevertheless everything you and your institution learn in Second Life – teaching or better coaching classes, creating and maintaining a virtual space, etc. – are skills that are easily

---

[24] http://slurl.com/secondlife/Glidden/196/178/564/

transferable to other 3D environments.

7.2.6. Resources

Recommended reading

- 101 Uses for Second Life in the College Classroom
  http://facstaff.elon.edu/mconklin/pubs/glshandout.pdf

Additional reading

- Examples of educational uses of Second Life visit
  http://sleducation.wikispaces.com/educationaluses
- PUTTING A SECOND LIFE "METAVERSE" SKIN ON LEARNING MANAGEMENT SYSTEMS in Proceedings of the Second Life Education Workshop at the Second Life Community Convention.
  http://secondlife.com/businesseducation/education/slcc2006-proceedings.pdf

Bates, T. (2000). Managing technological change : strategies for college and university leaders (1st ed.). San Francisco: Jossey-Bass.

Links & In-World

- Search page for the education mailing list archive: http://tinyurl.com/qfw4
- Continuously updated collection of online resources http://del.icio.us/secondlife/education

- Official information hub for Second Life education issues
  http://secondlife.com/education & http://secondlife.com/educationwiki

- Official Second Life Campus http://tinyurl.com/jnafl

- The New Media Consortium has developed an impressive educational area with about 60 islands hosting everything from a library, to an arts theatre and museum, to virtual mathematics labs etc. To visit the NMC Campus you have to freely join the NMC guest group and then teleport to http://slurl.com/secondlife/NMC%20Campus/114/100/26

8. Risks and opportunities of in-world engagements

Engaging in a virtual world might seem as if it is disconnected from our non-virtual activities. This separation is not as strict as it may seem. Often, you will experience spill-overs from one world into the other: You might discuss the experiences you made within Second Life with your friends in the physical world, or you might meet up your offline friends within Second Life. It is necessary to consider which implications arise from our engagement inherent in a virtual environment, because there are both considerable opportunities and risks inherent in this kind of engagement. To illustrate the major points, we will use examples mostly taken from the virtual world of Second Life, but also a number of online multi-player games or web services.

8.1. Privacy

One of the main issues in virtual encounters is privacy: Most online services require their users to identify themselves with a wide set of personal information ranging from email address, to postal address, to age. In many cases (like a premium Second Life account) credit card registration is also required. While in many cases no problems arise from giving out this information, users often have to give up a significant level of control over their own personal information, as the end user license agreement of many services requires exactly this: That way, it is common practice for companies to gain the right to use their users' data for commercial use, i.e. to customize advertisement.

But privacy concerns do not end there. Even more risk lies in the social networking character of many services that enable virtual interaction. Many Web 2.0 services implicitly award their users for publishing very personal – sometimes even intimate – information, ranging from their location to personal preferences. As Second Life also encourages (and lives off) our interactions with other users, we constantly give information about ourselves to both the company Linden Labs and to other users. As we usually do not have reliable information about these other users' identities (see the chapter about trust and virtual identities), we can not be sure about the way this information is used, or will be used in the future.

This of course does not mean that you should be afraid of sharing information with other people within Second Life. However, it is important always to be aware of what kind of information you are sharing with whom, and not to give out personal information to people who you do not personally know.

8.2. Intellectual Property

Much unlike non-virtual, physical property (i.e. a car), intellectual property (i.e. a book) has very different characteristics, and poses very different challenges. Digitally produced goods fall into the realm of intellectual property, but are again subject to slightly different rules.

For example: A car (physical) can be driven by only one person at a time, and in order for another person to use it, the car has to be transferred to that person. While the second person is driving it, the first cannot be driving the car. Digitally produced (or stored) content behaves differently: As it consists only of information and thus can be reproduced at virtually no cost, a digitally stored document can be copied to thousands of people and be read at the same time by all of them. Items created within Second Life are digital, virtual goods and therefore can be reproduced endlessly and with a distribution cost near zero. These characteristics are important to keep in mind, as they conflict massively with the traditional idea of physical property. Also, these characteristics mean that intellectual property is subject to massively changing legal regulation with smaller or larger differences between different legislations.

