Developing Virtual Environments for Educational Use

- A Case-Study of the Attempt to Improve the Virtual Island of Rosario as a Learning Platform

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Abstract:	

The main purpose of this thesis is to research the possibilities regarding the development of a virtual environment used in education, with focus on Arcada's Second life based Marinetta Ombro project. The Thesis is aimed at those interested in virtual education in Second life. It is written based on the assumption that the reader has no prior experience of Second Life, and also serves as an introduction to the subject. There are three major parts in this thesis. The first two parts address general, research questions regarding the culture of Second life (with focus on content creation) and virtual education. These parts also contain important background information for the reader concerning the main part of the thesis. The main part of the thesis consists of a walk through the planning, designing and re-building of the virtual island of Rosario, a key part in the Marinetta Ombro project. By defining the flaws in the previous version of Rosario, and building an updated version, the aim is to create a virtual space that can better meet the needs of virtual education. The final conclusions concern the possibilities for improving a virtual educational space and are drawn from this. The conclusions are focused on content creation and the Second Life culture. The conclusions also contain suggestions for topics that need further research. These are mainly focused on the specific case of Arcada, instead of virtual educational spaces in general. The thesis does not research into the subjects of technical benefits or challenges in Second life, nor the increasing interest in using Second life for business.

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Huvudsyftet med detta examensarbete är att undersöka möjligheterna gällande utvecklingen för virtuella miljöer som används inom undervisning, med fokus på Arcadas projekt i Second life; Marinetta Ombro. Examensarbetet är riktat till dem som är intresserade av virtuell undervisning i Second life. Arbetet är skrivet med utgångspunkten att läsaren inte har någon tidigare erfarenhet av Second life, och fungerar även som introduktion till detta ämne. Texten är uppbygg av tre huvuddelar. De två första delarna behandlar allmänna forskningsfrågor gällande kulturen i Second life (med koncentration på skapande av innehåll) och virtuell undervisning. Dehär delarna utgör även viktig bakgrundsinformation för läsaren gällande huvuddelen. Huvuddelen av examensarbetet består av en genomgång av planeringen, formgivningen och återuppbyggnaden av den virtuella ön Rosario, en avgörande del av Marinetta ombro projektet. Genom att definiera bristerna i den tidigare versionen, och bygga en uppdaterad version, är målet att skapa en virtuell miljö som bättre kan möta behoven inom virtuell undervisning. Slutsatserna gällande förbättringen av en virtuell undervisningsmiljö kommer att dras från detta ämne, med fokus på skapande av innehåll och kulturen inom Second life. De består även av förslag till ämnen som är i behov av ytterligare forskning. Dessa ämnen är i huvudsak koncentrerade på Arcadas behov, och inte virtuell undervisning i allmänhet. Examensarbetet behandlar varken tekniska möjligheter och utmaningar som följer med Second life, eller det ökade intresset av att använda Second life i affärssammanhang.

Nyckelord:	Marinetta Ombro, Second Life, Virtuell undervisning, Skapande av Innehåll
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Tämän opinnäytetyön päätarkoitus on tutkia opetukseen käytettävien virtuaaliympäristöjen mahdollisuuksia keskittyen Arcadan hankkeeseen Second Life-virtuaalimaailmassa - Marinetta Ombroon. Opinnäytetyö on suunnattu niille, jotka ovat kiinnostuneita virtuaaliopetuksesta Second Life-ympäristössä. Opinnäytetyön lukijalta ei oleteta aiempaa kokemusta Second Life-maailmasta. Se toimii myös johdantona kyseiseen aiheeseen. Teksti muodstuu kolmesta osasta. Kaksi ensimmäistä osaa käsittelevät yleisiä tutkimuskysymksiä, jotka liittyvät Second lifen kulttuuriin (keskittyen sisällöntuotantoon), ja virtuaaliopetukseen. Kyseiset osat sisältävät myös lukijalle tärkeää taustatietoa joka liittyy tekstin pääosaan. Opinnäytetyön pääosa käy läpi virtuaalisaaren, Rosarion, suunnittelua, muotoilua ja uudelleenrakentamisesta. Rosario toimii avainosana Marinetta Ombro-projektissa. Määrittelemällä edellisen version puitteita sekä rakentamalla päivitetty versio pyritään luomaan virtuaaliympäristö, joka vastaa paremmin virtuaaliopetuksen tarpeita. Johtopäätökset, jotka koskevat virtuaalisen opetusympäristön edistymistä, tehdään tästä aiheesta ja keskittyvät sisällöntuotantoon sekä kulttuuriin Second Life-ympäristössä. Ne muodostuvat osittain myös ehdotuksista aiheista jotka vaativat lisätutkimusta. Kyseiset aiheet ovat pääosin keskittyneitä Arcadan tarpeisiin eikä virtuaaliopetukseen yleisesti. Opinnäytetyö ei käsittele teknisiä mahdollisuuksia tai haasteita, jotka liittyvät Second Life virtuaalimaailmaan eivätkä kasvavaa kiinnostusta Second Life-maailman käyttöä kohtaan liiketoiminnassa.

Avainsanat:	Marinetta Ombro, Second Life, Virtuaaliopetus, Sisällöntuotanto
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1. INTRODUCTION

I have been actively involved in Arcada's experimental project within Second Life (SL), Marinetta Ombro. Since the year 2006 I have contributed to the development of the project in various ways, mostly by creating content for the virtual *island* of Rosario. This has been a key part of the Marinetta Ombro project. In 2008 it was decided to renew the project and re*build* the entire island. With this thesis I offer the reader a walk through this complex process.

The purpose of this thesis is to research the possibility of improving the potential of Rosario as an educational platform. I therefore address the following questions:

- What are the opportunities and limitations of Second Life, in terms of both content creation and interactivity?

- What are the benefits and challenges of developing virtual learning platforms in SL?

- Can Rosario, Arcada's virtual learning project, be improved by rebuilding and renewing it?

My intended readers are those curious about Second Life and the potential uses of it within education. The thesis therefore serves as a brief introduction to Second Life in general, and to using a virtual environment such as Second Life as a learning platform. It is also a report of my part in the work process in rebuilding the island.

With this thesis I am assuming the reader has no prior experience with Second Life or virtual worlds and I am therefore including a brief overview of some of the important fundamentals. In order to understand the possibilities of Second Life the reader should know what practical functions the virtual world offers, and how they can be used. To make it possible for the reader to understand Second Life's position within the scale of available virtual worlds, I include a brief overview of the history of virtual worlds. In addition, I compare Second Life directly to other existing virtual worlds. More technical details of many of the features presented are included in a separate appendix.

1.2. Method

The first part of the thesis provides background information, necessary for anyone who is not familiar with Second Life. After that I present a set of theories regarding virtual education – focusing on Second Life. The main part of the thesis describes the work process of rebuilding the virtual island with the aim of creating an improved educational environment. Because my main part in the work process consisted of content creation, I also present some background information on content creation in Second Life.

Within the description of the work process I document the process of defining the flaws in the previous version of Rosario, planning the new one, and building it. Through research into the popularity of different areas of Second Life and an analysis of what didn't work in the original concept of Rosario, I created a plan to update the island in order to make it more attractive to students and potential business partners. The goal was to make Rosario an efficient as well as pleasant place to have fun and practice educational tasks.

I do not talk in detail here about the technical challenges involved with using virtual worlds such as Second Life in education. Instead I concentrate on *in-world* elements. Although I briefly introduce the reader to technicalities regarding content creation, I do not offer a more detailed explanation than necessary to understand the range of possibilities offered by Second Life. I do not discuss the increasing use of Second Life for business purposes (other than a brief overview), since this is not directly relevant to the subject of the thesis. It is, however, important for the reader to know that this culture exists, in order to understand some of the decisions we made regarding the future of the Marinetta Ombro project.

During the summer of 2008 I started planning the new island with Owen Kelly. We had several discussions about what was wrong with the previous version, and how the new island should look. Between the summer of 2008 and the summer of 2009 I been rebuilt it.

The work described in my thesis will follow a four step process.

1. Research

2. Planning the new space

3. Designing and building

4. Assessments and feedback

In the first part I look back at the choices made about Arcada's space in Second Life the past years. I also compare this with other places in Second Life.

In the second part I draw conclusions and document the discussions and decisions made about Arcada's future in Second Life. These formed the basis of the design-work, which will be described in part three.

The main part of the design-work was finished in the summer 2009. The final part of my thesis assesses how well the redesigning met the goals set for the new island and how far these goals seem likely to assist Arcada in continuing its innovative educational work in Second Life.

It should be noted that the different work stages were not consecutive but, rather, flowed into each other.

1.3 Sources

My three main sources of information in this thesis are

- Web-based material (also *Slurls*)
- Literary material and
- My personal experience of Second Life.

Because of the changing nature of Second Life and virtual worlds, the best source for up-to-date information is the web. I will be using web based sources, such as blogs, online seminars and web-articles as primary references, to provide the reader with accurate information. For additional background information I have used several books about Second Life, game design and structuring virtual worlds. I have also added a glossary at the end with some terms

mentioned in the text, that might be unfamiliar to the reader. The words available in the glossary (such as *Slurls* above) have been marked in italics in the text body.

2. BACKGROUND

Although virtual worlds and virtual environments have been popular for several decades now, Second Life is a fairly recent development. It was launched by Linden Labs on June 23, 2003.

The structure of Second Life differs in many ways from the style of other virtual environments. In this chapter I will familiarize the reader with virtual worlds in general, in terms of the culture and history, to help clarify where Second Life stands in contrast to other virtual environments.

The term virtual world, is a term with room for interpretation, so I will offer the reader an explanation of what elements it might entail.

2.1 About Virtual Worlds

There is no one agreed definition of the term "virtual world". Instead there are many definitions, all of which overlap.

One short and simple definition states that a virtual world is "a 3D computer-based simulated environment used for interaction and communication" (Bell & Trueman 2008:213).

Although virtual worlds can be portrayed in other ways, most often virtual worlds are associated with representations of three-dimensional space. However it is worth noticing that online communities, such as Facebook or Blogger, have also been claimed as virtual worlds. They have their own culture, history and manners, just like three-dimensional virtual worlds do.

The user of a virtual world is usually represented by an *avatar*, which may or may not resemble the user itself. The term avatar originally comes from Hindu mythology where it means a temporary body used by a god when visiting Earth. The word avatar itself originates from the sanskrit term for "a passing down": avatara. In text-based virtual environments the terms nickname or alias are sometimes used instead of avatar. In gaming worlds synonyms for avatar include character, player, virtual actor, icon or virtual human. (Damer 1998:482) In

Second Life the user can choose what her avatar looks like from an almost endless set of options that range from human to animal to fantasy creatures.

A common notion is that virtual worlds are not “real”, and the communication in them is not real, but in important ways they are. Immersion in a virtual world can be comparable to getting lost in a good book or film, to the point where you can feel the reality of the story.

> Our sense of reality is a creation of our conscious minds in the particular circumstance we find ourselves. One of the great talents of the Human species seems to be our ability to accept and digest new realities. Virtual worlds on the internet are yet another way for us to experience a flavor of reality. (Damer 1998:XVI)

When it comes to multi-user virtual environments there can be no question about whether the communication is real or not, since all the avatars have a real live person controlling them somewhere.

> There is nothing virtual about the reality of your interactions and relationships with other people in these spaces. You can feel just as thrilled, offended, titillated, intrigued, or bewildered by your remote conversations in an avatar community as you do on the telephone. (Damer 1998:XVII)

The most common visual forms of virtual worlds are either textual, graphically two dimensional or immersively three dimensional. Virtual worlds can be based on either reality or fantasy, but most attempt to imitate the real world when it comes to, for example, the laws of physics, communication and time. Usually communicating is based on text, although lately it has become more popular to use headphones so you can communicate with voice. In graphical virtual worlds, body language, or visual gestures, also form part of the communication, with some examples being handshakes and hugs. In text-based communication emotive-icons, emoticons, are used to convey the mood of the conversation. (Wikipedia)

Most of the time-lines I have found outlining the history on virtual worlds start around 1970, because, along with video games, computer culture was brought into everyday life, in the 1970's (Turkle 1995:66).

The Maze War (illustration 1) is usually considered the first networked multiplayer 3D first-

person shooting game. It was designed for the Imlac-computer, by the NASA research center in California, and it was played on Arpanet, the early version of the internet (Digibarn Computer Museum).

In 1985 LucasFilm launched a game called Habitat (illustration 2), which generally is considered to be the first online virtual world. It was developed for the Commodore 64 computer. (Bainbridge 2007)

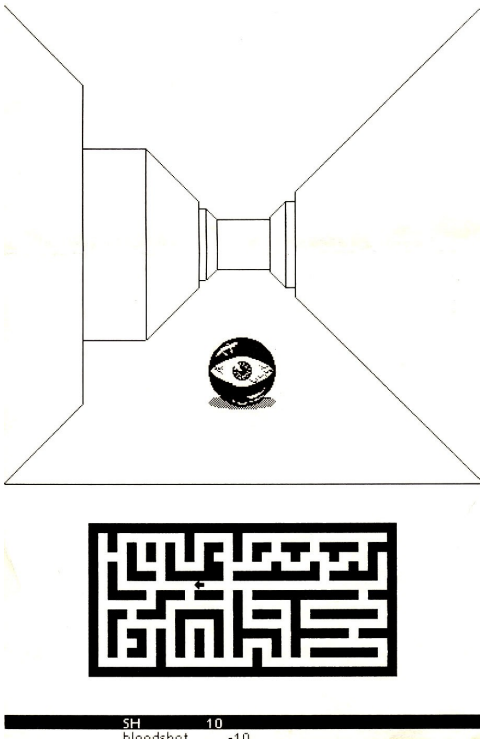

Illustration 1: The Maze War (Digibarn Computer museum)

Illustration 2:Lucasfilm's Habitat (see Morningstar & Farmer)

Second Life (illustration 3) was launched in 2003 and World of Warcraft (illustration 4) was launched in 2004. These were among the first "realistic" immersive environments, although they differed from each other in terms of both graphics, structure and purpose.

Illustration 3: Second Life

Illustration 4: World of Warcraft (World of warcraft screenshots 2005)

Second Life can be seen as a MUVE, which is an acronym for multi-user virtual environment. This is a term for non-game-specific virtual worlds. Thus Habitat could be considered one of the first MUVEs. Games like World of Warcraft are often referred to as MMORPG's, which stands for massively multiplayer online role-playing game.

Virtual worlds, then, may or may not be goal oriented. Although they are often seen as games, many people also see them as representing a parallel universe of one sort or another. Some educators, for example, consider virtual MUVEs a promising platform for distance learning, since it has been shown that online communities can provide useful environments for mutual support and learning. (Bell & Trueman 2008:XV)

There is much more to virtual worlds than just gaming. It is becoming more and more common to use virtual worlds for online education, virtual conferences and virtual libraries. They can be used for marketing purposes such as promoting a company or brand, or just for networking.

There are some recent virtual environments that have been created entirely for the purpose of having online meetings. Some examples of those are Venuegen and Teleplace, both of which aim to replace teleconferencing with virtual environments. On the front page of Teleplace's web site (Teleplace 2010) they state that “Enterprises increasingly rely on their teams to do more with less, across multiple locations, using an ever growing number of applications and information sources”, and offer their virtual conferencing as a solution. This indicates some of

the less obvious possibilities offered by virtual worlds currently being explored.

This suggests that for the internet user of the next generation, the traditional static web-page may not be enough to impress anymore, no matter how attractive it might be. It has been suggested that the internet will keep on evolving, until the user will no longer need a separate software to access 3D virtual worlds, but instead be able to view them from their everyday browser. (Bell & Trueman 2008:XVI)

3. A BRIEF INTRODUCTION TO SECOND LIFE

The original idea of Second Life came from Philip Rosedale. He wanted to create a world where anyone would be able to manipulate the content of it and add new things to it. He began working on the idea of what, eventually, would become Second Life, in 1991. At that time its name was Linden World. In 1995 he founded the company Linden Lab, where he remained CEO for nine years. Linden Lab made Second Life available to the public in June, 2003, after a half year of beta testing. In the initial version of Second Life *teleporting* and building had a tax-fee, but because of the dramatic response it received within the Second Life communities, another idea was developed. In December a new tax system was introduced, based on land ownership instead of building. Along with the same update that brought this, came the concept of SL time (the same as pacific standard time) and a number of new scripting and interface features.

A day in Second Life is 4 hours, of which 3 hours is day (light) and 1 hour night (dark) . This means there is six Second Life days in a real life day. Except for some clouds and the cycling of the sun and moon, there is hardly any change in the virtual weather. There are some weather programs available, but those are created individually by Second Life residents.

Virtual worlds, such as Second Life, are beginning to be thought of as the 3D-internet .

> It is obvious that 3-D virtual environments are here to stay and will soon be as common as the web itself. Whether SL will be the 3-D MUVE of the future is not certain. However, it is critical that libraries and other learning institutions explore virtual environments to determine the value for the future generations of learners. (Burhans et al. 2008:173)

Many enterprises and institutions have noticed the possibilities that virtual worlds have to offer. Second Life has millions of users from all around the world, all of which have their own personal avatar representing them in their own creative way. There are countless possibilities regarding what to do with your second life, and your only limit is your creativity and imagination. The basic idea of Second Life is that the resident can choose what to make out of his time in the virtual world. Is it a place for business or a place for socializing? Maybe just a

place to be creative?

Unlike some other virtual worlds, in Second Life the user does not have to limit herself to only one avatar-look. It is possible to alter the appearance of the avatar whenever one wishes, since everything that is bought and created is kept in the user's i*nventory*. For example, I can morph into a cat, a panda or even the Japanese character Totoro, in addition to my countless human looks.

When registering with Second Life, the introduction to the process of creating an avatar is fairly simple. There are a set of standard avatars to choose from on the Second Life website. The one you choose, will be the one you enter your second life with.

In-world it is possible to change the appearance of your avatar, down to small details like your eye-bags or nose-bridge. However if this all feels too overwhelming there is also a ”random” button which creates a randomly shaped avatar for you. Except for the body-shape, the avatar consists of clothes and possible body attachments made of *prims*. Something to remember when editing your appearance is that the avatar is a virtual representation of you, and it affects the impression people get of you. ”Your avatar choices say a lot about who you are; to the people you encounter in the SL world, your avatar is who you are.” (Rymaszewski et al 2007:12)

To play Second Life you have to download the *Second Life viewer* and register on their website as a resident. When registering you have to choose a name for your avatar. The first name of your avatar is for you to decide, while you choose the surname from a list of names created by Linden Labs. Each avatar has a unique name. The name you pick is important, in that it cannot be changed later on.

