# BEAM ME UP REZZY

ART AS YOU APPROACH

Pushing the boundaries of presentation of computer art in virtual environments. Join the experience of Ava Outlander and Alias Piek in Futurelab Art Gallery at SIM Comet 148, 236, 68 [1)]

Written by Reiner Schneeberger, director of Programmed Art Foundation (a brand of Gesellschaft für Computergrafik und Computerkunst e.V. München).

ART AS YOU APPROACH – a new kind of visual experience "bringing art to the world".
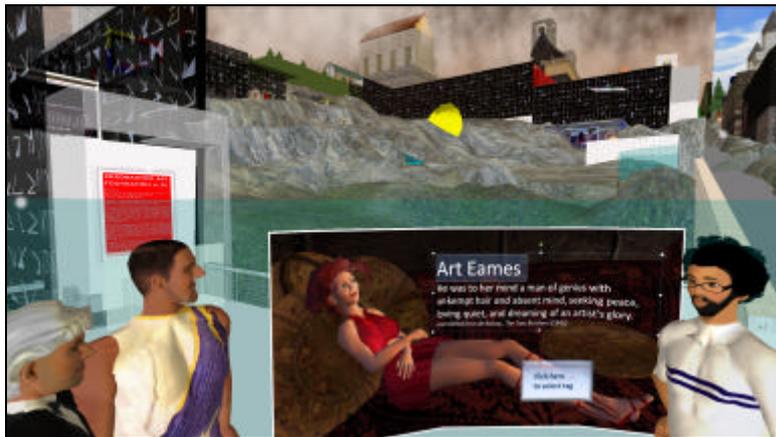
Second Life SIM Programmed Art,
Gallery Entrance at Comet 218, 148, 68
in background: part of gallery complex

What does it mean?

> In Business Language: "Use one visual environment to explore different content"
> In Media Language: "Take an object to see the pictures you want to see with sound and text during your virtual reality trip"
> In Art Language: "Art As You Approach - A virtual gallery with an unlimited number of art works in 3D on the internet"
> In Technology Language: "Wear a Tag to Rez a Texture in a Metaverse"
> In the Language of Bill Gates: "Information at your approach"
> In Cyberspace Language: "Beam Me Up Rezzi(ng)"
> In Legal terms: "Do what you want, imprint and terms of service are included"

To accommodate the varied knowledge of readers, this article adds background information in boxes, marked:

To emphasize that "Art As You Approach" stands only for one of the nearly unlimited usages of the technology, the term **TAGREZ** (tag to rez) was created.

> **R e z** derives from the movie TRON and is now commonly used in online-gaming to describe the action of bringing objects to the world by an Avatar (Rezzing).


REZzing

Avatars, the virtual equivalent to the users, operating in the so called cyberspace or virtual reality (VR) have a lot in common with the users who control them. An Avatar can wear objects such as clothes and tags. An Avatar has inherent animation capabilities programmed by animation scripting (walking, running, sitting, flying, greeting …).

TAGREZ Press Conference
In SIMIT Republic.
Avatars: Art Eames (Artist), Artefice Maximus (3D Builder), Noddy Shephard (Guest), Ava Outlander (Gallery Manager), Ben Outlander (CEO Cyberspace Ltd), Virtual Freenote (CEO Beam Me Up Scotty Ltd), Alias Piek (Editor Universal Gazette)
- from left to right.

Avatars are currently navigated by mouse movements and key strokes, this technology might be exchanged for gloves (cybergloves) or directly, "user-brain-controlled" in the future. The movement of objects an Avatar wears, like a cup of coffee "he/she/it" is drinking, is done through scripting. Finding efficient ways of constructing the virtual world (VR) to be like the real world (RL) will become very important for the social aspects of computing. Although it is irrelevant from a technical side that an Avatar "looks" toward a person during a voice communication, users feel much more comfortable if the "person" is looking in their direction to achieve an eye to eye contact. In the Art Gallery you will see Avatars standing and looking "towards" a picture, which of course is not necessary, because the users do not see "via" the eyes of their Avatars; we use camera control keys, like "CRTL-ALT" to have a look at the artwork which give, when used in combination with mouse-movements, a zoom in/out-functionality.
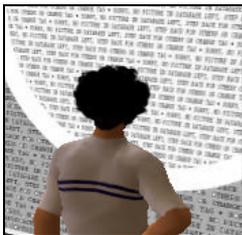

