

Real Cities in Second Life® by Magnuz of Sweden

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Second Life®, a virtual 3D-world

A short introduction to the virtual environment in Second Life®.

Second Life® is a virtual 3D world, based on a number of continents and islands, both public and private. Its residents, represented by avatars, can interact with each other and the environment by text and voice chat,

gestures, walking, running, flying and teleporting. They can also create content by building, texturing and scripting, making the content both static, animated or interactive.

URL: <http://secondlife.com/>

Building city replicas

Observations, analyses and tips on building city replicas, purposes, planning, styles and how to keep them alive.

Introduction

There are quite a few real world cities represented in the virtual world Second Life. So far the majority of them are European, for some reason. Perhaps Europeans have got a strong feeling for their often old and "personal" cities, with many characteristic buildings of varying styles and ages.

Purpose

There can be many reasons for building a city replica: To create a kind of fan place or museum for a beloved city, to promote the city, to use for modeling new building projects by city planners, to create environments for residential areas, role-playing or business by communities or companies, to simply try out building techniques in a major project, or combinations thereof. However, without a clearly stated purpose, based on knowledge about the possibilities and limitations of Second Life, and a careful plan to implement it, failure and frustration most likely will follow.



A model of a city street in the modern Swedish city sim Second Sweden 3.

One necessity, when planning for a presence in Second Life, is to know if and what audience is targeted. Two demographic facts are especially important. The first is that Second Life is not a mass medium with a broad audience, like TV or the web. Even if the virtual world boasts some 13 million residents, only some 300,000 are regulars, and an additional 300,000 new residents each month, who make, usually rather short, sojourns. The second is that the average age of users of Second Life is actually about 35 years, which may be a bit surprising since many describes the virtual world as a game.

The combination of these two demographic facts, and the complexity of Second Life and its user interface, putting demands on the users' skills, means that a high percentage of the users of Second Life are skilled professionals, who have advanced a bit in their careers. Also, the frequency of creative people, in the form of artists, designers and innovators is very high.

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An overview of the modern Swedish city sim Second Sweden 3.

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A generic Swedish cityscape

A generic Swedish cityscape, with tastes of the capital Stockholm's Old Town, featuring docks, parks, entertainment and more.



Overview of the sim Second Sweden, depicting a Swedish city.



A dockside view from the sim Second Sweden, with ships and warehouses.



A street view from the sim Second Sweden, with typical cobblestone streets.



Another street view from the sim Second Sweden, with street sign and décor plants.



A view from the sim Second Sweden, with a square and décor establishments.



A view from the sim Second Sweden, giving a déjà vu of the Stockholm Old Town.

This Second Life region or sim, Second Sweden, does not appear to model any particular city, but the atmosphere is typically Swedish, and some scenes are definitely referring to prototypes in the Old Town of Stockholm, although not quite prototypically. Teleporting to Second Sweden, you land in a bar, obviously intended to be a main event spot. Actually, even if the rest of the city is nicely modeled, it appears to be just a backdrop to that bar, without any shops, entertainment or much to do.

The sim is one of several conjugated Second Sweden sims, depicting several typically Swedish environments. Some of the surrounding residential areas are still rather popular among Swedes, while the central city sims don't seem to be visited much any longer.

This virtual version of a Swedish city can be found at SLURL:

<http://slurl.com/secondlife/Second%20Sweden/147/190/21>

Building city replicas

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A model of a square with decorations in the modern Swedish city sim Second Sweden 3.

Purpose (continued)

A build doesn't have to target these high-profile groups, or attract their attention in particular, but the presence of them should be taken into account when planning a build and the possible benefits of it. The impact of impressions on and opinions from even a few such people may in some cases outweigh the covering of a much wider audience.

Builders

The people deciding to build a city replica may be either single persons, communities of varying sizes, organizations, companies, a city council, or joint ventures between them. Sometimes the people themselves perform the actual build, but often consultants or other contractors are hired for it. The former often results in a dynamic build, with new parts being added over time, and older parts removed or enhanced, but perhaps not always a high technical and artistic quality. The latter may result in very high quality builds, but often quite static once handed over to the owners.

