



WORKSPACE
UNLIMITED

— WORKSPACE UNLIMITED

Workspace Unlimited (2001), founded in Belgium by Thomas Soetens and Kora Van den Bulcke, is an international collective that is at the forefront of media art, creating some of today's most compelling virtual worlds and interactive installations. The collective's projects engage with Hybrid Space, territories that emerge when physical spaces intersect with the enlarged public spheres of electronic networks and immersive technologies. As technologies guide the way we experience and conceive of space, Workspace Unlimited and its international team of art and technology specialists are exploring Hybrid Space with the unrealized potential of game environments to simulate and reshape architectural spaces. This ongoing research investigates and expands our understanding of the relationship between space and technology, as their simultaneous and reciprocal existences continue to invade both our real and virtual spaces. In this way, Hybrid Space challenges traditional conceptions of space and time, reality and simulation, and perverts the unidirectional implication of the real and the simulacrum.

Workspace Unlimited is frequently invited to participate in lectures and presentations, and has been commissioned to create original large-scale works and site-specific installations by leading media art institutions and festivals around the world. These include the Experimental Media and Performance Art Center – EMPAC (New York), the V2_ Institute for the Unstable Media (Rotterdam), the Museum of the Moving Image (New York), LABoral Centro de Arte y Creación Industrial (Gijón, Spain), the Society for Arts and Technology (Montreal), Elektra festival (Montreal), and the Nabi Art Center (Seoul). The collective's work has been highlighted in numerous publications, such as Space Time Play (Birkhauser 2007) and Interact or Die! (V2_Publications 2007). In addition to its artistic practice Workspace Unlimited initiates research projects and workshops in collaboration with an international network of artists, researchers, art institutions and universities.



KORA VAN DEN BULCKE/

(1972) graduated from the University of Montreal's program in Architecture and is a recipient of the Gold Medal of the Royal Architecture Institute of Canada (1996). Her vision of architecture is not limited to the design of future physical spaces, but also includes the creation of "Hybrid Space": mixed/augmented environments that coexist within the global culture of the Web. Though conceptually engaged with the materiality of architectural space and urban life, her creative output focuses on immersive technologies and electronic networks that activate a new field of relations between people, architecture and the broader environment.

THOMAS SOETENS/

(1972) graduated in 1992 with an MFA in Visual Arts from the St-Lucas School of Arts in Belgium. After practicing as a painter from 1992 to 2000, he co-founded Workspace Unlimited in 2001 and is currently its leading artist. Soetens is the creator of a unique conceptual framework, an international hybrid platform that reflects the impact of contemporary technologies through new forms of interactive and participatory artwork created with computer game engines. His work addresses the intrusive character of technology, as well as the human (un)consciousness of the hybrid realities that emerge between artificial environments and their inhabitants, both virtual and real.

TEAM/

For each project, Workspace Unlimited assembles a team of researchers, architects, artists, sound designers, composers, writers, animators and modelers from its international network of freelancers, companies, art centers, and universities. At the team's core are Thomas Soetens and Kora Van den Bulcke, Matt McChesney and Patrick Bergeron.

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With the support of
the Flemish authorities



THEY WATCH

2006-2009

Commissioned by the Experimental Media and Performance Art Center, New York

They Watch is an immersive art installation with virtual characters literally watching visitors. Several duplicates of the virtual characters – one man, one woman, and both portraits of the artists – surround and interact with visitors who are tracked as they move about the physical space and even projected into the virtual space. Years of research and development with game technology have resulted in a 360° audio-visual environment, exploiting a 15-meter-wide panoramic screen and a 32-channel sound system. The subtle collaboration of the real and virtual agents and environments conflate to engender a Hybrid Space where the observer becomes the observed.

Visitors' movements activate visual cues and affect the characters' spontaneous, unscripted behaviors so that the installation's visual and sonic compositions are uniquely influenced by the visit. Figuratively wearing a virtual camera causes the on-screen characters to approach and to retreat, analogously altering the soundtrack; characters that, as visitors will come to discover, are aware of their presence... *They watch*. They also whisper under their breath, sounds that surround visitors and, from exceptionally close to the screen, even seem to emanate from inside the visitor's mind.



THE UNCANNY EXPERIENCE OF BEING OBSERVED AT THE VAGUE INTERSECTION OF REAL AND SIMULATED SPACES DISORIENTS AND ENGAGES VISITORS. THE PIECE BECOMES A COMPOSITION IN MOVEMENT WHEREBY NON-LINEAR BLENDS OF REAL AND VIRTUAL FORCE VISITORS TO CONSIDER PERSPECTIVE, AGENCY, AND THE DISTINCTION BETWEEN AUTHENTIC AND IMAGINED AS THEY WATCH.



