

5946 Framework f5x5x5 [Environment]

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Framework f5x5x5 is the latest installation by Brussels based LAB[au] transdisciplinary studio in basilica of Denis Saint in Paris. Inspired by a methodology used in software development, f5x5x5 is a multi compositional structure that exists as both a low resolution display and a generative and interactive sculpture.

The 375 aluminium frames, equal the maximum installation resolution, constitute the framework, consisting of five 2x2m modules each divided into 5x5 regular elements establishing a matrix of 5x5x5 = 125 nodes. Each node has 180° vertical and horizontal rotation freedom operated by total of 250 servo motors. The frames are lit with LEDs on their visible edges and at the base of installation there are 50 infra red sensors creating a 6m deep sensing matrix and responding to peoples' presence and direction of movement.

We asked Jerome at LAB[au] about the inner workings:

The software is basically a collection of utilities for calibrating motors and sensors, and monitoring the network activity. The software is written in C and Blitzmax, a language that we find useful for rapid development while not scarifying stability and ability to go to low level coding (one can import C into it, so extending the language with custom libraries or C code is no problem). The software is multithreaded so that input, output and network sync have all their own thread, tasks are this way performed quite fast and smooth, so no glitch in sensor reading would interfere with the motor's position updating for example.

F555 is composed of 5 modules (of 5 x 5 frames), each modules has one computer (Intel Atom powered), the OS is installed on a Compact Flash while the software is on a USB key, so we can update the software simply by swapping the usb key. No keyboard, mouse or screen, the whole can be administrated remotely via VNC and a wireless router. So the 5 modules/computers are synchronized over the network.

On each computer there are 2 SD84 cards for driving one module ... equivalent to 50 motors (cheap RC models servos), 75 led circuits and 20 sensors (10 Sharp IR digital distance sensors and 10 Sharp IR analog distance sensors). Two modified PC power supplies are feeding these boards at 5V, 8 Amps each.

We build this installation ourselves, including aluminum work, machining and soldering, construction of Plexiglas led boards/diffusers and mounting/cablng ...and that was quite epic! (See poster-3 and cablng plan too).

For more information on the installation and very detailed text on the thinking behind the project check out the project page.

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 Pllennevaux and Els Vermang) also run since 2003 a digital design gallery, 'MediaRuimte', in the centre of Brussels.

(Thanks Manuel)



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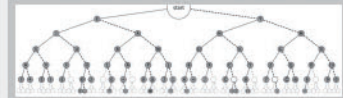
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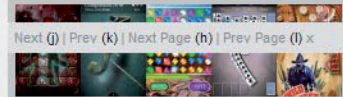
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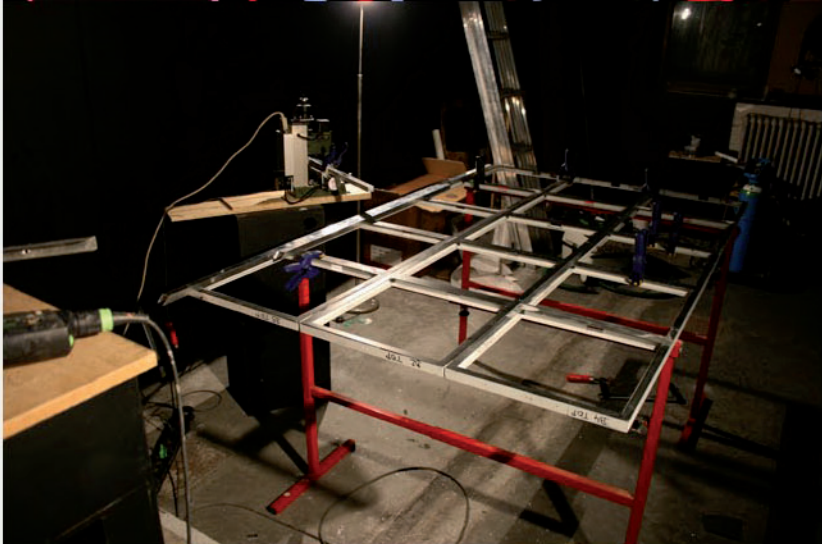
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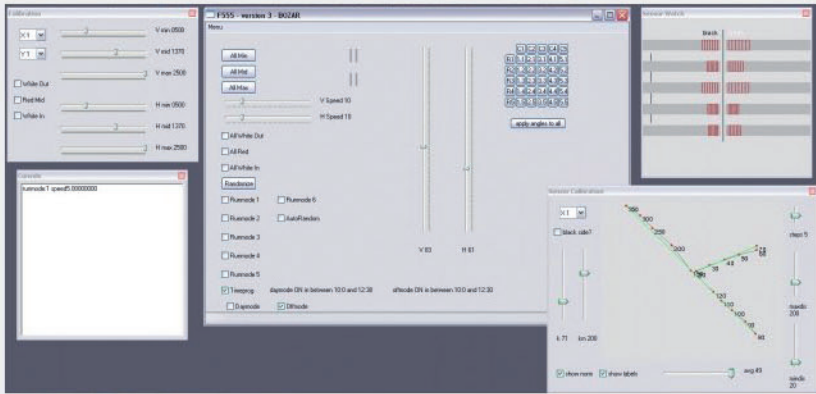
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