Reflection and expression in an ego-shooter environment

Maia Engeli

Technical Ontwerp & Informatica, Architecture, University of Plymouth, UK

me@i-dat.org

This paper is about editing ego-shooter games to elaborate and express ideas by means of virtual spaces. Ego-shooter games were chosen because they are a popular media and offer different possibilities for their alteration. The interesting and most challenging aspect is the search for new kinds of designs for the dynamic virtual space of the game environments. Examples from art and workshops with architecture students illustrate these explorations.

Computer Games, Virtual Reality, Virtual Architecture, Digital Messages.

Introduction

Ego-shooter games are a popular kind of multi-user virtual reality environment. Reasons for their popularity include the attractiveness of game itself, the fact that they are relatively cheap, mostly open-source, their vivid online community exchanging information on every aspect of the game, and the possibilities to creatively expand the game. Ego-shooter games combine entertainment and participation, popularity and creativity, and the potential for "spontaneous networks" (Jahrmann / Moswitzer 2003). For these reasons ego-shooter games can serve as an appropriate means to explore architectonic interests in virtual reality.

The virtual imagery and the virtual body motion in ego-shooter games have a particular and narrow ranged typology. But there is a modern quality to the way space is read by the player from his or her first-person (=ego) perspective. The player's perception of the dynamic scenery focuses on the moving parts, which have to be categorized immediately into threatening or non-threatening object, enemy, friend, or neutral being. The adventure of ego-shooter games is designed for an absorbing, spatiotemporal perception.

Skinning, mapping, modding, patching

Skinning, mapping, modding, and patching are different possibilities to alter ego-shooter games like Unreal Tournament (UT), Quake, and others. Skinning is the creation of new visual appearances for changing the predefined players, weapons and predefined equipment by altering their textures. Mapping is the creation of new levels for the game with a 3D editor. Modding means to alter some of the programming code. Patching can mean any one of these possibilities or their combination.

Game patching has been discovered by numerous artists because it "offers the possibility for artists to participate in cultural intervention outside of a closed art world sphere" (Schleiner) and it is "a new way of 'talking back to the media', of engaging in a creative/destructive conversation with the activities and the products of industrial media culture." (Huhtamo, 1999)

Interesting examples include the "untitled game" series by the artist group Jodi (http://www.untitled-game.org/), where reduction of the visual level to abstract black and white pixels and modification of the sounds force the player to rediscover the most basic characteristics of an ego-shooter game. The "nybble-engine" by Jahrmann/Moswitzer (http://www.climax.at) is about modding the game so that the game-engine, humans, and robots collaboratively create different kinds of messages; shooting is transformed into sending anti-war messages to the president of the US; the sounds of the bots are modified so that the game becomes a synthesizer, the dynamically changing scene becomes a nybble-engine-movie. The 'Epileptic Virus Patch' by Parangari Cutiri is an example from Anne-Marie Schleiner's online exhibition 'Cracking the Maze'. "Lights strobe nonstop and pixels on the walls and ceilings pulsate in specific patterns

designed to trigger epileptic seizures. Her patch seems less a cruel joke at the expense of epilepsy sufferers than an attempt to introduce an 'epilepsy virus' that travels from a digital host to a human host, blurring the boundary between wetware and hardware" (Schleiner).

Ego-shooter games and the architecture of their virtual spaces

Spaces in first-person shooters are noticeably close simulations of physical spaces or fantasies of physically possible spaces. Scholar Lev Manovich criticizes that "today's games largely ignore the innovations of modern and contemporary art. Most have the same look, and a very unfashionable one at that (a rather gaudy take on realism). Why aren't there different visual styles? Why aren't there different representations of subjectivity? Why not borrow from cutting-edge typography and architecture?" (Springarm, 2001). Harvey Smith, project director at the ION Storm game studio, points out "in games, realism is not necessarily the goal. But if the world seems to behave consistently and in ways that the player understands, it seems that the player has less difficulty immersing himself in the environment, suspending his disbelief." (Smith, 2001). Peter Bell sees "the development of the signs of realism and interactivity not as a progressive movement towards a grounded, objective 'reality' but as a movement away from other constructed realities, from other games" (Bell, 2003). The question then is how to expand the familiar? New games or gaming aspects should be challenging but not too strange to master.

Espen Aarseth points out "the spatial representation in computer games is ambivalent and double-sided: it is both conceptual and associative" and "computer games are both representations of space (a formal system of relations) and representational spaces (symbolic imagery with primarily aesthetic purpose)" (Aarseth, 2000). Henry Jenkins opts for an understanding of computer games as "narrative architecture", because "choices about the design and organization of game spaces have narratological consequences", where "the core narratives behind many games center around the struggle to explore, map, and master contested spaces" (Jenkins). Steven Poole, the author of Trigger Happy, explains the "illusionistic distortions" that are inherent in the media's use of the scientific perspective and demands that "designers ought to have the courage to play with the very fabric of their unreality, to create ever newer kinds of space" (Poole, 2000).

Student Work

In the context of three multimedia courses at the Architecture Department of the Technical University of Delft the students edited game levels and conducted interesting experiments regarding specific spatial themes (see also http://maia.enge.li/gamezone). In these courses the students worked with the editor of UT2003, which supports the creation of new maps including new kinds of imagery, forms, spaces, and behavior, thus also very new kinds of messages. The capabilities of the UT2003 editor are restricted when compared to commercially available CAD programs. On the one hand this makes the editor easy and fast to learn, but on the other hand the editing possibilities offered to the authors are limited.

The introduction of mapping into the architecture curriculum is particularly interesting for the following reasons:

Game engines allow for very fast graphics including animated forms, textures, sounds and players.

