

# Do Avatars Need Architects?

## *The Present and the Future of On-line Architecture*

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*The reflections contained in this paper concern not virtual reality created for one user, but rather on-line virtual architecture designed for members of Internet communities and players. Psychological and sociological aspects of inhabiting virtual architecture as well as several examples of technical solutions serve as an introduction to some predictions and guesses about the future of this type of architecture.*

*Keywords.* virtual worlds; games; avatars; on-line architecture;

### Intro

Virtual world available though the Internet has always been *idee fixe* of most cyberspace futurists, science fiction writers and movie producers. Since the beginning of the Net people have always dreamt about a world of digital architecture, parallel reality, where people can walk, work, buy and pay – simply live and be entertained. The Cyberspace user not only would watch computer-generated images, but also interact with others, who are logged in. In order to make it possible, his/her virtual being should assume equally virtual shape: an avatar. De Korchove (1997) compared it to wearing a digital mask for making identity more real in the Net. Referring to Webster's Dictionary (1989) the word "avatar" [Skt avatara descent] has two meanings: "the descent and incarnation of deity in earthy form" and "an incarnation or embodiment in human form; (...) complete manifestation or embodiment usually in a person, of concept, philosophy or tradition". To put it simply, gods, abstract beings, can live in the real world as avatars. In a new, Internet meaning this word defines a reverse idea: in the Net, physical bodies are able to interact with machines in virtual worlds.

Avatars appeared in the latter meaning in 1985, when the first 2D commercial network multi-user virtual world called Habitat was launched. It was Chip Morningstar, one of its authors, who called animated figures that represent people – avatars (Morningstar, Randall, 1991).

### Virtual worlds

One year earlier, in 1984, the term cyberspace was coined by the science fiction author William Gibson in *Neuromancer*. Cyberspace – a global computer network, which links all people, machines and information sources in the world – has no architectural form. It is the visualisation of data, their usage and storage.

In 1992 Neal Stephenson wrote a science fiction novel *Snow Crash*. Some action of this book took place in Metaverse – the first "real" virtual world, full of public buildings, houses, streets, transport services, advertisements – like in a true city. In 1995 a group of researchers, inspired by this book, launched AlphaWorld, a 3D virtual web of worlds with a window-based client, which was later called Activeworlds.

The Internet grows continuously, but these two basic visions of virtual worlds have stayed the same.

One is the world which pretends reality and has elements similar to the real world. The other – full of abstract visualisations of data, pillars made from data folders, electronic trails of bits – is popular in movies because of its spectacular appearance.

### **Basic human needs in virtual worlds**

G. Broadbent (1975) wrote about basic necessities without which a person could not live comfortably, or live at all. Building plays a disappointingly small role in assuring of these needs. This unsatisfactory conclusion is true for architecture in the virtual world, too. Broadbent then turns to the question of sensory simulation, or rather sensory deprivation. Similarly to the real world, a homogenous and unvarying virtual environment in the long term leads to boredom, unrest and lack of concentration. Virtual architecture should act as a source of sensory stimulation thus it can make live easier and more interesting, even more than in the real world. According to Donath (1996), an MIT Internet communities researcher, the virtual city is wholly mediated and synthetic: not only must the environment be created, but also the means of expression, the appearance of the inhabitants, etc.

A psychologist of the Internet users' behavior, P. Wallace (1999) mentioned that the most addictive thing in a virtual environment is the synchronic communication (in real time) and the possibility of creating many new personalities in various worlds, not necessarily visual. This way of thinking leads to the conclusion that it does not depend on the appearance of the particular world, whether the users are coming back or not, it is its inhabitants who are important. Moreover, the aim of all users is to be recognized. They are trying to achieve it for example by creating web home pages. WWW gives an illusion of being always in the center. It will not be important if it is in Poland or China, the page can always be found by the search engine. The situation changes when the icon of a person is a building in the virtual world. It sound promising – to make a house, which

will stay in the world, when you are not connected, always remind everybody about you and be part of your Net identity. I have mentioned Activeworlds at the beginning of my article not without any purpose. It is a world created not for social interaction, but for building. Rossey, a “Wired” columnist, wrote: “The persistent objects in AlphaWorld are all architectural: squares of paving stones, curtain walls, windows, fountains. It doesn't take much to become a master builder here. You can make your own building materials by cut-and-pasting pieces of existing buildings, and you can build anywhere you can find open space (...). The world that results is like a sprawling, out-of-control, multiplayer version of SimCity – only without rules, or Sims. It's full of half-finished buildings and roads that go nowhere. But at the same time, it's eerily deserted.”(1996)

Six years later nothing has changed. Maybe only except for just one thing: there is no possibility to find a place to build anywhere near the Ground Zero – NOW0 point, the location, where all users appear after logging-in. New buildings can be created only on the edges of the world, where nobody walks and watches. So the primary aim of building in virtual world loses all sense: if nobody can see your masterpiece, why lose time to design it?

### **Games**

However, the situation seems to be different in games. I do not want to take the floor in the never-ending discussion: are games good or bad? They are created, people play them, and, what is interesting, it seems that players' age is no object. On-line games are considered now the best and most interesting, because they give the possibility to contact with other people. If a game has a plot, quests, aims pretending real life challenges, the needs for buildings appears.