When registering you also have to choose what membership type you want for your account. There are two options to the kind of membership you can have; Basic membership and Premium membership. The basic membership is free of charge and with that you can experience all of the things Second Life has to offer, except for owning land. To own land you must have the premium membership, which costs 9,95 US$ or 6 US$ depending on your payment method. I am explaining the reason for this requirement in chapter 4.2 about

owning/renting land in Second Life. In case you want additional avatars to your account you have to pay 9,95 $ per each avatar you get.

The age limit of Second Life is 18 years, and there is a separate grid for younger users. The other one is called Teen Grid, or Teen Second Life, and is for members of ages 13 – 18. When a resident turns 18 he is automatically transferred to the main grid. Between 2006 and 2008, the number of accounts registered on Second Life increased from 180,000 to more than 12 million.

Since all virtual environments have their own graphic user interface, it takes some getting used to when you are a beginner. Especially Second Life, since it has a fairly steep learning curve with all its complex possibilities. As a beginner you can get by without knowing all of them, so getting started with Second Life is not as scary as it might seem. To make the introductory process even more comfortable, Linden Lab created an area for everyone entering Second Life for the first time called Orientation island, where you are guided through the basics of Second Life. After you leave the Orientation island, you cannot go back unless you create a new avatar.

The common way to move around between *regions* is teleporting. Distances within the same region or *estate* are normally traversed by flying. When you come across a place you like, and might want to return to later, you can *landmark* it. Landmarks work similarly to bookmarking a web-page. The landmark will be saved in your inventory for when you want to use it, and you can also give landmarks to other residents. Having the landmark means having a teleport shortcut to the landmarked location.

One of the revolutionary aspects of Second Life is the LindeX currency exchange. Second Life has its own internal economy and a currency called Linden dollars. It is possible to exchange US dollars for Linden dollars (L$) on market-based currency exchange. Thanks to this it is possible for the residents of Second Life to buy and sell directly to one another. Although it is highly unlikely to become rich on doing business in Second Life, there are some who have created successful businesses.

Another aspect in Second Life is the possibility to create and join groups. One resident can be

member of up to 25 groups at a time, and most avatars are members of several. To create a group you only need yourself and another resident, since the minimum amount of group members is two. The creator of the group becomes the founder, and enjoys special privileges which other members do not have. The founder is in charge of assigning various roles and responsibilities to the members of the group.

If you are planning to create a community having a group for it is essential. Inviting residents to join a group is also an effective way of marketing your business. For each group there is a separate chat where members can communicate regardless of their virtual location. It is also possible to send notices to the members with important information. For example shops can send notices about new products or sales and communities can inform members about upcoming event.

Users do not have to maintain their avatars in any way, meaning that they do not need to sleep or eat to gain health and energy, as they do, for example, in the video-game The Sims or World of Warcraft. Starving or drowning are not an issue in Second Life, because avatars simply cannot die. Although there are some combat-based role-playing areas that use resident-created health meters, you cannot even die there because, whatever you health meter says, your avatar and inventory won't disappear.

3.1 Comparing Second Life to a Game

To someone unfamiliar with Second Life it might be puzzling as to whether it is a game, or not. Personally I find saying “I'm playing Second Life” a bit strange, since there really is not much playing involved, but what else can you call it? “I'm living Second Life” sounds even weirder.

Despite some of the discussions regarding Second Life as a game, it is missing of some typical game elements. If you compare it to World of Warcraft, for example, which follows a more traditional game structure, you can see some distinct differences. World of Warcraft is an extremely popular multi-user online environment, with over 8 million registered users, and like Second Life it acts as a social environment for users from all over the world.

World of Warcraft has a pre-designed game structure, which the user themselves have to follow, although they have plenty of room to vary their activities, depending on how they want to advance. This can be referred to as a sandbox structure (the opposite of a linear structure) (Thompson et al. 2007). However, regardless of how the user chooses to play, there is a leveling system that is the same for everyone.

One of the basic features in most games is the indication of leveling, or some other way of advancing, in order to inspire the user to keep going. When reaching a higher level new features normally are revealed to the player. In Second Life, however, there is no official leveling system comparable to the one in World of Warcraft. Instead newly registered residents have the same possibilities as those who has been active users since its launch.

Character-maintenance also makes Second Life different from games. In World of Warcraft the player needs to keep track of their energy level in order to avoid dying. When the energy is low, the avatar has to eat or drink something to raise it. Even though your avatar in World of Warcraft will not disappear upon dying, it will slow your game down, since you will have to continue playing from a different place than where you died.

In contrast to World of Warcraft, there is no avatar-maintenance required in Second Life. As mentioned above, the avatar cannot die. Jumping down from the virtual Eiffel tower will not leave a scratch on the avatar, instead it will just fall face down on the ground, then stand up as though nothing happened. Although it is possible to simulate eating and drinking in Second Life, this has no effect on the avatar since gaining or losing energy is not an issue.

After creating your avatar and entering the virtual world, you can see a difference in how these two worlds introduce the user to the environment. In World of Warcraft the first thing you see when you enter is a computer generated character offering you a quest, which means you are given a clear guideline on how to start playing. When entering Second Life you start at “Orientation island” which will show you how to use your avatar but not suggest where to go next. Instead it is up to the users themselves to find places to visit and explore the new environment. There are no given quests or anything else indicating there is something specific you should do

3.2 What Second Life is Used For

If Second Life is not a typical game, the reader might wonder; what is it used for?

Second Life is a very versatile environment where almost all the events and landscapes are provided by the users. Second Life gives you the freedom to pursue your dreams and interests. You can create your own little fantasy island, you can do some shopping, or start your own business. You can become an artist and try to attract fans.

Those are just examples of the possibilities within the virtual world, it is up to the player what to make of their time in Second Life. For many residents Second Life is a place to build. For others it is a place to meet other people and make friends. Some people use it for chatting and networking, in the same way as social networking sites like Facebook and MySpace.

Because of the fact that the residents are from all over the world, networking in Second Life can be a powerful marketing tactic. Not everyone is in Second Life for its entertainment value. Scientists, researchers, teachers and students use Second Life as a platform for learning and exploring.

Regardless of what happens in-world, anyone who does not like what is going on around them can leave with just a click of a button. If residents do not find what they are looking for they have the possibility of buying an island of their own and making it into whatever they want, with their own set of rules.

The endless possibilities have both pros and cons. To some people it may be puzzling what the ”point” of Second Life is, since you have to come up with one yourself. As mentioned above, it is not intended to be like a traditional computer game with given goals to reach so you can advance to the next level.

According to the authors of Second Life: the official guide (Rymaszewski et al. 2007), one difference with Second Life and real life is that in Second Life income does not play as big a part in lifestyle as it does in real Life; in determining how you spend your time in Second Life. There is normally no cost in visiting areas and doing activities like parachuting or jet-skiing, and most parties and events are free of charge.

However, I think it is worth mentioning that having L$ gives you a wider range of options when it comes to renting land, buying houses and modifying your avatar. These facilities are provided by content-creating residents who are trying to do business, and high quality items usually go hand in hand with a higher price.

To someone not familiar with Second Life it might be difficult to grasp the fact that the virtual world has its own strong evolving culture. The culture of Second Life is hard to explain but introducing the reader to some popular activities in Second Life might give them an overall view of how the culture of Second Life is structured. Some of the activities most average users probably will stumble across are exploring, shopping and attending events

3.2.1 Exploring

From my experience in Second Life I have learned that most residents think of exploring new places as an active hobby, and they use the Second Life search engine to find new regions to visit.

In the search window the resident can either type in a word to search with, or they can browse in the showcase section, where landmarks to a wide range of interesting places are offered. It is also common to share landmarks of interesting places with your friends.

Although most residents enjoy seeing new places, I have found that they tend have their own favorite places they return to over and over. From lengthy discussions it seems that this gives them a sense of familiarity and a feeling that they are part of a community. Residents have their favorite shops, clubs and bars, and it is not uncommon to have a favorite build, nature area or even city that they like to return to or show their friends (Jacobson 2008:82). Residents can also add these to their *profile*, on a tab labeled ”Picks”. This means residents can then look at each others profiles in order to get tips on where to go.

3.2.2 Shopping

Shopping is one activity in Second Life that is almost impossible to avoid. Whether it is scouting for *freebies*, cool new gadgets or looking for the latest clothes, you are bound to end

up in a shop sooner or later. New shops come up all the time, and you cannot keep track of them all which makes the competition between shops pretty tough. There is in fact something for everyone, and if you have an idea of some strange gadget you want to get, chances are someone has already made one.

The biggest competition seems to be between clothes shops. As in real Life, there are some places that are considered trendy, which most active residents are familiar with. It is common to share landmarks to new shops, with other residents. You can even ask strangers for landmarks; For example if I see someone wearing something I like, I can simply ask them where they got it and they will usually hand me a landmark to the shop. This kind of interaction is well within the bounds of what is considered good manners.

One big part of the competition between shops is advertising. You can buy advertising space in the search engine, and if you pay enough you have the possibility of ending up on the front page, which obviously gets your shop more attention. Another thing I have found to get people to remember the shop is the size of it. Shops that invest more in the size of the area seems to stick around longer than smaller ones.

However, because of the lack of any real public media the main way of gaining a reputation in Second Life is by word of mouth. If a shop has enough new and innovative products to offer, the word will spread.

3.2.3 Events

Even if you are not interested in attending any events, you will probably end up hearing about some at one point or another. Most areas have regular parties because its a good and fun way to keep people interested in your *sim*. If you belong to any groups, chances are they will inform members about parties that they are hosting. For example, the Finnish sim has parties and other events every week. They announce information regarding the parties during the week of the event, to the members of the group.

If you talk to Second Life residents they might tell you about some party they went to or some exhibition they have seen. Second Life is full of events, although the easiest ones to

come across are parties with dancing and a DJ playing or a radio streaming. Most of them are free, but there are some with an entrance fee as well.

3.3 Second Life and Economy

The mainstream media have written a lot of stories about the economy of Second Life. Most people who join Second Life therefore expect to earn some money, and many new residents hope to make a lot of money. The few who have succeeded continue to inspire thousands of would-be online millionaires.

To get rich in Second Life takes a lot of effort, and as much luck and skill as in real life. It is important to keep in mind the exchange rate of L$, which is approximately $1 equals 250L$. That means you would need hundreds of L$ just to buy a pack of chewing gum in real life. To make some money that will be useful to you in real life, just getting a job in Second Life will most likely not be enough. The key is to make your own business, assuming you are skilled and inventive enough to have something fresh to offer to the Second Life world. (Rymaszewski et al. 2007:212).

When it comes to talking about working and making money in Second Life, it is almost certain the the name Ansche Chung will come up. She remains a symbol for success in the virtual path to riches. Being the owner of a virtual real-estate empire worth 250,000 US$ she is the wealthiest resident of Second Life, according to a May 2006 business week article. (Rymaszewski et al. 2007:216).

Another resident worth mentioning is Kermitt Quirk; He created a game in Second Life, called Tringo. He then went on and sold the game to a real world company, which in turn developed it into a game for the Nintendo Game Boy Advance. In addition to this, for each game he sells in Second Life he earns L$15,000. This example shows the possibilities with creating something in Second Life and translating into real-life financial success. (ibid.)

4. CREATING CONTENT IN SECOND LIFE

One of the things that makes Second Life stand out in contrast to other virtual worlds, is the possibilities it has when it comes to content creation in-world. Building and scripting are big parts of the culture of Second Life, and it is important for the reader to know the basics to these in order to understand the large amount of possibilities Second Life has to offer.

When it is said that the Second Life environment is entirely created by its residents', it is meant in the most literal sense. Except for some default *object*s given to you by Linden Lab, everything in Second Life is created by its users. Second Life has its own scripting language, called LSL, and its own building tools, which are available to all residents.

> After quite some time in SL, I am still amazed by the creativity and ingenuity of the residents. Looking at SL, the casual observer sees only the end result: avatars dancing or beautiful waterfalls, mountains, and flowers. However, one must realize that all this is created by the residents of SL, people like you and me. If you imagine it, you can create it in SL.(Galik 2008:154)

Through the manipulation of prims (primitive objects), the building blocks used to build all objects in Second Life, almost any object, real or imaginary can be created. Except for some building skills, you also need land with permission to build on.(Burhans et al. 2008:176). In Arcada's case we have our own land to build on.

With the help of scripting, you can make your builds interactive. Let's say you built a car and want to be able to drive it with your avatar. In order to make it move controlled by the arrow-keys on your keyboard, it needs to be scripted.

Landowners can also edit the shape and *texture* of the land they own, using a process called terraforming. Additionally they can play various types of media on their own land.

All of these elements can be managed from the Second Life viewer. These features might seem unclear to someone not familiar with the Second Life environment. In order to understand the full potential of the Second Life culture the reader should first learn a thing or two about the basics in content creation.

In the following chapters I will introduce the reader to the basic elements of content creation and land-management. I will start by walking the reader through some brief facts regarding land in Second Life, because it is the basis for everything created in the virtual world. These chapters will make the reader familiar with land-management and landscaping. I will then move on to an introduction of building and scripting.

The order I am presenting these subjects is the order they should be attended to when creating content in Second Life. Before building, you need to have access to land to build on. To script something you need to have an object to use the script in. Thus the order being land-management - building - scripting.

4.1 About Land in Second Life

Land in Second Life is the basis of everything you see in there. It is what you walk on and build on. In the Second Life viewer you can find a map of all the land that exists in the virtual world. This map consists of a grid, where one square is a region and is usually referred to as a sim (illustration 5). Each sim is 65,536 square meters (256m x 256m) and usually allow up to 15,000 prims to be built on the land. Regions that are not located on the mainland cannot be reached by flying or walking. These type of regions are usually called private islands. Several

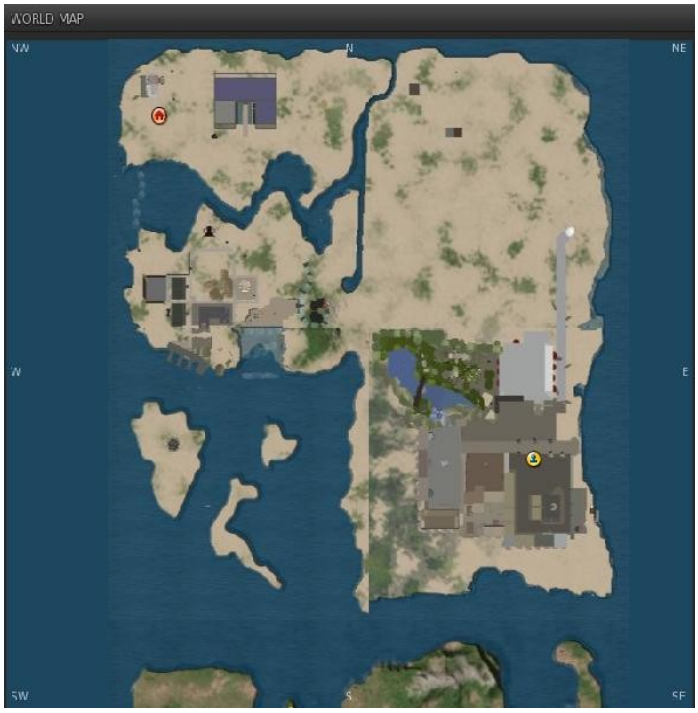

Illustration 5: A map of Arcada's estate, Rosario.

private islands together, owned by the same resident, are called an estate.

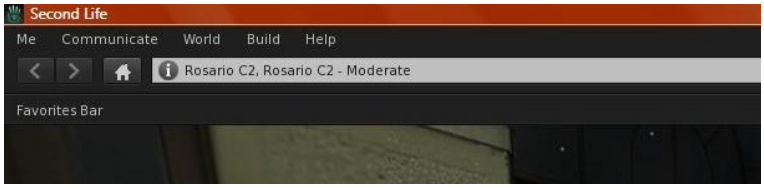

Illustration 6: This is what the top middle of the viewer looks like while visiting Marinetta.

The landowner can divide the land into smaller parcels, and edit the terrain as she wishes. For each parcel there can be different settings, which can be edited in the About land window. Here the owner can edit such things as the name of the parcel (the name of the parcel you are in shows in the top middle of the viewer (illustration 6)) followed by a small description of the area. The About land window also tells you who owns the land, and offers you a direct link to the owners profile.

The landowner can choose a stream of video or music to play in his region. Since these settings are parcel-based it is practical to have a separate parcel for a building that plays media, for example a dance-club or a movie theater.

Only one resident can buy a piece of land, but the landowner can then assign equal rights to the land, to other residents via a group. In the About land options, the landowner can choose one of the groups he is a member of and set it to the land. Only one group can be active at the same time, but it can be changed later. By creating a group and assigning the land to that group, the owner can then via the group decide what each member of the group is allowed to do on the land. The owner can change the settings for each member in the “group option”. After setting a group to the land, the owner can decide to “Allow deed to group”, thus sharing ownerships of the land with the other group-members. (more about this in appendix B)

In the About land options window, it is possible for the landowner to set the land for sale, or see if the land already is for sale. The owner can set the price of the land and possibly a specific avatar to whom the land-sale is intended for. This information will be visible in the about land window for anyone interested.

4.2 Owning/Renting Land in Second Life

In Second Life you can buy and rent land for real-life money. There is almost half a million acres of virtual land in Second Life, and most of it is owned by its residents. Linden Labs keep adding to the virtual land, in accordance with the residents growing interest in buying their own space. To buy and own land you must be a premium member, which means paying a monthly fee to Linden Labs. In return you get some linden dollars each month, a small plot of land on the ”mainland” and the right to own your own private island. When you own land, you have the possibility to rent it out to other users. Some have turned this into a business.

When you buy land, you do it in the form of sims,and you can buy as many sims as you want. After purchasing the sim you want, you have to keep paying a monthly *tier*, or maintenance fee, to the Linden Labs. The reason for the monthly fee is, that when you have your plot of land, it takes up storage space on the Linden Labs computers/servers. The more land you want to own, the more storage space it will take up. Basically the monthly tier is just rent, for a hard drive (Linden Research).

