# z Competitions Event

# Binary Waves, kinetic light sculpture, Lyon





Sphere: Urban & cybernetic installation

Location: Lyon, France

Who: LAb[au]

Dates:

Deadline:

Link: click to see

Source: http://www.lab-au.com

Fête des Lumières 2008, Guillotière's Terraces, Lyon, France

Binary Waves is an urban and cybernetic installation based on the measuring of flows and their transposition into luminous, sonic and kinetic rules. This relation between the installation and the urban activity happens in real time and sets each person as an element of the installation, as a centre of the public realm.

The installation Binary Waves is constituted by a network of rotating and luminous panels of 3 meter-high and 60 centimetres wide, forming a kinetic wall. The panels rotate around their vertical axis, and have a

black reflective surface on one side, the other being plain mat white.

Their rotation is controlled by microprocessors, allowing to determine precisely the rotation speed and angle, while their networking allows to synchronise the movement of the panels. The microprocessors are connected to infrared sensors, capturing the movement of passer-by's, defining the frequency and amplitude of the rotation. According to this set up, each impulse is transmitted from one panel to the other, describing visual waves running from one side of the installation to the other, and then bouncing back while progressively loosing oscillation.

The kinetic principle driving the installation is derived from wave propagation in water, which, because of the proximity with the canal, is one of the project's major contextual parameters. This analogy between wave propagation and the programming of the panel's rotation behaviour, is founded in the characterisation of the urban context as a fluid state constituted of micro events. As such the installation is based on the concept of rhythm inscribing single urban events into a collective pattern addressing the principle of flows.

Light reinforces the kinetic principle of the panels. The kinetic and illumination vocabulary is based on the parameter of time (duration = repercussion of a signal over the panels), speed (force of impulse) and the sense of rotation. These parametric settings of light in correspondence to the urban flows designate the intensity of light from flux to lux.

Furthermore, each captured signal is related to a sound reinforcing the perception of the circulation frequency and leading to a soundscape. All these principles relate the 'micro-events' happening in the area to a unified play of light, colours and sounds directly derived from the rhythm of the city flows.





Binary Waves by Lab au

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## LAb|au| collective

 $LAb \mid au \mid \ developed \ a \ transdisciplinary \ and \ collaborative \ approach \ based \ on \ different \ artistic, \ scientific \ and$ theoretic methods, examining the transformation of architecture and spatio-temporal structures in

accordance to the technological progress within a practice entitled 'MetaDeSIGN'. Metadesign [ meta =information about  $information \ ] \ displays \ the \ theme \ of \ space-constructs \ relative \ to \ information \ processes \ - \ architecture \ as \ a \ code. \ It \ concerns \ the$ transposition of inFORMational processes in n-dimensional form.

Founded in 1997 and based in Brussels, LAb[au] mainly creates interactive artworks, audiovisual performances and scenographies, for which it develops its own software and interfaces. Its four members (Manuel Abendroth, Jerome Decock, Alexandre Plennevaux and Els Vermang) also run since 2003 a digital design gallery, 'MediaRuimte', in the centre of Brussels.

 $LAb[au] \ showed \ its \ work \ at \ Emocao \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Club \ / \ Transmediale \ (Berlin, 2007), \ TENT. \ / \ Tento \ Art. ficial \ (Sao \ Paolo, 2008), \ Tento \ Art. ficial \ (Sao \ Paolo, 20$ Witte de With (Rotterdam, 2006), Centre Georges Pompidou (Paris, several times), Sonar (Barcelona, 2004), New Museaum (New York, 2003), Nabi Art Center (Seoul, 2003), ICA (London, 2002), Bauhaus (Dessau, several times), Louvre (Paris, 2000), Ars Elektronica (Linz, 1999), .... among many others.



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