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 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 aim of potential 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 forays the ontological implications of the real and the virtual.

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 Performing Arts Center – EMPAC (New York), the V2_ Institute for the Unstable Media (Rotterdam), the Museum of the Moving Image (New York), the CaixaForum (Barcelona), the ZKM Karlsruhe (Germany), the San Francisco Museum of Modern Art (San Francisco), the Institute for Art and Urbanism (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.
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.

Kora Van den Bulcke

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 Architectural 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 new fields of relations between people, architecture and the broader environment.

Thomas Soetens

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 intrinsic character of today’s technologies, as well as the human (un)consciousness of the hybrid realities that emerge between artificial environments and their inhabitants, both virtual and real.

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With the support of
the Flemish community
REALTIME UNREAL

2011

Commissioned by the Museum of the Moving Image, New York

Realtime Unreal is an interactive installation commissioned for Real Virtuality, the inaugural exhibition of the redesigned and expanded Museum of the Moving Image. The interactive installation provokes a unique integration of space, time and reality, as you attempt to bridge the gap between what you see unfolding and what you anticipate is occurring. As part of Workspace Unlimited’s ongoing dialectic defining Hybrid Space, Realtime Unreal challenges you to interpret what you see at the intersections of real and imagined spaces. Your interaction with physical space enables the scene to develop and serves as both cause and effect in this Hybrid Space. Realtime Unreal enhances an otherwise neutral museum space with a hybrid of real and virtual spaces that complicate visitor’s senses of presence and perspective. Moreover, the artists allow you to manipulate the installation simply by moving about the installation room. A portal suspended in mid-air to an alternate universe including both real and computer-generated architecture and visitors, Realtime Unreal augments the physical room with a constantly changing perspective.

Commissioned by the Museum of the Moving Image, 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 are projected into the virtual space. Years of research and development with game technology have resulted in a 360° audio-visual environment, exploiting 15-meter-wide panoramic screens and a 32-channel sound system. The subtle collaboration of the real and virtual agents and environments continue to engender a hybrid space where the observer becomes the observed.

Visitors’ movements activate visual cues and affect the characters’ spontaneous, uncanny behaviors so that the installation’s visual and sonic compositions are uniquely influenced by the viewer’s actions. The virtual agents sense their own presence and react to it accordingly allowing the virtual characters to appear and retreat, analogously altering the virtual environment as the observer’s movements are detected. 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.

2006-2009

Commissioned by the Tiger-named Media and Performance Art Center, New York
INNOVATIVE USES OF IMMERSIVE TECHNOLOGY AND MODIFIED GAME ENVIRONMENTS ENABLE AUDIENCES TO ENGAGE DIRECTLY WITH CONCEPTS OF SIMULATION, SPACE AND TIME.
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.
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 visitors’ 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]scape installations in other spaces also appeared reflected in the Hybrid Space, and all the visitors could interact with each other from different places.

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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.
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 a virtual camera that simultaneously projects what they see onto designated walls throughout the building. What appears to be a mere projection, however, is actually a functioned 3D rendering of the portion of the world, which serves as a portal allowing viewers to continuously 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 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.
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 real-time data. They didn’t attempt to document the festival or replicate it; instead, they tried to re-produce it for a remote audience. Instead, Devmap produced a poetic memory of the event—full of lapses, mutations, and shifting viewpoints. 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. Participants could then access this continuously transforming data from their home computers. 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 strive 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.
Commissioned by the Society for Arts & Technology, Montreal

In Extension, Thomas Säfven and Karin Van den Bulcke built an online virtual architectural extension ‘on top’ of the Society for Arts and Technology (SAT), and installed it in 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) engaging 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 temporarily unusual activities in spatially discontinuous locations.
NON-LINEAR STORYSCAPE

Storyscape depicts the intimate seven-chapter exchange of thoughts between two people. The virtual 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.

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.

DIPLOMATIC ARENA – 2002

Diplomatic Arena is a trilogy exploring random and reflexive violence, topography and architecture with artificial and real. In the first spatial installation, each based on a modified Quake 3 game engine, computer-controlled bots engage in an eliminative destruction mode. These bots represent political figures and members of international terrorist 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 spatial orderly cycle of endless destruction.

ETERNAL – 2003

Diplomatic Arena consists of three installations set in a cubic-shaped arena. The first installation comprises the mood-up composition “Ridiculous Rape” by the Evolution Control Committee (ECC), built with samples of ex-CBS anchor Dan Rather, as he imperturbably describes various gruesome acts.

B L I N D  L O V E – 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 cautiously trust and follow each other in order to survive, and they must approach each other despite the danger.

Tier 1 – The first installation is set in a chaotic sphere. The composition builds up the soundscape “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 observe other bots on the ceiling and walls in other gravity zones. In the floating mode, an overview reveals that the cube is rotating around three axes, which arouses a sense of disorientation and instability.

Tier 3 – The third installation is set in an infinite space surrounded by soft, invisible lighting effects. Suddenly, players witness a large structure with a giant hole in the center. The walls are covered with a freSCO of a blood-stained scene of a woman’s headfare. The structure is a representation of the cycle of violence and repetitive destruction. The camera moves slowly through the corridors and one can imagine such a scene as a ritual of purification.

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**GAME-O-RAMA**


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 earlier works in the new immersive format. This ability to warp an image to fit a circular screen could easily be achieved with the digital image processing software Hyperwall. The results were an optimized and unique method for calibrating and projecting a realtime game engine onto the 360° screen without compromising the resolution or native fields of display. This method would later explore in Realtime Wired. A further breakthrough added an infrared tracking system to the environment, allowing visitors to interact with the game engine with just their body movements.

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 found in the video, with a multi-channel sound system. This research would enable Workspace Unlimited to present earlier works in the new immersive format. This ability to warp an image to fit a circular screen could easily be achieved with the digital image processing software Hyperwall. The results were an optimized and unique method for calibrating and projecting a realtime game engine onto the 360° screen without compromising the resolution or native fields of display. This method would later explore in Realtime Wired. 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 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 take awareness of issues and challenges facing new media sectors, while offering every form of digital art in addition to digital works. This research enabled the project to be realized at the Vooruit Cultural Centre, and offer visitors an uncompromised experience of Hybrid Space.

**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 computing theorists and practitioners to build, debate and reflect on virtual worlds, computer gaming, immersion technologies, and new possibilities for the artistic practice and experience. Taking place both online and offline, the workshops opened up the prospects of applying existing theories and concepts to the virtual and beyond. These initiatives included research into the international state-of-the-art and state-of-the-practice of the virtual environment, the social interaction.

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 an architectural building have an ongoing relationship to its virtual and digital double? Could the public’s social interactions within a built environment be a virtual world of gaming, form, and function of the same building in physical space?