

Second City

The data-based world of digital networks has become an increasingly important part of everyday life. A diverse array of platforms, devices and services vie for our attention. The acceleration of communication and networking in recent years has been considerable. This expanding world is visible only on our screens, our windows on the digital world. Monitors of all sizes—from gigantic urban screens to tiny cellphone displays—accompany us through everyday life. The digital world can be extremely useful, or even indispensable if you will, but it remains arrested on a rectangle full of pixels. With each new communications service, people's online habits change. Whereas big-city anonymity still prevails in everyday life in the public sphere, the most minute details of private life are being exhibitionistically put on display in the Internet. Who are you? What do you do? Where are you? Who are your friends? The Internet services of so-called Web 2.0 trigger undreamt-of synergy effects for their users in the form of social networks; the price, however, is anonymity. But whoever doesn't get into the swim doesn't make a ripple in the networked world; they go unnoticed and go without access to the big data flow. Human beings themselves comprise the interface between the abstract, digital world and the material, analog one. We lead a sort of schizophrenic life between the rapidly moving, difficult-to-grasp world of communication and real life in space and time. It seems to be something regarded as completely normal to be chatting with someone in a café while simultaneously writing an SMS, but these are two fundamentally different worlds of communication.

The belief that technology is good is strongly held and widespread. The image of the machine that benefits mankind and makes life easier has remained intact ever since industrialization. The fascination with automation and remote control continues to be a driving force behind the development of new technologies. But when does the technology that surrounds us and that we work with every day actually divert us from the goals we pursue and the questions we seek to answer?

In which form does this network-data-world really manifest itself in our physical everyday-life-space? What is being fed back into physical space from the "cyberspace" into which data has been fed for so long now? How do these digital innovations influence our actions in everyday life? For several years now, I've been working in the field of inquiry delineated by these topics and questions, and investigating the feedback effects of general digitization as an approach to gaining an understanding of the technological transformation of society.

In the form of objects, installations, interventions, performances and workshops, *Second City* on Linz's Marienstraße will take the developments of recent years to the extreme—and perhaps slightly beyond—and attempt to get to the bottom of the issues inherent in them. Serving as the basis of this effort is a very graphic form of digital world: the metaverses or 3D worlds like *Second Life* whose rise to prominence has been the talk of the data-domain of late. What happens when established forms of digital communication are transferred directly into physical, public space? What status does privacy have in that world and in this one? In which light do digital artifacts appear when they, in their form adapted to digital space, are transformed into concrete physical objects? What happens when digital and physical objects are interlinked? Which of the two "aggregate states" has greater value for the user? The urban public space of the City of Linz will be tested in various forms to determine its digital suitability. Visitors to *Ars Electronica* are invited to attend *Second City* workshops, interventions and exhibits, and to experience virtual mechanisms and rules from a different perspective.

Second Life

Second Life is a three-dimensional virtual world that exists on the Internet. It currently has over 7 million registered users; at times, as many as 50,000 of these “inhabitants” are online simultaneously. The proprietor is a San Francisco firm, Linden Labs, which has been making a basic version of this service available free of charge since 2003. Unlike online computer games like *World of Warcraft*, *Second Life* doesn’t have a plot, sequential levels of play or a pre-defined objective. On the other hand, *Second Life* “inhabitants” have the possibility of expressing themselves creatively by constructing, designing and programming objects. The in-world 3D editor and the Linden Script programming language provide an astounding degree of freedom in going about this. The possibility for users to create content themselves and the well-functioning economy with a convertible currency are factors that have contributed to the success of *Second Life*.

Second City—Designing Marienstraße

For about a week during the Ars Electronica Festival, Marienstraße, a side-street in downtown Linz, will undergo strategically orchestrated design interventions that will shift it out of the real cityscape and morph it into a zone of transition into virtuality. Oversized, gaudily colored ad panels that are typical of *Second Life* announce an unusual assortment of wares and invite festivalgoers to do some shopping. Through the application of a new, homogenous surface to the street and sidewalk, the public, exterior space will take on the artificial appearance of privacy. Out-of-proportion signage featuring excessively large lettering is suggestive of typical *Second Life* design. Urban infrastructure elements and “street furniture” will be stylistically adapted to the reduced mode of construction of *Second Life* objects. Interventions in the streetscape that are apparent only at second glance conduct festivalgoers into the zone at the nexus of virtual and physical worlds.