As you participate in Second Life, you immediately become part of the world that constitutes Second Life: You stop being a mere consumer and become a contributor to this world – a creator. This starts with your avatar, which as soon as you start customizing it, you get a certain copyright on. Linden Labs policy on intellectual property is to leave all copyrights to the creators, i.e. you:

> *"Linden Lab's Terms of Service agreement recognizes Residents' right to retain full intellectual property protection for the digital content they create in Second Life, including avatar characters, clothing, scripts, textures, objects and designs. This right is enforceable and applicable both in-world and offline, both for non-profit and commercial ventures. You create it, you own it – and it's yours to do with as you please."* (Linden Lab Intellectual Property policy)

Think about what this means to you: You create content that you own, and that you are free to do with what you want (within certain guidelines). However, the goods you create within Second Life are non-transferable to other virtual worlds or the physical world. If you decide that you would like to leave Second Life, you can only choose between leaving all your property behind, or sell it and exchange your Linden Dollars for non-virtual currency. (This of course ties directly into the discussion about governance, which you can find in the according chapter.)

Also, keep in mind that even though users need to provide personal information in order to participate in Second Life, the system of identifying users properly is not without flaws and can be abused. If you consider a transaction within Second Life with a substantial monetary value, consider that it might not be possible to enforce legal consequences.

8.3. Psychological issues: Trust, identity, losing yourself,

Apart from legal issues, engagements in virtual environments also have psychological implications which are to consider, namely those connected to trust and identity (as already pointed out in the according chapter).

As you spend more time in the world of Second Life, engagement and interaction can become increasingly intense. You might find yourself making friends, developing a social network, maybe even finding a love interest. While contacts with other users can be very superficial (which gives us room to experiment and to explore different aspects of our identities), it is also quite possible to find people to share your experiences with, and to make close friends.

This can be a very rewarding experience, as you might be able to find other people interested in similar topics and hobbies, to spend time together and to share parts of your life. However, this kind of intense engagement is not without risk, as perceived friendliness (or even friendship) does not necessarily live up to one's expectations. In contrast to the physical world, where we usually know where our friends live, what they look like, and (to some degree) what their life situation is like. Within a virtual world, we know next to nothing about these aspects of our connections: Relationships within a virtual world are very likely to be based to a large degree on the exchange of thoughts, words, and non-physical actions. We usually cannot tell anything of the physical whereabouts of the other users, or about their life situation. Thus, in the case of "wrong" or "bad" behavior, no strong social penalties can be expected as it would be the case in the physical world. For example, if we got into an argument with a person in the physical world and just decided to leave the room without a comment, we would be held accountable for our actions: Maybe the other person would try to stop us, or would not invite us back next time. On the other hand, if we just logged off during an argument within Second Life, the other person would not be able to do anything about it, and maybe would not even think that we left the room on purpose – after all, it could have been just a technical mishap that disconnected us.

This prepares the ground for very different rules of social interactions within virtual environments, and this we always need to keep in mind.

On the other hand, the same rules also allow for very rewarding types of relationships which are much more uncommon within the physical world: Since our avatars are not bound to a physical location as such, we can choose our relationships not by geography but by interest alone. Niche cultures and subcultures can be fostered more easily in this kind of environment because the technology helps us to find (and be found by) other people with similar interest. Second Life also allows us to experiment with different aspects of our identity (as discussed in the chapter about identity and trust). The (partial) anonymity of Second Life and other virtual environments allows for a great deal of experimentation in terms of relationship models. Also, meeting connections from the physical world within Second Life – or vice versa – can enhance our understanding of the other person as we get to know different aspects of their identity and personality.

As with a globalized world in general, our actions within Second Life can also have an impact for other people in a way which can be hard to predict. For example, just as the clothes we choose to wear in the physical world have an impact (in one way or another) on the workers who produce them, the same rules can apply for virtual worlds: Many buildings and items in Second Life are produced (i.e. programmed) by cheap labor in developing countries. Within the massively-multiplayer online role-playing game *World of Warcraft* there have even been reports about children in developing countries who produce virtual goods under sweatshop-like conditions: These children were reported to spend twelve-hour shifts just performing rather mind-numbing point-and-click operations to produce simple goods or to earn in-game character experience points for richer players in industrial countries. Our actions, even within Second Life can have impact within both the virtual and the physical world.

