

**EventSpaces**  
An Multi-Author Game and Design Environment,  
Elective CAAD Course, 1999 - 2000

**Team**  
Fabio Gramazio, Urs Hirschberg, Kerstin Höger, Michele Milano, Benjamin Stäger.

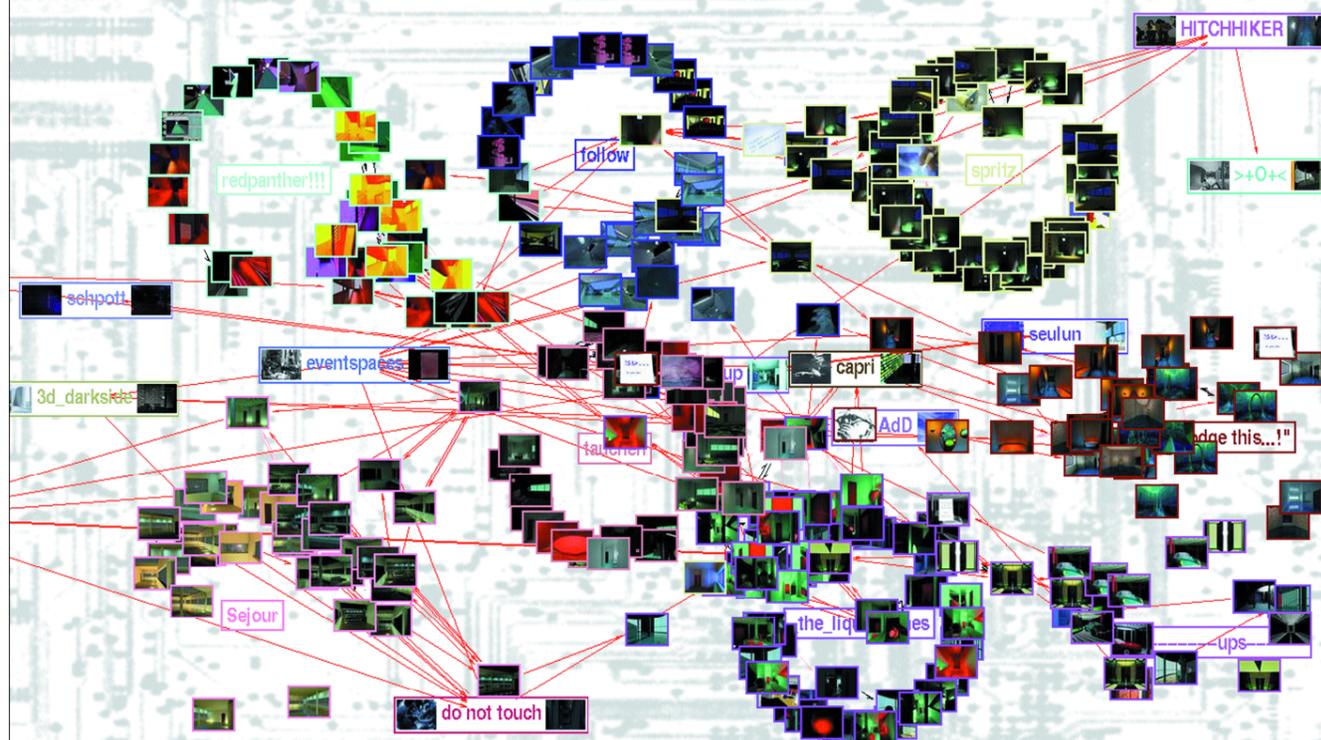
**Partners**  
George Liaropoulos-Legendre, Jeffrey Huang, Harvard University Graduate School of Design.

**Keywords**  
Online Communication and Collaboration, Database-driven Web-Environment, Computer Games, Narrative Structures, Architecture and Digital Media Theory, Architectural Representation, Virtual Architecture, Meta-Information Representation

**Students EventSpaces I, ETH Zurich**  
Claudia Bauersachs, Jeanette Beck, Matthias Berke, Dominik Bossart, Philippe Bürgler, Katrin Busser, Petr Chrysta, Christa Diener, Elisabeth Dill, Thomas Fässler, Karin Fehr, Lukas Fehr, Nils Fehr, Susanne Fritz, Martin Fuchs, Ueli Gadiant, Andreas Germann, Daphne Gondhalekar, Henrik Hansen, Arndt Jagenlauf, Dimitri Kaden, Silke Lang, Oliver Luetjens, Michael Meier, Yu Miyauchi, Thi Lieu Nguyen, Juho Nyberg, Andreanne Pochon, Andre Rethmeier, Maïke Schneider, Michaela Schulze, Phil Steffen, Stephanie Stratmann, Chris Thueer, Oliver Wick, Beatrice Wolner-Hanssen, Oliver Zimmermann.