Workshops and Shopping

A series of workshops in *Second City* provides festivalgoers with the opportunity to explore the path into and out of the virtual world. In a variety of different forms, objects can be imported into and, above all, exported out of *Second Life*. Here, practical work with paper, scissors and paste offers a stark contrast to 3D modeling workshops and avatar design. The output of these workshops will be offered for sale in both virtual and physical form in the *Second City* Shop. The workshop participants themselves determine the price and whether or not the next owner is authorized to make additional copies of the object. A product that goes for 100 L\$ (Linden dollars) costs the equivalent of 0.27 g at the current rate of exchange. The business models that have successfully established themselves in *Second Life* will also play a key role in *Second City*: buying, producing, selling, reselling and trading. When does which object have what value, and what are the interrelationships between virtual and physical products?

Trade Counter

The Trade Counter in the *Second City* Shop is for selling, swapping or distributing virtual and physical objects from the workshops or the Shop’s inventory. Here, festival visitors can buy products and transfer them directly to their avatars in *Second Life* and they can swap or distribute freely duplicatable objects among themselves. All this takes is an account and avatar in *Second Life*. These can be set up on the spot at *Enter the Metaverse*; those who already have an account and an avatar can register them there.

Workshops

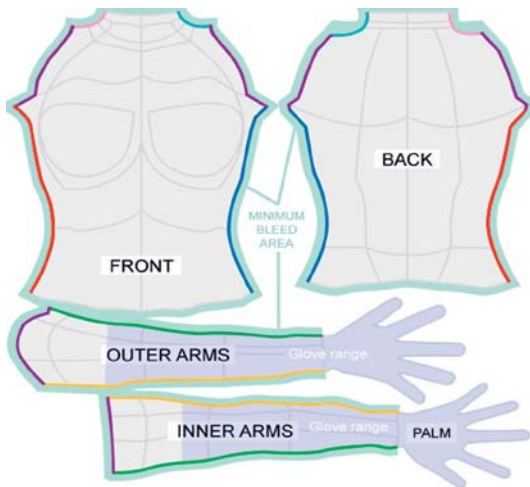
Handmade

The *Handmade* workshop project lets Festival visitors create handmade garments for the *Second Life* virtual world.

Every user of *Second Life* as well as of other virtual worlds is represented by an avatar. These mostly human-like virtual figures play a central role, constituting the user's interface with and identity in that virtual world. The user controls the avatar with a keyboard and a mouse. Through these extensions of themselves, users communicate with each other via chat window or language transmission. Once users have spent many hours in these virtual worlds, they begin to develop a strong sense of identification with their avatar.

Once a user gets registered at *Second Life*, he/she can choose a virtual image from a list of approximately 15 prefab avatars. As a way of underscoring their individuality, users customarily buy clothes, a hairstyle, a body form and skin to “beautify” their standard character. Even more so than in real life, the inhabitants of *Second Life* take an avatar's appearance to be indicative of its status and that of the user behind it.

But even more individualistic than purchasing virtual clothing is designing it yourself and producing it for use in the virtual world. To do this, prefab graphic files provided by Linden Labs are available as templates that can be customized using desktop software like Photoshop. With a few basic skills, users can utilize a digital camera and graphic material to design their own clothing for *Second Life*. Despite the fact that this process takes place outside of the virtual world of *Second Life*, it nevertheless remains within the confines of the digital process on the computer. For the *Handmade* workshop, full body-sized copies of the prefab, computer-customization-ready clothing templates will be printed out. Ars Electronica festivalgoers will be supplied with a wide array of materials, paints and fabrics that they can apply by hand to their paper templates. Then, the results are imported into *Second Life* and offered for sale there. This application of artisanal work and physical materials thus actually brings the digital creation process of virtual clothing back into the “first life.”



