LIVING-ROOM2 — Domesticating the Multiverse

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The research project "living-room2" is an ironic take on future consumer culture. It is a physical room decorated with familiar furniture and objects from daily life: a white couch, a cabinet, a mirror, reminders of the global player IKEA. Wearing a HMD, being tracked when changing position and carrying a handheld device, visitors can interact with the space and furniture interfaces and select different narratives and landscapes.

Introduction

The project title 'living-room2' is ambiguous. It can be interpreted both as a living room and a room that actually lives. 'living-room2' intends to integrate these two concepts, aiming to create a dynamically extendable room by using Augmented Reality (AR)-technology.

The project's main research question is: what could augmented reality mean to us in daily life, and how could it influence the future design of domestic spaces? Will we accept the virtuality of AR in daily life as a reliable way of perceiving? If so, what new language and level of quality would this perception require in terms of aesthetics and design?

'living-room2' proposes a design vocabulary for a hybrid, 'third' reality, that merges 'real' and virtual space in a credible way. It presents a scenario for a future experience of domestic hybrid reality spaces and explores new ways of seeing, perceiving and interacting.

Instead of merely developing new AR tools for applied fields, like assembling aids or visualization tools for (interior) design, architecture or communication, the project wishes to question the specific 'trait d'union' between virtual and material spaces. This is articulated in the project's specific approach towards AR as an immersive application: the room dynamically negotiates between 'real' and 'virtual'. Thus, the room itself has become the object of transformation. As an extended space, it embodies a hybrid between a dynamic environment, an immersive movie and 'interactive wallpaper'.

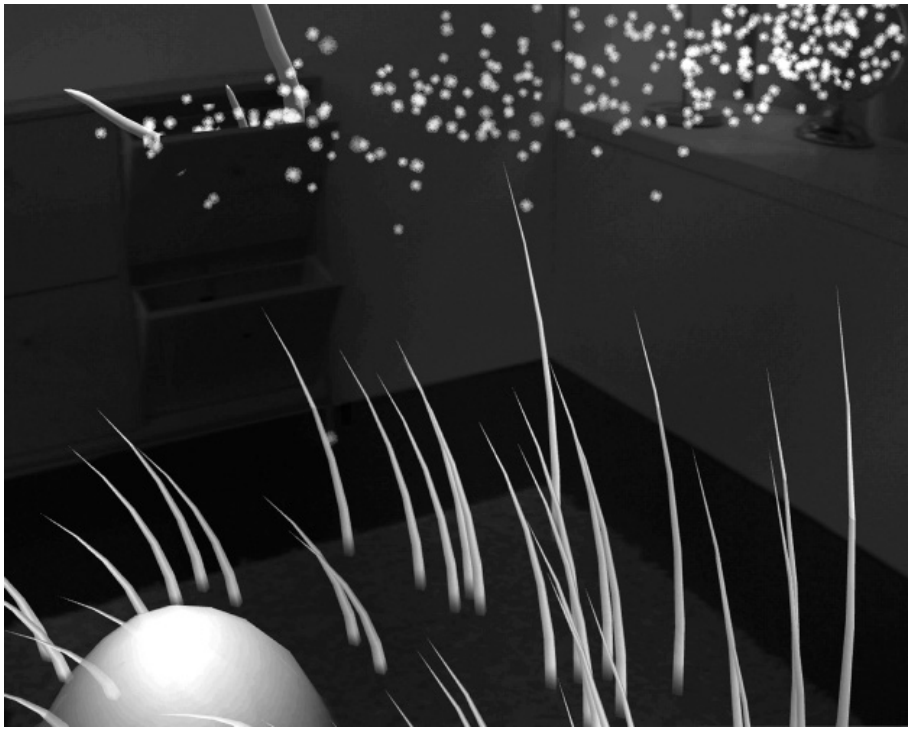
'living-room2' refers to a possible future domestic culture of escapism and consumerism. Just as visitors would normally purchase their furniture, now they can customize their desires by selecting their imaginary landscapes or visualizing their fantasies. 'living-room2' could be seen as a simulation of a 'future lifestyle experience'.

Reality jamming: synchronizing realities

Since the birth of the computer and the rise of the Internet, different theoretical concepts of parallel virtual worlds have emerged. Examples include Neil Stephenson's Metaverse,[1] a fictional, virtual 3D world inhabited by avatars, and David Gelernter's Mirror Worlds, on-line, real-time mirrors of the physical world.[2] These concepts, both written in the early nineties, describe the rise of virtual microcosms, screen-based worlds that exist parallel to the physical space.

Though in 2008, the universes of metaverse and mirror worlds have left the screen and entered our daily environment. Ubiquitous and embedded computing applications are omnipresent, weaving a hybrid landscape of virtual and material spaces. Parallelism is being replaced with a more inclusive approach — one that merges different realities in terms of time, space and matter. Which possibilities could this 'third space' offer and what does it mean for our perception of 'real'?

