JEFFREY SHAW virtual world voyaging

THE LEGIBLE CITY.   1989/90

An interactive computer/video artwork by Jeffrey Shaw

Co-author Dirk Groeneveld
Application software developed by Gideon May
Implemented on the Silicon Graphics IRIS 4D/20 computer

Preview – "Het Postmoderne aan Kinderen Verklaaard", Bonnefanten Museum,
          Maastricht, 1988, en Museum voor Hedendaagse Kunst, Antwerpen,
Premier – "ARTEC 89", International Design Expo, Nagoya, Japan 1989
also   – "SIGGRAPH 89" Boston, USA 1989
        – "ARS ELECTRONICA", Linz, Austria 1989
Planned – "ARTWARE" exhibition at "CeBit", Hannover, March 1989
        – Centrovideoarte, Ferrara, Italy, May 1990 (exhibition is
          associated with the Venice Biennale – Italian translation
          of Manhattan version will be shown)
        – Bali theater, Amsterdam, June/July 1990 (premier of the
          the Amsterdam version)
        – Japan museum tour 1991 (Kyoto version in Japanese)

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Introduction:

The research and developement of various mechanisms and codes of spatial
representation has been a major preoccupation throughout the history of
Western Art. The application of three dimensional computer imaging
technologies in this context has a revolutionary meaning. Instead of the
traditional activity of art as a representation of reality, the artwork
can now become itself a simulation of reality within which the viewer's
point of view is located. THE LEGIBLE CITY is a first example of this
possibility of the digital image to evoke a three dimensional virtual
space which the spectator can enter and explore.

Description of the work:

The spectator is able to use a bicycle to interactively travel in a video
projected three dimensional virtual image space. In the first realised
version of this work the image space in which the bicyclist can travel
is based on the ground plan of part of Manhattan, New York – the area
boundaried by 34th. and 66th. Streets, and Park and 11th. Avenues.

Using real-time computer graphic technology, the city is visualised by
solid three dimensional letters that form words and sentences along the
sides of the streets. These words and sentences conform to the actual plan
and scale of this city – its particular organisation of streets, avenues,
intersections, parks, etc. Thus the actual Manhattan architecture of
buildings is completely replaced by a new architecture of text.

Travelling through this city of words is consequently a journey of reading.
Choosing direction, choosing where to turn, is a choice of the storylines
and their juxtaposition. In this way this city of words is a kind of three
dimensional book which can be read in any direction, and where each
spectator constructs their own conjunction of texts and meanings as they
bicycle their chosen path there.

The image of the city is video projected onto a large video screen in front of the bicyclist. The bicycle is fixed on a platform in the installation, but the spectator controls his/her speed and direction of movement in the projected image space by pedalling faster or slower, and by turning the handle bars. The virtual world where the bicyclist is travelling simulates faithfully the experience of bicycling in the real world.

In this work the city is constituted physically by the three dimensional arrangement of words into streets, and the city is constituted psychologically by the meanings these words carry as they are read by the bicyclist travelling through these streets. The texts have been written as eight separate storylines that have a particular relationship to Manhattan - for instance monologues spoken by Mayor Koch, Frank Lloyd Wright, Donald Trump, Noah Webster, a cab driver, a tour guide, an ambassador, etc. Each storyline has a specific location in the city, and each is visually identifiable by the particular colour of its letters. Thus the bicyclist/ reader can follow one storyline by following its colour, and also recognise his/her shifts from one storyline to another because of the colour changes.

Directly in front of the bicyclist, a small video screen shows a plan of Manhattan, and the actual location of the bicyclist there by means of a flashing dot that represents his/her position and direction of movement.

Electronic devices attached to the steering wheel and pedals of the bicycle measure the rotation of the steering wheel and speed of pedalling. Responding to this information, the Manhattan database is interactively calculated and displayed by a Silicon Graphics Personal IRIS graphics computer. Video output from this computer goes to a video projector which shows the image on the large screen in front of the bicyclist. Another personal computer handles the small video display of the plan of Manhattan and the indication of the bicyclist's position there.

Further development of THE LEGIBLE CITY:

The authors of this work intend to realise more versions based on the ground plans of other major cities. What is felt to be interesting are the different formal geometries of these city's plans, which will strongly effect the character of their lettered visualisation. Furthermore, each city's plan and historical identity asks for a different approach to the content and writing of the text.

THE LEGIBLE CITY, as it now has been created, is in a fundamental way determined by the capabilities of state-of-the-art computer graphic visualisation technologies. The on going and rapid evolution of these technologies generates new capabilities that are significant to future developments of this work. For instance cooperation is underway with Scott Fisher at NASA to implement a version of this THE LEGIBLE CITY on a stereoscopic head-mounted display. The bicyclist would then experience the work as a totally surrounding three dimensional space of imagery.