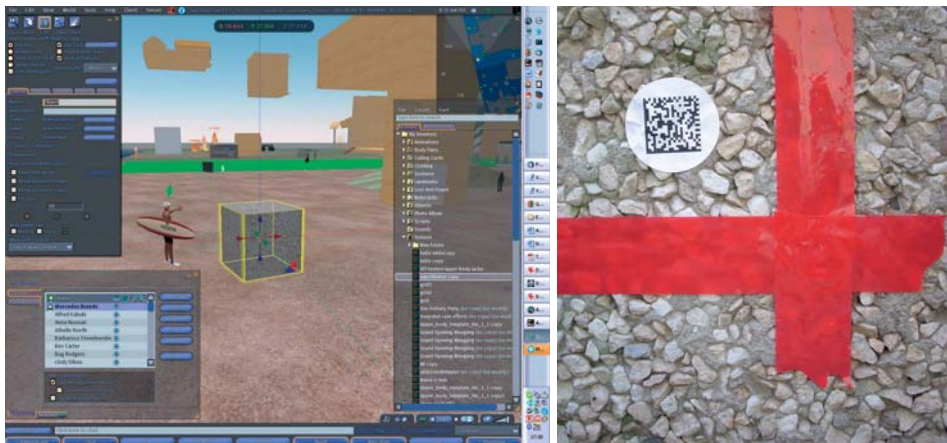
Create and Trade

Create and Trade is a workshop in which participants learn to create 3D objects in *Second Life*, to apply actual textures found in the City of Linz to them, and then to generate them in a physical form in order to be able to swap, sell or distribute them.

At the disposal of all inhabitants of *Second Life* is an in-world 3D editor they can use to create and program their own objects. Just like in 3D desktop software, the users operate with mouse and keyboard to create various geometric bodies and then scale, rotate, stretch and position them, and assemble them into groups. The colored surfaces of the objects can be modified or a variety of different textures can be applied to them. Since most users attempt to reproduce the physical world down to the finest detail, they often work with photos of material surfaces as their textures in the virtual world. For example, to simulate a brick wall in *Second Life*, a processed photo of such a wall can be repetitively applied as a “tile” all over a particular surface in order to create a textured effect. Worlds like *Second Life* make available a generally accessible archive containing thousands of textures that inhabitants can use to build objects. Stone, wood, fabric, sand and patterns of all sorts of other materials can be found in this library and most can be easily recognized as what they purport to be. What is not apparent, though, is where, when and out of which “actual” material these textures were produced. Where, for instance, is the piece of pine that has been used millions of times in *Second Life* as the standard (default) texture?

The workshop will come to grips with this problematic issue by launching expeditions through the cityscape. Selected texture scouts will be prowling around Linz in search of interesting surfaces and materials that would be suitable for construction purposes in *Second Life*. Once the selected excerpt of the urban environment has been digitally photographed, that surface will be tagged with a square frame of red tape. This material’s transition into the realm of virtuality is thus documented and made visible in the public sphere.

Almost every object in *Second Life* has been created by *Second Life* users: buildings, landscapes, plants and vehicles of every sort all the way to clothing, hairstyles and body shapes. Linden Script, the *Second Life* programming language, makes it possible to attribute additional characteristics to any object. From a simple series of movements to complex behavioral sequences in