**Students EventSpaces II, Harvard University GSD**  
Makoto Abe, Alexander Barker, Sonja Begün, Yi-Hsuan Chang, Hongchee Chiu, Shane Curmy, Ray Falke, Gustavo Garcia, Amy Gelsone, John Gidding, Martin Goldberg, Qichao Guo, Sharon Gi, Elizabeth Ghiseline, Abigail Hoover, Eun-Sang Jeong, Pars Kibarer, Selee Kim, Kangsoo Lee, Min-Chang Lee, Whasook Lee, Linda Mao, Robin Martuza, Leonard Ng, Pete North, Maxwell Pau, Jennifer Rios, Maximo Rohm, Michele Rueegg, Anuraj Shah, Amy Sheehan, Matthew Soules, Heather Taketa, Patrick Tam, Chee Kiang Tan, Frederick Tang, Alex Tsang, Joanna Chen Tzuchiao, Winifred Wang, Bill Yen, Warinporn Yangyuenwong, Shiu Yokoyama.

**Students EventSpaces III, ETH Zurich**  
Katrin Busser, Claus Dold, Sibylle Frey, Susanne Fritz, Rauser Jürg, Ben Hendriksen, Dimitri Kaden, Antje Machold, Paul Oldman, Udo Schaumburg, Maïke Schneider, Michael Schnellmann, Michaela Schulze, Michael Wagner.



EventSpaces out.world map:  
Display of all scenarios and their connections.

# EVENTSPACES

Fabio Gramazio  
Kerstin Höger

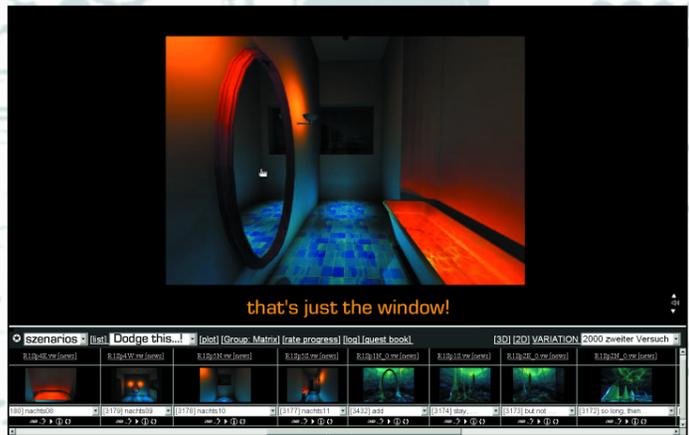
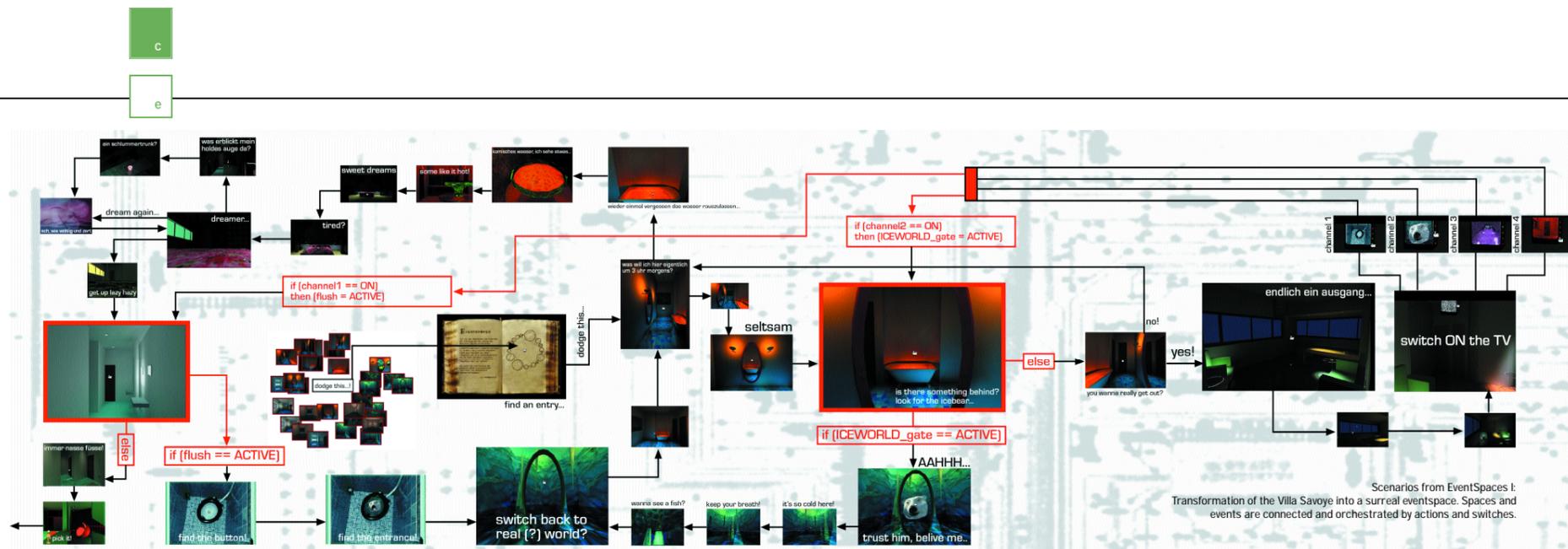
EventSpaces is a web-based collaborative design and teaching environment that allows a large number of architecture students to collectively design a coherent product – the EventSpaces game. This game is a vast dynamic hyperstructure, composed of spatial scenarios that represent connected spaces and events or chestrated and programmed by employing the EventSpaces script editor. In EventSpaces, the game is not only the aspired end product, but also the model according to which the students design and interact with each other. It is a process enabled by the EventSpaces system that combines work, learning, competition, and play in a shared virtual environment. By transforming, evaluating and rating each other's contributions, the students themselves distribute the authorship credits of the emerging game. The credits are used to measure the contribution of a single author in relation to the whole game and serve as motivation for the students to contribute work that is popular among the other authors. The content of the EventSpaces game is thus created in a collaborative as well as competitive manner by a community of authors that share a common interest in the success of the game while at the