Why would you want to own land in Second Life? When you own a piece of land in Second Life, you can customize it however you want. You will have a place to call your home, where you can invite your friends for a party or just to hang out. You can also make it into something more public like a bar, shop or gallery or, as in the case of Arcada, a place for education. Basically it is up to the owner of the land to decide what to make of it.

Not all items can be used everywhere. If you buy a house and a garden, you would want somewhere to put it down. Unlike clothes and other accessories for your avatar, a building cannot be used anywhere you want. That is when you need your own plot of land, so you have some place to build your house, park or whatever you want. The landowner can also handpick which residents are allowed to access the land, if he wants. In the About land window the owner have the ability to add avatars to either a *ban*- or access list.

Renting is another option. This means paying a consistent fee, regularly, to another resident who already is a land owner. The owner has bought his land from the Linden Labs, and is renting it out to other users. Usually a landowner who wants to rent out their land, divide their

land in smaller plots of land, that are to be rented out separately(illustration 7).

Illustration 7: Plots of land available for rent.

Renting land is a private transaction between residents, and the Linden lab will not take any responsibility for any problems that might occur from this. There are some risks involved in renting land from another resident, most of which include losing your land and/or money. When you rent land from another resident, you will be entirely on the landowners mercy. The rules and regulations on the land will be set by the landowner. If, for example, the landowner has not paid his tier for the land to Linden Labs on time, he will lose his land, which means you will lose it to, even if you payed your rent on time. (Howl 2009)

There are of course some benefits to renting land as well. Renting is a good option if you want to be part of a community with a specific set of rules or if you want to have a shop or apartment in an already popular place (Second Life Wiki). Renting also gives you more freedom when it comes to moving around. In case you don't like the place you rented, you can just look for another one, whilst the land you own, will always be in the same place. These factors makes renting a good option for when you are just starting your life or business in Second Life, and just want to see where it takes off to. If you then feel like you want to

expand your second life, you can start thinking about buying land.

The official Second Life website says:

> Think of it this way: the world of Second Life is like a 3D version of the web, where you can explore and interact with everyone else who is using it at the same time. Virtual land is like a 3D web site: a blank space where you can make anything happen. (Linden Research)

To manage a whole sim, you need to access a separate window to do so. In the Region Estate window the landowner can manage their whole private island at once. (More about this in appendix B)

4.2.2 Terraforming and Landscaping

By editing the land, the landowner can define the whole style of his region. The owner can for example change the texture of the ground to snowy to make it into a winter landscape, or form the land into a beach with a large part of the land being underground. Why not a snowy beach while we are at it? Planning your terrain is an important step in planning your region.

Terraforming can be done either externally the whole region at once, by creating a RAW file in a graphics software and uploading that to Second Life, or internally, by editing the land one step at a time with the land editing tools. In the edit land window you can also buy land, abandon land you own, subdivide the land into smaller parcels and join parcels into bigger ones.

When buying land it is good to keep in mind the differences between the mainland and private islands when it comes to terraforming. The options you have in editing the land is far more limited on the mainland. You can for example only raise or lower the land by 4 meters on most mainland sims, in some cases not at all.

After you bought your land and before starting the actual terraforming, it is good to make a plan before doing so. You can make a simple 2 – dimensional drawing from above and to scale, to make sure you fit everything you want into the sim. For inspiration you can find real life photos or illustrations, and it is good to stick to one overall concept throughout the entire

sim. A mistake people make with terraforming is trying to sculpt everything manually from the edit land window. Instead the key is to create the base externally and import the RAW – file into Second Life, then add finishing touches with the internal land editing tools. Other common mistakes can be not knowing when to stop editing, and burying existing content by mistake (Weber et al. 2008:252).

There is more to designing the landscaping of your island than editing the terrain. Things like paths and waterfalls have to be added separately, after forming the terrain, and can only be made by someone using the building tools. It is good to keep this in mind when adding finishing touches to the terrain. Combining terraforming and building is key in making this work. For example lowering the ground where the path is supposed to go will make the result look more natural, instead of building the path on flat land. This would leave the harsh edges and corners of the path visible, unless some natural looking borders combined with the path is built as well.

4.3 A Brief Overview of Building in Second Life

One of the content creation features in Second Life is the building tools (illustration 8). With the building tools the Second Life resident can create objects for themselves or to share with others. They can be stored in the creators inventory or somewhere in the 3D world. When creating something with the building tools it is called building, and someone specialized in building is generally referred to as a builder. Even though the term “build” might seem odd when talking about creating things like clothes or hair, those are just some of the objects that a builder can specialize in building. Basically all objects that you come across in the virtual world are built by some of its users – Everything from small objects like rocks and plants on the ground or accessories and hair, to large objects like waterfalls or buildings.

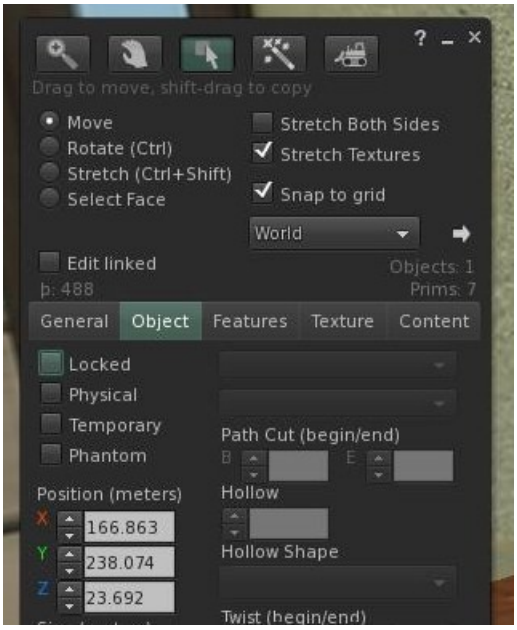

Illustration 8: Second Life's buildin tools.

A prim, short for primitive, is a basic 3D geometrical object in Second Life. Prims could be defined as the building blocks of Second Life, something like Lego blocks. The building tools offer several different shaped prims for the builder; a box, a cylinder, a prism, a sphere, a torus, a tube and a ring (illustration 9). It is then possible to edit each of these shapes further, regarding for example size, shape and position.

Illustration 9: Second Life's basic building blocks

In addition to these there is an exception, “prims” that cannot be used for actual building. Those are the default plants that can be found in everyone's inventory. They are treated like single prim objects, but are not really made out of prims, but built into Second Life (Weber et al. 2008:134). Another exception to the regular in-world prims, is *sculpted prim*s which are created externally. I will explain more about sculpted prims later on in this chapter.

In the building tool window, there is a separate tab which controls two special features you can add to the prims; flexibility and lighting (illustration 10).With lighting it is possible to set a prim to light up itself and its surrounding objects. Flexibility is mostly used on clothes, hair and plants. As the function-name implies, you can use it to determine how flexible the prim is. Prims with this feature turned on are usually referred to as flexi-prims. They are affected by wind, and if attached to an avatar, by avatar movement.

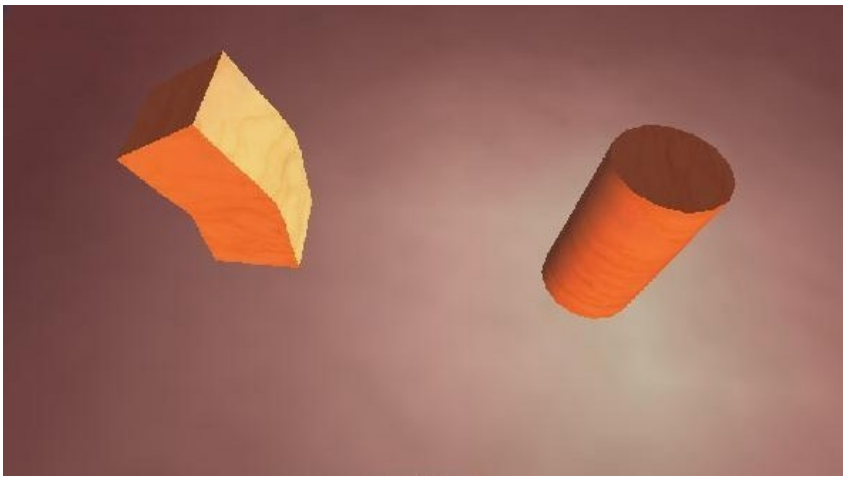

Illustration 10: The box has the felixibility feature turned on, while the cylinder has the light feature turned on

Most residents pick up on Second Life's building tools fairly quickly, and if they don't there is always the possibility of attending a building class in-world. If the user has prior experience from 3d modeling it might take some time adjusting to the Second Life system. It is a bit different from the norm. For one there is no mesh-import functionality, instead everything in Second Life is made out of prims and they cannot be modified as freely as 3D objects can in a professional software like Maya or LightWave.(Weber et al. 2008:136)

One of the most challenging things for the new builder to master, is getting a grip on perspectives (Weber et al 2008:23). Depending on where the camera-view is, the perspective of the prims might look very different. The key is to remember to look around your build from all angles before moving any of the prims around. This way you can avoid making mistakes with the perspective.

Not all residents have access to land where building is allowed for them. Those who are in need of an area to build on can look for a sandbox in the Second Life search. Sandboxes are large empty spaces, usually maintained by other residents and are available to everyone who wants to build. To keep them from getting cluttered, they are normally cleaned up regularly.

At the time of writing the current fashion in Second Life building is sculpted prims, or "sculpties". To create a sculptie you have to create an object with an external 3D-software, for example Blender or Maya, in the form of a NURB. NURBs are shapes that can easily be molded into organic forms like fruit or trees (illustration 11). Using sculpted prims instead of regular prims makes it easier to save prims when building. A downside with sculpted prims, is that they cannot be modified once they are in-world, as much as regular prims.

Illustration 11: These apples are both made of two prims, the one on the left with sculpties, the one on the right with regular ones

All places in Second Life have a prim limit, meaning you cannot place more than a certain amount of prims in one plot of land. With the ability to create the objects externally, and then import them as one prim into second life, makes it easier to build what you want on your land, without worrying about creating too many prims. If you want to build it in-world, you might need to use several building blocks to get a detailed and realistic looking result.

4.3.1 A Brief Overview of Textures in Second Life

One big part of the building process is assigning textures to the prims in your build. The texture finalizes the whole construction and defines the object. It determines the look and feel of the object you are building, and depending on the quality of the texture it determines the quality of the whole build. With changing the texture on one object, you can change what the object represents. With the help of texture it is possible to reduce prim usage by using detailed

textures instead of creating all the details with prims.

> Textures help tell stories that prims alone struggle with. One simple box prim can tell many different stories depending on how it's textured. Is it a bomb? Is it a birthday present? Is it the mysterious Time Cube? (Weber et al. 2008:58)

Even if your building skills are out of this world, there is only so much you can do with the set of prims provided. Linden lab offer a variety of free textures, which are a good start for beginners to practice with. But they are not all that realistic and everyone has the same ones, so the key is to either buy some new ones from a texture shop in Second Life, or better yet, import textures into Second Life created by yourself. For this you would need some kind of graphics software like Photoshop or GIMP.

There are different ways to make your own texture, the most common way is to use photographs. It is important to remember that the photographs should be of high resolution so you can get the textures with their full details. You can also combine photos to make original textures according to your own design. If you have have one photograph of a house with a nice looking window, and one photograph of a brick wall, you can cut out the window from the picture of the house and paste it onto the brick wall. In addition to this it is possible to make the windows transparent by making it into and *alpha texture*. This way you don't have to spend prims on building the window (illustration 12). (Weber et al. 2008:60-61)

Illustration 12: These windows are part of the wall texture,instead of built with prims. Thanks to the alpha texture you can see through the windows.

Another way to make textures is to hand-draw them. You can do this with pen and paper and then scan them, or you can use a drawing tablet and paint it directly into whatever graphics software you use. Making textures like this is a good way to make the textures interesting and stand out from others. Since the attempt with most textures used in Second Life is to imitate a realistic look, making them yourself from scratch will add some valued originality to your creation. Hand-drawing your textures does require the creator to have some artistic skills."I feel like drawn textures have a lighter, more fun feel to them – they don't have to look realistic because that is part of the appeal"(Weber et al. 2008:61).

When you have created your texture you will have to upload it into Second Life from the Second Life viewer to be able to use it in your builds. Uploading a texture or image costs 10 linden dollars. After you have uploaded it, the texture will be stored in your inventory, in your texture folder, for whenever you need it.

4.3.2 Challenges when Building

There are some technical factors that has to be taken into consideration when building. For smooth camera – and avatar-movement you have to pay notice to the distances in the infrastructure. If you were to build a house exactly to real life scale, in Second Life, you

would probably run into some problems. The default female avatar is about 6'1” (185 cm) and the default male avatar is 6'7” (201 cm), some other default avatars found in the inventory are even taller, the cybergoth male is 7'6” (229 cm) tall. When you start customizing your avatar there is no indication of this, so, naturally, avatars tend to be pretty big. That makes most normally scaled rooms, vehicles and furniture a bit on the small side. If the area of movement is too small, the user might find the camera angle in the wrong place, or the avatar might end up bumping into the walls or ceiling. To make the user interface a more pleasant experience, the buildings should not be made too small.

The Second Life camera can cause some problems if you build in real life scales. Most residents do not use *mouselook*. Most use the default point of view, which is from a bit above and behind the avatar. This can pose some problems. For example; If the ceiling is too low, your view will be in between the floor you are at and the floor above your avatar. This is called ”getting your camera stuck in the ceiling” by residents. You can get your camera stuck similarly in walls, if the space is too small. When building any kind of functional space in Second Life, it is important to consider the camera's dislocation from the avatar. Hallways, vehicle interiors and even large event venues should be designed with the camera view in mind. (Weber et al. 2008:210-214)

How much do you have to rescale your builds to avoid these problems? There isn't really a definite answer to this, because the size range of avatars is so wide. There is everything from giant dragons to so called tinies, which basically are minimum sized avatars. The best thing to do, is to build according to a range of average-size avatars, there will always be compromises. Ceilings should be at least 3.5 meters high. One rule to go by is to increase the scale by 1.25 – 1.50 times real life scale. If you are planning to teleport people into the house you are building, it is important to keep in mind that the avatar will land some meters above the ground. In case the avatars intersects the ceiling, Second Life will force the avatar to bounce up to the next floor/roof. This is one of the reasons to use larger scales when building. (ibid.)

Because the most common way to move around, especially when it comes to longer distances, is flying, it is good to keep that in mind when constructing entrances. The builder might want to make the roof *phantom* or at least make the entrance big enough to enter when flying. When flying, the avatar is moving faster, this makes it essential to make the entrance

quick to spot and easy to fly through. Navigating in Second Life is not as smooth as in real life. If the build is poorly made, moving around will end up feeling clumsy. Walking up (or flying) spiral staircases is an example of something difficult to master in Second Life architecture (Ball & Bainbridge 2008:119). They are often made too narrow, and you tend to either bump into the stairs above you, or fall off them entirely.

4.4 A Brief Overview of Scripting in Second Life

One of the key elements in making an area in Second Life catch the visitors interest is interactivity. Without interactivity there is no given reason for the visitor to stay in your region, or more importantly, return to it later. The builds might be beautifully made, but without scripting the objects will remain static like sculptures. It might be fascinating walking around and explore a forest with beautiful colors and nature, but without scripting there will not be any movement in water and animals will just stand there, no birds chirping or wind howling. Even in museums where the art is supposed to be static, there still usually are some kind of teleportation devices between floors, objects that hand out note-cards with information and possibly doors that open and closes. So even the sims that only are for exploring and walks will need some scripting to make them worth a visit and making the experience richer.

> [...] consider how sterile Second Life would be without scripting. Builders and artists create beautiful vistas, but without interaction the world is static; little more than a fancy backdrop. Scripts give the world life, they allow avatars to be more realistic, and they enhance the residents' ability to react to and interact with each other and the environment, whether making love or making war, snorkeling, or just offering a cup of java to a new friend.(Moore et al. 2009:2)

With the help of LSL it is possible to make the objects move and interact with avatars, other objects and the internet. LSL, short for Linden scripting language is a simple but versatile programming language used to bring Second Life objects into life. It is similar to the C and Java programming languages but it uses an event – driven state based model. Except for a few updates, the LSL has pretty much stayed the same since the beginning. ”The syntax and semantix of LSL have remained basically unchanged since the beginnings of Second Life, but as new features have been added to the Second Life world, LSL has been updated to support them. ”(Weber et al. 2008:96)

Event – driven means the script functions based on certain events that occur. The events then trigger the code that makes the object with the script do what the script tells it to do. This means the object can be coded to perform a certain action when someone, for example, clicks on it, sends a message to it or just bumps into it. The script can only perform one task at once, although there can be several tasks in one script, as long as they are coded to be performed one by one in a certain order. This means it is important to command the task to finish before moving on to the next one.

If a resident is unfamiliar with scripting from before, it might be comforting for them to know that in Second Life you can find a lot of different scripts for free, most of them has the permission for you to edit them. This is a good way to getting started with scripts. Changing some variables in the existing script, and observing how the changes affect the object after that is a way to ease into scripting rather than making them from scratch yourself. Some of the scripts have comments in them, to help other users, and the creator as well, to understand the script and what it is doing. It might also contain some important information about the script.

> Comments can be used to identify a script's author and creation date, and can provide notes for the script's usage, behavior and options. Comments can also be used to annotate variables(describing for the user how the variable will be used), to describe events and functions, and to explain a tricky piece of scripting. (Weber et al 2008:101)

Comments can be created by typing two slashes (//) in the script, the script will then ignore what is written after the two slashes until the end of the line (Moore et al. 2008:7). This means, if your message is long, you will have to add the slashes in the beginning of every new line your message will be written in and that you want the script to ignore.

In case a builder in Second Life needs a script but cannot make one himself, there are some shops to buy scripts from. However, it is not uncommon that content creators in Second Life teach themselves both building and scripting. Another way to work is working in pairs or a group, where everyone are specialized in their own field, scripting or building (someone might even specialize in making textures). Then you will also have the benefit of having someone to share ideas and brainstorm with. (more about scripts in appendix B)

5. VIRTUAL EDUCATION

Educators might shy away from the idea of using a virtual environment for education, but technology is becoming a strongly visible part of our everyday lives, and the possibilities of it should be explored rather than ignored. Virtual education, or E-learning, refers to the use of internet as a learning tool. The main purpose of most virtual education is to make communication between teacher and student easier, however it is also used to enrich the learning experience itself. Applications or browser-based information sharing *platform*s like, WebCT, Moodle and Blackboard are practical tools when it comes to submitting assignments, sharing documents and staying up to date with the class curriculum. Learning material can easily be uploaded to these types of virtual learning environments (VLE), and the technical requirements are not as high as when it comes to MUVE's. As with all virtual learning environments these platforms require some understanding of computer interfaces.