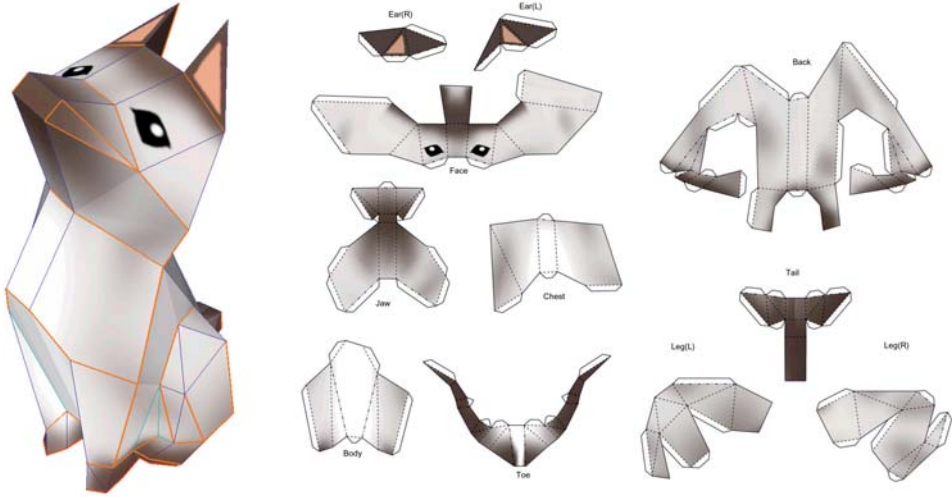
reaction to environmental parameters, this object-oriented but very open script language makes a broad spectrum of possibilities available. Every object that the user creates is, in principle, also his/her “property,” whereby it’s important to note that the user actually does own the copyright to the object and can also assert this right in a real court of law. However, the data that describe the object exist on Linden Labs’s servers and are not in the users’ possession. What the users do take into their own hands, though, is a decision of considerable importance for the economic and social system. For each object that users create, they can specify particular rights of use by a subsequent user to whom the object is given or sold. Different settings listed in the Object Context Menu lay out what amount to fundamentally different concepts of property rights and social models.

1. Next user can copy and modify this object
2. Next user can copy but not modify this object
3. No copy, no modify, this object is for sale L\$

Creating an artificial shortage of digital artifacts—which, for example, the music industry failed to accomplish with the proliferation of MP3 swap sites online—is (almost) no problem in *Second Life* due to its central server and software architecture. If a user decides that his newly-created digital object is to be one of a kind in *Second Life*, then that’s how it’s gonna be. But users can also come out against the economic system that has been successfully imported into *Second Life* and, in the spirit of open source and new social models, make their creations freely available for duplication and/or modification by all *Second Life* users.

The textures that were collected in Linz to start off the workshop can then be processed. In a few simple steps, participants learn to create objects in the virtual world and to take advantage of all the 3D editor’s features to modify them. Investing their time and the skills they’ve acquired, participants can give free rein to their imaginations in using surfaces from the City of Linz to create new objects in the virtual world. Upon completion of their project, the participants can decide which rights to endow the object with. May other users work with this digital artifact, or is the object to be unique? The next step is for each participant to actually receive the results of the workshop in the form of a physical representation (in abstract form) of their work: a 10x enlarged, two-dimensional copy in the form of a laser-etched outline of the object in Plexiglas. This set of “prims” that exist as proxies for the “real” object in the virtual world can then be sold, dealt in, swapped or dispensed just like trading cards.

What’s the relationship between virtual objects and real, physical ones? What happens when they’re interlinked? Does the value of an object always rise in line with its rarity? What value can be attained by open-source objects that any user is entitled to copy and modify? What can we learn from this development that is applicable to alternative social systems?



Export to World

The success of multi-player environments has meant the advent of economic forces in the world of online gaming, and the threshold separating playful simulation and the real world has been lowered a notch. Phenomena like sweatshops and shady transactions that once manifested themselves only in the black-market economy of role-playing games like those by Blizzard Entertainment might increasingly take center stage in the game experience.

In Linden Labs' *Second Life*, interaction with merchandise is part of the design of the simulated world. Every object created can be assigned a value and can be traded in. Every user is thus automatically also a producer of virtual wares, and, in contrast to the social web, this added value is much less abstract here: after all, Linden's game currency is directly linked to the real US dollar. Perhaps this is also one of the reasons why *Second Life* is perceived less as a game and more as an unexplored territory, and has been a much-discussed topic over recent months in the mass media. Many observers have identified this as the beginnings of a new Internet and wasted no time setting up branches of their companies in this world. Perhaps it's the three-dimensionality and its proximity to the original promises of virtual reality that make this so attractive, or simply the possibility of producing value—that is merchandise—according to classic patterns.