same time competing against each other to establish their identity as individual participants. The functionality integrated in this rather intricate online working environment, which also includes an out.world map, a news tracker, and a message board for all EventSpaces activities, is achieved by means of a central database. This database makes the design process transparent and manages the authors' contributions over time. It preserves and displays all works produced in relation to the whole and thus allows for the emergence of coherence from the multiplicity of contributions.

**The Game: Interrelation of Spaces and Events**  
The EventSpaces game is not an ordinary computer game. Since its authors are architecture students and not game-designers, the game serves as a vehicle to explore architectural spaces in relation to the events and actions that occur within them. Our hypothesis is that architecture and events are inseparable and complement each other – events qualify spaces as much as spaces qualify events (Tschumi, 1996). This contingent relationship can be applied to and explored in computer games. In abstract terms, a



Authors of EventSpaces I, ETH Zurich.



Scenarios from EventSpaces I: Transformation of the Villa Savoye into a surreal eventspace. Spaces and events are connected and orchestrated by actions and switches.

EventSpaces online working environment: Scenario "dodge this..." by Michaela Schulze.

game consists of a set of rules according to which one or several players interact. These rules, as abstract construct or architectonic program, form the space of the game. In the EventSpaces game, space is developed around the notion of scenarios. Here, a scenario is understood as a set of hyperlinked texts, images and three-dimensional models, referred to as nodes, that describe an architectural or urban situation, like a stage set or mise-en-scène for possible interactions. During the design and production process, the scenarios become activated by events – actions and switches that can be programmed with the help of the EventSpaces script editor. Actions transform the

scene, put it permanently into new conditions and allow the EventSpaces player to make decisions about where to go in order to engage or influence the game. Actions evoke hints in the form of sounds, words or images by framing a logical sequence of individual scenes. Actions can also activate or deactivate switches. A switch is a control element that executes nested actions. The state of the switch (on or off) determines which action is executed. Through the linkage of simple binary control elements (if, then, else) powerful game structures can be generated that alternate actions locally as well as globally. To coordinate such interdependent control mechanisms the authors have to reconfigure, negotiate, and trade

their scenarios in iterative refinement cycles in order to achieve a common and coherent game logic. In addition to programming logical game structures, students rethought traditional architectural and urban design topics such as light and shadow, materiality and immateriality, movement and orientation. To express their ideas and to create the scenery for the EventSpaces game they applied modeling and rendering techniques as well as animation, sound and real-time interaction software.