In contrast to browser based learning environments, 3D - virtual worlds show a clear advantage when it comes to more interactive and immersive ways of learning. With the possibility to learn from the environment itself, 3D – virtual worlds provide the students with educational elements which do not exist in the flat browser based learning environment. In a 3D – virtual environment the user has a stronger sense of presense through avatars than with the user names on browser based VLEs. "The greatest educational strength of virtual worlds such as SL is clearly the dramatic visual environment that is available to participants." (Burhans et al. 2008:176). However, what Browser based VLEs lack in visual immersion, 3D virtual spaces lack in practical ways of document sharing.

At the moment the majority of virtual worlds are not aimed for the purpose of virtual education. Most virtual educational projects are designed by a user who wants to explore the possibilities of E-learning."In the majority of present-generation online virtual worlds, learning is a user-created by product rather than an integral component purposely included from the time of a world's conception."(Grover 2008:31)

It is understandable that the managers of virtual worlds need to make a living, therefor aiming the virtual worlds to those most likely to use them. But perhaps in the future if virtual education rank higher, developers of virtual worlds will show stronger acknowledgment

towards the needs of the educators. (ibid.)

There are some virtual worlds aimed solely for the purpose of virtual education, for example Whyville – a virtual world designed specifically for preteens learning through play, focusing on science. Using an environment like this might meet the needs of the educators, but it also limits them to the creators specific approach to E-learning. In case the educator wants to explore a wider range of possibilities, a more open minded virtual platform might be suited. Some competing virtual worlds which are not designed specifically for education, but strongly support it, include but are not limited to ActiveWorlds and Second Life. Out of these two the one which takes the stronger interest in educational project is Second Life, with its specific benefits for educational projects.Compared to ActiveWorlds 2 million users (ActiveWorlds Inc. 2010) Second Life is also the one with most registered users with its 12 million (Bell & Trueman 2008:XVI), and with the most possibilities offered to the users of a free account.

Virtual worlds offer educators a large variety of tools to take advantage of in virtual education. These tools vary depending on the platform, the more flexible or advanced the simulation is, the more tools will be available for the user. “Although SL is not the most advanced virtual simulation, it is by far the most flexible”. Some of the notable tools available in Second Life include text, voice, visuals and avatar presentation.(Thompson 2008:170)

5.1 Education in Second Life

Many of universities around the world has realized the potential Second Life has when it comes to online education. Harvard, Oxford and Stanford are only some among the universities who have set up virtual campuses in Second Life. In the online campuses the universities hold lectures and discussions. Some of the universities run entire distance learning course in Second Life, while others supplement classes. In Finland, Arcada and Åbo Akademi were pioneers with setting up virtual learning environments in Second Life.

Even though Second Life is fairly similar to virtual worlds in games, there still is some difference in opinion about Second Life being a game or just a virtual environment. Some of the people who are not familiar with the concept of Second Life have prejudices against it, thinking its just a game and a way to make time pass. (Suomalainen 2009:10) This means it

can be difficult to convince people to take it seriously as an educational platform, even though it has great potential to be used in learning.

There are three main factors that makes education in a virtual environment worth exploring. Those factors are interactivity, distance learning and social interaction.

As mentioned, a major advantage of using Second Life as a learning environment, is the ability to use the environment itself as an interactive teaching tool. “A large body of research and writing shows that people learn best when immersed in a subject”. (Thompson 2008:170)

Since it is an interactive and creative environment, where residents can basically create anything they want, it offers a fresh and innovative platform to learn. Many educators who are using Second Life as an educational platform, share the opinion on the fact that interactivity is one of the most interesting factors about virtual learning.

With the possibility to create your own objects in-world, Second Life offers its user a deeper level of interactivity. They can for example create Shakespeare's globe theater, and simulate plays there with their avatars. Another example is creating historical places that can be walked through, explored and looked at 3 dimensionally. Some existing areas like this are New Paris – a virtual version of Paris, Independent state of Caledon – a virtual presentation of 18th century England and Meteroa – a virtual simulation of a tsunami. (Schwartzwalder 2008:34). Although visiting any of these in 3D is not the same as seeing them in real life, it is certainly more interesting than the option of seeing them as flat 2D image.(Burhans et al. 2008:177)

During a virtual conference in Second Life I attended, I was introduced to some interesting examples of this. One of the areas I visited during a tour, provided by Texas State Technical College, was a simulation of a fine-dining-restaurant (illustration 13). This area was meant for the students to practice business etiquette. By role-playing out the situation, they would learn from experience. By taking turns in acting out the roles in a business dinner scenario, they would gain valuable experience regarding proper business etiquette. During this course they would learn everything from restaurant manners to what to wear on a fine dinner. Janyth Ussery (2010), the Director of Web Education at Texas State Technical College, who presented the sim , pointed out that a majority of the students just sit at home with a pizza in

front of the TV, but they also need to know how to act in a business situation. Ussery stated that they did not have an assessment, but they wrote a report on their experience and it worked out really well.

Illustration 13: TSTC's Dining simulation

This is an example of a way to use Second Life for learning things that might be too complicated to practice in real life. Like in this case, going to an actual restaurant to practice business etiquette would cost a lot and acting them out in a classroom might not offer a realistic enough environment to learn from. Another benefit with providing this kind of learning experience to the students via Second Life, is that it is available 24 hours a day. If they want to refresh their memory on what they learned earlier, they can return on their own to the virtual restaurant. (Ussery 2010)

Building in Second Life can also be a powerful interactive learning medium. During the same tour Ussery showed the group a gallery with student work based on their expressionism studies. The students had created artwork with the Second Life building tools with the principals of expressionistic art. The students created the artworks in teams, as a presentation of expressionism. Ussery noticed that while students usually do the least amount of work for the highest possible grade, they really enjoyed themselves doing assignments in Second Life and were able to have fun with it.

One of the other main advantages with using Second Life as a learning platform is the way it

affects the sociology of the class. Using text based communication can balance down the group dynamic. The threshold to speak up during class drops, which means even the shy ones get their voice heard. “Tärkeimpiä SLn käyttöä puoltavia tekijöitä oppilaiden mukaan oli että SLssä on helpompaa ottaa osaa keskusteluun, kynnys esittää kysymyksiä oli matalampi ja että oppiminen SLssä on hauskaa. “ (Holmberg & Huvila). in addition to this, having classes in Second Life also enhances the group mentality of the class. Ussery said she have bonded far more with the classes in Second Life than other classes.

In his article ”Harvard's Virtual Education Experiment in Second Life” Ian Lamont (2007) interviewed Rebecca Nesson, about teaching Harvard's first ever class in Second Life. She pointed out that having the distance-education in Second Life helped to give the feeling of a class community, since the class rarely meets face-to-face when it comes to distance education. Followed here is what she commented on the benefits with virtual text based discussion.

> .. In all my years of teaching classes, there are always some students in the class who are very hard to get to speak up. You can ask them a direct question, but basically, unless they are put on the spot, these students will not volunteer their own opinions in class, and I think that there are various reasons why people are reticent and don't want to do that. Sometimes I think people are shy and don't want to be put on the spot — all the conversation stops, and everyone turns to look at them. In some cases, students for whom English is not their first language, it really can be an intimidating thing to have to extemporaneously put together English sentences like that in a classroom environment.
>
> In Second Life, that problem of students not participating in class discussions just totally disappeared. And when I thought about it, these reasons, these challenges of speaking up in a regular class went away in this environment. In Second Life, when you want to contribute something to the class discussion, you just go ahead and start typing it in your chat box, and nobody turns to look at you, even if they do notice that your avatar is doing the typing motions, they are not actually looking at you, it's just your avatar, and your avatar is not doing anything embarrassing. When you are ready to enter your comment into the conversation, you just hit enter. And it doesn't have that moment where everybody stops and looks at you. Your comment just goes right into the conversation, along with everybody else's. So I think a lot of the anxiety that goes along with the public-speaking aspect of participating in class discussions, is just removed in this environment
>
> On the flip side, we didn't have any trouble with students who dominate the discussion. There's always been the phenomenon of the student who ends every sentence with a conjunction in order to not stop their

> comment, and you can do that as much as you like in Second Life, and it doesn't stop anybody else from participating in the discussions. What's nice about that is very frequently people who usually speak a lot in class have a lot of very good things to contribute, and it's hard as a teacher to shut somebody down in order to make space for other students, especially if you do feel that you want to be encouraging of their interest and enthusiasm. And this just takes away that problem as well.
>
> So for me the idea that I would actually end up almost preferring to run a class in a text-based environment to a voice-based environment, that was a huge surprise

In the USA today article, ”Teachers, College Students Lead a Second Life”, Jean-Claude Bradley (see Sussman 2007), chemistry professor and e-learning coordinator for the college of arts and sciences at Drexel university, says he uses it to complement classes. Even though only 10 of 200 students used it more than once but those who did thought of it as an effective way of studying. Bradley says it is a new way to interact, and mentions as an example that he can show the students molecules in 3 dimensions in-world. They can then in walk around the molecule and discuss it.

The benefits with Second Life probably is most notable when talking about distance learning, since it offers a clear solution to this subject. While holding classes in Second Life, the participants can attend from where ever they want, as long as they have access to a computer with Second Life installed. Virtual worlds are at the moment the next best thing after Face-to-Face education. Compared to browser based online classes, Second Life has the advantage of avatar presentation. “This agent for the user provides the sense of a person being present in ways that a screen name cannot, making one's peers and instructor memorable.” (Thompson 2008:169)

5.1.1 SLoodle

With one of the problems in using virtual worlds for education being the benefits missing from browser based VLE's, Second Life educators solved this by modifying Moodle to be compatible with Second Life. This application is called SLoodle, short for Simulated linked object oriented dynamic learning environment. The following is stated on the Sloodle website;

> SLOODLE is an Open Source project which integrates the multi-user virtual environment of Second Life with the Moodle learning-management system. Sloodle provides a range of tools for supporting learning

and teaching to the immersive virtual world; tools which are fully integrated with a tried and tested web-based learning management system used by hundreds of thousands of educators and students worldwide .

The basic concept of Moodle is to assist the educators and students in managing courses. The educators and students can register on Moodle and create their own profile, from where they can manage their timetables. Other tools provided byt this program are for example; arranging quizzes and forums to supplement courses, aswell as enroling students to courses and managing timetables (Moodle Trust 2010) . Sloodle is a cross-platform educational tool, connecting the concept of Moodle with Second Life education. Following here are some examples of how Sloodle connects Moodle to Second Life; With Sloodle it is possible to link the students Second Life account to their Moodle user account, Sloodle provides the user with a chatroom which is connected to both Second Life and Moodle, meaning you can chat in Second Life and it will be stored in Moodle. Sloodle also makes it possible to create, complete and grade assignments in Second Life which can then be reviewed in Moodle (Sloodle 2010)

5.2 Arcada's Approach to Second Life Education

Arcada's approach to Second Life, is a bit different from how the majority of other universities use it. The idea is not to hold online lectures on Rosario or role-play out various simulated situations, but instead take advantage of the fact that Second Life has millions of users from around the world. The students can via them get genuine feedback on their assignments as if it were being done in real life. For example, when creating clothes for Second Life the students will learn how to use Photoshop and they will also end up with an actual product they can attempt to sell to other users. Because of this it is vital to get regular visitors to Rosario.

Just using Second Life for holding online lectures in, would not be taking advantage of the fact that this is a virtual world where only the residents creativity is the limit.

Most educational sims are created to resemble something like a virtual campus, unlike Arcada who have created a Mediterranean island. At a first glance the virtual campus might make more sense than an fictional island, but the idea here is that Rosario is created on Second

Life's terms, and to make it into an inspiring environment for students to be creative. The students see the campus every time they have a real-life lecture, why copy that into a virtual world where you can create anything you want? To inspire the students with something less obvious, it teaches them a valuable lesson to think outside the box.

5.3 Challenges with Using Second Life as an Educational Platform

One of the biggest challenges with education in Second Life is its novelty. Since both educators and students are unfamiliar with this kind of learning environment, chances are they will not be able to use it to its full potential.(Thompson 2008:165)

Although one of the great benefits with using a virtual environment as a learning platform is the possibility to use the virtual surroundings to learn in an interactive way. But in order to use the environment itself as an educational platform, the institution needs to be in full control over the virtual land. “Such control requires a commitment of financial resource to the upkeep of the space.” (Thompson 2008:171) Finding a stable financial resource is important, but can be a challenge because of the fact that Second Life is so unfamiliar to most people.

Second Life has a steep learning curve, especially for people who are not used to game-interfaces, not to mention familiar with computers in general. For the learning experience it is important that the new users learn how to handle Second Life on their own, so they won't need continuous amount of help during classes, and can focus on the relevant subject. Therefore less help with starting up your second life will pay off more in the end. (Burhans et al. 2008:177)

The virtual environment is not the best platform to present certain mediums, it is not for example a practical platform for a large amount of reading. “In those cases it is best to provide supplementary materials via the browser based internet” (Thompson 2008:171) However, Second Life has a built in web-browser which might make it easier to incorporate browser-based material.

In the USA today article Bradley (see Sussman 2007) mentions that professors found out not all students prefer the Second Life environment. It is important to keep in mind that not

everyone will embrace the 3D environment as a educational platform. Even for those who are curious about trying it out, the concept of what Second Life is and how it works takes some intellectual effort to understand (Burhans et al. 2008:177). Research shows that some students rather meet in real life for activities that can be done in a real classroom, such as lectures or slide shows(Sussman 2007). But that is to be expected, Face-to-face education is still the most honest and "hands-on" form of learning, and there is no need for extra training in order to participate in face-to-face classes.

> The face-to-face education remains the gold standard to which all other educational forms should be compared.[...]Communication is the area in which traditional, face-to-face education truly shines. In this environment, both the student and the instructor have access to the full range of human communication options. (Thompson, 2008: 166)

5.4 The Changing Nature of Second Life

One of the major challenges (and also advantages) of using Second Life as an educational platform, is its rapidly changing nature. Second Life is constantly evolving, and new features are under ongoing development. This fact makes it virtually impossible to create something constant in Second Life, something that would steadily live up to the potential of Second Life. This means, running a project in Second Life need constant maintaining and updating. Even if an estate would run independently it would still need a regular update every now and then.

There are some examples of this that can be named, which have required Rosario to be updated in terms of land-parcels, building and media-streaming.

At an early stage of Second Life the media rights were sim-bound, meaning whatever media the estate-owner wanted to play, it would be playing in the whole sim. Since only one medium can be played at a time, this would become a problem for parcel renters. This feature was later changed so the media rights were parcel-bound.

This development had not been taken into consideration on Rosario, which was noticed when the apartments intended for the students were being handed out. The apartments in Marinetta were created in the form of two apartments on top of each other and parcels in Second Life are only divided on the ground, not vertically. This meant that people sharing a house would

also have to share media-rights. The result of this was that the apartments were combined into one two-story apartment, so each owner would be able to decide for themselves what kind of media would be played. At least that was the idea.

Another problem with this was the actual dividing of the parcels. Because you need to access the land itself to divide the land into parcels with the select tool from the building window, a new problem arose because the land was built on. In order to divide the land into parcels the buildings on top of the land would have to be temporarily moved, which would have been a complicated procedure. This resulted in that the problem with the media-rights was ignored for the time-being, and it ended up never being properly dealt with until Rosario was completely redone.

As I am writing this, the Linden lab is introducing an entirely new viewer, which yet again has a new media feature. The media in Viewer 2 is object-bound, which means the parcels and land-rights are no longer an issue regarding media, instead the owner of the object is in charge of whatever media it plays, if it plays. With this new feature also web-addresses can be assigned to the prims, which, for example, makes keeping something like a gallery notably easier. Now it is possible to add an image to an objects just by adding the web-address of the image to the object information.

Another development that affected Rosario, and everything else in Second Life, was the introduction of sculpted prims, or sculptie's. Now objects that previously had to be created in 10 prims, could be created with just one. This meant building “prim-efficiently“ was no longer as big of an issue as it was before. Everything in Second Life could now be structured with more details and virtual realism than before. In addition to this, the sculpted prims have a completely different style to them a softer and more organic one compared to the sometimes chunky building blocks. The sculpties took Second Life residents by storm; It became a whole new trend to build with sculpted prims and using sculptie's became a whole new marketing tactic. By mentioning in the advertisement's that the objects are created with sculpted prims, creators were hoping to get the explorers or shoppers attention.

According to rumors, the Linden lab is trying develop a feature which would enable the user to build with meshes, meaning you would be able to both import and export your builds to

and from Second Life. This would make the process of saving your work much easier, since you would be able to store all your builds as files on your hard-drive. With this feature it would also be possible to create larger builds entirely with the help of an external software, which I think would raise the bar of building standard quite a lot. This would result in there being even stronger competition between builders than it is now, and the “average” builders might find themselves challenged.

One of the benefits with using a rapidly evolving platform in education, is that the students will learn the importance of staying up to date with current trends. The culture and trends of today that keep changing at a fast pace, and new technology is introduced by the day, proves it is important to keep track of what is new. Especially in the field of multimedia where basically everything comes down to technology and trends.

5.4 Some Pointers to Keep in Mind when Getting Started Educating in Second Life.

A number of the educators who are curious about using Second Life as an educational platform are not necessarily familiar with a virtual environment. Setting up a project in Second Life without any prior knowledge of the virtual world might seem like the equivalent to Bambi walking on ice. But the fact remains that this platform already is new as a phenomenon alone. In order to make the virtual world meet the specific needs for each educators purpose, the only way to learn how, is by learning from experience. But how should one know where to start?

In Second Life:the official guide John Lester mentions some successful strategies for educators interested in trying out Second Life as an educational platform. His primary focus at Linden Lab is how to use Second Life for real life education. Some of those strategies are;

- Spend as much time as possible exploring Second Life
- Talk to other educators who are currently using Second Life for real life education
- Come up with clear and measurable goals for your academic use of Second Life.