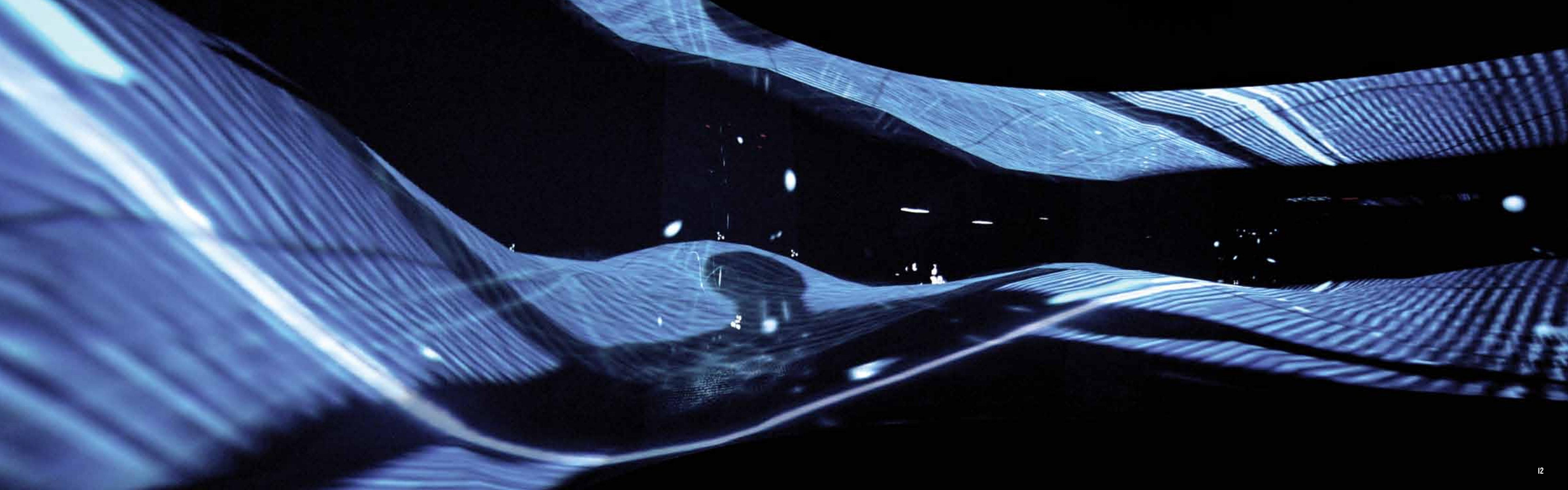
IMMERSIVE PERFORMANCE-LECTURES – 2008

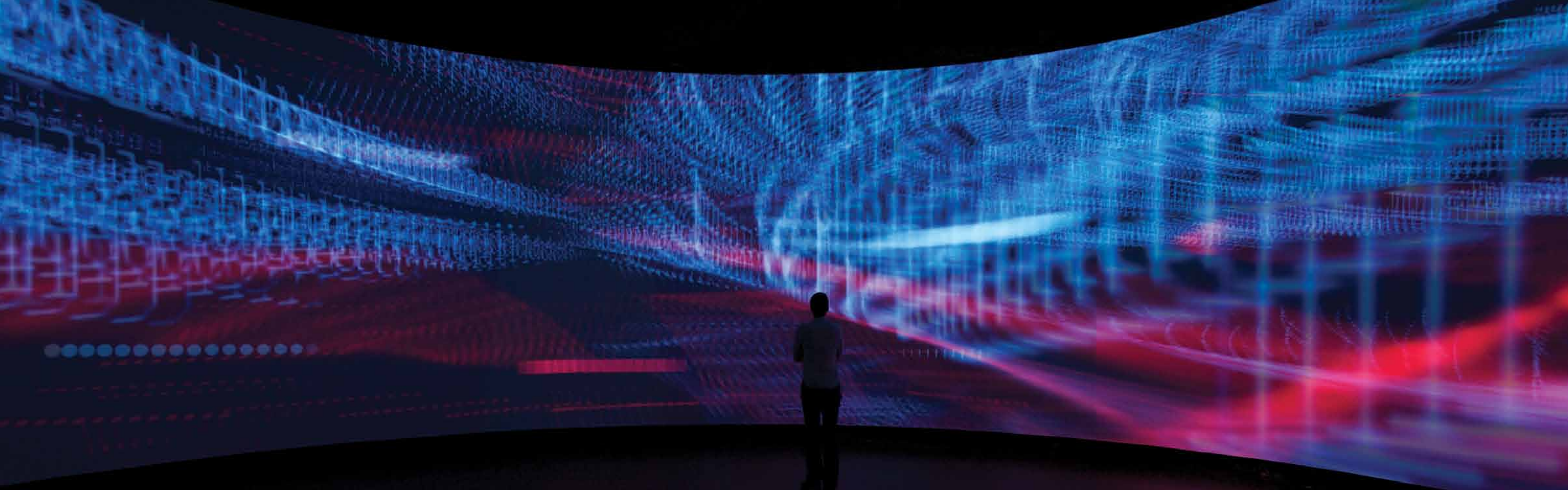
HYBRID SPACE & THE PANORAMIC SCREEN



Commissioned by the Experimental Media and Performance Art Center (EMPAC), New York for its inauguration

