12m4s by LAB[au]

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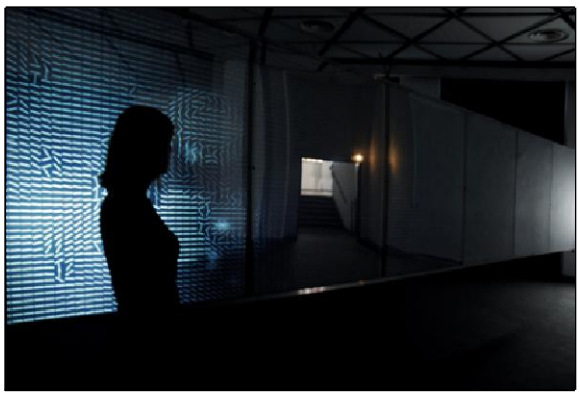
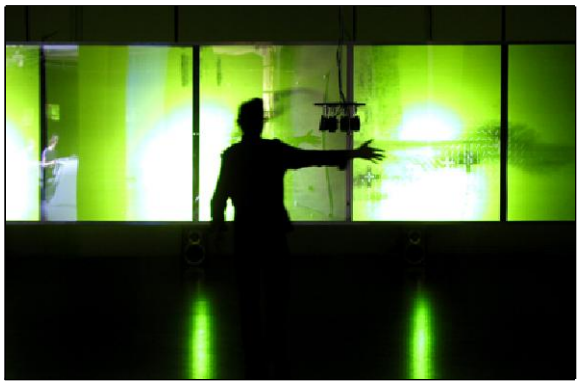
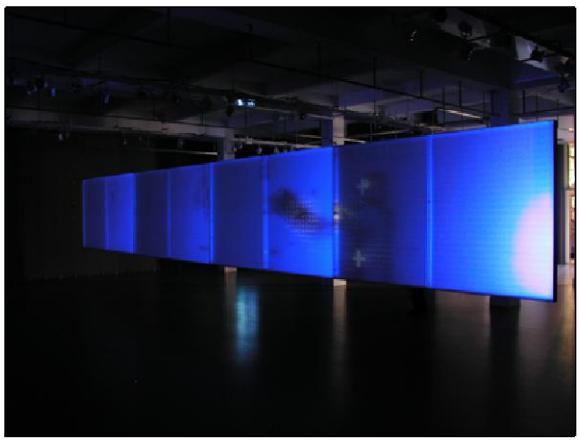


Interactive installation 12m4s is a light and sound piece completed by LAB[au] in 2006.



It uses movement of the people in the underpass as the source of the dynamics of light and sound.



More info by LAB[au] follows:

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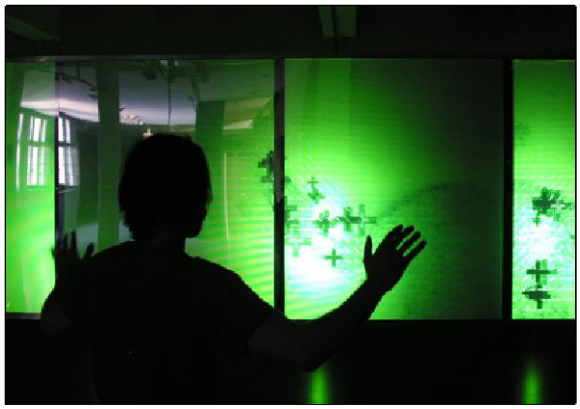
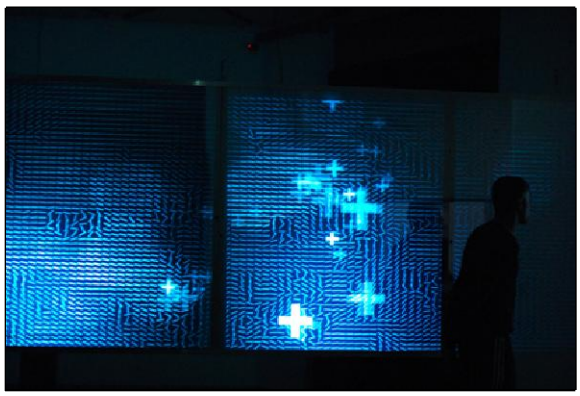
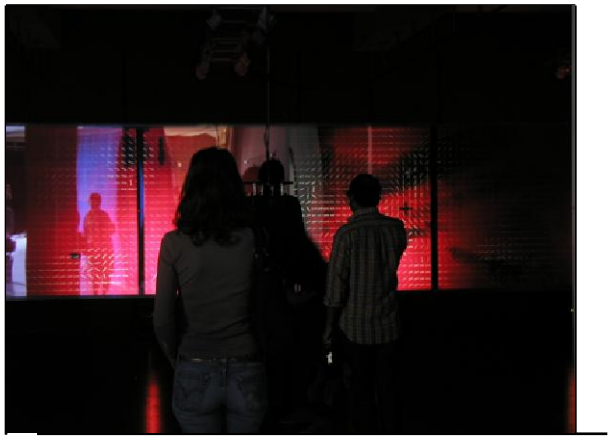
The interactive installation "12m4s" is based on a 12 meter long screen which takes a 'man walking at ordinary speed' the time of 4seconds to cross. In this particular space-time human movements and flows are tracked to generate visual and sonic elements.