What is certain, though, is that these wares are digital artifacts too and, as such, can also be copied and manipulated—indeed, to a far greater extent even than some users would wish. Bottom line: there's no escape from the world of MP3. The general outcry about the so-called copybot—the software that allows someone to copy any object in *Second Life*—illustrates how the system still reacts so sensitively to issues like this.

Export to World seeks to comment ironically on the design and production of merchandise in virtual worlds. Retail space on Marienstraße will be temporarily converted into a shop like those found in *Second Life*. Large-scale display ads show what's for sale: custom-made or purchased virtual objects that shoppers can buy at a price determined daily by the current Linden dollar/euro exchange rate. Instead of the acquired object suddenly appearing in the purchaser's inventory, though, the proud new owner receives a two-dimensional paper representation of it, which he/she can manually fit together into a three-dimensional object on site. The final results are paper representations of digital representations of real objects, including all the flaws that copying entails.

Text: Sascha Pohflepp



Cut and Paste

Cut and Paste is a workshop that, like other such offerings here, transfers objects from *Second Life* into the physical realm and thereby evades in very simple fashion the copy protection operational in the virtual world. In this instance, however, the digital artifacts are not three-dimensionally reconstructed as is the case in, for example, the *Export to World* workshop; instead they're captured as screenshots and realized as two-dimensional objects.

This workshop will concentrate on objects like apparel, jewelry, bags and other accessories worn for show. Festivalgoers are invited to generate material to work on in the form of 2D screenshot taken in retail outlets and of other inhabitants of *Second Life*. The selected objects are then printed out in their "original size," applied to a cardboard backing, and cut out by workshop participants, who can then wear the accessories themselves during the festival. Through the magic of Velcro closures and rubber bands, a visitor can walk around Linz sporting a two-dimensional rucksack alongside his/her real one. In this way, more and more *Second Life* accessories will make their way into the physical realm and, worn on the bodies of festivalgoers, gradually proliferate throughout the Ars Electronica festival venue.

Workshop participants can select from among a gallery of already-cut-out objects to repeatedly copy any accessories they like. Moreover, the finished products will then be re-imported into *Second Life* as 2D objects by the workshop crew. These too can then be purchased, traded or passed out (depending on the respective copyright situation) on the digital level by participants. Juxtaposed to the "original" three-dimensional *Second Life* objects, these re-imported, low-tech copies then call into question the relationship between 3D and 2D, between real and virtual worlds.

WoW

The *WoW* project is a workshop and intervention in public space that uses computer play-worlds as a means of calling attention to the changing ways people deal with privacy and identity in the public sphere.

Every day, millions of people spend a great deal of time in online virtual worlds like *World of Warcraft*. They congregate there to go on adventures, solve puzzles and experiment with new digital artifacts. Many players remain in these worlds many hours a day. Even when they're seated alone before their computer, they have lots of friends in the online world and share experiences with them. Although these experiences are played out “only” in the realm of virtuality, they nevertheless become memories in the particular person’s overall wealth of experiences. When 40 players operating according to a precisely organized division of labor being executed every weekend over the course of months “play” out an adventure and finally vanquish their ultimate opponent, a gigantic monster holed up in a cave, the screenshot of all the members of this tightly-knit group constitutes a graphic document commemorating this important occasion in their lives. The process of social bonding that occurs in such groups that frequently communicate only via messaging in the virtual realm ought not to be underestimated.

Each player is represented by an individual avatar, which is given an unalterable name that by no means corresponds to the real name of the player but serves as a clear means of identification in the online world. This so-called nickname floats above the avatar’s head and is constantly visible by all other players. There is no anonymity for the avatars themselves; each on-screen game figure is clearly labeled with its nickname. Nevertheless, changing roles via multiple accounts and avatars presents no problem to the users behind them.