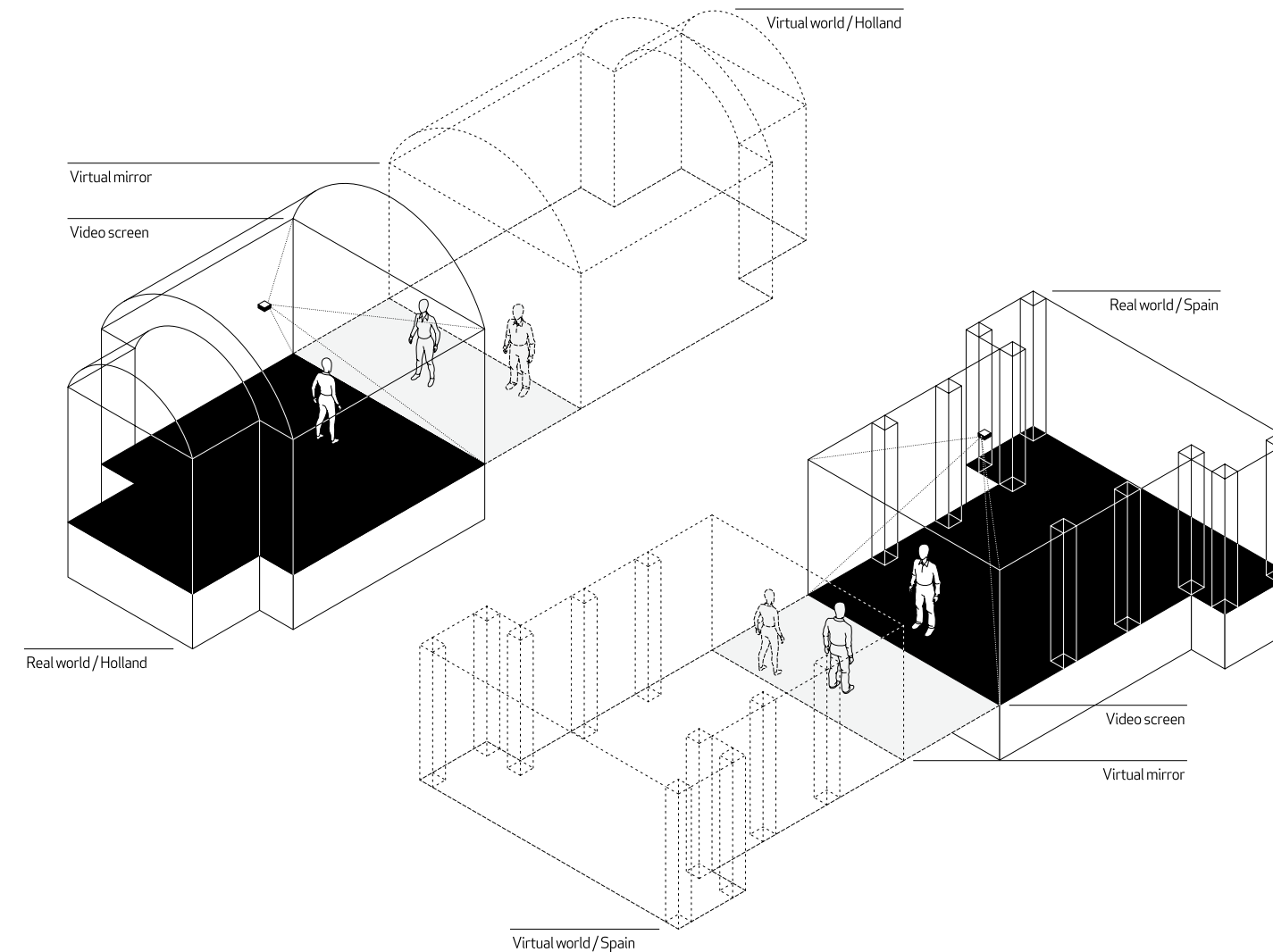
As part of the inauguration of the Experimental Media and Performance Art Center in New York, Thomas Soetens and Kora Van den Bulcke were invited to present a series of performance presentations in the context of a 360° panoramic projection screen. The lectures took the form of a 45-minute performance that immersed the audience in an ambiguous Hybrid Space, conflating the real world with a live, animated projected environment. They presented several projects created with video game technology that go beyond the concept of mere virtual reality and reinterpret augmented environments. To realize this project, Workspace Unlimited initiated the Game-O-Rama research project in 2008.