The concept of 'multiverse' might offer an appropriate approach for our ubicomp society. In *Minds, Machines, and the Multiverse. The Quest for the Quantum Computer* (2000)[3], Julian Brown proposes a 'multiple universe' in which 'real' and virtual seamlessly collide. Recently in



Screenshot of the scenario "ECOSYSTEM"

a presentation in Amsterdam, marketing guru Joseph Pine introduced an applicable model of this multiverse for communication purposes. It included eight worlds in which different co-relations between space, time and matter are negotiated (Physical world, Augmented reality, Augmented virtuality, Warped reality, Mirror world, Alternate reality, Physical virtuality and Virtuality).[4] His main question: how can we communicate between these different worlds?

For design purposes, the multiverse raises similar questions: how to synchronize different spaces aesthetically and create a seamless experience? In other words: how could we design the multiverse? 'living-room2' aims to create a simultaneous experience of the 'real', 'the mediated' and the 'virtual'. It explores possible relations between real – real, real – virtual, virtual – real and virtual – virtual. To create this immersive experience, the project focuses on both audiovisual (extended vision, multiple perspective) and sensory perception in material space. For example, 'living-room2' examines the function of touch as a means to synchronize physical and virtual space. Objects and space are used as intuitive interfaces. An example is the sensory equipped furniture visitors can manipulate both physically and virtually, uniting time, space and matter from different realities.

Domesticating the multiverse?

'living-room2' explores the future of the concept 'home', a private space that is becoming more and more commodified by global players like IKEA. However, as a personal space, a living room also reflects our identity. The intimacy of our home encourages us to visually extend it with our desires, fears and fantasies. 'living-room2' approaches the room as both a physical and mental extension of ourselves. Integrated in one space, it becomes a new room, a hybrid private place.

Could this be our future experience of 'home', an extension of our minds? What would our domestic multiverse look like? And for the field of (interior) design: will its future involve the integration of mental and physical space, and if so, what would be the ramifications?

'living-room2' offers two main cross-world narratives that reflect possible fantasies and desires connected to our home environment. 'AR-Décors' is an ironic fiction referring to commercial uses of AR. When entering the space, the visitor becomes a future 'AR-Décors' consumer, browsing the new 'Habitat-Collection', which offers a broad spectrum of exotic areas. This reflects our desire for both escapism and the sublime landscape — as an extension of our domestic space.

Exhibition at the Museum of Communication in Bern, Switzerland, July 2007

'Ecosystem' transforms the audience into a 'Fremdkörper' in its own environment. It invites visitors to delve into an obscure ecosystem inhabited by virtual, abstract creatures that interact with them and eventually take control of the room. In this artificial space, 'Ecosystem' confronts us with our alienation from nature.

As a cross-world narrative experience, 'living-room2' offers the interactor options to simultaneously escape and to comfortably remain home. The desire for the domestic and the alien landscape come together in one space.

A future of home design

Recently, as a follow-up to 'living-room2', the spoof website 'AR-habitats' was developed. 'AR-habitats' intends to visualize future scenarios for domestic multiverses. More strongly than 'living-room2', 'AR-habitats' examines 'intimate landscapes' that arise from the private space of home. For this purpose, it introduces options such as bio-feedback and neuro-feedback sensors. New genres include 'spiritual', an atmospheric world co-created by biofeedback sensors that measure the user's mental state, and 'horror', a game-like narrative in which the pace of the story is determined by the user's heartbeat.

Though 'AR-habitats' is created to present an ironic view of technology and design hypes, at the same time it proposes a future scenario for (interior) design in times of ubicomp and multiverses. From this perspective, the project wishes to encourage design practitioners to think critically about their future role as mediators between mental and physical spaces. Would we allow IKEA to invade our private mental space?

living-room2: http://projekte.idk.ch/livingroom
AR-habitats: http://arhabitats.com

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1 Stephenson, Neil. 1992. *Snow Crash.* Bantam Books.

2 Gelernter, David. 1992. *Mirror Worlds, or: The Day Software Puts the Universe in a Shoebox... How It Will Happen and What It Will Mean.* Oxford University Press.

3 Brown, Julian. 2000. *Minds, Machines, and the Multiverse, The Quest for the Quantum Computer.* New York: Simon & Schuster.

4 Schutz, Bart, April 9 2008, "The Multiverse (the Universe, Augmented Reality and beyond): verplichte inspiratiekost voor e-marketeers", Frankwatching http://www.frankwatching.com/archive/2008/04/09/the-multiverse-the-universe-augmented-reality-and-beyond-verplichte-inspiratiekost-voor-e-marketeers/, last visited April 28 2008