We should always be aware of what all this implies for our in-world actions. However, if we do, engagement in a virtual world will be a very rewarding experience.

Suggested activities:
- Look at two of your classmates' Second Life profiles and avatars. Based on the information you find (without asking them), write a brief profile of the person behind it. How detailed is the profile you could write from the publicly available information? How much about yourself do you give away with your current profile settings and avatar?

Recommended Reading:
- Lasica, J.D. (2006): "World of Warcraft: only a game?" In: New Media Musings (Weblog), 18 September 2006: http://www.newmediamusings.com/blog/2006/09/world_of_warcra.html

Additional Reading:
- Doctorow, Cory (2004): "Anda's Game". Salon.com, 15 Nov 2004. Available online: http://dir.salon.com/story/tech/feature/2004/11/15/andas_game/index.html
- Mayer-Schoenberger, Viktor and Crowley, John R. (2005): "Napster's Second Life? - The Regulatory Challenges of Virtual Worlds". KSG Working Paper No. RWP05-052 Available online: http://ssrn.com/abstract=822385

Links:
- Linden Lab's policy on intellectual property: http://secondlife.com/whatis/ip_rights.php

9.   Politics & campaigning

Just like any new form of medium or communication sphere, Second Life has become a battlefield for political campaigns as well. Candidates and parties for elections in real life want to be present in Second Life, show their openness to new forms of campaigning and try to engage people in political arguments. Moreover, Second Life has become a political space per se since people constantly discuss the rules and the borders of the world. Whether it be more influence and power over decisions made by Lindenlab since they feel to be the rightful owners of their land, or to call for more control and safety by the same ubiquitous institution.

9.1.1. Real life campaigns in Second Life

It's probably fitting that the country which produced Baudrillard and Foucault now has the most prominent presence of major real world politicians in Second Life. Days after the strife over the arrival of France's far right Front National, the country's Socialist Party built a virtual location in Second Life as well, promoting the Presidential election of Segolene Royal.

Figure 5: Anti Le Pen protest in Second Life

In January protesters attacked the cyberspace headquarters of Jean-Marie Le Pen. Le Pen security forces responded with push guns, whimsical digital weapons that tossed bodies through the air "like rag dolls," according to one witness. Protesters fought back with pig grenades, firing fat pink porkers that exploded in neon pink splatters – a good example of how hard politics is fought in-game. Sarkozy-island is also a frequent targets of attacks – so extreme that they even thought about closing it[25].

All four major candidates in France's presidential election had virtual headquarters in Second Life to engage in debates, attend political rallies and take part in protests. For now, the numbers are small. But just like with marketing efforts, the main outcome of political campaigns in Second Life today is press coverage. Moreover, in a campaign in which only a few points separate the candidates like in almost every recent campaign in a Western country, campaign officials can't afford to dismiss the several thousand voters who visit their virtual offices.

The candidates for the Democratic rally in the US also have virtual officess and several hundred residents already teamed up in unofficial support groups for O'Bama, Clinton, and John Edwards. When the Second Life campaign managers of the candidates came together for a round table[26], they stressed the idea of community building and virtual cooperation over the idea of applying brand-space like environments in Second Life. International cooperation is another experience political campaigners have in Second Life, while being there for a national campaign purpose, discussions about global politics develop and some hope to see reflections to national politics out of border-crossing virtual worlds.