SPAC[E] SCAPE

SITE-SPECIFIC
INSTALLATION
SERIES
– 2006-2007



2007: Commissioned by STUK Art Center, Leuven for the Artefact festival / 2007: Commissioned by LABoral, Spain, for Gameworld / 2007: Commissioned by V2_ Institute for the Unstable Media for the DEAF festival / 2006: Commissioned by the Art Center Nabi, Seoul for Connected

Usually, a video screen forms a separation between our physical environment and the virtual space it displays. The goal of *Spac[E]scapes* was to trigger new perspectives of the meaning and experience of overlapping physical and virtual realities by bringing both spaces closer to each other in a third space that acts as an intermediate space. This installation raised issues regarding presence, representation and identity in media culture, as the relation between real and virtual becomes increasingly complex.

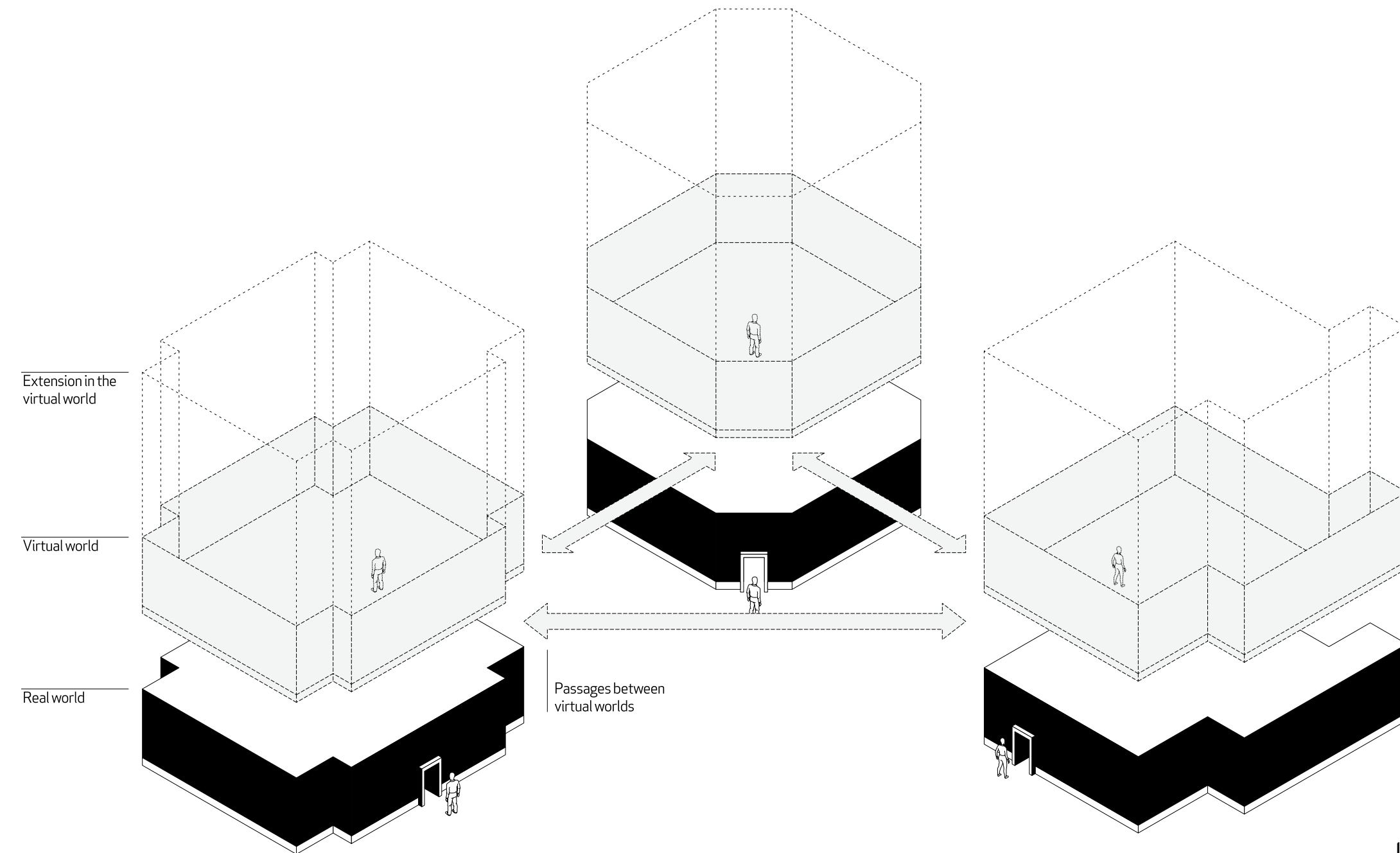
A virtual simulation of the exhibition space was recreated and seamlessly integrated within the architectural space of the museum as a digital *trompe-l'œil*. Two virtual characters, or avatars, were standing in the simulated space with their backs to the observer. In their virtual space, they watched video captured by two webcams of visitors perusing the installation. This capture was displayed within the virtual architecture, essentially becoming another virtual space. From the installation's computer terminal visitors controlled the avatars to navigate the virtual space, where approaching the virtual video screens led the avatars through portals to other virtual worlds networked in Ghent, Rotterdam and Montreal. Visitors standing in front of similar *Spac[E]scapes* installations in other spaces also appeared reflected in the Hybrid Space, and all the visitors could interact with each other, from different places.