The *WoW* project takes this mode of publicizing players’ names that’s typical of online 3D worlds and transfers it into the physical domain of everyday life. Every Ars Electronica festivalgoer will have the opportunity to participate in this ongoing *Second City* workshop in which they’ll be able to construct their own name out of plastic and then parade around in public with it hovering above their head.

What happens when a person’s customary anonymity in the public sphere is obliterated by the principles operative in virtual worlds online?





Missing Image

Missing Image is a piece of clothing that transfers a graphic error from the virtual world of *Second Life* into the physical sphere in the form of a long-sleeve shirt. Unlike the articles of clothing created for the virtual world in the *Handmade* workshop, *Missing Image* is a real article of clothing that can be purchased in the *Second City* Shop.

As already mentioned in the description of the *Handmade* workshop, *Second Life* users can individualize their avatars any way they like with clothing that they buy or design themselves. To do this, several layers of textures are “wrapped” around the avatar’s body or 3D objects designed especially for this purpose are applied to it. Depending on where the player is located in the virtual world and which other avatars are currently in his/her avatar’s proximity, these texture and object files are transferred from the server to the user’s *Second Life* viewer, a client program that resembles a Web browser. Frequently, individual clothing textures get lost during the process of transfer and communication between the various data banks at Linden Labs. So that the avatar isn’t completely invisible to the player when this happens, a standard error report texture designed by Linden Labs is deployed. The words “Missing Image” in large letters barely legible on a white background are “wrapped” around the avatar’s upper and lower body. This very image is now being taken up by *Missing Image* and transposed into the physical world as a tight-fitting long-sleeve shirt including gloves. Which “textures” do we wear in real life? How do we portray ourselves by means of our body in public?

T-Shirts

The Web Shirt and the Profile Shirt are two more items of clothing available in the *Second City* Shop.

As allusions to the development in recent years of what has come to be known as Web 2.0, these T-shirts call attention to the plethora of private information that users reveal in an endless series of new Web services. In so-called social networks in which millions of users communicate, details of people’s private lives are made public on websites like *MySpace*, *YouTube*, *Twitter*, etc.



Ars Electronica festivalgoers are called upon to present themselves in the context of these private data in the public sphere. A typical profile website—such as those used by *Flickr*, *Plazes* and *Del.icio.us*—is printed on the Profile Shirt and the user fills in personal data by hand. The Web Shirt provides a long list of the best-known Web 2.0 services with their stereotypical names and icons to check off. Just like the wearers of a status symbol, users can compare their number of Web 2.0 accounts and show the world what they've got. Who has the most? Who's in on the latest? In contrast to the online world, though, the user wears these personal entries on his own body in public.

Enter the Metaverse

Festivalgoers who still don't have a *Second Life* account can receive help opening one up from the highly skilled crew of *Enter the Metaverse*. Here, you can get support in the selection and design of your avatar, and user-friendly explanations while taking your first steps into the world of virtuality. Which type of avatar fits you best? Where are your hidden dreams? We deliver counseling individually personalized to each visitor. Well-equipped computer workstations and the congenial members of the *Enter the Metaverse* team accompany you every step of the way. Your wish is our command!

Once you've set up your new *Second Life* account or registered your already existing one, you will be able to conveniently take advantage of all the services available at the Trade Counter in the *Second City Shop*.

Übermensch / Become Your Avatar

Second Life is a world of the young and the beautiful. You see far fewer older people here than you do in Berlin's hip Prenzlauer Berg neighborhood, for instance. And no fatties at all! A few SLers prefer to adopt an animal identity or to appear as mythical creatures, but the overwhelming majority doesn't break ranks with homo sapiens. Actually, most of them look like decathletes and Conan the Barbarian action figures. Female avatars often seem to have been inspired by the Barbie Doll; their Body Mass Index would hardly be a source of critique on TV shows like "Germany's Next Top Model." This is neither surprising nor reprehensible.