In some cases this may work fine, but experience has it that dynamic builds are more attractive to the general audience, which is important if the purpose is to draw customers to shops and other establishments in the virtual build, or potential tourists, competence and investors to the real world prototype. Also, a single contractor may find it hard to create a variation throughout the build that creates interest. Therefore it may be better to divide the build among several contractors to create such variation.

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Copenhagen 1

The first of two versions of the Danish capital, this one mainly a backdrop for shop and residential renters, capturing the atmosphere.



Overview of the sim Denmark Copenhagen, capturing the air of the Danish capital.



A street view from the sim Denmark Copenhagen, with shops and street detailing.



Residential area and park in the sim Denmark Copenhagen.

Denmark Copenhagen is another of those places, which is not really prototypically, but captures the atmosphere of the prototype city, with an arrangement of streets, canals and parks. The mix of central shops, (intended) entertainment places and parks, and peripheral residential areas is nice, although the lack of activity makes the place something of a ghost town. A nice touch is that the landing place is in front of a 3D map of the sim, presenting the different activities there.



Waterfront in the sim Denmark Copenhagen, with canals and shops.



Park, canal and a café in the sim Denmark Copenhagen.



Residential area with street signs in the sim Denmark Copenhagen.

The combination of residential areas and commercial areas should really be a good way to keep the sim vivid, but on the occasions it was visited, it was deserted, so obviously something is missing. Maybe one sim is too small for such a mix to work, or needs additional attractions in the form of events or engagement from the sim owner.

This virtual version of the Danish capital can be found at SLURL:

<http://slurl.com/secondlife/Denmark%20Copenhagen/128/114/22>

Building city replicas

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A model of shops and a café in the modern Swedish city sim Second Sweden 3.

Styles

Modeling whole cities in full scale is generally too demanding, considering the cost and resources required both for the actual construction and the maintenance. Therefore, the city builds are usually modeled as one or a few key areas of the prototype, as some characteristic buildings compiled into a small area, as buildings and areas without any real prototype, but capturing the style and atmosphere of the prototype, or as a miniature of the prototype city, similar to Lego-Land or Liliput-Land.

Buildings may be quite simple, consisting of a few primitives, but with high-quality photo textures from the real world prototypes. This often looks very good at a distance, but may take a long time for visitors' clients to load and render. The buildings may also be carefully modeled after the prototypes, with plenty of prims for windows, doors and other details, but with rather generic textures. This usually loads rather fast and also allows for close encounter and interaction with the building, like entering it.

Depending on the purpose, either style or combinations of them may work best. For a shopping area, it may be best with carefully modeled ground floors with shops that can be entered, while the upper floors may be modeled quite simple but with the use of photographic textures. In a residential area, where people want to be able to use the entire buildings, the whole build may need more detail. For backdrops or picturesque areas, the simple modeling with photo textures may work best.

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Copenhagen 2

The second of two versions of the Danish capital, this one presenting a photo-realistic center as part of a project presentation.



Overview of the sim Cph, featuring a photorealistic depiction of Copenhagen.



A street view from the sim Cph, doing the use of photo-textures full justice.



A view towards Rådhuspladsen, the center of the sim Cph, with photo-textures.



A street view from the sim Cph, where the simplicity of the builds shine through.



A street view from the sim Cph, with the commercial area towards the docks.



A view from the sim Cph, down at the docks, with neat photo-texturing.

Cph is a presentation of a think tank project, intended to turn the Danish capital Copenhagen into a knowledge city. It presents a quite realistic and prototypical part of central Copenhagen, with arrival at Rådhuspladsen, with much photo textures on rather simple builds. It does however not offer much to do, like shopping or entertainment, and a drawback is that much of the information is in Danish only. An overview map with teleporter capacity is a bonus though.

This sim is an example on how a virtual model could be used to present a project. However, the focus of the build seems to be rather on the existing Rådhuspladsen with surroundings, while the actual project proposals wind up in quite peripheral parts of the build. This makes a somewhat confusing impression on visitors, since the purpose is not clear.