COMMON GROUNDS

International Network of Hybrid Space

Workspace Unlimited explored new forms of art, architecture and sociability by combining hybrid reality events and installations in virtual 3D worlds created and networked together over the Internet. Common Grounds, this artist-driven platform, investigated the artistic potential of multiplayer gaming technology and augmented space, and developed critical dialogue and research opportunities among academics, as well as members of the industry and art communities.

Common Grounds installations are unlike traditional game spaces since they are inextricably linked to their physical surroundings in existing public spaces and architectural environments in Europe, Asia and North America, while fundamentally remaining available in the Common Grounds network. Examples include *Extension* (2002), created for the Society for Arts and Technology in Montreal, *Devmap* (2004), commissioned by the V2_ Institute for the Unstable Media in Rotterdam, and *Implant* (2006), linked to the Vooruit Arts Center in Ghent.





COMMON GROUNDS

IMPLANT – 2005



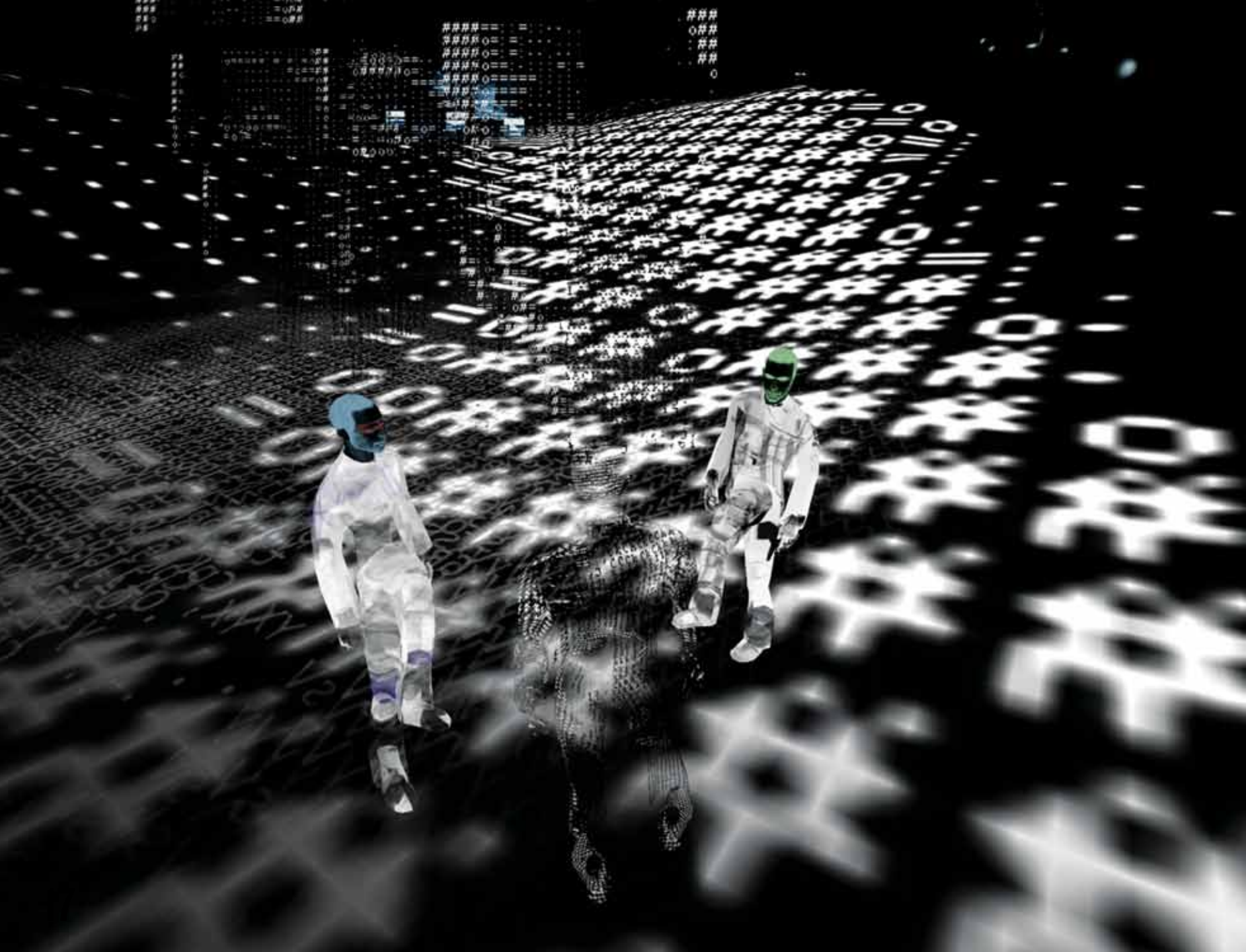
Commisioned by the Vooruit Art and Performance Center, Ghent