Despite all the freedom that users have in designing their avatars, body build in *Second Life* says relatively little about its owner. At most, you can recognize newbies from their avatars' lack of design detailing. That's not how it is in real life, as we're all aware. A person's body enables others to draw conclusions about his/her way of life and lifestyle. Especially with advancing age, the body necessarily becomes an accumulation of traces, the sum of which is a more or less clear picture of that person.

A virtual world in which you enter into the arena of interaction in the form of a customizable avatar thus offers the opportuni-



Aram Bartholl

ty to engage in a bit of self-emancipation from the genetic lottery and the facts of one's own biography.

This lightness of being seems unattainable in the first life in which a body can't just be traded in for a new one. Decoupling the representation of the self from the body is thus a thoroughly practical idea and is undoubtedly here to stay. In the future, even in the area of sexuality, the body will serve strictly as a reception apparatus and no longer as a device for courtship display. Until this process of dividing up tasks between the body and the avatar is consummated and generally accepted, the experts at the *Übermensch* Agency will help to bridge the gap between Body 1.0 and avatar. Utilizing modern training methods, pharmaceutical supplements and plastic surgery, *Übermensch* creates individual training and therapy plans to let you bring your body into line with your avatar. *Übermensch* has come up with an approach that is holistic and results-oriented. *Übermensch* doesn't slavishly follow medical and scientific findings, and thus intentionally breaks free from irrational, atavistic concepts of morality that restrict possibilities of designing the body. Attention is focused unceasingly on achieving the avatar body as quickly as possible, without compromise. Each training and therapy plan comes with warnings about the pharmaceuticals required in conjunction with body re-design that do not have government approval or are available by prescription only. Those that are on the International Olympic Committee's list of banned substances are likewise labeled as such.

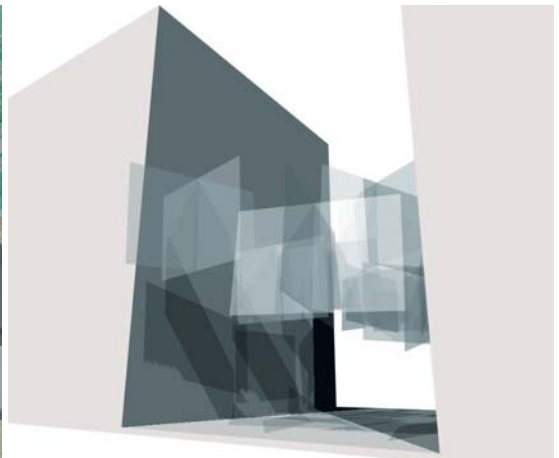
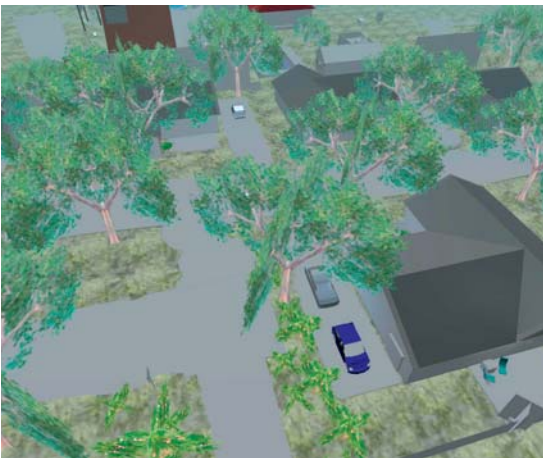
Übermensch is also engaged in political lobbying aimed at the liberalization of national pharmaceutical regulations and the repeal of restrictive anti-doping legislation.

Text: Joachim Stein

Tree

A forest, half virtual, half real, on Marienstraße, *Second City*.

As in most computer games and 3D worlds, objects from the real world are "copied" or simulated in simplified form and in accordance with programming constraints. Textures are applied to 3D structures and, depending on lighting conditions, the images making up the virtual scenery are computed in real time during the game. Most trees are constructed out of two interlocking surfaces, each of which is covered with the same tree-view texture. The transparen-



cy of the gaps between the leaves and branches is provided by a so-called alpha channel in the graphics file. From a certain distance and the corresponding perspective, this abstracted form of a tree in virtual space doesn't stand out as a simplification.

