## **City of News**

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"Is there a way for us to define ourselves and the space in which we dwell, when the city is increasingly referenced as a space of disappearance, a space of the future but not of the present, a space of anxiety and loss?" I M. Christine Boyer

In a 1995 article, which appeared in Le Monde Diplomatique, the French theorist of technology, Paul Virilio, describes the phenomenon of the "loss of orientation" experienced by the exponentially increasing crowd which is relentlessly enthralled in cyberspace. Virilio observes that the construction of information superhighways, which are globalized and instantaneously updated, presents us with a threat, a menace to our perception of what reality is, of what it means for us to exist, as individuals, here and now. Induced by the splitting of the sensible world into real and virtual parallel with the "invention of the perspective of realtime", this threat causes a shock, a "mental concussion", that hooks the happenings of events to a globalized monorail track. We have extended Virilio's concern to the varied world of the Net, we have lost our bearings in the flatland of data offered by our "regular" browser, and experienced information anxiety as a shock caused by the vast unstructured landscape under the infinite horizon of the World Wide Web. As "spacemakers" [Walser, 1990], we have therefore undertaken the task to "escape flatland" [Tufte, 1990], to design an information browser that organizes information as it fetches it, in real-time, in a virtual three-dimensional space which anchors our perceptual flow of data to a cognitive map of a [virtual] place. This place is a city.

#### **CITY OF NEWS**

Since William Gibson, in his visionary science-fiction novel called Neuromancer, described "the Matrix", i.e. the new informational network, as Los Angeles seen from five thousand feet up in the air, the idea of mapping the informational wasteland of the web to a metroscape has become an urge more than an invention. City of News is a dynamically growing urban landscape of information. It is an immersive, interactive, web browser that takes advantage of people's strength remembering the surrounding three-dimensional spatial layout. Starting from a chosen "home page", where home is finally associated with a physical space, our browser fetches and displays URLs so as to form skyscrapers and alleys of text and images through which the user can "fly".

The City is organized in urban quarters [districts] that provide territorial regrouping of urban activities. Similarly to some major contemporary cities there is a financial district, an entertainment district, and a shopping district. In addition to these areas we have created other functional groupings by creating a mapping between modern newspaper layout and city planning. Hence the name City of News for this designwork. There are therefore sports, books, advertising, science, and opinion districts.

One could think of these districts as urban quarters associated to the different conceptual areas of one of the many currently available search engines on the WWW. According to the architectural suggestions of the Krier brothers [Krier, 1984], zoning does not fragment the virtual city in huge sections where a citizen can only accomplish a single task. City of News is federation of autonomous quarters, which are "cities within the city" [ibid], and that are distinguished mainly by the people who inhabit them [students or artists, for example] and their common tastes or preferences [like Paris]. The City evolves and grows organically

through exploration: following a link causes a new building to be raised in the district to which it belongs, conceptually, by the content it carries.

So far we have implemented a navigational interface based on speech and gesture recognition [Wren, 1997]. We are currently considering using a wireless digital baton and a "space-ship console" to drive our three-dimensional browser. This work was inspired by Jeffrey Shaw's Legible City [1989] and finds a precursor in Apple's eWorld [1994].

#### **The Memory City**

In the late 70s, a group of researchers at MIT, who gathered under the name of Arch-Mac [Architecture Machine Group], created an immersive, video-based simulated space, called the "Aspen Movie Map". This interactive system, which offered a faithful digital reproduction of the city of Aspen, became a platform to investigate spatial learning in virtual environments [Mohl, 1981]. Although the "Movie Map" required a detailed recording of the place to explore beforehand, it constitutes an important predecessor to City of News for its attention in providing the user with a cognitive map of the virtual surroundings.

Kevin Lynch [Lynch, 1960] has done a remarkable study in identifying the elements that make of a city a legible, memorable and coherent place. The elements according to which an image of the city is constructed are: paths, edges, districts, nodes, and landmarks. While we have organized City of News around districts, added memorable landmarks, as organic constructions or as virtual sculpures, and aligned typographic buildings along paths, we have also designed City of News to serve as a Memory Theatre.

The "Classical Art of Memory" depended on the mental construction of complex architectures composed by places inhabited by vivid images. These images would provide associational hooks to the material to be recollected.

Inspired by Yates' description of Camillo's Memory Theatre we have endowed City of News with salient images extracted from web-newspapers' front pages. These act as architectural landmarks and memory cues in the different districts. They appear attached to huge and tall billboards, like those that animate the city of Tokyo with glooming publicity. Yates also describes a lesser known Art of Memory, developed by Raymond Lull. This was an abstract art of memory based on concepts associated with letters. The art of recalling would then become a combinatorics exercise rather than a promenade through a virtual path.

A similar abstract model for organizing news data [not in real-time] was adopted by Earl Rennison in his Galaxy of News, at the MIT Media Lab's Visible Language Workshop. The main difference between this last design work and City of News consists in the spatial, urbanlike, organization of data, together with the real-time construction and evolution of the landscape of the latter.

### **Organic Architecture**

City of News is an "architecture machine" which gives "the physical environment the ability to design itself" [Negroponte, 1975]. However, this machine operates according to the organic laws of the garden. As the user follows a link on the World Wide Web, [s]he creates new city-elements that are added according to an algorithm which simulates artificial growth and evolution. Following a link becomes equivalent to a pursuit of possibility which determines a change in the environment: the consequence of every choice is amplified, causing a building

to be raised or a path to be followed. In the previous age of the machine, city planners would design cities according to the rigid discipline of the workchain and plan traffic flow to the rhythm of clockwork.