Implant is situated inside the Art Nouveau building of Vooruit, a performing arts complex in Belgium. Navigating, the installation projected onto various surfaces, online visitors from Montreal, Rotterdam, and Ghent explore together what first appears to be a sumptuous 3D simulation of Vooruit – a large maze of theater spaces, cafes, meeting rooms, and offices. Visitors move through the virtual space the same way they would move through physical space – walking upstairs, through doors, down corridors, around corners, inside and out. But this logical order soon gives way to architectural and spatial inversions and distortions.

As visitors move through the building, their glowing paths reveal a hyper-mediated environment of text, real time chat, and both pre-recorded and live streaming videos. These videos feature artists, activists, and curators reflecting upon the conditions of urban life, technology, cultural hybridity, and the virtual self. Each visitor's trajectory through *Implant* reinterprets the building's narrative and its function, offering multiple, simultaneous points

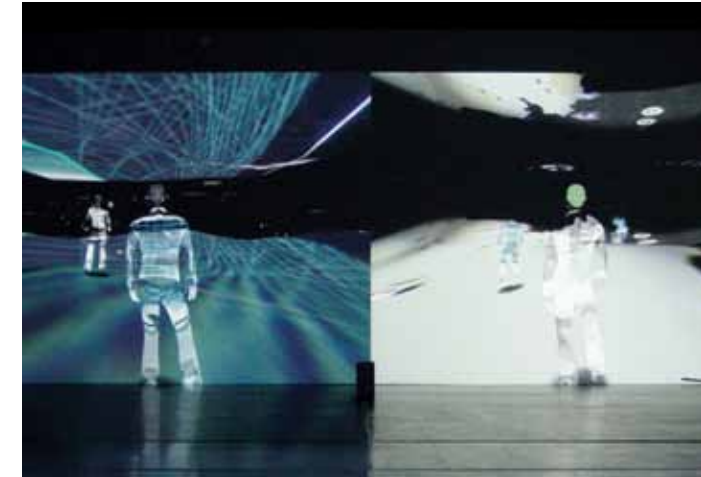
of view that cannot be easily reconciled. Viewers share their real-time journeys with each other via in-world virtual cameras that immediately project what they see onto designated walls throughout the building. What appears to be a mere projection, however, is actually a functioning 3D rendering of that portion of the world, which serves as a portal allowing viewers to instantaneously enter the image and join their fellow users in another part of the newly constructed world.

Outside, from the street, passersby peering through the window into Vooruit's lobby actually see a projected simulation of the lobby, seamlessly integrated into the building's façade. Instead of the usual theatergoers purchasing tickets and socializing with friends, these observers see the avatars – real-time graphical representations of actual people in Vooruit – co-mingling and exploring the same simulated space with their counterparts. At the same time, a webcam outside Vooruit captures the scene on the street, projecting the performances of everyday life back into the virtual world.



COMMON GROUNDS

DEVMAP – 2004



Commisioned by **V2_Institute for the Unstable Media, Rotterdam**

Devmap was concerned with time. The work was commissioned by the Dutch Electronic Art Festival (DEAF), a biannual international interdisciplinary festival organized by V2_ in Rotterdam. Here, the artists asked how a temporary media art festival might be re-coded as a constantly expanding, spatially indeterminate environment influenced and shaped by users' individual paths through realtime data. They did not attempt to document the festival, nor did they try to re-produce it for a remote audience. Instead, *Devmap* produced a poetic memory of the event – full of lapses, mutations, and shifting juxtapositions. An organic archive of the event was fed back to each festival participant as a unique individually created experience.