- Learn from your students

Exploring Second Life might seem like an obvious advice, but it is critical. Getting to know the Second Life environment is important in order to get to know the potential it has as an educational environment. Getting to know how people interact and how the community works in general in this virtual world, is an important part of learning how an educational platform in this environment should function. (Rymaszewski et al. 2007:323-324)

Networking is an important part of getting involved in a lifestyle in Second Life, maybe even more so than in real life, since Second Life does not have any general media like TV or newspapers. Getting to know and integrated in the existing educators community in the virtual world should be done as soon as possible. The other educators will be of help when it comes to adapting ideas and coming up with new ones to use in virtual education. ”Educators are most successful when they find colleagues and collaborators in real life to help them work through new teaching ideas and projects. Educators using Second Life face the same challenge, so the first thing to do is to get connected with the growing community of real-life educators actively exploring Second Life. Share your ideas and project plans, listen to the experience of people who may be working along similar lines, and you'll be off to a great start!” (ibid.)

Like real life course curriculum have clear goals, so should your work in Second Life have. Keeping those goals in mind when working on education in Second Life will make it easier to measure your achievements. These measurements will be useful when reporting back to other faculty members that your project in Second Life have merit.(ibid.)

Second Life is quite a different medium compared to anything else the user might have experienced. Getting to know a new interactive medium instinctively starts from basing your experimenting with what you know from before, so the key is to unlearn your old ways of thinking. As an example of this phenomenon Lester mentions the motion – picture camera. When it was a new invention no one realized it could be moved around, instead it was just stuck in one place used to film plays on a stage. It took a few years for the film makers to realize they can move the camera around. ”Don't re-create preexisting models of education. If you want to teach biology, why build a virtual classroom with desks and a blackboard in

Second Life when you could build a whole interactive human cell?" (ibid.)

6. ABOUT THE MARINETTA OMBRO PROJECT UNTIL 2008

Arcada has its own project in Second Life, called Marinetta Ombro. The media department at Arcada commenced a long-term project to consolidate the media courses. Owen Kelly and Camilla Lindeberg, both lecturers at Arcada at the time, were the ones who started the project. The Marinetta Ombro project was launched in 2002, but didn't move into Second Life until 2005.

When it started, it was in another multi user 3D – world that had been created with the SCOL programming language. It was in developed in France by Cryonetworks. Unlike Second Life you did not need to download a separate viewer to log into the virtual world, but you did however need to download a plug-in, called SCOL Voy@ger.

The purpose of Marinetta Ombro and Rosario, is to be a workshop for students where they can experiment with their ideas and assignments. In a virtual setting the students would be able to put their design-, marketing- and programming skills to the test in a simulated realistic environment, and the idea was that the students would be ”[...] both learning about the environment (graphic design, 3D modeling, scripting and programming, database management), and learning within the environment (language tuition, cultural theory lectures, and so on). ” (Kelly et al. 2004)

When starting the Marinetta Ombro project there were other options for the setting, but having the virtual world on a distant planet, in the far future or in remote past was decided to be too unrealistic. It was thought it would not contribute to simulating a realistic work-environment, and was therefor rejected. Instead it was decided it would be in the present time and somewhere on earth. The inspiration to the virtual island then finally came from a 1923 magazine story, Sexton Blake and the time thief, which partially was set on Rosario, the fictional island in the Mediterranean sea.

The students of a concept design course, a programming course and a design course, started working on the base-concept of the island. The concept designers spent months on planning the virtual island thoroughly, including a detailed history of Rosario from 1425BC to the present day. The design group and programming group then worked together on creating the

3D – setting with the SCOL technology. It had been decided that the website would contain a 3D model of the capital city, Marinetta, with chat facilities, working buildings and in-world banking. To add to the feeling of the visitor being a tourist, it was decided Rosario should have its own language, Ido. This language would be used in all street signs, advertisements and government documents.

According to the plan of the virtual island it would consist of various cultural venues, like museums, a gallery and a cinema. The cinema was thought to show a range of work made by students. The venues would then be accessible by logging on to the Marinetta website as a resident or holiday – maker. The residents would receive a password protected virtual house in the city, and an in – world bank account.

The launch of the island was in 2003, and it was arranged by students at Arcada studying to become producers. It was intended that these students also would arrange cultural events, holidays and festivities on Rosario in the future.

There were four long term goals set for the original 3D – island, it was meant to act as a new kind of environment for distance learning, a laboratory for cultural studies, a test-bed for web applications and a framework for in-house apprenticeships.

In the summer of 2005 a group of students at Arcada started thinking about how to improve the project ,with the attempt to create a richer onscreen world. The group started off using a game engine called 3D Game-studio. Although the students learned alot about structuring 3D worlds the problems they encountered ended up being too programming – oriented when it was supposed to be combining different fields of multimedia.

During the aspects of game design course in the autumn term, the students researched various online worlds, some of which were ActiveWorlds, There and Moove. The attempt was to draw conclusion to which features to add to the upcoming version of Marinetta. During this research the students stumbled across the online world of Second Life, which they considered to be in a altogether different class from the other online worlds and was therefore their primary option for the new version of Marinetta.

The features Second Life was able to add to the project were complex but useful things, the students would not be able to create themselves. After three weeks of testing the virtual world it was decided that the Marinetta project would be moved into the Second Life grid.

The students were enthusiastic about the newly found virtual world, and Linden lab were interested in supporting Arcada on the Marinetta project. By informing Arcada about the land for a lower price intended for educational land, the Linden Labs made the choice of experimenting with the possibilities of Second Life even easier.

At this time Second Life had approximately only 75,000 users and around 3000 users online at a time. There were already some existing popular areas in Second Life, like the independent state of Caledon, which was helpful in researching the idea of a functioning virtual culture.

6.1 Moving Rosario to Second Life

The Second Life version of Rosario consisted of nine sims altogether. The island was carefully planned. It was still supposed to represent a fictional island in the Mediterranean. Each sim would have a city, and each city would have their own style and purpose on the island. The city called Marinetta was decided to be the capital city of the island. The history was thoroughly figured out, and it was even studied what kind of eco-life there would be on the island, if the island would have been a real one. The terraforming and nature was created to be a believable Mediterranean landscape, the buildings were built according to the Mediterranean theme and the official language was decided to still be Ido. The attempt was to make it as realistic as possible with the tools Second Life provided at the time. It was even thought to have its own economy but that was never put to action. Because of Second Life's existing Linden dollars it would enhance the feeling of being a tourist when visiting Rosario, if the island would have its own economy.

On Rosario it was thought the students could experiment with things they learned in courses, and use it as an realistic environment to make assignments. For example, concept development students created brands to use in the virtual environment, and the brands would appear on billboards or as products on the island. At this stage Rosario was supposed to be a exploratory project, since Second Life still was a new phenomenon.

Until the winter of 2008 Arcada owned 9 sims, when Arcada realized it was too many. Not enough people used it, so it constantly looked empty. They were narrowed down to 6, of which two would be rented out to Aalto university, which means Arcada are currently using 4 sims for their own projects. The project survives on funding's from Arcada and Stiftelsen för teknisk undervisning och forskning.

6.2 Semano Semano – a Successful Attempt to Attract Visitors to Rosario

One of the continuing problems with Rosario has been attracting visitors to the island. In 2007 another attempt to increase the popularity of Rosario was made. With this project I was introduced to Second Life and Rosario. With the group from the Marinetta Ombro course at Arcada, we were aiming to attract more people to the island. The course started in autumn term 2006 where we all began by registering to Second Life and got to know how the program works. In the beginning of 2007 we then started making plans on how to make residents of Second Life take notice to Rosario. It had to be something that would be interesting to Second Life users in general, aswell as practical and rich in educational terms aimed at Arcada's students.

The group came up with the idea of having an annual festival, called Semano Semano (semano stands for “week” in Ido), a week long festival with a final party the last day of the week. Semano Semano was intended to attract Second Life users to Rosario, and to make people across Europe to notice the DINA Hostcity project.

The Dina Hostcity was a real live event in which Arcada was involved. The idea to extend the project to Second Life was suggested to the multimedia-students, who then had to develop the idea further. It was planned as an addition to the activities during the week Eurovision song contest was held in Helsinki. You were able to upload videos filmed by yourself to the net, and it would be streamed live into Rosario, in Second Life.

The theme of Semano Semano was also decided to be the Eurovision contest, and that year the festival was called Your Vision. The idea was to inform Second Life users interested in the Eurovision contest about the festival, and make them curious about the events and party. The

party was held at the same time as the Eurovision finals.

We needed a large area for the festival to take place, and started constructing the festival site in the beginning of the year. The festival was decided to be held in Moyena Valo (Media valley), a large valley in the middle of the island (illustration14). There would be activities and places to hang out during the festival. The group built a large stage to be the focal point of the festival area, and in front of that was a half pipe for skating and a dance floor. Other than that the festival area consisted of campfires, lounge chairs and a large screen for the video streams. There was even a treasure hunt designed for the event, with clues hidden around the island to encourage visitors to explore Rosario.

Illustration 14: Moyena Valo

As a promotion for Your Vision a story was made up about a musician from the island of Rosario. Supposedly the musician, L'angelot, had applied to participate in the Eurovision song contest, but was rejected because Rosario is not a real country. An avatar was created to represent him and a music video was filmed, in Second Life, to accompany the song he had tried to enter with. A fan video with real people was also made protesting the rejection. Both videos were uploaded to YouTube to the Rosariomarinetta channel (Youtube 2007).

When exploring different places in Second Life, you tend to meet a lot of people. When I got to know new residents I always tried to weasel in Semano Semano in the conversation, to

promote the event. But I felt just mentioning it wasn't enough. I wanted to leave something with them to make them remember talking about it. To attract people to the event, I created a flyer with Photoshop, uploaded them to Second Life and handed them out as an image file to people I met. Even if you mention the event to them and they are interested, they might forget about it later since Second Life is full of interesting distractions. I felt giving them something visual to remember would increase the chance of them remembering the event, plus the fact that the flyer contained information about the time and location of the festival. In case they wanted to come and check out the area but forgot where it is, they could always look at the flyer again.

The final party was a success and the Moyena Valo got a fair share of visitors(illustration15). They stayed in Moyena Valo, dancing and talking about the Eurovision contest since most of them were watching it at the same time on their real-life TV's. Together with one of the festival guests I arranged a competition where all the guests were supposed to guess who would win the Eurovision contest. The first one to guess correctly would then win some Linden dollars. I found this to be a good way to get the visitors to stay interested in the party. All in all around 700 visitors came to Rosario during this week for the event. In Second Life this is enough visitors to call the event a success

Illustration 15: Semano Semano launch

One of the reasons this was a successful event was due to the effort put into the development of the project. One factor which made a big difference when it came to the amount of time invested in the event was that four exchange students had too few assignments to keep them busy. Because of this, they got involved with the Semano Semano festival, and worked almost full time on the project. This proves hosting a large scale event, like Semano Semano, requires a large amount of work and it might not even have been possible without the help from the exchange students. Hosting an event like this proved to draw a large crowd to the island, but it would require more effort than what under normal circumstances is available, to keep hosting similar events regularly. This means some other solution to attract regular visitors to the island would be needed in the future.

6.3 Rosario after Semano Semano

Although Semano Semano was a successful event, the festival guests did not end up returning to the island after the festival was over. The island remained as deserted as ever, except for the clutter that was left from the festival. The next project was setting up the missing cities, which occupied the multimedia students the following year, autumn term in 2007 to spring term in 2008. There was supposed to be a city in each sim, but they were never finished before this time. And now it was thought building them would make the island look more professional, and finally make the island look finished. Some other finishing touches were added to the island, like a church close to the graveyard outside of Marinetta (illustration 16). It was starting to look like an island with a culture.

Illustration 16: The Church of Marinetta

Finishing the island did not help in terms of getting more people to the island, but it did affect the overall look of the island in a positive way. With the 9 cities finished according to the original plan the island was starting to have a more finalized appeal(illustration 17). However, having an island appearing finished but without much to do, it was obvious this would only be a temporary attempt in order to attract visitors in a hurry. The island still seemed dull, and a more thorough refreshing of it was in order. Walking around the island from one town to another took far long time, and there was nothing to see on the way while walking.

Illustration 17: One of the cities finish during this time

After deciding Rosario needed to be refreshed, we needed a way to find out what users might think needed to be changed. One way we came up with was the dullness-marker (illustration 18). It was just a small object that anyone could place on the ground on the island. The idea was that the visitor would walk around, and whenever they got bored, they were supposed to place the dullness marker on the ground. This way we would find out where and how often the visitors got bored and possibly would leave the island. The dullness-marker was placed all over the island and it made us realize the island would need more than just a little refreshing. It would need a complete renewal.

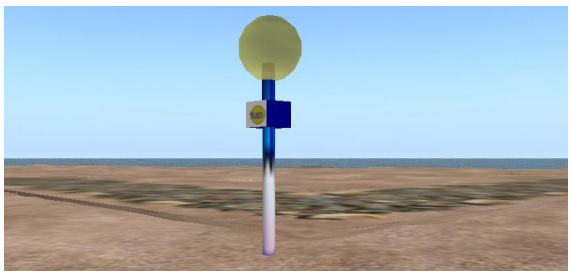

Illustration 18: The Dullness-marker

7. REBUILDING THE ISLAND

7.1 Problems with Rosario and why It Needs Reconstructing

One of the major problems with Rosario was that it did not live up to the standards that Second Life offers today. Many regions in Second Life has a regular amount of returning visitors, so why can Rosario not seem to get any? One of the answers might be that the whole Marinetta Ombro project started off as exploratory, and so was moving it into Second Life. When setting up the virtual island no one really knew how Second Life works, and it was just intended as a test to see where it leads. When setting up the virtual island, in a virtual world where everything is possible, it is of course difficult to know where to start and what kind of guidelines to follow. Naturally it was attempted to create a realistic version of a Mediterranean city, which ended up being one of the problems.

When building in Second Life there is no indication of scale, neither that of which scale is the norm. Basically the only thing you have to go by is your avatar. If you are new to Second Life your avatar might be awkwardly sized compared to others and you might not have realized it yet. If you have no previous experience with Second Life you probably would not know this.

Ironically the attempt to create a realistic Mediterranean city resulted in the town giving off an unrealistic impression when it came to Second Life terms. (Illustration 19)

Illustration 19: A view of the old Marinetta

As the island was until 2008, not many students used it except for the assignments they got during the courses, which were supposed to be executed in Second Life. Several apartments

were built for the students involved with the Marinetta Ombro project. The idea was that the students who wanted a virtual apartment, could have one of their own. Due to lack of demand, most of the flats just stood empty, and even if some of them were occupied they were not being actively used. It seemed the students did not find that the virtual space had enough to offer them, to make them use it on their own time as well as during class. (Illustration 20)

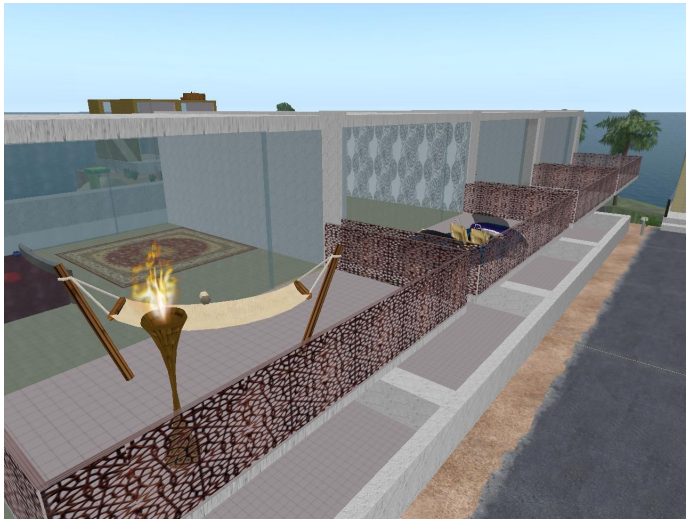

Illustration 20: Some of Marinettas deserted appartments

Something that might have caused this is the fact that when you arrive to Rosario there is no indication of what to do, or what the island is for. Nothing is suggested to the new user. Compared to a themed place like the independent state of Caledon for example, the game of the estate is clear when it comes to style, clothes and manners. I remember when I arrived to Rosario for the first time, and I wondered what the point of it all was since nothing was going on anywhere no matter how much I was looking around. It was like a deserted city. Added to that I kept getting lost because all the buildings looked very similar.

One feature Rosario used differently than the majority of places in Second Life, was the flying feature. On Rosario it was not allowed to fly, which meant walking was the only way to get around. This was thought of as an experiment and was meant to encourage visitors to look around the town. It might seem like a good idea, but the down-side of this is that not being able to fly starts to feel frustrating pretty fast to someone used to flying, because flying is much faster. The distances between the towns were too long for walking, but there was no other way to reach them, which just resulted in the towns not being visited, unless someone teleported you.

The infrastructure in the previous version of Marinetta was of simple design, there was not much variation in the structure or the textures on the builds. The streets were very narrow, and the spaces inside the buildings were small, which made the camera-view awkward at times. The infrastructure did not really meet the possibilities that Second Life offers today. Due to the fact that Rosario had not been updated since the beginning of the project, the style of the island was very outdated, because of Second Life's changing nature.

Most of the city consisted of empty buildings, except for some minor activities, like buying ice cream or rolling dough with a rolling pan. Although some new and improved activities were added to Rosario during the Semano Semano festival, for example parachuting, it was not enough to save the interest of the visitors.

The students of Arcada were hoped to take advantage of the free space on the island, but they did not. Instead, Second Life users who do not have anything to do with Arcada, had built their own buildings on our property without permission. This is generally not allowed on private land in Second Life, and is considered to be the equivalent of theft. Real-estate is a competitive, money-making business and there no reason for a random visitor to assume they can build on private land without permission. Land thieves are normally blocked from returning to the property they were stealing land from. Even though we may not want thieves on our land, the fact that people choose to build their homes on Arcada's space in Second Life, still proves there is some interest in Rosario. By updating the island, and adapting it to the target audience, the interest in Rosario hopefully will grow.

7.2 Comparing Rosario to Other Second Life Areas

Introducing Rosario to Second Life users might leave them with the question what the island is for, since nothing really is indicated upon arrival. Having a themed area in Second Life can be challenging, the visitors might not know how to properly act or dress to fit in. A themed city also has some special factors that should be taken into consideration. Some examples are; There can be residents of different rank or with different titles and rights, the events on the island should be planned according to fit the theme of the city and the culture needs some basic structure before introducing the city to residents.