This virtual version of the Danish capital can be found at SLURL:
<http://slurl.com/secondlife/Cph/31/90/27>

Building city replicas

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A realistic pedestrian crossing in the modern Swedish city sim Second Sweden 3.

Styles (continued)

Builds offering residential possibilities may be enhanced considerably if their residents are given the opportunity to extend the builds with their own constructions and decorations. This need to be planned for already in the initial stages of the projects, to make sure sufficient building resources are left and that permissions to build can be administrated.

Maintenance

Builds in Second Life aren't worn and weathered like in real life, unless they are constructed to behave like that. This means that classical maintenance, like re-painting and exchanging worn parts, is not necessary in the virtual world. Still, to prevent a shiny build to turn into a ghost house or dead city, another kind of maintenance is required. The builds need to be kept interesting. Offering various attractions can do this, but stationary such tends to become "worn out" and lose their power of attraction with time.

If the purpose of a city build is to attract visitors, a static environment is usually the same as slow death. It may attract some attention in the beginning, owing to PR, media reports and many old residents of Second Life discovering the new build and visiting it out of curiosity, but after a short period, usually a few weeks or months, it will be mainly forgotten, with only a few visitors in the form of new residents who happen to find it via search engines, old web reports or word of mouth from people who once visited the build.

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Amsterdam

The vivid center of the Dutch capital, with prototypical characteristics and much to shop and see, mixing complex builds and photo-textures.



Overview of the sim Amsterdam, compiling the central features of the Dutch capital.



A view from the street Damrak, central in both the prototype and the sim Amsterdam.



A view of street sales on the square Dam, the commercial center of the sim Amsterdam.

Amsterdam is a very nice and prototypical model of the central part of the Dutch capital, although somewhat compressed. Arriving at the railway station, you don't have to go far to encounter a couple of the things strongly associated with Amsterdam: Sex and drugs. Be prepared for solicitation by escort girls and ads for "coffee shops" (drug shops). The city is otherwise a tasteful mix of architecture, shops and ads for and links to Dutch companies, with much to see and do, and quite a bit of activity.



A view from outside the Central Station in the sim Amsterdam.



A view towards the Central Station in the sim Amsterdam, with much photo-textures.



A view from the square Dam with the church Nieuwe Kerk in the sim Amsterdam.

The main drawback is that the rich use of photo textures makes it quite heavy on the client. Still, this is definitely the build with the best city-feeling in Second Life, much owing to the intense and prototypical commerce and advertisements. There are also neighboring sims extending the city area.

This virtual version of the Dutch capital can be found at SLURL: <http://slurl.com/secondlife/Amsterdam/122/214/25>

Building city replicas

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Art and entertainment in the modern Swedish city sim Second Sweden 3.

Maintenance (continued)

Even if Second Life offers fantastic technical possibilities to build attractions, the strongest attraction is probably that of engagement and participation. This should be considered and planned for already from a start. To buy a turnkey solution from a contractor may seem like an easy start, but is a good way to alienate people who are supposed to be engaged in the activities later on. Even if it means longer starting time and higher initial costs to involve people and give them an opportunity to express their opinion about the project, and let those opinions matter, it often pays off later on.

Employees, students or citizens, who feel the build they are interacting with and around are actually "theirs", may contribute immensely to keep the build vivid. They may present it with pride, answer questions about it, help out visitors, and invite guests of their own. It may actually be a good deal for a company, organization or city to allow its employees to spend paid time in the virtual build, even for not strictly job-related tasks, and to offer them support to learn how to socialize, navigate and create content in the virtual world.

A company, organization or community can help getting their staff or members acquainted to Second Life by also using it as an internal tool where appropriate. A virtual meeting, saving 5 persons one hour paid travel time, pays the tier fee for an entire sim for one month. This kind of meeting is often found superior to chat meetings, telephone and even video conferencing.

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Berlin

A small portion of the German capital, compiling several characteristics with vivid shops and entertainment.



Overview of the sim Preussen, with a part of the German capital Berlin.



A view of a park, towards the Spreepark Ferris wheel, in the sim Preussen.



The famous monument Brandenburger Thor with surrounding park in the sim Preussen.