When a player is online in *Second Life*, all geometric and graphic data relevant to the player's current position in the virtual world are sent by the provider's servers via Internet to the player's client processor. Due to this unique feature of *Second Life*, the current environment of the player's avatar is constructed in slow, step-by-step fashion. First, objects are loaded, then come textures and then high-definition textures. In this transitional phase, you can see what the "sub-structure" of extremely realistic 3D objects in a virtual space actually looks like.

The *Tree* installation captures this moment: it materializes several trees at various stages of loading in the virtual world and implants them into the Linz cityscape. In a vacant lot on Marienstraße in *Second City*, typical *Second Life* trees at various stages of development form a tiny forest. Semi-transparent and printed surfaces shine through and transfer the simplified and abstracted form of the trees from the virtual world into real space.

Chat

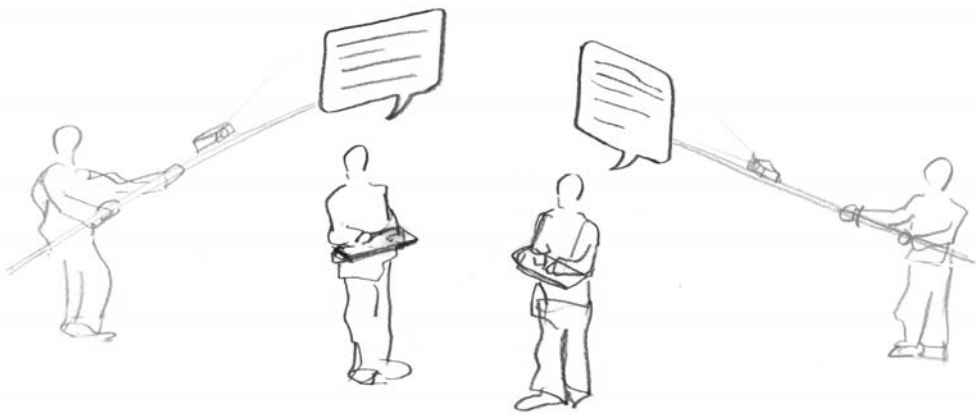
The *Chat* project is a mobile performance installation that can be played by two people at a time. Just like in *World of Warcraft* or *Second Life*, the two participants communicate with each other in the form of brief text messages input via keyboard. Immediately after they've been entered, the written communiqués appear in comic-strip-like dialogue balloons projected above the speaker's head. The projection surface in the form of the dialogue balloon is put in place by a technician positioned behind the speaker with the help of a telescoping pole featuring a built-in miniature projector. Thanks to a wireless keyboard set up in front of his body, the speaker can move about freely in interior and exterior spaces and concentrate on the written conversation.

Engaging in conversation on the Internet by means of short text exchanges that usually consist of rapid-fire sequences of questions and answers has a long tradition. So-called IRC (Internet Relay Chat) servers with thousands of chat rooms (channels) have existed since the '70s. Over



the years, chatting has established itself as an integral communications standard on a variety of different software platforms, services and user devices. This highly reduced form of communication has a quality all its own and has brought forth a number of different innovations such as the emoticon :-). Nor has the online verbal communication that has since become very widespread completely eliminated chatting; rather, it has supplemented it. In 3D worlds, chatting as a form of communication was present at the very outset. In contrast to chat “rooms”—abstract, placeless places—conversation has been re-endowed with a spatial dimension here. Wrenched out of the context of text windows, the typed-in message appears in a dialogue balloon above the avatar’s head and follows the player’s proxy on its way through the virtual world. All other players within a certain range can read these messages and, in turn, answer with a communiqué in their own dialogue balloon.

Chat is an intervention that translates this form of conversation into the physical, public sphere. The written conversation becomes legible by the people in ones proximity. Each message remains visible in the dialogue balloon until a new message replaces it. What happens when a conversation between two people is made public in this way? What relationship exists between the written and spoken word? How does ongoing technological development influence our interpersonal communication?



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