

The Difference Engine #3

by

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in collaboration with Construct Internet Design
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[HTTP://www.construct.net/de3](http://www.construct.net/de3)

DESCRIPTION

The Difference Engine #3 uses the architecture of the ZKM Media Museum as a 3D template and the visitors to the museum as the interface. It is an interactive, multi-user, sculpture about surveillance, voyeurism, digital absorption and spiritual transformation of the body.

The Difference Engine 3 was inspired by Charles Babbage's original Difference Engine # 1 (commonly considered the world's first computer). The original machine was used to calculate numerical positions. This piece calculates the captured image and position in the physical/virtual space of visitors to a physical space, located now at The ZKM Media Museum.

Avatars of museum visitors are "born" when a they approaches one of three Bi Directional Browsing Units (BBU's). These are mirror like units that flip between the physical and vitual space. Quickcams embedded in the BBU's , flip 180 degrees to capture the image (Avatar) of the person standing before it. Each avatar (image of the visitor) is assigned a number, representing the time in seconds the visitor approached the unit. The numbered avatar embarks on a 27 second journey through a 3D representation of the museum constructed in VRML2 and coded with JAVA3 .

The avatar then moves to a Purgatorial Site where it cycles continuously with 30 other avatars. Eventually, the avatars are archive permanently on the internet where their image can be recalled via the identity number.

The Difference Engine #3 is an interactive, multi-user, telerobotic sculpture about surveillance, voyeurism, digital absorption and spiritual transformation of the body. It uses the architecture of the ZKM Media Museum as a 3D template and the visitors to the museum as the interface.

ONLINE visitors choose a "generic" avatar to represent them and travel ALONGSIDE the avatars created for people in the actual museum. Visitors ONLINE can also "capture" images within the museum - (they can see into the space via the a live video feed from the camera that is capturing the image of people in the museum. There is a dedicated chat line that allows viewers ONLINE to communicate with people in the physical space.

COMPONENTS

The physical installation consists of three stations called **Bi-directional Browsing Units (BBUs)**. The BBUs house a graphical representation of the museum, act as a "mirror link" between "real" visitors to the museum and those who lurk "virtually" on the internet. The "mirror" reflects:

- 1.) from the internet into the physical space of the ZKM Museum and
- 2.) from Museum into cyberspace.

At the entrance to the museum a large LCD screen houses the Purgatory images in which the Avatars suspend.

WEB PAGE

A dedicated site hosts information about the projects development and provides views into the real and virtual spaces. It is via this site that the Internet User is afforded photo control over the BBU.