---

[25] http://ilesarkozy.typepad.com/ilesarkozy/2007/04/on_ferme.html
[26] Political campaigning in the Metaverse:
http://nwn.blogs.com/nwn/2007/04/politics_and_th.html#more

But this is exactly the case right now, campaign areas feature little interactive possibilities. Avatars can pick up free stuff, read posters or watch video streams. But politicians also experience a more open and spontaneous way of communication in Second Life. Jorgo Chatzimarkis, a member of European parliament opened a virtual office and has regular opening hours to receive interested citizens and says: "Relatively few people come… but I think every politician will have an office in Second Life".[27]

Of course, political campaigning in Second Life is still in its infancy and the efforts of maintaining a political space with supporters who engage visitors in discussion is relatively high compared to other communication instruments. But it's like the traditional door-to-door campaign: Every vote counts, no matter where it is won. In the future, we might see campaigns that make use of the opportunity in cooperation and global alliances and the professional campaign managers are just gaining experience in using virtual worlds.

9.1.2. Political In-Game issues

Just like discussed in chapter 5, virtual worlds have slightly other premises for rules and regulations. The American lawyer Marc Bragg sues Linden Lab over virtual property ownership at a federal court in Philadelphia because he claims to have been "dispossessed" when his Second Life account cancelled because he wanted to sell a virtual estate which he had acquired by exploiting as system error.

This one of the few stories when users moan about too much power by Linden Labs. Many call for more regulation e.g. to prevent political extremism, pornography or simply because their neighbors do not behave in a desired way.

But there is the other extreme as well: The Second Life Liberation Army is a group of self-proclaimed avatar revolutionaries who call for more freedom and the "creation of a broad democratic initiative aimed at the election and convocation of a representative body in Second life based on One Citizen One Vote."[28] Establishing avatar's rights, based on civil rights is an issue which has been addressed already in the year 2000 and a "Declaration of the Rights of Avatars" was made back than[29].

Even less radical voices call for a parliament with representatives of all Second Life citizens to address issues of discussion among residents and even local governments for some SIMs. Linden Lab, in this case, is not seen as an enemy, merely the "last court of appeal".[30]

It will be interesting how the discussions evolve and what path in-game politics will take. For now, the rules are clear but might cause more and more discomfort: Allowed is, what is technically possible and who owns land can set technical rules for behavior and action.

Suggested activities:
- Discuss the following questions with your peers and in the forum:
   o Do you think the rules form a fair and just framework?
   o Where do you see the limits of the Second Life's freedom? Where are more regulations needed, where less?
   o Can you find more political positions on the internet concerning governing structures of Second Life? Sum them up and try to sort them in political fractions.

---

[27] In: The Avastar 19: http://avastar.de/pdfs/2007/TheAvaStar_Issue19.pdf p.05
[28] http://slla.blogspot.com/
[29] http://www.raphkoster.com/gaming/playerrights.shtml
[30] http://gwynethllewelyn.net/article11visual1layout1.html

Recommended Reading:

- Political campaigning in the metaverse
  http://nwn.blogs.com/nwn/2007/04/politics_and_th.html#more
- Furries and griefers on the campaign trail
  http://www.medialoper.com/hot-topics/second-life/furries-and-griefers-on-the-campaign-trail-presidential-politics-in-second-life/
-

Additional Reading:
- Avatar Politics: The Social Applications of Second Life
  http://www.ipdi.org/UploadedFiles/Avatar%20Politics.pdf
- A Declaration of the Rights of Avatars
  http://www.raphkoster.com/gaming/playerrights.shtml

10. Media in Second Life: In-world media, Reporting about Second Life

As you have seen, many companies have already opened offices within Second Life, and more and more are joining in. This is, of course, mostly a part of the companies' public relations (PR) measures, no matter if it serves primarily to advertise their products, or to foster customer relations.

Traditionally, communication science thinks of PR as one of two pieces that constitutes the media system – the other piece is journalism. Both of these pieces are needed within the media system: Depending of your academic school of thought, you might think of PR and journalism of antagonistic players, or of partners in informing their recipients. Either way, both PR professionals and journalists try to inform readers or viewers – about different things, by different standards and norms, and sometimes through different channels.

Not surprisingly, in Second Life this system is reproduced to some degree. While no proper media landscape has been established within Second Life yet, more and more publishers, journalists and media outlets have started to engage in Second Life.

While there are many forms of media engagement within Second Life, most publications can be catalogued into one of three main categories. (Please note that there are border-line cases, which could be sorted into a different category.) As there are many new publications being established at all times, this list cannot claim to be complete. Rather, it just picks a list of media outlets to illustrate the wide range of publications.