Caledon is a place in Second Life that is worth comparing to Rosario since it is a themed city. It is a good example of a functional and popular city in Second Life. It is also worth mentioning to give the reader an overview of how a city in Second Life might work. Caledon (illustration 21) started off as one sim, and it kept growing in size since it became popular. The official opening of the Caledon Estate was on April 1st 2006, it took the form of a ribbon – cutting celebration with a party afterward. The party had some events and competitions to engage Second Life users and residents of Caledon in the Celebration of the new town. Some of those events were;

- Coronation of the first steward
- The first of Caledons annual rose hunts – the contestants look for the rare caledon rose around the estate, there are 19 of them scattered around the area. They will only bloom for 30 minutes only on this one day of the year, and are dated and numbered for added value.
- Formal Dancing
- Fireworks

This is an example of what a party, or celebration, in Second Life might look like. Most themed places have regular (usually weekly) parties to keep the visitors coming back. Those parties are less festive, but usually have some kind of best costume - competition or some other way to engage the guests in the event. If it is also a role playing sim, the party is most likely adapted according to that specific theme of the region.

Illustration 21: Caledon Welcome Area

The theme of the town could be defined as Victorian steam-punk (”steam-punk involves an alternate history of technology, in which steam-era technology embraces accomplishments of the modern era, such as computing and powered light” (Jacobson 2008:86)). It started off with Desmond Shang wanting to make a sim based on his own interest in Victorian steam-punk culture and then the estate just kept growing. Now it could be defined as a micro-nation of Second Life.

When you get to Caledon you are handed a note-card with a set of rules. This is usually standard procedure in most cities in Second Life, especially themed and role playing ones. Second Life does not have a specific set of rules, so if you have a private sim it is good to mention what they are to avoid *griefing*. The rules of Caledon say the following;

> Caledon is a themed community with a relaxed attitude. Generally, period clothing and behavior are encouraged and welcomed, but not required. However, in spite of the continent's mature rating, proper class and decency in public areas is the rule. Some other restrictions:
>
> - Externally out-of-theme builds are forbidden below 512 meters. Zoning is relaxed above that altitude.
> - RL political/religious signs are banned outright.
> - No camping chairs

- No casinos
- No scamming
- No ageplay within Caledon
- No racial slurs

These are a basic set of rules and regulations, that more or less look the same in most estates in Second Life. In case a resident violates any of these rules, the region usually holds the right to kick him out and ban him. It is not uncommon to hire someone to work as a guard for the estate, to keep the area enjoyable for honest visitors. Like in many role playing sims, the player himself can decide how seriously he takes on his role in Caledon.

To someone not familiar with Second Life from before, it might not be clear how strongly or not the theme of the sim in Caledon is played with. I will therefor introduce the reader to two other sims which communities I am a part of; The first one, *World of Hogwarts* (WOH),is a sim with a strong theme and strict role-playing, the second one, *Suomi-Sauna*, is an area which I would like to call an “avarage” sim, a liberal area with its own individual approach to Second Life, and where everyone are welcomed as themselves with their own manners.

The WOH is a role-playing sim created for Harry Potter fans, who want to role-play as wizards or witches in the Hogwarts's school for witchcraft and wizardry. In the school they have actual classes, terms and tests inspired by the J.K. Rowling Books about Harry Potter (potions, dark arts, astronomy etc.). Before being allowed into Hogwarts you have to submit a character sheet, with information about the role you intend to play out. (You even have to do an online quiz to determine which of the four houses of the school you fit best in with.) If they accept the character sheet you will then be invited to the group which allows you to enter the school-building. If you want to be one of the students, you have to play the role of a kid. If you want to remain an adult you will have to role-play as a teacher or janitor or some other position believable as an adult character. If you do not role-play according to the rules set by the owners you risk getting banned from the area, or ejected from the group.(Illustration 22)

Illustration 22: Diagon Alley in the WoH sim

Suomi-Sauna is an area dedicated to the Finnish sauna-culture, but basically it is a place for Finns to meet other Finns in Second Life. The area consists of a Sauna, a lake and a dance-floor. In contrast to the World of Hogwarts, the Suomi – Sauna sim does not have any role-playing or strict rules. The rules set in this area are basically just based on common decency. Everyone are welcome as their Second Life-selves, regardless if they are dressed as wolves, dragons or humans. Except for the events held in the area, it is up to the visitors themselves to stay entertained by socializing or exploring the environment. (Illustration 23)

Illustration 23: the Finnish sauna retreat

Compared to these two areas, Caledon stands somewhere in the middle ground in terms of rules and role-playing, which is something which might fit with the idea of Rosario. With a slight encouraging of theme and role-playing, those interested would participate. It would also give Rosario a niche. But it still would not be strict to the extent of scaring people off, instead the island would welcome various type of visitors, also the ones who do not want to role-play.

7.3 Research and Groundwork

In the end of May 2008 we had a meeting with Owen Kelly regarding what to do with the island. The meeting concerned financing the island once the fundings run out. With the plan to make the Rosario self sufficient, we started by weighing our options on how to do this. We came up with three options to raise money for the island. These were:

1. Applying for grants
2. Seeking sponsorship
3. Renting space on the island to SL users.

Out of these three ideas, renting out space on the island seemed like the most permanent solution. By getting long term renters to settle down on Rosario, the island would have a steady income. In case some of the renters would want to move away, hopefully another one would come along instead, and it would not have needed much management.

Playing the role of a potential renter, I was to look at land sales. I used the Second Life search-engine to find available land-parcels. To get an overview of what is available, I tried to find places of all styles.

The easiest parcels to find were small simple land-plots with nothing particular on them. Just flat land with the neighbors close by. Those were also the cheapest. The ones I found with a house included were more expensive, but also more luxurious since the buildings were of good quality.

I saved landmarks for a few real-estates, with the intention to check up on them regularly. .

Based on how the land got rented out, we would have some idea to what kind of estates are popular or unpopular. Knowing which ones catches a residents interest, we would have some guidance to what would make sense for the parcels on Rosario, in terms of price, size and style.

Because Arcada's land is bought from the Linden Labs as non-profit educational land, the land set for rent had to be priced only to break even with the tier. We assumed it would be easy to rent out land, being able to use notably lower prices than most other real-estate sellers.

The next thing to do was to decide how much of the island should be altered. We also had to think about the amount of land reserved for Arcada's use.

Based on the research on Second Life real-estate the island would be planned to meet the needs of the market. During the summer of 2008 I would then redesign and rebuild the island according to that plan.

7.4 Researching Results

I saved the landmarks of 10 real estates, with the intention to keep track of which ones would be rented out first. Then we would try to figure out why they were rented out in that particular order.

However, by the time of our next meeting,in the beginning of June, there was still no change in the real-estates I was researching. Although the research did not give us much regarding what a possible renter might be looking for, it still gave us a ballpark regarding, rent-rates and -sizes.

In mid-June we had a long meeting concerning the future of the island. The real-estates still remained as they had been before, unsold, so we decided to move on with the project.

As a simple solution we decided to rent out most of the land on Rosario. We also agreed it would be a good idea to lower the amount of sims from nine to six.

Six sims would be enough to divide some of it into parcels for rent, but still leave Arcada with

the space they need to use for educational purpose. There would be various sized parcels available, but most of them would be 4000 sqm. They would be priced at 8500L$ per month. The island would have 48 parcels for rent, which when rented out would zero out the costs for Rosario's tier.

To make it easier for the visitors to see the potential of the parcels, the terrain had to be flattened out. If a terrain is too bumpy it would be difficult to build on. We came to the conclusion that one large town would be enough, instead of nine. The city of Marinetta, was to be the center of Rosario, where the renters could meet up, interact and have fun.

7.5 Planning the New Space

While planning the new and improved Rosario, it was decided to stick with the old theme. The style of the island would still be Mediterranean. Having a specific theme, would also make the island stand out more from other places in Second Life. The Mediterranean theme is easy to work with and offers a wide set of design options and room for creativity. In addition to this, so much ground work had been done for the previous island and the Mediterranean theme, that it would be a waste to just ignore it.

When building in Second Life, it is important to adjust the building to the standards of the virtual world. When trying to imitate a specific real life style, as mentioned it is not always the best thing to try and make it as realistic as possible.

Another thing to keep in mind is the comfort level of the user experience. It is always important to make a place in Second Life user friendly, which means easy to understand, navigate and interact with. If there is a certain place you want the user to go, or a certain object you want the user to click on, it should be clear. Especially if the place will be used by new users. (Weber et al. 2008: 210)

Since the plan for Rosario was to be user friendly to both new and old users, I had to make the place simple enough to use if you are a *newbie*, but still interesting enough to keep the experienced users attention.

7.5.1 Enough Space

When you move around in a small space in second life, the camera might go behind a wall which will block your view and as mentioned most residents do not use mouselook.

If the space is too small, it also feels crowded to move around, especially if the place is supposed to fit more than one avatar. On the other hand, if there is too much space it will look empty and unfinished, which might bore out the visitor. Therefor correctly taking advantage of the space is essential when building. By doing so you can also enhance a specific style you are trying to create. For example in the fisherman's neighborhood (more about that in chapter 7.8) I used smaller distances between buildings to make it look more crowded to enhance the sense of the area being busy.

7.6 Creating the Culture

To make the culture of an area believable, you have to pay attention to details, even if its not essential to the practical user experiences.

Creating a virtual history can be seen as the key to creating a virtual culture. Although culture cannot be made, it can be indicated through a fictional culture implemented across the whole virtual world.(Weckström 2004:46)

Details like street signs, plants and critter all add to making the place feel more realistic. Even if the visitor would not need, let us say, the street signs for anything practical it will introduce the visitor to the culture of the island in an implied way.

To keep the area interesting and make it look like someones living there, I think it is important to use a variety of textures on your buildings. As stated earlier, one thing that made the previous design of the island look dull was because most of the buildings looked very alike. Another problem in the previous version was it was easy to get lost. Having some kind of small landmarks along the walking path would prevent the visitors from feeling they are walking around in circles . It could be as simple as a trashcan in a corner somewhere. Variety in the environment is important.

7.7 Developing the New Concept

When moving around in Second Life from place to place, and deciding to stay or leave, it pretty much comes down to if you get bored or not. One key to keep the visitor from leaving is to keep their interest up, by implying that if they keep on looking around they will find something worth looking at. This mentality is similar to keeping a player of a computer game playing by implying he can advance to the next level.

Another idea on how to keep the resident in your sim is to give them something to do at the moment they arrive. Some places have some small quest they hand out when you arrive, to make you walk around for a while. A quest like this could for example be to collect stamps from machines that are placed around the sim, and when you have all the stamps you get some reward (A specific example of this kind of game is the treasure hunt during Semano Semano). But this requires someone to script the game and my scripting skills are not good enough to make something like that work. Instead I would invest time making the environment interesting through building.

To have better control of where the visitor might be going once they have arrived, most places have starting areas. Juro Kothari states the following regarding navigation in commercial builds in Second life; “ I want it to be crystal clear where they landed and where they are to go next – any guesswork on the part of the customer could lead them to leave the site and a potential sale is lost”(Weber et al. 2008:211).

I built a platform by one of the ends of the main street, intended to be the starting area.

After it was decided the style would still be Mediterranean, I had to think about where to take my inspiration from. It is easier to work if you have something visual to go by. Having just come home from Barcelona a few months before I started building, it was fresh in my memory. Barcelona is a city with many faces, and it is also very trendy at the moment, so I thought it would be a good source for ideas. Another place I kept in mind was the French riviera. The mood of Marinetta was also thought to be similar to the one in the film Casablanca.

I decided that to make the city less repetitive, it would have areas of different ”classes”. This

way there would be a good motivation for variation in the style of the city, meaning the visitor would not get bored as fast. In each area there would be different interactions fit for that space.

My idea was to have a run-down neighborhood (which I'll call the Fisherman's neighborhood), a central meeting-area (the Market district), an upscale neighborhood (the Dance-hall) and a representative neighborhood (the Town Square). The city would also have a park to give the town some color and an area for exploring.

Because it was expected to get a lot of people new to Second Life, to visit Marinetta, I wanted to make the infrastructure of the city easy to find your way around in. I therefore decided to make one broad main street, that goes through the whole town. From this street you would be able to easily spot the different parts of the city. I also did not want to make a lot of small streets where you could get lost. I wanted to make it as simple as possible without compromising the look and feel of it being an actual city. “Everyone starts off in Second Life by bumping into things while flying, but a good design can make it easier – even for newbies – to use your build. Unless you're purposely building a maze, make it easy for the avatars to find their way around.” (Weber et al 2008:210)

One of the things that seemed to be a challenge in the old version of Rosario, was filling the space. There was a lot of empty areas, and they ended up being filled with buildings without any use, just so it wouldn't look empty. Building entire towns to fill space is not the correct approach to making a place in Second Life interesting to visitors. If they arrive somewhere where they find a lot of objects but nothing to do, they might feel misled and will get bored.

There are some places in Second Life that do not really ”do” anything, and residents just visit them to explore it, but those places are visually impressive, and are made for specifically that purpose, to look at, not unlike a piece of art. To make a region like that takes a great amount of building skills and it is very time consuming. These places do not usually form a community, since most visitors go the see them just to leave for the next place to explore.

One of my concerns was that the builds I planned would not take up enough space to justify calling the place a city. But I decided not to make the same mistake as had been done with the

old version, meaning I would not build just to fill the space. However, I did keep this concern in mind when planning the buildings, and I decided not to be afraid of using more space in the various venues. Areas with more space is also more user friendly. The city would have open squares, a big park, and roomy places to hang out at. These areas were also thought to be places to meet during courses, meaning they would have to fit a whole class. It was essential that the spaces were planned big enough for that.

7.8 Raising Marinetta

When starting to build in Second Life, especially something as big as a city, I found it is good to build in a way that give you an overall image of the size and look of the place. When I initially began the building process I made the mistake of starting with a small area and focusing on that.

Starting to build in this way did not give me the proper overall image of the city, and I ended up building to a scale which was too small in comparison to the region itself. I also did not have a plan drawn out of the city beforehand, and I realized too late it would have made the building process a lot easier.

After coming to the conclusion that I came at it with the wrong approach, I thought it would easiest to start from the beginning.

I decided to this time start with building the base for the town, in order to make it easier to determine the whole size of the area for when I would start setting up the buildings. I wanted the city to be separated from the ground, to make it stand out more from the rest of the island. According to the history made up for the culture on the island, the city of Marinetta was built on ruins from an era when the vikings lived at the island. I kept that in mind when building the base for the city, and later when choosing textures for the buildings(illustration 24).

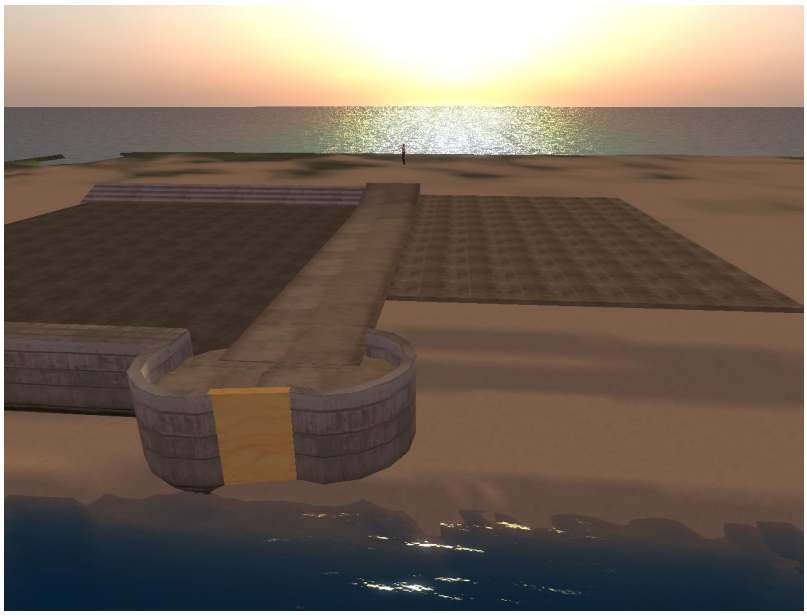

Illustration 24: The initial stage of building Rosario

One thing that can be tricky when building is to build prim efficiently, especially when it comes to large builds. The largest prim you can make is 10m x 10m. However, there are some prims that are scripted to look past this limit, called huge prims. Using these prims makes it easier to keep your larger builds to a lower prim-count. These prims are free for all residents but you cannot edit them as easily as the regular ones, you do however get a set of various sized ones. These kinds of prims are the ones I used as a base for the city, to keep the prim-count a little bit lower, since I was planning on investing more prims in the buildings. I started to place out the huge prims, to map out the four neighborhoods. I decided to build it in levels instead of making it flat. I have seen a fair amount of places in Second Life, and I personally prefer cities with a bit of difference in height. It just makes the area a little more interesting to explore. My idea was also that it would stand for the difference in hierarchy of the neighborhoods.

In the middle of the town, I built the base for a main boulevard as planned. I wanted to make it wide enough for easier navigation and movement of the avatar. I also kept in mind that it should be wide enough for a possible addition of public transportation in the future, like a tram. After placing out the huge prims that was to become the ground of the city, I built blocks underneath as a foundation for it all. Between the different levels I added some simple staircases and by the ocean I built a railing, to make it resemble to a pier.

I found it more practical to use temporary textures for your builds at this early stage (illustration 25). Choosing the final ones later, all at once, will give you a better overall view of what the town will look like, and which textures match. Choosing the final textures right away is of course a possibility and you can always change them later. I still think investing time in choosing the textures at such an early stage is a waste of time, since you probably will want to change them later anyway. Another option is just to stick to the default texture while building, which is plywood, but then every object would have the same surface, and for me it is just easier to visualize the area if there is some variation in the different objects.