On the whole, on-line games can be divided into two general groups:

*First, games with non-changeable sceneries* (e.g. CounterStrike, Diablo) with so-called maps, dif-

ferent for every mission and not connected with each other. Maps can look very well, owing to the possibility of optimized graphic environment, which is on the players' hard drives. During using multi-user virtual worlds, which are primary designed for communication and the formation of communities, the user has to load every element of the world from the server. Therefore, every object has to be optimized for the possibly smallest size of its data, because people get bored when the world elements load up too slowly. Presenting some of the effects (e.g. shadows, reflections of light) is too complicated for the present state of the Internet in this technical solution, so designers do not show them. In effect the appearance of virtual world is without texture filtering, anti-aliasing, in 16-bit, too bright and intensive colours. If the obsessive pursuit to reconstruct the real world is for example in Activeworld doomed to failure, games, which use your processor and hard drive for renderings and have all their elements in your computer, can pretend better and better a movie-made reality. This course can be used by architects at the end of design process, for example for showing the inhabitants of whole city the vision of a public building, not yet existing, or by students, for presenting their completed projects. If maps in games are entirely finished, the only possibility to create something new is to prepare a user's own map. The situation is different in the other group of games:

Second, *games with the possibility to modify and change the environment* during the play, by players' actions. One of the most popular is Ultima On-line. What is characteristic of this kind of game is they are often full of social interaction. It is not only team dragon-killing, but also town building, guilds, parties and chance to totally personalize the world for a particular group of users. The technical solution is the following: every user has the basic version of the whole world on a hard drive. After logging-in on the game server his/her computer gets information only about the changes made by all inhabitants of

a world since the first running the game on the particular server. Every change of the world has an immediate effect on players' screens. But it needs an exchange of tiny amounts of data, because every element of the world is still on the player's hard drive. I think it is a good solution which should be used by architects/students during design process. There are no obstacles to make an initial virtual 3D sketch of a building, send it to an investor/tutor's computer with almost all possible elements, which can appear in the next phases of the design, and then only send messages about possible subsequent changes.

Coming back to RPG games, buildings are important in the players' virtual life. Not only do they act as houses in the real world: they are shelters, a place to meet people or storing players' goods. Additionally, they are valuable and expensive, therefore they are signs of wealth and social position. They are designed to be admired. Thus they play a role, which was the Stephenson's dream in Metaverse: architecture as an important part of virtual world. The author mentioned that the most beautiful homes in the virtual world are copies of Victorian or F.L.Wright's houses. The main building there has a simple form only because at the beginning of Metaverse programmers had no money to pay the architects. In conclusion, this gives architects a ray of hope that in the virtual world there will be demand for good, well-thought-out architecture, but never without a function.

## Conclusion

When I first decided to examine the role of architecture in virtual on-line worlds I did not even imagine what my conclusions would be. After first readings I expected that my paper would be a form of a manifest – calling architects to building in virtual worlds, because avatars – their users – have not yet realized that what they really need is a good architecture. Now I am full of doubts. Neither architects nor virtual worlds' visitors seem to be interested in creating architecture in on-line worlds. Firstly,

designers are used to perfect visualisation of their projects, and when they see the virtual world, rough, devoid of grace and in bad quality in comparison to the possibilities of good rendering machines, they do not want to have anything to do with it. Secondly, virtual worlds' visitors are concerned with communication and having access to reliable information. Unfortunately for virtual world architects, information and contacts with other people in multi-user virtual worlds, as Rossney (1996) wrote, always "(...)fights against depth and continuity. Chat room conversations always start from scratch; maintaining context from day to day is impossible. And chat is structured against thoughtfulness: if you don't say what's on your mind right now – you don't exist".

Nobody can undermine the role of a designer in the virtual world. Mark Pesce (1993) said: "We must do our best to construct a vivogenic cyberspace, one that supports both individual and community, where every person can extend their creative potential, free from pathogenic influences." Designers have magnificent possibilities of creation. But what they aim in the virtual world is to reproduce the reality, which, as I mentioned, is doomed to failure. But do virtual world have to remind us of the real? Is there any reason for conforming to physic rules if they do not exist in cyberspace? If the world is not used for design-process, which possibility I wrote about, it can be totally different from our every-day environment. For example in cyberspace we can build in every direction, so there can be worlds without preferring X and Y axis as "level". But will they be used, inhabited and explored?

Jonscher (1999) is calming down the worries, which had their beginnings in the 80s, that in the 21st century the Net will give people everything they need, cheat their senses, and, co-operating with our fridge and car, will not forget about their dinner. The town was supposed to be an obsolete place. Fortunately, the predictions have not come true. It is a well-known fact that we spend more and more time in front of our screens. But it is at the cost of

time we used to spend watching TV, whose viewing figures reduced in the 90s. People even more readily attend entertaining and cultural events. This kind of behaviour is a message: computers are still too weak for our brains, which are so complicated that they only need real world stimulation. Maybe, if computers were so fast that they would be able to render on-line every blade of grass and drop of rain, we – as common people, not architects – would be more interested in virtual on-line architecture. But if there were no function for it (apart from the role as a background), we could not demand guarantees that it would ever come into existence as a living and necessary part of virtual worlds.

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