Ego-shooters provide a multiplayer virtual reality environment in which the other users can be seen and interacted with; this allows for a liveliness that single-user virtual reality is missing.

Mapping means to create and implement in real size, 1:1 (in contrary to the usual design projects, where architecture students can only show their ideas as plans, images and models.)

The reality aspect also includes the possibility to invite others into the design at any time. Visitors can just be observed or invited to critic the design. This introduces the possibility for a fruitful feedback loop into the design process.

Mapping with the Unreal Tournament 2003 editor means to grab space out of the full, a brilliantly challenging approach for training the skill of thinking in terms of space.

Some exemplary results:

The primary interest was to use a virtual reality media to explore new kinds of spatiotemporal designs. The immersive, first-person perspective of ego-shooters supports this aspect very well as the examples from the courses show:

Challenging spatial configuration: Armand Bos and Jeroen Keuvelaar created a cave-like space with blocks reaching into the space. The form of the space and the blocks added different challenges to the navigation, like obstructions, the need to jump, double-jump, use lifts and jump off the lifts in very coordinated ways in the ascending part of the level and the careful planning of the descending because of the danger of falling to death.

Changing space: Martijn Hoenderdos and Ilse Karman created a circular space where textures change every time the player passes through. This dynamic adds a new dimension to the space and makes it seem geometrically larger then it actually is.

Flying platform: Martijn Hoenderdos and Ilse Karman introduced a flying platform in their level. A player, who can jump onto the platform, is in an advantageous position over the ones on the ground.
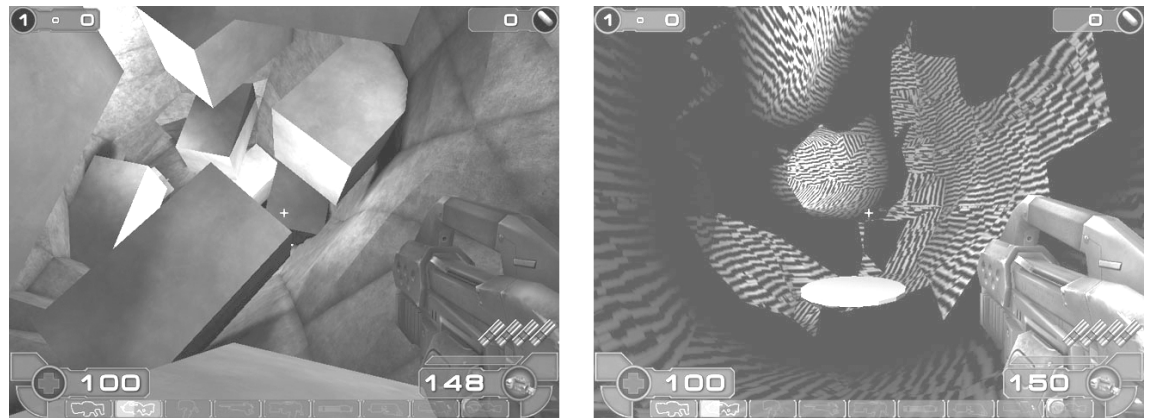

Figure 1: Challenging spatial configurations, and the flying platform in the changing space.

Growing buildings: Ralph de Schipper has created a level with buildings that grow out of the ground when the player gets close to them or steps on them. The graphics are much reduced allowing the dynamics to become the most important aspect. The level is great to play against monsters and other players, because the behavior of the buildings makes them a third kind of being to take into account.

The maze: Inspired by the film 'Cube', Marlies de Vries has created a maze-like level. The space develops along a square grid and has identically patterned walls everywhere. There are non-solid walls that lead to weird and disturbing spaces. On return into the main maze space, there is no way to orient oneself and desperation will push the player to check out the next unsettling 'off-space'.

Conclusions

The workshops have shown that editing ego-shooter games is an interesting approach to explore expressiveness in virtual reality and can be used in an educational environment to reflect upon architectonic issues, to communicate ideas, and to create strong and subversive messages. New kinds of narrative architecture that would make a game commercially successful have not resulted from the workshops, but the explorations into new kinds of spatiotemporal designs can be seen as a step in this direction.
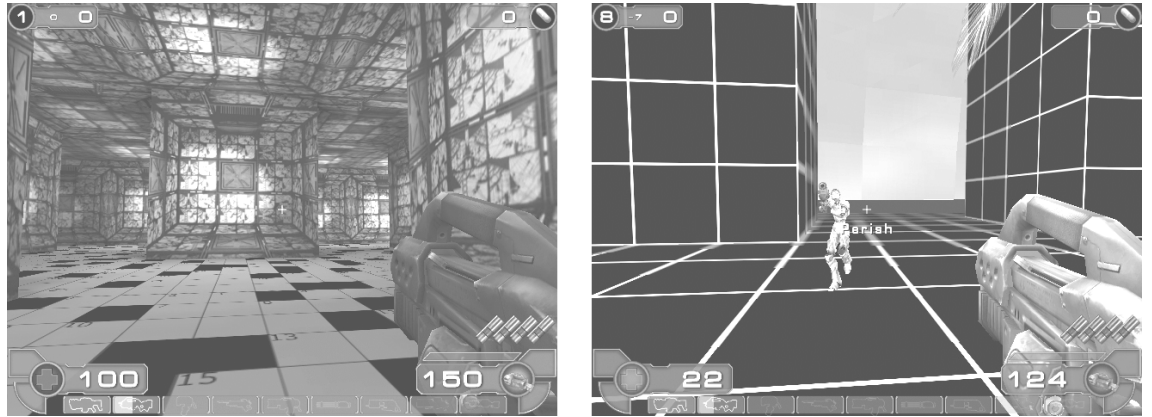
Figure 2: Growing buildings and the maze.

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