**The Evolution of the EventSpaces Game**  
In three successive courses the different topics and tools were explored in depth, each leading to a bet-

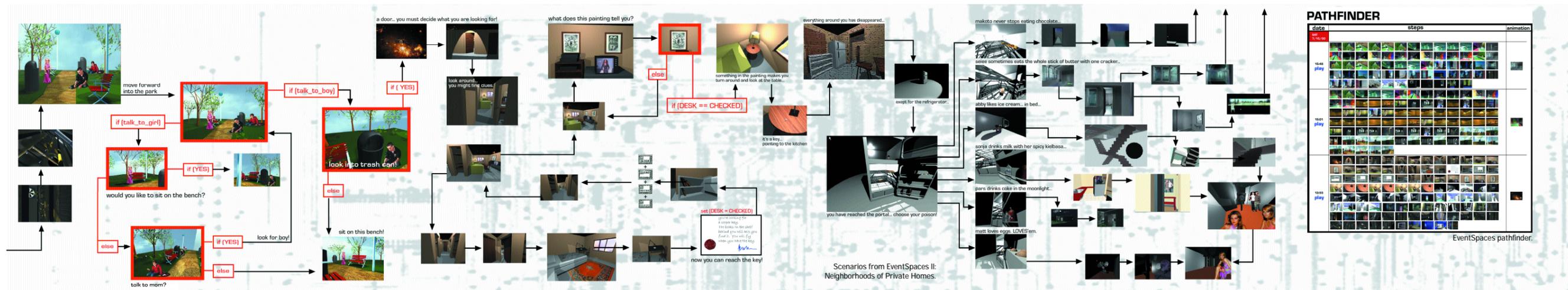
ter understanding of the possibilities and constraints of the EventSpaces game. Various views and scales were extensively investigated: From the micro to the macro level, from the public to the private, from the abstract to the concrete, from the home to the city and vice versa. By reversing, connecting and overlapping these levels, the game could be condensed and, from the player's point of view, intensively enriched. Not only the theme but also the EventSpaces system evolved throughout the three iterations. Building on the experience gained from the first course, the initial prototype was refined in EventSpaces II and III by adding several new tools and possibilities and eliminating the ones that were

less suitable, thereby improving the design process as well as the overall quality of the EventSpaces game. **EventSpaces I: Transformation of the Villa Savoye**  
The theme of the first course was to transform a widely recognizable architectural icon, the Villa Savoye by Le Corbusier, into a surreal eventspace. This Villa, a seminal work in the history of modern architecture, becomes in the context of the EventSpaces game the spatial status quo to be transcended, challenging the students' preconceptions of the building. Starting point of the transformation was a rough CAD model of the villa as well as the fact that

this building is in manifold ways present in the minds of most architects and the general public. By bringing different attitudes, experiences and images about the villa into their work, the students not only rethought and transgressed the modernist ideal of space with today's digital tools, but also took a very personal position towards this icon of modernity. What is special about the Villa Savoye is that it was never inhabited for a long period and hardly functioned as a living space. When the students animated, rendered and enlivened the rooms of the villa during the semester, it seemed like they were moving in, and finally some events could take place in those 'virtual' spaces. Besides developing their own scenarios, the students



Authors of EventSpaces II, Harvard University Graduate School of Design.



established links from their scenarios to others, thereby creating a coherent hyper structure. By sharing a common building, spatial relations between all scenarios were defined which could be respected or intentionally disregarded when connecting the scenarios.

**EventSpaces II: Neighborhoods of Private Homes**  
The theme of the second course, which took place at the Harvard University Graduate School of Design, was neighborhoods. The students modeled, portrayed and estranged their own homes by reflecting on their personal living conditions and by acting as architects for their fellow students. They thereby progressively

built up a neighborhood out of digital homes. This neighborhood became the raw material for the game, like the Villa Savoye had been in the first EventSpaces course. The students rendered, animated, and activated their homes into scenarios in which surprising events could be detected at every turn. By creating various interstitial spaces as mediating nodes, the students linked their individual homes with other homes in the neighborhoods. The resulting neighborhood game questions the spatial coherence the Villa Savoye provided in EventSpaces I. Links were determined only through content, challenging the students' imagination. Based on the emerging logic of the game, the students integrated their private scenarios into a

common hyper-composition. Playing the game produced the unusual sensation of moving through a continuous public space made up of individual intimate spaces.