An Avatar looking towards a picture being rezzed

User brain control is no longer a fiction. Scientists at FhG Germany have invented a special hardware-software for paraplegic persons to control a typewriter based on individual EGG waves. The writing is done by "thinking" about the letters the person wants to be invoked. Having a better understanding of biodominance will be important for future technologies.

user brain controlled

If you have a chance to see a Wii in action (invented in 2006 by Nintendo for gaming), you can get an idea of what a potential technology has to change the navigation and interaction in RL soon. Speed and direction are defined by marketing and business power, not by technology. In the cyberspace future, user´s Avatars will not be limited to the opportunities RL users have. "Beam Me Up Scotty", one of the most common phrases in Science Fiction (but nevertheless never used in Star Trek by Captain Kirk) is now a reality in VR. Avatars can teleport from one SIM to another within seconds, just like you can move from one website to another on the internet by simply clicking on a hyperlink. A sponsored TP can easily be established. So how to attract Avatars to visit your environment more than once and for a long time comes into focus. Handling the legal requirements, which may differ from country to country, is another important aspect.

This article describes how the technology works from the user´s point by presenting computer generated art work by the artists Art Eames and Kon Kronfeld, using the SL-environment based on Linden Scripting Language [2].
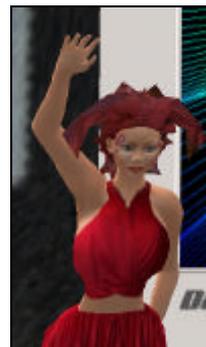
Ava Outlander greeting friends via the chat command
/ h e y
from the balcony of the Tag Centre at the SIM Symmetry … …

Gallery at SIM Comet

Avatars: Noddy Shepherd, Ava Outlander, Artefice Maximus, Art Eames, Alias Piek (form left to right).

Left picture (collision by Art Eames): "brought to the world" (rezzed) by Noddy Shepherd´s Tag.

Right picture (Mondrian NxG Spaceship by Kon Kronfeld): waiting to be rezzed by Alias Piek´s Tag.

Take a Tag

The first step is to take a tag. For a user who is familiar with metaverse-environments, what is described next this is a common task. Just go to the place where an object for a specific use is offered and take the object by clicking on it. The object will be copied to the Avatars inventory and via the function "wear" the object will move from the inventory to the body of the Avatar. If the object is, let´s say a pair of shoes, it will rez on the left and the right foot, just everyone in RL would assume. If you take a tag and wear it, the tag will rez on a predefined place, in our case on the Avatar's chest. Tags can be used for active social grouping because, in a tag, software can run which amongst other things can detect friendly tags nearby, saying "hello"; open a "private voice chat"; hand out an text-invitation (Notecard); send an IM (Instant Message) or an Email to "the real life" (RL) of the Avatar. A new user (Newbie) could easily be overwhelmed by this new world; attitudes like those toward the internet, 10 years ago, could arise.

An Avatar wearing a tag (on chest) for rezzing the art of Art Eames

For a **N e w b i e** (the term for new users with no experience in VR) it could be difficult to handle the first steps in VR with success. As it comes with all new technology there are cons – an object can send not only friendly messages. Begging for money, spamming (penetrating unwanted Adverts), and "griefing" (derives from "to grief" – griefers enjoy upsetting and harming others). There are technologies to avoid the cons, but like in the internet mainly the con-lovers say: before you use Google the first time, make sure to set up a firewall, a virus- and a phishing-protection, a pop-up- and an AD-blocker and lot more!

Newbie

Let´s assume you want to see the pictures from Kon Kronfeld who is a programming artist. He uses software with roots stretching back to the late 70s when Herbert W. Franke [3] introduced the first computer art software on a TI 99/4 home computer to generate animated computer art. If this is the case you will take the tag "Mondrian NXG" from the "tag board" and during your visit to the gallery you will wear this tag.