In our contemporary time, global networks of computers, time-shared activities, Internet life and usenet groups define a life-like skin or membrane of virtual places and activities. Hence we have found that an organic pattern of development of the city would be best suited to represent life-on-the-web i.e. "the Net". From William Mitchell's mathematical formalism of The Logic of Architecture to Marcos Novak's genetics-based Liquid Architecture; from Christopher Alexander's rational design of Notes on the Synthesis of Form to his later nature-inspired "Pattern Language", we witness a trend towards finding biologically-driven or simulife solutions to complex problems of design and organization. In parallel to this phenomenon, an increasing number of individuals, communities and social groups wish to plan their own worlds, under the techno-promise of personalized news and entertainement services. A new utopian movement seems to animate the view of the city as a "theatre of prophecy" [Rowe, 1978] overlapping the theatre of memory previously described.

## Postmodern Utopia

The fantasy of a comprehensive city of deliverance, which dates back to early Modern Architecture, invests also the collective imagination of cyberspace. Howard's smokeless "Garden City", Wright's decentralized "Broadacre City", Le Corbusier's enthusiastic "Radiant City", and Sant'Elia's dynamic "New City" are just a few among the many historical examples of visionary architectures for future cities. More recently an English group of architects that calls itself "Archigram" [Architectural Telegram] has designed fantastic spaces like: Walking Cities, Plug-in Cities, Instant Cities, and Inflatable Cities, which respond to our contemporary transformed imaginary view of the urban space.

The new city is seen as "an immense node of communication, a messy nexus of messages, storage and transportation facilities, a massive education machine of its own complexity, involving equally all media, including buildings" [Benedikt, 1991]. City of News certainly participates in the utopian dimension of this historical line of thought as it carries within itself a hope for an ideal space of information sharing and consumption. At the same time it does not pretend to offer all information available on the Web in a fully rationalized and non-polluted way.

As many architectural theorists have observed, there are some similarities between the virtual space of computer networks and posturban spaces of disorder and decay. City of News reflects this view of the city from "the Periphery of the Empire", as a science-fiction narrative à la Hugh Ferris. It is a gleaming metropolis, a tempting city, a glorious slum of information that hosts the Internet addicts as well as the hyperefficient businessmen that surf the wave of real-time, a city that welcomes, excites, and consumes people. It is a city imbued with a postmodern nostalgia for the future and that ambitiously wishes to compare itself to the film architectures of Blade Runner, Brazil, and Batman.

#### Conclusions

City of News was first completed in May 1996 and it is since a work in progress. As it progresses, we feel that this project raises more questions than the ones it provides answers to. As we push along the city metaphor, we ask ourselves: "What does it mean to have an Information Hospital or an Information Cemetery?" "What are the criteria for the livability of

this cybercity?" Because, although we make cities, they also make us. We have built a virtual environment under the natural law of the "creatio mundi" rather than by following the compulsion to the "fuga mundi". It is an environment where to organize is to construct, and to build an informational structure that facilitates the recollection of memories. At the same time, we hope that our audiences become aware of how information affects who they are, and how the urban layout of their surroundings has an influence in making them the way they are. In a near future, as we find ourselves tied together under the new perspective of a globalized real-time, we are not likely to ask each other any more, "Do you have the time?" but instead, "Do you have the place?"

Banham, Reyner, The Visions of Ron Herron, New York, Academy Editions, 1994, pg 45

Benedikt, Michael ed., Cyberspace: first steps, Cambridge, Mass., MIT Press, 1991. In: Introduction, by Michael Benedikt, pg 16

Boyer, M. Christine, CyberCities: visual perception in the age of electronic communication, New York, Princeton Architectural Press, 1996, pg 242

Krier, Leon, Houses, palaces, cities, New York, Architectural Design AD Editions, 1984

Lynch, Kevin, The image of the city, Cambridge Mass., The Technology Press & Harvard University Press, 1960

Lyndon, Donlyn and Moore, Charles W., Chambers for a memory palace, Cambridge, Mass., MIT Press, 1994, pg x

Mohl, Robert, Cognitive space in the interactive movie map : an investigation of spatial learning in virtual environments, Thesis Arch Ph.D, 1981

Negroponte, Nicholas, Soft Architecture Machines, Cambridge Mass., MIT Press, 1975

Novak Marcos, Transmitting Architecture. Architects in Cyberspace, in: Architectural Design vol. 65, no. 11/12, Cambridge, VCH Publishers, 1995, pg 46

Rowe, Colin and Koetter, Fred, Collage city, Cambridge, Mass., MIT Press, 1978, pg 49

Tufte, Edward R., Envisioning Information, Cheshire, Conn., Graphic Press, 1990

Walser, Randall, Elements of a Cyberspace Playhouse, Proceedings of the National Computer Graphics Association, Anaheim, CA, March 1990

Wren, Christopher, Sparacino, Flavia et al., Perceptive Spaces for Peformance and Entertainment: Untethered Interaction using Computer Vision and Audition, in: Applied Artificial Intelligence, vol. 11, no. 4, June 1997

"The Metropolis would arrive like the circus, set up shop, operate for a period of time, and then move on". Ron Herron

"Places are spaces that you can remember, that you can care about and make part of your life ... The world should be filled with places so vivid and distinct that they can carry significance... Places could bring emotions, recollections, people and even ideas to mind."

Donlyn Lyndon

"Architects aspiring to place their constructs within the non- space of cyberspace will have to learn to think in terms of genetic engines of artificial life"

Marcos Novak

"Could not this ideal city, at one and the same time, behave, quite explicitly, as both a theatre of prophecy AND a theatre of memory? ... For, if without prophecy there is no hope, then, without memory there can be no communication."

Colin Rowe

"Places that are memorable are necessary. We need to think about where we are and what is unique and special about our surroundings so that we can better understand ourselves and how we relate to others."

Donlyn Lyndon