**EventSpaces III: Programming and the City**  
The focus of the third course was to place the evolving hyperstructures from the previous courses in an urban context. The goal was to condense the EventSpaces game with switches, maps and views, endowing it with qualities inherent in the physical city. They resulting environment wants to be perceived over long spans of time, offering prospects that are unexpected and inviting us to interact with it. From the dif-

ferent players' perspectives, it will be explored and navigated differently without destroying the common image of the whole.

In this course, ways were developed to capture, interpret and represent urban environments in order to concretize the abstract term of the 'switch' in the analog realm. Through the combination of objective analysis and speculative imaginings of urban situations and their control structures (the interplay of switches), personal images of familiar urban landscapes were generated and translated into subjective texts and three-dimensional models. By employing sensors, triggers, key-frame animations and control structures, these conceptual sketches

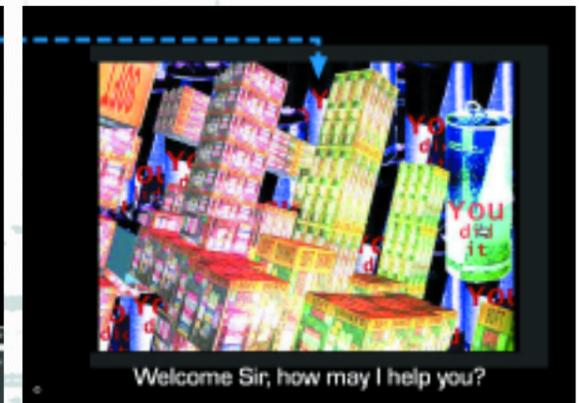
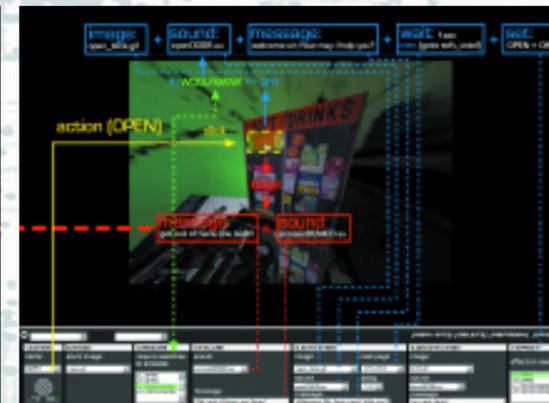
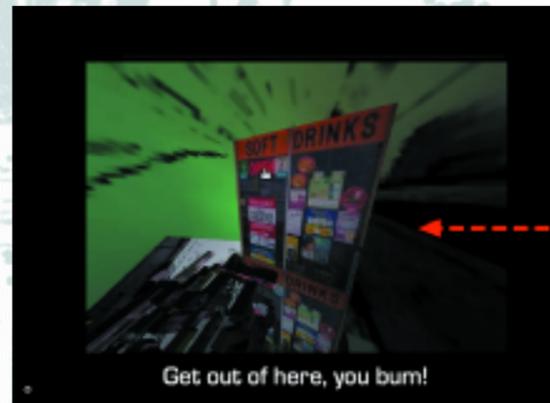
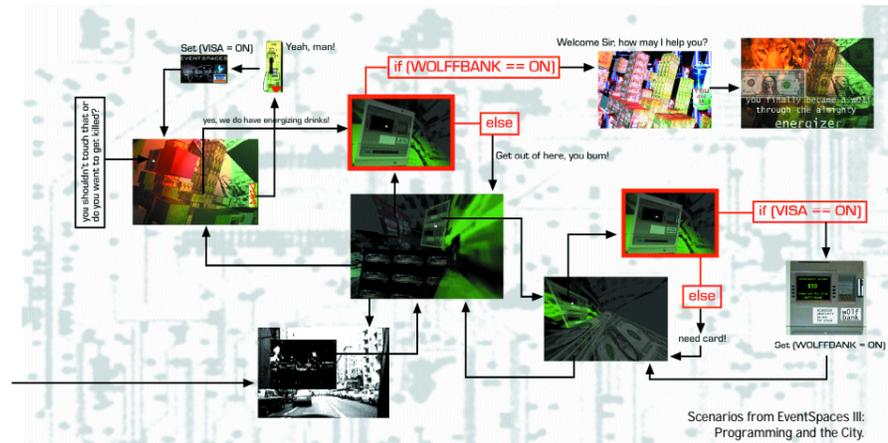
were further transformed into interactive engines. The initial analysis and the elaborated models served as a basis upon which the game logic was designed and implemented in the existing EventSpaces system. To conceive insights in specific dependencies and relations, a partial visual mapping of the resulting game was carried out. Since complex networks or systems, like EventSpaces, cannot be described nor understood with one general valid or objective view, the students created various maps for different individual uses. Through these subjective and fragmentary maps of the same 'urban' space, the EventSpaces game can be viewed, navigated, and interpreted in multiple dimensions.