The board-sensors in the gallery will recognise that you approach and will rez the art of Kon Kronfeld for you. If you are accompanied by another Avatar, who is interested in the art of let´s say Art Eames; an artist who hopefully will be known (LOL [4]) in the future for his artwork based on the visualisation of equipotentials and fieldlines. To see Eames' art your friend will need to wear the Art Eames tag. The sensors will decide to rez the picture for you or your friend depending on the distance of your Avatars from the presentation wall: Art comes and goes as you approach! The unlimited virtual gallery has been born in the metaverse. One step back and your friend sees his/her picture; a few steps forward and your tag is in control. The sensor will rez for you. Of course you can change which tag you are using during your visit. This means that you should copy as many tags to your inventory as you may need.

M e t a v e r s e comes with Cyberspace and VR. The term stands for various 3D-environments on the internet. Market leader is Second Life (SL). Leader in online-gaming is WOW (World of Warcraft) and Entropia Universe. The first Metaverse Conference took place in the SL-SIM IT Republic in November 2007.

Metaverse

Building up a community

By joining together with a group of friends you are often able to share a tag and thus share a virtual experience with no extra costs (if the "ticket manager" allows "copy" and "transfer" for this tag-object). This is important in Cyberspace as if you have many visitors to your virtual space it will be listed as a "hotspot". The internet front liner Google generates rankings by determining sites with high traffic (clicks, references from third-parties and website-visitors). In VR-environments the visits of Avatars and the length of time they spend in a virtual space are counted and used to determine "popular places" for searches. In terms of advertising, selling products and offering services one needs to be familiar with the rules in this new world. The ability to work in areas which combine hard and soft-technologies such as man and machine; art and science is going to be a key for future success of applications in new media. It takes time to build a reputation for this kind of "Working between the lines" and as such there are currently only a few people such as Herbert W. Franke who are well known both in Art and in Science.
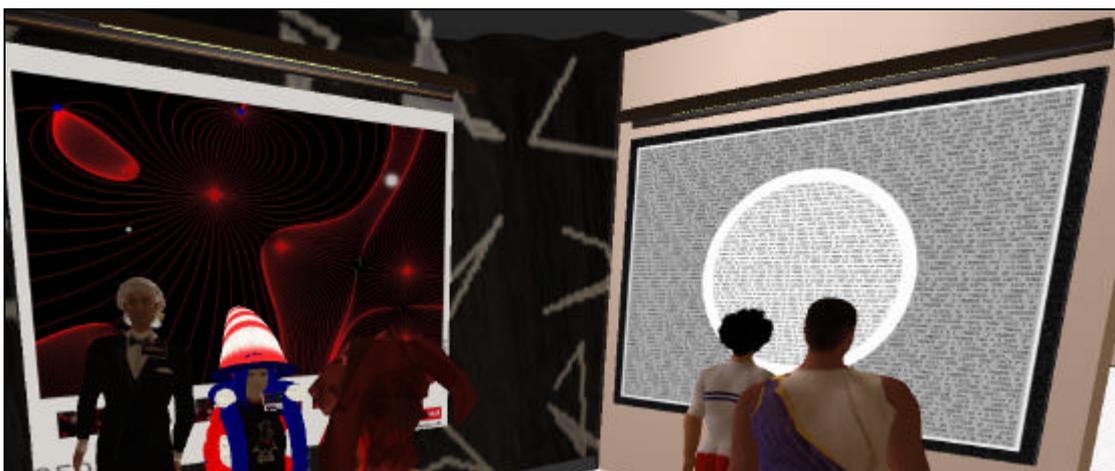
Pre-Opening of the Gallery at SIM Comet, 02.02.2008

Left: picture rezzed. Art by using Anyfield, based on software by Prof. Aegidius Pluess

Right: two Avatars wearing different tags: database performing a reload (rezzing the texture for the Avatar who is closer to the screen).

The gallery is, with one exemption which will be explained soon, free of costs just as the internet was in its early years. But the clock is ticking. Payment systems are an elementary element in the new world of SL. This explains why it is of such great interest for a lot of people. No change of technology is needed to put a price on a tag. Micro payment is far easier in metaverse systems than it is on the internet as a whole.

In the Linden Lab environment Second Life payment is based on Linden Dollar (L$). If you want to pay to an Avatar for an object let´s say 300 L$ (about 1 Euro) – you can do it with a few-clicks (set the amount and name of the Avatar, click on Pay and after an "are you sure question" it's done). Millions of real US$ are running in this world every month. DELL computers are one of the pioneers in this area. You can configure your "dream-notebook" in the virtual world; run benchmarks on it and - after you have paid - the product comes to you in RL via DHL or Fedex. The most important thing for DELL is the community aspect. Users are communicating about DELL products on a DELL SIM (and not on platforms in the internet that DELL has no link to).