Preussen is a good capture of the atmosphere of this part of the German capital. If there is such a thing as a modern Prussian national character, this is it. Exact modeling and perfect order, straight lines and right angles, grand and great. Parks, shops and art in perfect order. Much to see in a limited area, including the Brandenburger Thor and the Cube, old and new Berliner characteristics. Still, this place lacks real atmosphere and should be a bit boring, but for some reason, it's not.



The visitor center of the sim Preussen, with much and well structured information.



Typical German straight angles towards Brandenburger Thor in the sim Preussen.



Some of the commerce around the central square in the sim Preussen.

Like so many other city-builds, the main drawback is the heavy graphics, with plenty of photo and semi-transparent textures, loading the client and causing lag. Also, much information is in German only. A bonus is the international Metro to other city builds, although I never managed to get it working.

This virtual version of the German capital can be found at SLURL:

<http://slurl.com/secondlife/Preussen/126/108/21>

Building city replicas

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Caveats

As almost everywhere else, resources in Second Life are limited and cost money. This means that most major builds need to be compromises between what is desired and what is practical or possible. A region, or sim (short for simulator) in Second Life is an area of 65,536 (256x256) square meters, supporting a maximum of 15,000 primitives for construction and 50-70 simultaneous visitors. A build may consist of several prims, but each sim cost USD 1,000 to "buy" and then a monthly "tier fee" of USD 295 to maintain, with some reduction for non-commercial purposes. To construct buildings in scale 1:1 in Second Life usually isn't practical, if intended for interactions like entering the building, for two main reasons. First, most avatars are oversized, meaning the average height for male avatars is above 2 meters. Second, the normal view position is located a bit above and behind the avatar, meaning that low ceilings and narrow rooms risk putting the camera above the next floor or behind neighboring walls. Together, these two factors mean that a suitable scale is usually at least 1.5:1 to the prototype, giving ceiling heights of at least some 4 meters. This means a sim should rather be considered 170x170 than 256x256 square meters.

A sim of 65,536 square meters supports a maximum of 15,000 prims, which may sound plenty at first. But an average building may use 512 square meters of land, which corresponds to 117 prims. A simple backdrop building may do with only 2-10 prims, but as soon as details are added, much more prims are used. A house with "real" doors or window openings and frames requires 3-5 prims for each wall segment with a door or window, which may easily mean some 60 prims per floor. Chairs, tables and beds may require 3-10 prims each, quickly consuming the supply of prims. Using textures with transparent "holes", reducing the requirement for prims, may solve some of this but this can bring other problems.

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Paris

An ambitious and artful replica of parts of the French capital, many landmarks and an excellent blend of builds and texturing.



Overview of the sim Paris 1900, depicting the French capital a century ago.



An airy street view with high-class shops and prototypical details in the sim Paris 1900.



A nice boulevard view with well-modeled houses, in the sim Paris 1900.

Paris 1900 is a very artful model of the French capital at the beginning of the last century. You arrive in a metro station, and get rules and information on the way up to the street. Technically, the build is a quite good mix of prim detailing and texturing, not too heavy on the client. But despite the Eiffel Tower, the Arc of Triumph, the beautifully modeled Moulin Rouge, wide avenues, parks and art, and some very high-class shops, the "Atmosphere Parisienne" just isn't there. Some of it probably depends on the open views at the sim borders, not allowing any real city feeling.



View towards the famous cabaret Moulin Rouge, in the sim Paris 1900.



A view towards the famous Eiffel Tower, too high to capture fully, in the sim Paris 1900.



A view of the art park at the foot of the Eiffel Tower, in the sim Paris 1900.

Still, the build is definitely worth a visit, and quite some time to see it all. The beauty is more in the loving and carefully modeled details than in the general impression in this build. Besides the central sim with Moulin Rouge and the Eiffel Tower, there are also neighboring sims with parts of Champs-Élysées, the Arc of Triumph, and other well-known landmarks.

This virtual version of the French capital can be found at SLURL:
<http://slurl.com/secondlife/Paris%201900/8/171/16>

Building city replicas

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The sim Amsterdam is one example where the rich use of textures causes lag.