**The System: Turning Competition into Collaboration**  
The main novel aspect investigated in the EventSpaces system was that many activities contributed to the development of a single product, the EventSpaces game. While in previous courses database-driven websites were used to transparently present and exchange students' works, those contributions remained individual projects displayed in the context of all other works. In EventSpaces, we went a step further by introducing cycles of refinement in feedback loops to combine individual contributions into a common product. To achieve this, we distributed the design task and workload among a large number of authors, facilitated the sharing and shap-



Authors of EventSpaces III, ETH Zurich.

c  
e



EventSpaces player and script editor: Scenario "magnificent" by Dimitri Kaden.

ing of multiple contributions across time and space, and included evaluation, rating and mapping mechanisms to provide feedback, control and self-organization. In the EventSpaces system there are authors and owners. The scenarios are owned by the authors that develop the initial plot for them. In contrast, the single nodes can be generated and refined by any EventSpaces author. Although every author can contribute to any scenario of their choice, it is up to the owners to determine the final version of their scenario. In EventSpaces I, the scenario owners could select from different node versions by different authors. The scenario variations were submitted,

evaluated and rated on a weekly basis by the whole community. The rating translates to so-called EventSpaces Units (ESUs). The ESUs are used to compensate the single authors for their contributions to the whole game. Because many authors were disappointed when their changes, which often related to important connections to their own scenarios, were not accepted, we eliminated the ability to create variations of nodes in EventSpaces II and III. Instead, we allowed actions and switches to be added to existing nodes at any time by any author. Consequently, the scenario owners only had to manage one scenario version and could better coordinate the additions of the nodes made by the

authors. Now, if the scenario owners wanted to change or get rid of the refinements, they had to contact the authors who made them via the messaging system. This enhanced the exchange and negotiation of ideas and allowed the scenario owners not only to govern the development of their part, but also to facilitate its meaningful and logical integration into the whole hyper structure. To analyze and control the complexity of the emerging game, a mapping function was provided to display all the works and their connections at once. This out.world map of the game can be adapted and filtered according to personal needs. For example, the scenarios can be displayed as one element or with all its individual nodes and links.

EventSpaces is built on the hypothesis that the creative development of a complex distributed system without a central authority requires both competition as a mechanism to generate variations or to create alternative solutions and collaboration to produce a coherent result. While evaluating and rating each other's contributions in repetitive refinement cycles, the individual authors compete to get credits for their work and recognition in terms of authorship percentage in relation to the resulting game. Consequently, all authors are motivated to contribute to the success of the game as a whole. EventSpaces turns competition into collaboration and achieves excellency as a collective and competitive endeavor over one or more gen-

erations or cycles of generation and evaluation processes. **Conclusion** EventSpaces allows diverse forms of trading ideas and encourages students to team up and to build on each other's insights and contributions. The system provides new means to make design processes transparent and coherent, to augment group negotiation and to foster a collective game culture or intelligence. As a result, diverse concepts and requirements can be better integrated into a single composition. We have built a unique design environment where to play is to compete and to construct spaces. These

spaces offer prospects as events, which are constantly changing, unexpected and even astonishing, provoking us to wander through them. EventSpaces invites us to pay more attention to the spaces around us. At the same time, our audiences – players and authors – engage in the game and become aware that the total effect of the dynamic spatial experience is greater than the sum of the discrete effects or parts of the EventSpaces. The success of the project lies in the transformation of the switch, a linear and logical programming mechanism, into a catalyst for an organic process and experience.