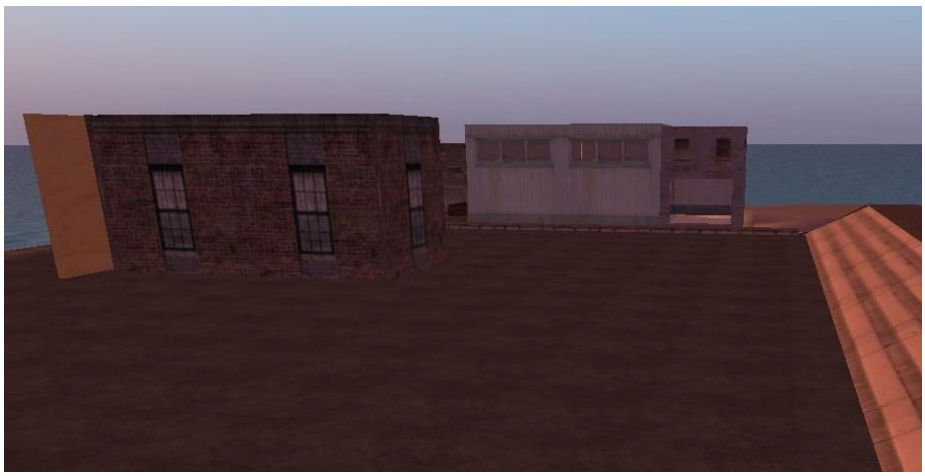

Illustration 25: I used temporary textures for the buildings while planning the city

On the south side of the boulevard I planned to build the areas which, when combined, would become the main part of town; the Fisherman's district, the Market district and the Town square. On the other side I decided to build the big Dance-hall, and the park.

With the base of the town finished, I started thinking about how to place the buildings. Before starting to work on the proper buildings, I created simplified versions of them, models, with only a few prims. They did not look as good as the finished versions would, but at this early stage it did not matter. With placing the models where I had thought the buildings should be, I would be able to see if my original plan would work out in the virtual setting (illustration 26). With the models I could see if the scales were correct and practical. I found using the models was a good way to start planning the initial build, they were faster to create than the finalized

buildings, and they are also easier to edit if the size is wrong.

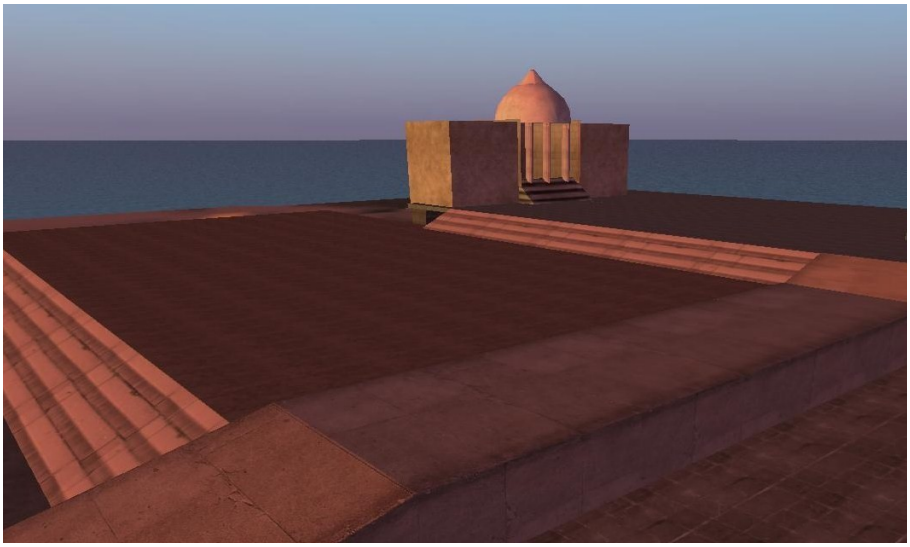

Illustration 26: Example of a model of one of the buildings

Regarding the details of the city, I told myself it would be best to do them last. They would be the finishing touches that would make the town feel like it is populated by a united community. During the weeks I was building the city, I wrote down ideas for details I could add, whenever I came to think of something suitable. I liked the idea of bringing the fictional culture from the previous version of the island, into the new one in a more interactive way, since it was not strongly present in the previous version. For example; I read about the flora and fauna of Rosario, and it was mentioned that one of the main sources for the economy on the island was sardines. This gave me the idea to build a grill-stand, from where the visitor could get a serving of grilled sardines. I wanted to place these stands around the city similar to hotdog stands.

According to the the initial plan I was to incorporate the following public facilities to the island;

- two art galleries
- a museum
- open meeting and learning squares
- shops
- cafes and bars
- a library?
- a church
- piers and harbours
- forest and lakes

I decided I wanted to combine some of them, to add to the feeling of Marinetta being an actual town instead of looking like a fair with various booths to visit. For example one of the cafe´s would also be a gallery, with regularly changing exhibitions. The other gallery would be the town itself, meaning the artwork would be displayed around town. This was also meant to encourage the visitor to walk around. By displaying some artwork in all parts of town, the visitor would have a reason to explore the city. My thought was that the visitor would be informed of these exhibitions upon arrival to Marinetta to wake their curiosity.

To inspire the students to be creative, the previous version of Marinetta had some shops where the students would be able to sell their in-world work. The updated Marinetta would also have some shops. In addition to offering the students a way of earning money with their creations, the shops would help set the image of the island. The idea was to rent out some of the shops to selected, content creators of Second Life, who could contribute to enhancing the intended theme of Rosario.

I made the shops by initially creating one shop and then using copies of that as a base for all the shop-venues. Instead of building all the shops separately, I would just modify the details of the base to make the buildings differ from one another. I would also change the textures to fit in with the neighborhood where the shops were placed. Building all the shops from scratch would have been very time consuming and not necessary for this concept. Initially I had placed shops in both the market district and the fisherman's district, but I ended up only keeping the ones in the fisherman's district because I wanted to keep the market-square open for sales stalls instead.(Illustration 27)

Illustration 27: The shop venues in the Fisherman's neighborhood

To test out the functionality of the infrastructure, I made a habit out of taking walks around the town instead of just flying, every once in a while. By doing this I could see if there was some practical issues that needed attention, regarding interface and smooth avatar movement. Doing this also gave me insight regarding the distances between buildings and I would be able to see if they needed changing. Although you might not see your own build the same way as a new visitor would, posing as a random visitor in the city helps to see possible flaws in the functionality. This can be compared to testing a web-page before presenting it to the client, or test screening a movie before distributing it to cinemas.

There are various opinions about having doors in Second Life buildings, since they are not really needed. Some think opening a door makes an unnecessary step when entering a building. Others think it creates a sense of familiarity, that indicates where the resident should enter. I solved this by making phantom doors, meaning you can walk through them.

The final step of creating the city was building the park. I had decided to leave the park for last, and then focus fully on building it. This way I would be able to make it stand out better. I also planned for a path leading out of the city would start from the park. I felt it was important for Marinetta to have a park, which was something missing from the previous version of Marinetta. My idea was that a park would give the area a more urban feel, since most big cities have parks. I wanted to add small hidden details in the park for the wanderer to find. The park would also be an opportunity for me to be more creative when building and adding plants. Since a park generally is something planned and maintained with the intention of being a visually interesting environment to visit, my thought was that it did not have to be as "natural" as the rest of the nature would on the island. Because I wanted to stick to the history of Rosario, at least to an extent, I was bound to a specific style of design when it came to the rest of the builds. With the park I decided to build more freely.

I started with doing some research for building the park. I looked around in various parks, forests and other nature regions I was able to find in Second Life, to get some ideas to what I might like to build. Whenever I came across a place that inspired me I took a snapshot of it, so I would be able to use it as a source of inspiration later. I also looked at real life photos of parks for ideas. Before beginning to build, I sketched up a 2D plan of the park. Although it did not end up exactly as in the original design, having a plan did help when putting it all

together. It was easier to visualize the overall look of the park, when having something to refer to.

I decided to allow myself to buy the plants, instead of building them myself. The alpha-textures used in most plants, can be a bit tricky because sometimes they flicker when you move around them. I have not yet found out why it happens, but it lowers the value of the build. I had found a shop with plants of good quality, and they were within my price-range as well.(I had some L$ intended to buy plants with) They were also modifiable and copyable which was important, because I would be using several of them.(Illustration 28)

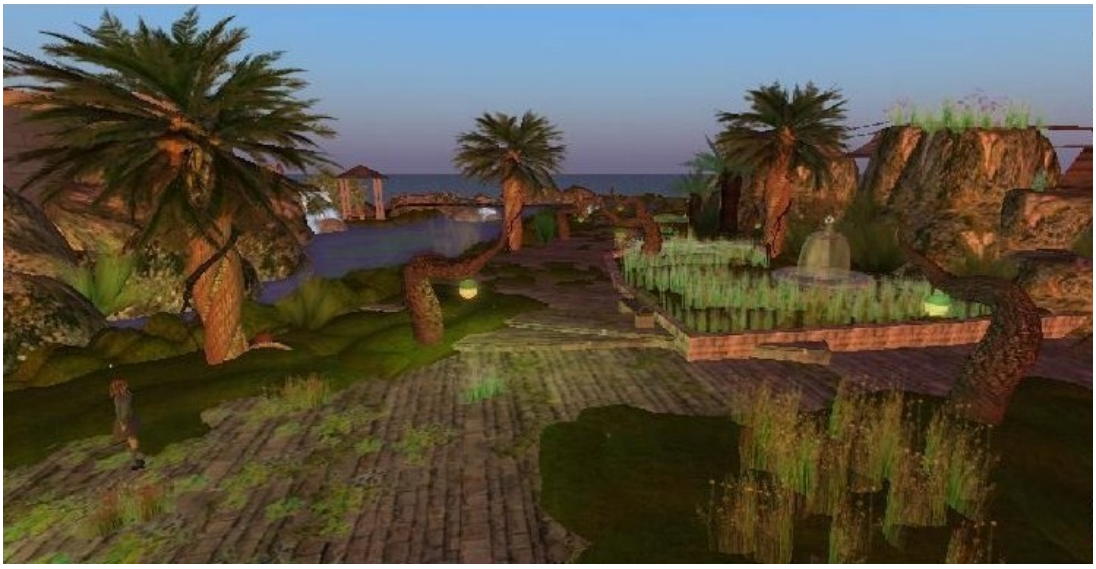

Illustration 28: The park of Marinetta

7.9 Building the Event- and Activity-Area

Like in the previous version of Rosario, events were planned to be held on the new one, but there was no area for this yet. After finishing the city of Marinetta, the next project would be to build an area for various events and activities. In order to fit in a wide range of activities, it was decided to dedicate an entire sim to this part of the development. Building this area would then be the assignment for the students, during a class. The area was decided to be a beach, to complement the the Mediterranean theme and Marinetta. On this area the visitor would be able to attend parties, and do water-activities like jet-skiing or windsurfing.

The students were supposed to plan the event-area, and build it. The instructions they got was to follow a Mediterranean-steampunk theme. The idea here was not to overdo it, but to take inspiration from the nature and atmosphere of Mediterranean elements, and similarly from the worn-down look of the steampunk-styled builds. After researching various areas from which they took inspiration, they started building the area.

The area did not end up to meet the requirements. Instead of building the objects themselves, the students mostly used freebies that they had found. This meant the overall look was not a consistent one, and some of the builds looked tacky.

Although many educators in Second Life rely on freebies when setting up their estate, freebies can make the area look cheap and impersonal. Because they usually are created by different content creators all building to meet their own needs, they do not really follow a consistent style. This is why using freebies, when setting up your own sim, can make the overall style seem scattered and messy.

Although you can make an educational area work alright with free objects, there are only limited choices available which means you have to compromise your style to match the available freebies. Most residents who have been using Second Life for a while know the available freebies by heart, and are used to seeing them here and there. This means the freebies might make the more experienced visitors find the area uninspiring, which also is a reason not to use freebies. Investing time on building, or money on buying nice looking objects will add value to the area, and make it a more inviting environment for creativity.

The builds ended up being erased in order to start the plan from the beginning to improve the look. Instead, simple builds were raised, and the essential details were bought from good quality shops. Buying the objects to the event-area in contrast to building everything yourself, shows that not everything has to be built yourself but you can still create a unique environment. A dance floor and arcade was set up in the area, in addition to an underwater cinema and a center for water sports.(Illustration 29)

Illustration 29: The dance-floor and arcade in the activity area

8. AFTER FINISHING THE BUILD

8.1 Re-Opening the Island

The official re-opening of the island was in 2009 in combination with an exhibition opening. In collaboration with a student from TAIK, a virtual exhibition was arranged on the island. The artwork displayed was from various artists studying at Taik, who were interested in exploring the virtual environment. With the opening of the exhibition the guests would also be introduced to Rosario and Marinetta.

The exhibition was held on a separately built platform a bit outside of Marinetta. A connecting path was built between the two areas. The gallery consisted of a concrete block over which the artwork hovered around the edges of the block. It was a simple build, but fit well for its purpose.

During the opening the exhibition the guests also explored Marinetta, although most of the visitors focused on the gallery(illustration 30). Of the different areas in Marinetta I noticed the dance-hall got the most attention from the exhibition guests.

Illustration 30: The exhibition opening

8.2 What Stage is the Island at Now?

At the moment the development of the infrastructure is on hold. Instead the students involved in Marinetta Ombro are trying to develop a set of features which would make it possible to show PowerPoint slide-shows in Second Life that are hosted on the web. This would be useful in online presentations during meetings or class.

Aalto University is at the moment renting two islands from Rosario, and are currently developing their space for use in online education, next to Arcadas regions.

9. CONCLUSIONS

In the introduction I presented three question I would be addressing in my research and practical work. The first two were general, research questions and I have dealt with those in chapters 3 to 7.

The third question concerned my practical work in rebuilding the island and I will focus the conclusions drawn here on that topic.

One of the main issues seems to be that Second Life is a constantly evolving environment, and it is therefore difficult to make something permanent in this kind of virtual world. Running an estate in Second Life requires constant updating and keeping track of new features.

While renting out land on Rosario did not work out the way it was supposed to, the attempt to do so has proved valuable. If you need to make money fast in Second life, the real-estate business is not the best option. However it might be possible that it is impossible to make fast money in Second Life at all. If you want to get a stable economy with selling real-estate you should have money and time saved up for it, since it seems to take a while before the business takes off. It makes me curious to see if any of the spaces in my list of real-estate to research still has been rented out now, two years later, and if so what stage the land is. Unfortunately I have lost the landmarks to them.

The construction of the island took longer time than I expected and there are still some things that needs finishing. Finishing the details is an important part of creating the culture, and should not be forgotten, even if there is no drastic hurry at the moment. Creating a properly drawn-up plan for the city would probably have made the building itself faster, since I wouldn't have had to start from the beginning for a second time.(This is discussed further in chapter 9.2)

The more I researched and read on the subject of virtual worlds and online education, the more I realized there are still plenty of topics left that are worth further research. For example, there are aspects within the culture of Second Life (such as events and marketing)

that could be important subjects to study, in order to learn how make the educational environment richer. I have added a chapter (9.3) in the conclusions dedicated to the subjects I think need further research. During the research I did for this thesis I found there were some subjects more prominent than others. I think researching those subjects further can provide Marinetta Ombro with useful information for its future development.

As mentioned in chapter 5.2, Arcada's use of Second Life education differs from the norm. This means there is not too much knowledge on how to adapt to this method as it is still at an exploratory stage. Although I researched the subject of Second Life education, most of the information I found concerned online lectures, which are not directly related to Arcada's way of teaching in Second Life. However there is no reason why the information found about, for example, social interactivity not could be incorporated into Arcada's teaching methods. One of the subjects I repeatedly came across while researching was the fact that students seem to have a lower threshold to reach out and ask questions in a virtual environment, and this is one of the things Arcada could take advantage of.

Chapter 4.4 argues that one of the key elements to get Second life residents curious is interactivity. Unfortunately there is not a lot of interactivity in the city of Marinetta. There is some, but in my opinion not nearly enough to make a difference. This was also a problem with the previous version of the island and it has still not been properly dealt with in the updated version. Although more effort has been put into creating space for an interactive environment (for example by leaving space for public transport), the space requires new forms of interactions. In the build I did the best I could with my skills in creating interactive content, but for more complex interactivity a skilled scripter is needed. There is, of course, the option of buying scripted objects, but that would be one creative process less for the students to practice. One suggestion could be to buy some “cool” scripted objects, which would inspire the students to want to script for themselves. Like said before it is common for content creators in Second life to know both building and scripting, but my scripting skills are not developed enough to contribute a whole lot in this area of expertise.

9.1 Assessments Regarding the Build

With one of the main challenges with Second Life being its evolving nature, it is virtually

impossible to create something constant in this virtual world. This does not mean the environment cannot be improved as an educational space, but it does mean it can never be a finished space. Even though the education itself might not be dependent on which textures you choose when building or what kind of culture is chosen to be represented on the island, all these factors affect the overall appeal of the island, in the eyes of Second Life users in general. In a virtual educational environment which is trying to take advantage of the millions of users provided by the Second Life client, adapting the environment to meet the expectations of these users is essential for the environment to function as planned. Therefore keeping the island up to date is important in order to get these much needed "random users" to take interest in Rosario, and hopefully become regular visitors to the island. However if the aim is to use the space solely for online lectures it might be more important to focus on creating practical builds of simple structures without any unnecessary distractions.

In terms of recreating the city to be more user friendly I think the project is on the right track. Making the spaces bigger than in the previous version has made it easier to navigate. In the previous version the indoor spaces were sometimes too small and you could easily get the camera stuck in the ceiling or a wall.

The open spaces of the updated Marinetta make it easier to visualize where you are in relation to the different buildings. In the old version of the city the buildings were crowding the area, and because they looked very alike, it was sometimes difficult to know where you were. I think this is a problem that has been solved in the new version.

At the moment the only areas that provide the visitor with some kind of activity in the city at the moment are Cafés, a restaurant and the park which might be boring to a single visitor. Nevertheless they serve as good meeting points for larger groups, like classes, since they are spacious.

One problem that occurred during building was building permissions. Even though I had permission to build on the general land, there were some separated parcels in the Marinetta region that I could not build on. This meant I had to build around them until the land permissions were figured out and I could continue the builds on the separated parcels as well. This slowed the building down somewhat. The land-permissions should be clear when

initializing the creative process to avoid the building to exceed the deadline.

To improve the educational potential of Rosario the space would have to attract Second Life users to regularly visit the island, and the island would also need room for the students to experiment and learn. However updating it did not increase the visitors to the island (despite a couple of land thieves), which leaves me with the assumption that it takes more to improving this educational space than improving the infrastructure. I am however satisfied with the work I did and I think it solved some major problems in contrast to the previous version, regarding practicalities and esthetics in the build.

The rebuilding of the island was something that needed to be done in any case, so it was not a waste of time. Yet it will soon need to be updated again due to the new features introduced in Linden Labs' new Viewer 2.