During the festival, *Devmap* was tied into the festival's network, intercepting live audiovisual streams and data flows connected with the festival and the other new-media artworks on display. Webcam images of events, broadcast streams, artist interviews, online webgrabs and reports were captured as they occurred in real time.

These were instantly ported to a computer, while a modified game engine continuously retrieved, remixed, and morphed the data, which participants accessed at the festival or remotely in Montreal and Ghent. As members of an online audience moved their avatars through the environment and chose particular paths to explore, the software responded by transforming and manipulating the data into a constantly morphing fluid virtual world. Moreover, the itinerant paths that users created through this vast dataspace were literally mapped onto their avatar's skin, communicating to others where they had been and what data they had encountered. But whereas designers of most virtual worlds take pains to create visual stability and consistency so that users see and act upon the same visual cues over time, Workspace Unlimited undermined this stability, presenting different versions of the data to each user. So while two visitors could actually see each other's avatars, chat together, and occupy the same virtual space, they simultaneously experienced unique parallel realities.



COMMON GROUNDS

EXTENSION – 2003



Commissioned by the Society for Arts & Technology, Montreal

In *Extension*, Thomas Soetens and Kora Van den Bulcke built an online virtual architectural extension “on top of” the Society for Arts and Technology (SAT), and installed it on computers in the building in Montreal. Visitors inside the SAT, together with a Common Grounds audience, accessed *Extension* by first entering a digital replica of the building’s ground floor lobby, and then riding a fictional elevator to a dazzling virtual Zeppelin-like world of glass and steel.

Once inside the extension, users explored a number of interactive digital art installations created with the Quake 3 gaming engine including: “Storyscape”, a 3D non-linear story with text and meanings literally distorting and shifting according to users’ movements; “Blind Love”, a game requiring two people to cooperate in order to find their way out of a darkened labyrinth; and “Infinite 60 Seconds”, a dynamic and generative soundscape based on a 60-second recording of a watch. One of the most disturbing installations, “Diplomatic Arena”, consisted of three deafening and visually bloody “levels” depicting

the ethical bankruptcy of pre-emptive killing. Computer-controlled 3D players (bots) depicting key figures in the media’s terrorism spectacle were programmed to engage in an endless and horrific cycle of futile self-destruction. Each time one bot killed another, it was immediately resurrected into the same never-ending cycle of retribution.

Extension challenged visitors to consider how a real building might have an ongoing relationship with its networked virtual double. The artists suggested that the virtual extension exist simultaneously as a functioning addition to the actual building’s artistic programming and values, offering a new networked public temporally simultaneous activities in spatially discontinuous locations.



NON-LINEAR STORYSCAPE

- 2003

Storyscape depicts the intimate seven-chapter exchange of thoughts between two people. But the interactive story unfolds in a non-linear way based on the spatial position and movements of its participants. Navigating the responsive 3D space determines the implication of the narrative, so each individual user generates a unique experience and interpretation.



DIPLOMATIC ARENA – 2002

Diplomatic Arena is a trilogy exploring random and reflexive violence, conceptually translated into artificial intelligence and immersive image-making. In three separate installations, each based on a modified Quake 3 game engine, computer-controlled bots are programmed to pre-emptively destroy each other. These bots represent political figures and members of international terror organisations. However, the bots are programmed to consider each other bot as comprising one part. Each time they are eliminated, they are resurrected in the same perpetual cycle of endless destruction.

In each tier this premise unfolds in a different setting, each with a particular set of destabilizing laws of physics regarding space, time and navigation. The user can adopt two possible perspectives as a spectator: a second person or a third person.

Tier 1 – The first installation is set in a claustrophobic arena. The soundtrack comprises the mash-up composition “Rocked by Rape” by the Evolution Control Committee (ECC), built with samples of ex-CBS anchor Dan Rather, as he imperturbably describes various gruesome acts.

Tier 2 – In this installation the users are subject to various levels of gravity. In a turning cube with eight distinct centers of gravity, the bots consider their own perspective to be the only correct one. Depending on which bots visitors follow, they will observe other bots on the ceiling and walls in other gravity zones. In the floating mode, an overview of the installation reveals that the cube is rotating around three axes, which arouses a sense of disorientation and instability.

ETERNAL 60 SECONDS – 2003

Eternal 60 Seconds offers visitors a dynamic and generative soundscape based on a recording of a ticking clock. Several dozen loudspeakers, in constant movement around a virtual room, guide the soundscape by means of specific sound filters. The composition, which is variable in space and time, only assumes any meaning in the presence of an audience.

Tier 3 – The third installation is set in an infinite space surrounded by diffuse, ethereal lighting effects, where gravity does not apply and time runs slower than it would in the real world. The scene opens like a fresco of an aesthetic blood bath, a vision of a “heavenly hell” that adds religious connotations to the cycle of violence and pre-emptive destruction. The camera then makes slow circular movements around characters like a ritual of purification.