The three categories of media engagement in and with Second Life are:
1. In-world media
2. Weblogs and media covering (more or less exclusively) Second Life
3. News coverage about Second Life

To some degree, the second group (Weblogs about Second Life) play a special role as it encompasses both news from within Second Life and analyses about meta-aspects of Second Life as a virtual system.

10.1. In-world media

The in-world media landscape is still far from having fully developed. However, both traditional and innovative new types of media are developing. An example of the rather traditional approach is the tabloid *The AvaStar*, which translates the classical paper version of a tabloid into a PDF format that can be downloaded both on the website and from within Second Life.

The news agency *Reuters* instead features a rather innovative model: Here, avatars can pick up free display screens to use in their houses. That way, users are enabled to share news they deem important. More importantly, though, the *Reuters* approach goes a step further in adapting to the new environment, whereas *The Avastar* did not go that extra step.
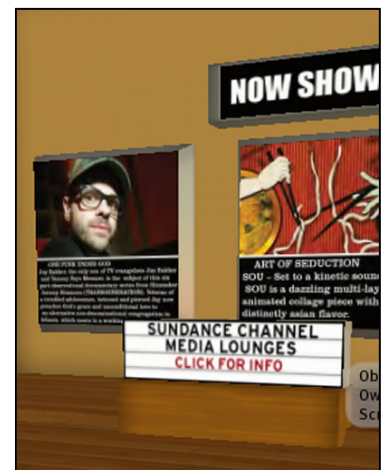
A slightly different approach of in-world media: The *Sundance Second Life Channel* adapts the independent movie channel *Sundance Channel* to Second Life. While technically this is primarily an adaption to the new media model with a slightly broader repertoire, the adaption works surprisingly well, as the Second Life version focuses on re-creating and stressing a very central element of the movie world: The atmosphere.

When trying to move a publication or campaign into Second Life, that a simple replication of the offline version will not unfold the full potential. Instead, it is important to think about the most important, central element that makes your publication or issue interesting or important, and to build your in-world concept around this central element. Focusing on this most important element will make your unfold its full potential.

- Examples of in-world media:
  - The AvaStar
    - Type of publication: Tabloid
    - Languages: English and German
    - Price: L$150 per issue
    - Location: AvaStar Island (secondlife://The%20Avastar/128/128/)
    - Website: http://www.avastar.de
  - Reuters Second Life News Center
    - Type of publication: News agency regional bureau
    - Language: English
    - Price: free
    - Location: Reuters Atrium (http://slurl.com/secondlife/Reuters/127/99/25/?img=http%3A%2F%2Fsecondlife.reuters.com%2Fimages%2Freuters-slurl-icon.jpg&x=285&y=340&title=Reuters%20Atrium)
    - Website: http://secondlife.reuters.com/
  - Sundance Second Life Channel
    - Type of publication: Weblog about events and new media offerings
    - Language: English
    - Price: free
    - Location: Sundance Channel Island (http://slurl.com/secondlife/Sundance%20Channel/157/97/28/)
    - Website: http://www.sundancechannel.com/secondlife/
  - Wired News
    - Type of publication: Technology News (regional bureau)
    - Language: English
    - Price: free
    - Location: Wired Second Life Office (http://slurl.com/secondlife/Millions%20of%20Us/202/227/23/?x=300&y=200&img=http%3A//www.wired.com/ly/wired/wired/v/12.05/images/logo28_wiredmag_2.gif&title=Welcome%20to%20the%20Second%20Life%20Wired%20Offices%21&msg=Please%20click%20on%20the%20Teleport%20Now%20button%20above%20to%20visit%20the%20virtual%20Wired.)

10.2. Weblogs about Second Life

As Second Life can be overwhelming at first, advice and orientation can be found in a number of weblogs, websites, and journals that follow the events in Second Life closely and provide analyses of the world's development. While some of these weblogs contain mere reports of the author's experiences, some are a source of in-depth reporting or a good place to meet respected members of the SL community.