Caveats (continued)

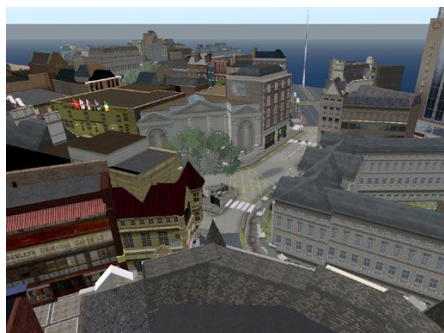
Extensive use of detailed textures, to save prims in builds, often means long times to load the builds in the visitors' clients, and cause lag in rendering the scenes. Especially partially transparent textures appears to add high load. The same goes for the presence of many avatars and complexly modified prims in limited areas.

In the end, a major build usually requires a delicate balance between use of prims and textures. Often it may have to be reconstructed several times, because the supply of prims runs out, or the graphic load, owing to textures and complex prims, becomes so heavy the build becomes unusable. In some cases, a build that works well in some state-of-the-art computers, as often used by professional computer people, may be unusable in, or even crash, less powerful computers, like those in many schools or the general public.

Actually, most of the real-life cities, represented in Second Life at present, suffer from these problems, i.e. although often carefully and beautifully built, they are often slow to load and cause lag in many clients. In some cases this may be a conscious compromise, in others simply unawareness of the effect in clients run by computers not being state-of-the-art. Still, the limitations and caveats above should always be kept in mind and considered when planning and performing a major new build, or when performing restorations of older builds.

Dublin

A large and loving build of the Irish capital, although mostly a pub backdrop capturing the atmosphere there and the hearts of the visitors.



Overview of the sim Dublin, depicting the central parts of the Irish capital.



Down by the river Liffey, with both good modeling and textures, in the sim Dublin.



A view most real life visitors to Dublin will recognize, in the sim Dublin.

Dublin is a beautifully and lovingly modeled replica of the central parts of the prototype city. Although most of the build seems to be just a backdrop to a single pub and some tourist information, it's still very nice to walk around in. If you ever been to Dublin in real life, you will no doubt recognize both the atmosphere and many of the buildings and environments. Even despite the build is quite graphic heavy and hence lagging, the abrupt breaks at the outer rims are disturbing, and the famous Molly Malone statue is missing, you just got to love this place.



A street view towards the apparent main attraction, a pub of course, in the sim Dublin.



Another street view from the sim Dublin, with some environmental characteristics.



A view from the sim Dublin, showing a realistic effect of the virtual topography.

This is probably the best-captured atmosphere in Second Life. Much of it is owing to the prototypical avoidance of right angles and the topography, bringing the build to life. Also, despite the frequent use of photo-textures, care has also been taken with modeling the buildings as well.

This virtual version of the Irish capital can be found at SLURL:
<http://slurl.com/secondlife/Dublin/127/128/25>

Thought from Magnuz

Some personal reflections on (second) life, the universe and everything, focusing on the art of model building.



Magnuz of Sweden at his sky planetarium in the Second Life® region Honawan.

It's really strange how some things keep coming back to you. One of my earliest interests was model railroading, starting out with a second-hand set given to me by my parents on my sixth birthday. That interest have stayed with me, and I have this dream of one day having the resources to build a really impressive model railroad, with landscape, buildings and all.

So far I have only partly realized that dream, in virtual reality. Although not in Second Life, I have modeled whole towns and cities, mainly medieval, as backdrops for some creations, like castles, which have been the real focus. I can't say I'm very good at it though, much of it owing to me being quite square in my approach.

When I look back at the model builds, mainly in model railroad landscapes, that have impressed me the most, I realize that it's not the size or amount of details in the builds that are impressive, but actually the imperfectness of them. They are not flat, square and shiny new, but hilly, irregular and weathered. That is probably why Dublin is the city-build in Second Life that has touched me the most.

My problem is, that even if I know what makes the build attractive, at least to me, I have a hard time thinking outside my own square and box. So I cheat, and write computer algorithms which create realistic landscapes with buildings and roads, based on theories of geology and city planning, and you know what? It actually works. The computer beats me!