The ideal space would be one where Second Life residents and students reside simultaneously as a sort of consistent community, where they would be able to learn from each other and exchange ideas. Although this has not been completely achieved by rebuilding the island, I think Rosario is a few steps closer to it. By learning from the mistakes of the old version, and taking inspiration from the positive aspects of it, the island has been developed into a more complex environment. In comparing the new island to the old one, one can see the new one explores the potential of Second Life in a more varied way, both visually and in terms of interactivity. There are nevertheless still some things that need to be added to the city and to the island..

9.2 Remaining Tasks and Problems to Attend To

The island is as mentioned an ongoing project that needs constant updating, but there are still some basic tasks that remain unfinished due to lack of time. These are things that affect the overall functionality of the island. Although they do not affect the island in a crucial way, they are still problems that need to be fixed.

The landscaping of the island is still unfinished, it needs some more plants and animals in order to make it look believable as a Mediterranean island. The important thing to remember

is not to rush it, because building based on the principle to fill space has been proven not to be a successful approach. During the building stages mentioned in chapters 6.3 and 7.9 the building was rushed for various reasons, and it showed in the final result. Instead builds should be planned in a way to make it appeal to the visitors. It has to bring something to the island, and before building them the builder should keep in mind the questions what the purpose of the build would be, and who the intended visitor is.

The beach needs to be connected to the city of Marinetta somehow. At the moment they are separated, and something leading from one to the other would encourage the user to explore both. It could be a path between them, a forest or just a teleportation-device. As it is now, the resident will have to manually teleport between the two, which is not a big issue if the resident knows both areas exist. But to someone visiting just one or the other it might not be clear that there is more than one area to see.

There are some technical problems that need attention. One major bug has to do with landing in Marinetta upon teleporting. When you teleport to the city, the avatar lands under the ground, from where there is no way up. The avatar is supposed to land on the ground instead of under, and the reason for landing underground has not yet been figured out. This is something that should be fixed in order to improve the user experience of the island.

There are two simple things undone which I personally think would make a difference in getting regular visitors. One is to put the starting area to use. The visitor would land in the starting area upon arrival and provided with the necessary information in order to feel secure in what to do next and what the island is about. As mentioned in chapters 7.5 and 7.7 it should be clear to the visitor what to do, leaving them guessing might cause them to leave. While defining the flaws of the previous version of Rosario, and comparing it to places like Caledon, one of the problems were that the visitor was the lack of instructions regarding what the game of the estate is (chapter 7.1), and this problem still remain unsolved in the new version. The second thing is to add information about Rosario in the Second Life search engine, since it at the moment only can be found via the map. As mentioned before, Second Life residents actively use the search engine to find new places.

9.3 Ideas for Future Research

Rosario still struggles with getting visitors of the island to become regulars, and there is plenty of loose ends regarding this subject that deserves further research. While just rebuilding the island made it more up to date on Second Life terms, the social venues still remain empty. Researching some of these following subjects might help with improving the island and with pushing it towards its goal.

9.3.1 Marketing the Island

Finding new ways to market the Second Life environment to the students might encourage them to get more involved. For example; Social media like Facebook or MySpace remain popular virtual environments, perhaps exploring the possibilities of Second Life further as a social medium would raise the interest of the students. Could Rosario be encouraged as an area where students could meet up and discuss group assignments not related to the Marinetta Ombro project?

Getting the concept of Second Life more visible in the students everyday surroundings might make it feel less unfamiliar. Would this lower the threshold for the students to get involved, and regularly take advantage of the virtual environment?

Marketing the island within Second Life more aggressively could be a viable way to get more Second Life residents to visit the island. Would investing some L$ in advertisement's attract more visitors? There are so many places to visit in Second Life and not all places worth a visit are even noticed. Ways to put Rosario on the map has a lot of doors open for further research.

9.3.2 Marketing the Marinetta Ombro Project

Finding new ways to include the Marinetta Ombro project in courses outside the multimedia department might encourage the students to take an interest in the Second Life environment. Creating innovative real-life projects that would make a difference in the Marinetta Ombro project and paralleling that with Second Life, might raise the interest of students who would normally shy away from virtual environments.

9.3.3 Renting Out Land or Shops

The initial plan regarding offering land for rent to Second Life residents was swiped under the rug due lack of time and also the fact that Aalto University got involved in the project. However, this does not mean that it was a bad idea. Putting land-plots up for rent, and getting social permanent renters to the island would mean getting regular visitors. The ideal case would be the renters then would use the public spaces as meeting points for socializing. Figuring out how to reach the wanted target group could be a subject for further research.

Renting out the empty shops to carefully selected content creators would strongly add to the image of the island. If the quality of the shops are good, it might attract positive attention to the island.

9.3.4 Hosting Events More Frequently

One frequently seen marketing tactic in Second Life is the hosting of events. Via a group used for promoting the estate, reminders of these events are usually sent out to the group-members who may or may not show up at the event. Regularly held events or parties is a way of getting residents to regularly visit your estate until the point where it becomes a habit, and the resident feels part of the community.

The events held on Rosario has proven to be successful, would more frequently hosted events attract more visitors?

Usually these events have a host and possibly a DJ. These are professions in Second Life which get paid, and investing some L$ in events might pay off in the end. Other possibilities could be students interested in hosting events or DJing, they would be able to use Second Life as a practice environment and get realistic feedback on their performance. How could these positions be adapted into educational tasks?

9.3.5 Ways to Improve Social Interactivity on the Island and During Class

Since we have established that one of the greatest assets of Second Life is its interactivity, it

would be an interesting topic to explore further. Interactivity is, as mentioned in this thesis,a powerful learning tool and it should be taken advantage of. Coming up with new ways to use interactivity within Second Life education might be interesting to many parties, and it could add to improving the use of a virtual environment for education.

Coming up with more interesting ways to engage the visitors in social interaction might make them more keen to stay on the island, some other things except events could be incorporating some more structured game elements to the culture of Rosario, for example developing a role-playing concept. It would give the visitor a clearer idea of what to do on the island and also create a stronger sense of being a community.

9.3.6 Ways to Improve the Landscaping of the Island

The way user perceive their environment plays a big part in how they perceive the general Second Life experience. Researching in how different parts of the virtual environment is interpreted by the user would help with keeping the island interesting in the future. Elements like sound weather and infrastructure are all vital parts of creating a believable virtual culture.

9.3.7 Further Ways to Use Second Life as a Learning Environment

In a virtual world where everything is possible, there surely is plenty of unexplored ideas. Coming up with new concepts of learning in a virtual environment and evaluating them could be a valuable subject to research. Collaborating with other universities in developing the use of Second Life as a learning platform would also include positive social aspects like networking and getting to know like-minded people.

9.3.8 Renting Land in Popular Areas

Renting land in an already popular area, could be a way of attracting residents' attention, instead of trying to get regular visitors to Rosario. This would mean less control over the land, but instant access to other users. Could this be a possible solution to Arcada's problem with reaching active Second Life residents? Although this would mean faster access to the users, would the loss of control be worth it? This is a subject worth some research.

9.3.9 Developing Arcada's Approach to Second Life Education

At the moment Arcada is exploring the possibilities of using the residents of Second Life as a resource for realistic feedback in educational tasks. My research suggests that this is an unusual approach that itself raises many research questions: about its practical effectiveness, and its theoretical implications for education and learning.

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APPENDIX A

This appendix consist of a glossary of some terms mentioned in the thesis, and other common terms regarding the Second life virtual world.

Glossary

Alpha channel – the transparency channel in image files such as textures.[2]

Avatar (Av, avi, avie) – A graphic of pictorial representation of a user, usually chosen and created by that user.[1]

Ban – 1) The act of explicitly forbidding entry. Landowners have ban tools to prevent specified residents from entering their land; 2) To add someone to your ban list and thus ejecting them from your land; 3) The permanent removal of someone from Second Life. This can only be done by Linden Lab.[2]

Build – 1) to make something out of primitives; 2) an object composed of one or more primitives; 3) An engineering term for a specific version of the Second life software.[2]

Covenant – A set of rules and regulations governing a particular estate.[2]

Inventory – The collection of clothing, objects, textures, etc. that your avatar possesses in-world. Your inventory travels with you and you can use any of it at any time.[2]

Estate – An administrative unit of private or group-owned virtual land (usually a region or a collection of regions) with special tools for large-scale real estate management.[2]

Freebie – an item sold for 0L$

To grief, griefer – To bother or harass another SL resident through offensive actions; an SL resident who bothers other residents. Griefing violates Second Life community standards.[2]

In-World – Anything that takes place within the virtual environment of Second life. Also the

state of being logged into Second life.[2]

Island – A simulator/region that is detached from the main continent and accessible only by directly teleporting to it.[2]

Lag – A situation often encountered in computing (especially networked systems) that indicates the latency of a connection. In virtual environments, lag translates into slower movement of avatars, objects, or communications because it takes longer time for the environment to communicate with the server. Lag can also be caused by in-world factors, such as textures, scripts or too many avatars in one location.[1]

Landmark – A beacon marking a specific location in-world, and the teleport shortcut to that location stored in the Landmarks folder in your avatar's inventory.[2]

Metaverse – Used to describe the 3D internet, a virtual world, or a virtual environment. It is created from the terms meta and universe, originally used to describe the fictional virtual world in Neal Stephenson's 1992 science fiction novel Snow Crash.[1]

Mouselook – The first-person camera view. The mouse is used to move the camera around. Often used for weapons, vehicles, and grabbing objects.[2]

Newbie, noobie – A newcomer to Second life; a resident who has been in-world for a relatively short period of time and/or is not familiar or comfortable with Second life's nuances. Also spelled noob or n00b.[2]

Object - When building and combining prims, you create *objects*. Object is the term for a set of individual prims that create one whole item when linked. Objects can be made of 1 or up to 255 prims, which means one single prim also counts as an object.[2]

Phantom – A non physical object, meaning you can walk or fly through it

Platform – A combination of server and client that enables users to jointly share a 3-D environment.[1]

Profile – a brief bio of an avatar that allows other users to learn about the avatar's intrests, favorite locations, likes and dislikes.[1]

Region – a named area within Second Life, also known as a sim. One region is 256mX256m.[2]

Rezzing, or to rez something, is the term used when referring to creating a prim or loading an object from your inventory. The term itself originates from the Disney-film Tron from 1982, where the characters living in a computer are forced to keep playing video games until they "de-rez", or die.[2]

Second Life viewer- the Software you use when playing Second life

Sim, Simulator – A square, named region that makes up part of the Second Life world (not an avatar or character).[2]

Slurl – Location-based linking that provides direct teleport to places in Second life.1

Teleport – A method of traveling within Second Life by dematerializing an avatar at one point and reassembling the avatar at another.[1]

Texture – A graphic applied to an object that features the simulated textures of real life objects such as fabric, wood, metal, grass, rock and other elements.[1]

Tier; tier up – 1) One of Second life's levels of land ownership and land-use fees. Each tier has a montly price and a maximum amount of land that can be held. 2) to make a land purchase that increases your monthly land use cost. [2]

1 (Bell & Trueman 2008:211-213)
2 (Rymaszewski et al. 2007:325-331)

APPENDIX B

In this appendix the reader can learn more details about content creation. Here i have added subjects which are not directly related to the subject of the thesis but might be interesting for the reader to know. I will talk about various options when it comes to editing textures and managing land, and talk about the diffrent menus of these features. I will also explain briefly the concept of alpha textures.

Additional Information on Content Creation

Land Management

Allow Deed to Group - Group owned land gets a 10 percent tier bonus, meaning the group can have 10 percent more land for the same cost, compared to someone owning land on their own. Although this might be a practical solution if you are working together with a group in the same parcel, it is important that the landowner is careful about the rights to the land within the group, before checking the Allow deed to group – box. After doing that, the only way to get the parcel back, is to buy it back from the group. This is why it is a good idea for the original landowner to be the owner of the group as well, so he can change the rights assigned to each member later if needed.

When right-clicking on the ground, the landowner is offered the option ”edit terrain”. Clicking on this will open the terraforming tools window. From here it is possible to form the land with the help of the following commands: flatten land, raise land, lower land, smooth land, roughen land and revert land. To use these commands you have to select an area of land by choosing either a small, medium or large square of the terrain. When applying the commands smooth land and flatten land to your selection, the height-reference point will be the center of the selected square of land, no matter how big the selection is. According to Eric Call not realizing this is one of the most common terraforming mistakes. (Weber et al. 2008:252)

Estate Management

In the *region* tab the owner can control what is allowed to do on the island, for example he can turn on and off flying, block terraforming and restrict pushing. These settings can also be changed in the About land window individually for each parcel. In the region tab the owner can also teleport home all or individual residents, who are in the sim at the moment. Before doing this the owner might want to send a universal message to the residents in the area before sending them away, which also can be done in the region tab.

The *debugging* tab offers the owner some solutions to fix possible technical problems in the region. In this tab the owner can choose to disable scripts, disable collisions and disable physics. The owner can also track which scripts or object are overloading the region. Added to this it is possible to force the region to restart.

In the *ground texture and terrain* tabs, the owner can edit the look of the region. Up to four different textures can be set to the ground, on four height levels. This means you can for example have one rocky texture for mountains which blends into a grass texture where the terrain is lower. In the terrain tab the owner can set the water height, terrain height limits and upload RAW files to sculpt the actual terrain.

The *estate* tab is mainly for avatar access management, but the owner can also change settings regarding the time of day, day/night cycle and position of the sun. When it comes to avatar access the owner can decide whether he wants the estate to be available for everyone (public access) or if he want to tighten the limits for who can visit the land. There are various options to choose from to determine who can access the island or not. The owner can for example allow people on the land based on their payment status. The owner can also select up to 63 groups or 300 residents who are allowed on the land. It is also possible to kick or ban residents. The settings in this tab will affect all the regions withing the estate.

The *covenant* tab is for the estate owner to set rules for the island and leave a message for possible visitors via a note-card. It could be something as simple as a message to your friends or a list of rules for everyone visiting. After setting the covenant the message will be visible to the visitors in the About land window. While the estate managers can upload new note-cards to the covenant tab, only the estate owner can reset these settings. To let your tenants resell your land you have to have set a covenant.

Building

Linking – Linking is the term used when combining individual prims, which results in the prims becoming one object. You can also link multiple objects consisting of already linked prims. A group of linked prims will function as one object, this means when you manage it you will be managing all of the prims as one combined unit. For example when you move, script and store it in your inventory it will respond as one single prim would. To link prims all you have to do is select all of them and press, CTRL + L. Doing this will also unlink the prims. There are some limitations when linking objects, for example, you cannot link prims that are too far apart and you cannot link more than 256 prims.

Sculpted prim – After you have created the NURB**, y**ou then save the NURB as a bitmap image-file, and import the image into Second life in the form of an UV-map. You can then in-world load the UV-map onto a regular prim, and it will turn into the shape you created in the third-party software.

Texture Management

When you apply a texture to a prim, by default the texture is stretched to fit each face of the prim once. This may work if you are creating a poster or painting to decorate your walls with, but if you are creating something with a pattern, you might want to make use of the *repeat* and *offset* function provided in the building window. With these you can match the tiling of the texture to go with your original building idea.

There are some additional features when it comes to editing your texture, to help make the texture fit its intended purpose better. One of them is applying shine to your prims. The shine option should be handled with care, not to be used in excessive amounts. When you begin building it is easy to get excited about all the extra spices you can add to your creations, which means it is also easily overdone. Adding too many of the features to one and the same object gives the impression that you don't know what you are doing. When applying some of the features, like shine for example, to your objects, it is important think about if it actually would be shiny in real life and more specifically how shiny it is, since there are three degrees of shininess that can be applied.(Weber et al. 2008:67) I usually avoid using the shine feature

all together, because it tends to tone down the details of the actual texture and it doesn't have the esthetic appeal that i prefer. Another feature new builders should be careful with is the *glow* feature. It should be used with moderation or the place might end up looking like a psychedelic rave. In my opinion the most simple way to us it properly is to only use it on things that glow in real life, like lamps, or fires.

Other notable features available for textures include brightness, bumping and transparency. Brightness is a subtle feature which fits to be used when making lamps, fires and anything that might be lit up. It can also be used on objects that you want to be visible at nighttime or objects you want to be clean from shadows during the day. With bumping you can make the surface appear more dimensional. There are a variety of materials to choose from in a drop down menu. This feature attempts to imitate would-be-shadows of the chosen material on the surface of the prim. In my opinion the textures look better without this feature, because activating this makes the object appear a bit plastic.

The transparency feature gives you the opportunity to edit the amount of transparency the texture has on a scale of 0 – 90.

Alpha Textures

Alpha textures consists of partially transparent areas in the image itself, due to alpha channels. They can be created in a software like Photoshop by marking out the parts you want to have transparent, and making it into an alpha texture. You upload the texture like a regular texture into Second life, and the area which you marked out in you graphics software will remain transparent. This feature can assist you in saving up prims for example when building houses or plants; instead of building a hole for the window, you can create a texture with a transparent window; or instead of building plants by the individual leaves you can use a single texture of a leaf and just cut out the edges.

The alpha textures are also practical when creating clothes or tattoos. By using alpha textures you can choose how the hems will look on the clothes, instead of depending on the “edit appearance” tools in-world.

Scripts

To create a script, you have to start by creating an object. In the building window you can find a tab that says Content and under that tab, a button that says New script. Clicking on this button will create the script. All new scripts start off with the same command, which makes the objects say ”Hello Avatar!” in the public chat when it is created, reset or saved. It also says ”Touched.” when clicked on. The script that does this looks like the following;

```
default
{
    state_entry()
    {
        llSay(0, "Hello, Avatar!");
    }

    touch_start(integer total_number)
    {
        llSay(0, "Touched.");
    }
}
```

See this simple script as an introduction to what a script might look like, and how it is

structured. ”This script consist of one *state*, named default. The default state contains two *events* , state_entry and touch_start. Both events call a built-in *function,* 11say. The 11say function takes two arguments: the number of a chat channel to speak on and some text to say.” (Weber et al. 2008:98)

Scripts have to contain at least one state and one of them must be named default. States consists of at least one event. Events consists of a series of statements. Scripts may also contain functions that events can use over and over again.

APPENDIX C

Additional Images of the Island after Rebuilding It

Illustration 31: A view over Marinetta, facing east

Illustration 32: A view over Marinetta from above

Illustration 33: The Fisherman's district

Illustration 34: The Dance-hall

Illustration 35: Kaferio Vaganto (The Vagabond Cafe) in the Market district

Illustration 36: The Under-water cinema in the activity sim