Again, providing a list of weblogs would not be practical, as the list would be outdated before it was printed. However, this brief list of weblogs will give you a starting point from where you can start your journey into the SL-related blogosphere.

Also, while the Second Life software is not yet widely available in Spanish or Catalan, there are a number of weblogs about SL written in Spanish. With more Spanish-speaking users signing up every day, more Spanish and Catalan weblogs can be expected soon.

Examples of weblogs about Second Life:
- New World Notes
  - o Type of publication: Reporting from within SL
  - o Language: English
  - o Price: free
  - o Location:
  - o Website: http://nwn.blogs.com/
- Second Life Blog
  - o Type of publication: Official Second Life blog
  - o Language: English
  - o Price: free
  - o Website: http://blog.secondlife.com/
- Second Life Insider
  - o Type of publication: Weblog with statistics and in-world information
  - o Language: English
  - o Price: free
  - o Website: http://www.secondlifeinsider.com/
- Second Life Spain
  - o Type of publication: Weblog about Second Life
  - o Language: Spanish
  - o Price: free
  - o Website: http://www.secondlifespain.com/index.php
- Tu Segunda Cida en castellano
  - o Type of publication: Weblog about Second Life
  - o Language: Spanish
  - o Price: free
  - o Website: http://infosegundavida.blogspot.com/
- Second Life Herald
  - o Type of publication: Weblog with news about virtual worlds
  - o Language: English
  - o Price: free
  - o Website: http://www.secondlifeherald.com/

10.3. Second Life in the news:

Providing a list of news coverage about Second Life here would not be useful. Instead, for an up-to-date overview of the latest reporting about Second Life, please consult the Linden Labs website at http://secondlife.com/news/

Many offline publications also offer their media in-game, just like Wired or Business week
- Reporting in-world und offline: spillovers und crossovers (blogs, reuters-inworld, medien), metaberichterstattung
- Spontan-Livekommunikation: Twitter-SL-Mobs (s. Blog)

Suggested activities:

- Find two weblogs about Second Life in Spanish or Catalan and share them with your class.
- Improve the Wikipedia entry about Second Life in the Spanish Wikipedia: http://es.wikipedia.org/wiki/Second_Life

11. Building your own world II

11.1. Using the Grid

The Lindens use the term "Grid" to describe all of Second Life (or alternatively the Main and the Teen Grids) because of the grid pattern that the different regions make up on the map. In building terms, the grid is an alignement tool to allow you to more easily position prims within a region. Each region within Second Life is a 256 x 256 m square.

The Use Grid feature allows you to easily align your objects to points in the grid. This is handy because it allows builders to create and duplicate objects quickly without having to line up prims –they snap into place automatically.

To activate the grid, select the Sue Grid check box in the Build windows Edit mode (it should be checked by default) by clicking the Options button next to it, you can open the Grid options menu in which you can change various properties of the Grid.

11.2. Textures

In Chapter 3 you learned how to build very simple objects. No it is time to put more live to your creations. Textures bring in the individuality in Second Life and is one of the most important features.

Figure 6: Default texture menu

11.2.1. Default textures

Second Life already gives you a variety of default textures. To change the texture of a prim(s) simply highlight the prim(s) and click on the tabtitled texture within the build window.

Double click on the box titled Texture and another window with the Library should appear. Browse the different textures by scrolling through them or try searching for a texture by typing in a word at the top. There are even textures for waterfalls.

Adjust the texture mapping by adjusting the boxes on the left under the title "Face". To adjust the color simply double click on the box titled color and choose the color you wish.

11.2.2. Shininess and bumpiness

Alter the mapping, determine the shininess and/or bumpiness by clicking on the corresponding boxes and then scrolling down to desired choice.

You can also set a prim as a light source and and illuminate other objects around it. You can have up to eight light sources per scene. Use light sources sparingly as lights will flicker when they come into and out of view. Light sources can be controlled with the options: Color, intensity, Radius and Falloff (how sharply the edge of your light source stops)

11.2.3. Importing textures

It cost L$10 to import a texture into SL, maybe you have already gained some L$ or become a Pro-member. Importing a texture allows you to have more options and variety for the type of texture you want and applying an imported texture to an object makes it more unique.