G r o u p s are becoming important on the internet, but are unbeatable in VR-environments, so there is a restriction in SL to a maximum of 25 groups which an Avatar can be a member of. Joining and even establishing a group is easy. Search for groups in SL. Many groups are free; some have a one-time fee for joining.

Join a group

Real World

"Art As You Approach" does not only work in VR-environments.

VR		RL
Avatar	by	Visitor
Tag	by	RFID-chip
Virtual Gallery on a SIM	by	Museum / Gallery / let's say "Point of Art"
Screens	by	LCD screens

Next, define the positions of your LCD screens to meet the demands of your visitors. Having more than two or three rooms will allow groups on the fly optimal walks through the museum. Several rooms will also help to avoid visitors having to share their experience by seeing artwork selected by other visitors with a completely different taste. With only few visitors in a room or a sector of the museum at the same time, the computer system could easily solve the grouping problem. For large and heavy frequented places you could offer "group tags" to bundle a package of artwork that many visitors focus on. If, for example, one visitor wanted to see H.W. Franke´s artwork from 1964 until 1980 and another person preferred the artwork by Georg Nees between 1965 and 1975, you could offer a tag named "the old masters of computer art". Artwork by Vera Molnar could appear on a screen if a third person added their preference at the ticket counter without the previous two visitors having selected it. Nevertheless, the amount of artwork that could be "rezzed" in this digital RL-museum will increase by factors.

The era of "Art As You Approach" to present digital artwork could start right now. Everything is available: RFID tags for visitors to wear, RFID sensors to position around LCD screens. The current screen quality (and in a few months time screen sizes as well) is sufficient enough to present digital art to an ambitious audience. In addition, flat screen prizes are on a countdown to free fall. There will be a time when flat screens will be able to present modern art appropriately, like for instance the artwork by Roy Lichtenstein as well as by other masters of pop art. This type of artwork will most certainly not be the end of the line.

1) SIM <name> refers to a Simulated World of 62.000 sqm of virtual land managed on an internet connected high performance server owned by Linden Labs. To enable yourself (the user) to "see", "hear" and "talk" you need to download a user client from secondlife.com or other vendors of Linden-technology like onrez.com (CSI:NY) and then to teleport to a destination like Comet 148, 236, 68. Running second life requires a PC with quite a good processor; the main core should be 1 GByte and a good graphics card is needed for high speed rendering.

2) Linden Scripting Language, developed for Second Life by Linden Lab, San Francisco, USA. The LL-technology received an Emmy Technology Award in January, 2008 for "user generated content" by the National Television Academy at the Consumer Electronics Show in Las Vegas.

3) The art-project Franke´s Mondrian 1979 is fully documented at www.mondrian21.com. The software is free to download after the terms of services are accepted. Mondrian NxG is a 3D enhancement with an advanced parameter language to set up animated performances to show that Franke´s basic-design is "beam(able) up to the 21 century".

4) LOL please google this term if you want to know what it means, this will be one of your first steps towards becoming a prof in VR, if you do not wish to be identified as a "Newbie".

5) If your interest is focused in generating art by software and present this kind of artwork in SL, search for 'Enjoy Art As You Approach'. Joining this group is free of costs. Ask one of the owners via IM (Instant Message function).

This article uses the Avatar Names. Concept by Artefice Maximus; scripting by Kon Kronfeld; design by Alias Piek;

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The Trademark for the Technology "Art As You Approach" (AAYA) will be TAGREZ (pending) - A Tag to Rez.

About the author:
Reiner Schneeberger, born 1957 in Munich has an MBA in IT- and Management-Science and is accredited as an EOQ-Auditor (European Organization for Quality). He sees himself as an "art informatics" (Kunstinformatiker), since he has been working in IT-training with art students for over 30 years. To celebrate the 80th birthday of Prof. Dr. Herbert W. Franke he rebuild the first interactive computer art software, established on a TI 99/4 home computer in 1979, called Franke´s Mondrian art machine, to Windows XP in 2007.