BLIND LOVE – 2004

Contrary to the object of most shooter games, to seek and destroy, *Blind Love* requires players to cooperate. In a pitch black labyrinth, two visitors must collaborate to find their way out. Armed with rocket launchers that illuminate the walls with exploding particles, every shot discloses a small part of the labyrinth’s architecture. Like lovers, they must blindly trust each other in order to survive, and they must approach each other despite the danger.



SELECTED WORKSHOPS, RESEARCH & CONFERENCES

GAME-O-RAMA

INNOVATIVE PANORAMIC PROJECTION FOR GAME TECHNOLOGY – 2008-2010

Research project funded by the IWT

Game-O-Rama was a research project involving groundbreaking forms of immersion and interaction with game technology. The goal was to project a game engine onto a panoramic screen shaped like a ring around the viewer, with a multi-channel sound system. This research would enable Workspace Unlimited to present the Common Grounds projects and *They Watch* in the immersive AVIE screen at EMPAC, designed by Jeffrey Shaw, and offer visitors an uncompromised experience of Hybrid Space. The results were an optimized and unique method for calibrating and projecting a realtime game engine onto the 360° screen without compromising the resolution (6 continuous images of 1920 x 1080 pixels) or frame rate (60 fps uninterrupted), and a method of producing realtime spatialized sound over 32 speakers.

During several residencies at EMPAC preparing for Game-O-Rama, Workspace Unlimited used state-of-the-art equipment to devise a means of using a single computer to project the 360° image using the native resolution of the video components. The environment became a spatially realistic visualization of virtual space and virtual characters, 5m high and 12m in diameter. This important breakthrough was recognized by *Wired* magazine, IBM's Director of Research and NVidia, and enabled the artists to present earlier works in the new immersive format. This ability to warp an image to fit a circular screen could easily be used to fit the image to any shape, a possibility Workspace Unlimited would later explore in *Realtime Unreal*. A further breakthrough added an infrared tracking system to the environment, allowing visitors to interact with the game engine with just their body movements.

VIRTUAL ART CENTER OF THE FUTURE 2006

Research project in collaboration with the Vooruit

In light of a digital revolution, cultural institutions must take the appropriate steps to incorporate new media, and to provide opportunities for new possibilities of communication and interaction with the public. The Vooruit Cultural Centre, along with Workspace Unlimited and various strategic partners, organized this project to provide a technologically innovative answer to the social and scientific questions raised in this context. The goals were to research and construct a prototype of the cultural centre of the future, and to raise awareness of issues and challenges facing new media sectors, while offering newly-born digital art in addition to digitized existing productions and collections.

The project sought to develop three practical applications: a web portal, a 3D digital platform, and a decentralized collective Customer Relationship Management application (CRM) that could serve the entire cultural sector. These initiatives included research into the international state-of-the-art of digital creation, presentation, communication and interaction, focussing on the effects on cultural participation, and a study of specific expectations and needs of various actors. The integration of these three demonstrators into one cohesive digital platform is the major innovation of this project. Ensuring interoperability was the primary objective in the development of the individual prototypes. Research for each prototype included their legal framework and possible business models, emphasizing distinctions of vertical and horizontal models of trust.

BREAKING THE GAME 2005-2006

Workshop and series of virtual conferences

Workspace Unlimited organized Breaking the Game, a series of interdisciplinary workshops and online symposia that brought together competing theorists and practitioners to build, debate and reflect on virtual worlds, computer gaming, immersive technologies, and new possibilities for artistic practice and experience. Taking place both online and offline, the workshops opened up the prospects of applying game modifications to everyday life, as virtual technologies mediate physical spaces and human movements in increasingly complex and dynamic ways.

Networked across multiple cities, the conference and workshops were organized around three core themes: “Hybridity”, “Overclocking the City” and “The Virtual World as Interface to Self and Society”. Participants considered gaming and other virtual technologies in relationship to building and designing cities, navigating and experiencing urban life, constructing identities, and creating and maintaining social interaction.

Architects, visual artists, filmmakers, choreographers, anthropologists and curators debated how these technologies and associated audiovisual cultures have impacted the work and ideas of their disciplines. For example, how might anthropological fieldwork and ethnography change if its practitioners composed 3D virtual worlds rather than essays and books; if anthropology's disciplinary object was an updatable, media-rich, networked and navigable space, rather than a text? How might online gaming and modification continue to challenge and expand the boundaries of filmmaking and public performance? How could the design and implementation of a material building have an ongoing relationship to its networked and virtual double? Could the public's social interactions with a virtual building impact the meaning, form, and function of the same building in physical space?



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