To import a texture you must first find a texture to import. You can create your own textures by using a computer program such as photoshop or you can draw your own and then scan the drawings into the computer. Another and simpler approach is to find textures on the web at a copyright free sight (i.e istockphoto.com). It it necessary to pick a copyright free texture because the same copyright laws apply in SL as they do in real life.

Save the texture to a place that is easy to find. Next, refer back to SL and click on "File" and scroll down to "Upload Image" or your can just push the keys Command U. A window will pop up in which you will need to find your saved texture. Once you find it, click on the file. Another window will pop up in which you will need to name your texture. After you have done that click on the button "Upload $L10". You will receive confirmation that your texture has successfully uploaded. To apply the texture to the object first click on your object so that it is highlighted yellow. Then refer back to the "Build" window and texture tab. Proceed to apply the texture as described earlier. It will probably be easiest to find your texture by typing the name in the search bar.

11.3. Landscaping

There's more to building in Second Life than simply manipulation prims. Many residents enjoy landscaping their plots. You can create plant prims only on land that you own, or on group land if you are an officer but the results can be impressive.

Besides the usual primitives, Second Life allows you to use several predefined tree models as primitives, around two dozen or so types. The variety of trees ranges from palm trees to snow covered pines.

Trees are plants affected by wind, whereas grass is a complex mopdel of individual tufts that adhere to the ground surface beneath them.

The specific type and dimensions of a grass or tree model is chosen randomly when you create a new one. This is to give the impression of randomness bnut can result in odd-looking forests.

To give the effect of a more natural scene, you'll want to rotate and scale trees if you use a bunch of identical trees types clustered together. Introducing a little variety is key.

11.4. Scripting

In Second Life there is a quite complex scripting language to give objects interactive abilities, from a randomly barking dog to a controllable airplane. On the Second Life website there is a pretty good documentation on that matter since we do not want to too much into detail here. You will find many scripting classes in-game and scripts in the forums which you can use and edit.

11.5. Conclusion

We said it before – creativity is unlimited but demanding in Second Life. It can take a while until you feel more comfortable with the tools. But remember: You can always ask the people around. This is what makes Second Life so special: It is not a lonely programming challenge but a social one. The more you try and identify with your creations the more

respect will you get from others. Why? Because it is difficult and you deserve it.

Suggested activities:

Attend a building class and watch the video tutorial "How to build a flag that waves in the wind" on http://secondlife.com/knowledgebase/article.php?id=381 and redo the steps.

Recommended Reading:

Rymaszewski, Michael: Second Life – the official guide, ch. 7

Links:

- Second Life Forums http://forums.secondlife.com
- Second Life video tutorials: https://wiki.secondlife.com/wiki/Video_Tutorials