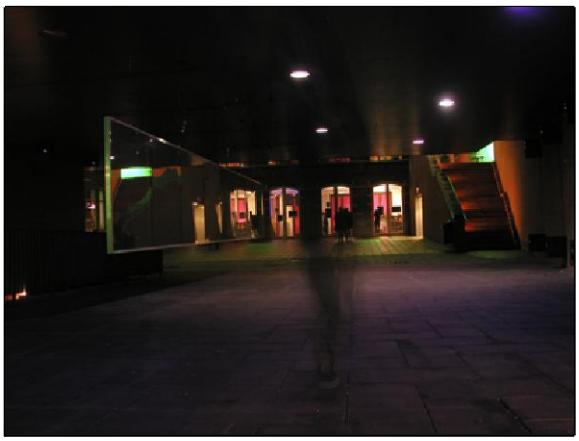
The motion tracking is achieved via two different techniques: firstly, image recognition is used to create spatial sounds (diffused through 8 speakers disposed along the installation) and secondly, ultra-sound sensors are used to create visual echograms of the space constituting the background of the projection. This real-time process uses the main parameters of visitors' position and movement (orientation and speed).



Further user movements influence a graphical vector field which constitutes the foreground layer of the projection. Each vector reacts to visitor's movement pointing to his/her orientation whereas the speed influences the size of the graphical elements.

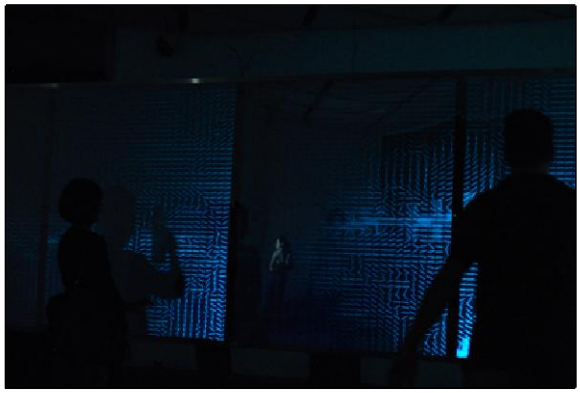


In this manner the vectors trace the actual movement of a visitor while the others remain in position corresponding to past movements at this area. On a spot motion is detected, graphical and sonic objects emerge spreading out while negotiating their way through this vector field.



In this manner a visitor passing by the installation is followed by a visual and sonic trace. As soon as s/he changes direction turbulences in the field appears and sound increase at this spot. The result is a 'particle synthesis' where the visitor can actively paint with his/her movements on the 12m surface of a Mylar screen.

One of the specificities of the Mylar-screen is that its surface remains a mirror on none enlightened zones by the projection and that it turns transparent on strong enlightened ones. This characteristic of the projection screen leads to an astonishing effect: a person passing by will see on first view the graphical elements emerging from his movements but ones he remains on a spot his 'self' image appears in the reflected surface of the screen.



This effect only uses the light characteristics of the screen fusing projection and reflection while building a common space in between the digital and the body spaces.

Technology:
The installation is based on a software developed by LAb[au] using Basic and C++. Motion tracking is achieved via infrared cameras and infrared illuminators along with ultra-sound sensors. The projection screen is developed by LAb[au]

Posted by: Mitja Prelovsek