Spanish speaking sandbox: http://slurl.com/secondlife/Nueva%20Red/172/48/22

12. Literature

- Gibson, William (1984): Neuromancer Trilogy (Novel)
- Stephenson, Neal (1992): Snowcrash (Novel)
- Mayer-Schoenberger, Viktor and Crowley, John R. (2005): "Napster's Second Life? - The Regulatory Challenges of Virtual Worlds", Part 1: Virtual Worlds, 6-15. KSG Working Paper No. RWP05-052. Available online: http://ssrn.com/abstract=822385
- Castells, M (2000) Nations without a state: Catalunya, in: The Power of Identity. Blackwell Publishing
- Berman, Joshua, and Amy Bruckman, 2001. "The Turing Game: Exploring. Identity in an Online Environment," *Convergence*, 7(3): 83-102, available as www.cc.gatech.edu/~asb/papers/convergence-tg-01.pdf
- Turing, Alan (1950): "Computing Machinery and Intelligence". MIND 59, October 1950. Available online: http://www.abelard.org/turpap/turpap.htm
- La arquitectura de la privacidad (Lessig) http://cys.derecho.org/02/priv-lessig.html
- Galloway, A. R. (2004). *Protocol : how control exists after decentralization*. Cambridge, Mass. ; London: MIT.
- Lessig, L. (2001). *El código y otras leyes del ciberespacio*. Madrid: Taurusesdigital.
- Virtual World Governance: Digital Item Trade and its Consequences in Korea
- Ian MacInnes, YJ Park, Sang-Min Whang http://web.bu.edu/law/scitech/volume11issue2/JankowichArticleWEB.pdf
- Virtual World Governance: Digital Item Trade and its Consequences in Korea
- Ian MacInnes, YJ Park, Sang-Min Whang http://web.si.umich.edu/tprc/papers/2004/382/ppr%20Korea%2008%20TPRC%20final%20revised.pdf
- Bates, T. (2000). Managing technological change : strategies for college and university leaders (1st ed.). San Francisco: Jossey-Bass.
- Search page for the education mailing list archive: http://tinyurl.com/qfw4
- Continuously updated collection of online resources http://del.icio.us/secondlife/education
- Official information hub for Second Life education issues http://secondlife.com/education
- http://secondlife.com/educationwiki
- Examples of educational uses of Second Life visit http://sleducation.wikispaces.com/educationaluses
- PUTTING A SECOND LIFE "METAVERSE" SKIN ON LEARNING MANAGEMENT SYSTEMS in Proceedings of the Second Life Education Workshop at the Second Life Community Convention.
- http://secondlife.com/businesseducation/education/slcc2006-proceedings.pdf
- Official Second Life Campus http://tinyurl.com/jnafl
- **Gibson, William** (1984) Newromancer
- **Rymaszewski, Michael** (2006): Second Life – the Official Guide
- **Walsh, Tony** (2006) Second Life Stats Expanded In Secret Lair: Online: http://www.secretlair.com/index.php?/clickableculture/entry/second_life_stats_expanded_early_2006/ (visited on April 23, 2007)
-

Links

- Jabberwacky: A smart, learning chat bot that emulates human behavior: http://jabberwacky.com/
- Alan Turing Homepage: http://www.turing.org.uk/turing/
- Stanford's Persuasive Technology Lab is a great resource on credibility on the web and how we perceive it: http://credibility.stanford.edu/
- The Gender Genie: A web tool that analyzes text and tries to determine if the author is female or male: http://bookblog.net/gender/genie.php

- Linden Labs: Implementing policy to allow users to confirm other users' identities: http://blog.secondlife.com/2007/04/05/advertising-policy-changes/
- Lawrence Lessig: http://www.lessig.org
- Architectures of Control, online: http://architectures.danlockton.co.uk/
- 101 Uses for Second Life in the College Classroom http://facstaff.elon.edu/mconklin/pubs/glshandout.pdf

13. Shortcuts

13.1. User Interface

Ctrl+F Find
Ctrl+G Gestures
Ctrl+H Chat History
Ctrl+I Inventory
Ctrl+L Link (selected objects in edit)
Ctrl+M World Map
Ctrl+P Preferences
Ctrl+R Run Mode
Ctrl+T Instant Message
Ctrl+U Upload Image
Ctrl+Z Undo (once while in edit - chat window off)

13.2. Switching modes:

Ctrl+1 Focus
Ctrl+2 Move
Ctrl+3 Edit
Ctrl+4 Create
Ctrl+5 Land

13.3. Building

Ctrl+Shift+A Start/Stop Movie to Disk
Ctrl+L Link (selected objects in edit)
Ctrl+Shift+L Unlink (selected objects in edit)
Ctrl+Shift+M Toggle display of mini map
Ctrl+Shift+S Snapshot

Shift and Drag   Copy object in edit

13.4. Zoom Camera

To zoom in and out, and to rotate the camera around an object or avatar, hold down the Alt key and left-click-hold on the object or avatar, then move the mouse up and down to zoom, and left and right to rotate around in a circle.

13.5. Orbit Camera

To orbit around an object or avatar in all directions, hold down Ctrl+Alt and left-click-hold on the object or avatar and move the mouse.
Pan Camera   Hold down Ctrl+Alt+Shift and left-click-hold on an object or avatar, and move the mouse. This will move the camera directly horizontal and vertical, no rotation.

14. License