



LASERPAIN

TECHNICAL INFORMATION ABOUT THE SYSTEM SETUP

1.Introduction

1.1 Synopsis

1.2 Preamble

2.Diagrams

2.1 Technical map

2.2 Lateral map

2.3 Screen captures of the software

3.Material needed

3.1 Technical material

3.2 Material to realize the installation

4. Electrical needs

5.Renting materials

6.Contact

1.Introduction

1.1 Synopsis

The Laserpaint is a system which allow people to draw on walls, monuments or buildings with a laser pointer. We developed a software which make a real-time tracking of the impact-point of the laser and draw all the path of the laser with a video-projector. The software will do all the real-time data processing to get a perfect result. Then, you have 2 possibilities of use :

- The VJ (Video Jockey) mode, the operator will control absolutely everything with the computer.
- The public performance mode which allows to the public or spectators to take the control of the Laserpaint and the drawing parameters with a Android tactile tablet.

The Laserpaint is a free and clean form to make some street digital graf' art.

The public is the actor, interaction is total.

The Laserpaint can be mounted and run automatically during all the time we want. The operator can control all the system if censure is necessary.

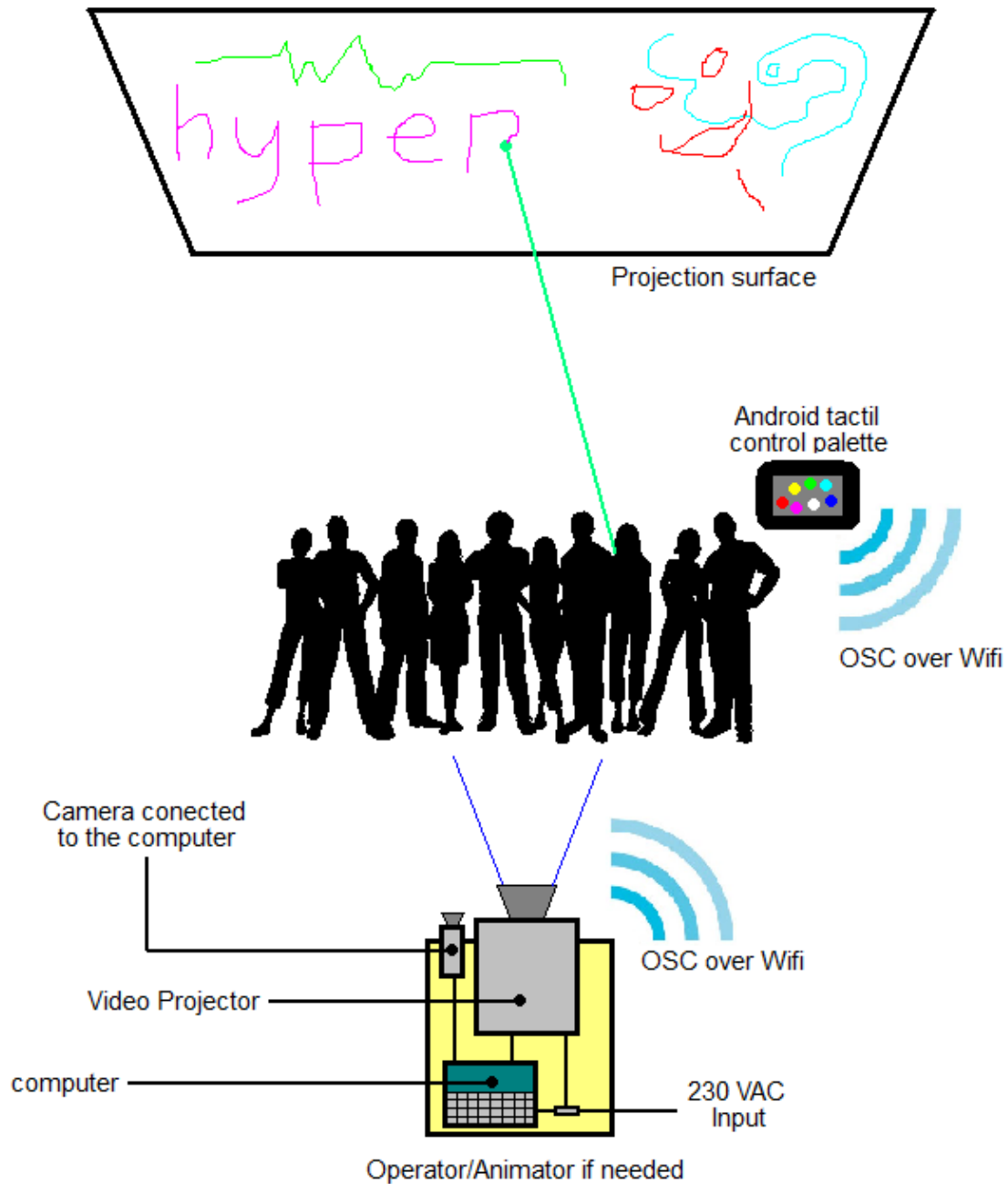
1.2 Preamble

- We used this application at Tabacelera Madrid, with the cultural association Telenoika for workshops and events, at the MIRA! Festival in Barcelona and with the events of Hypernoika.

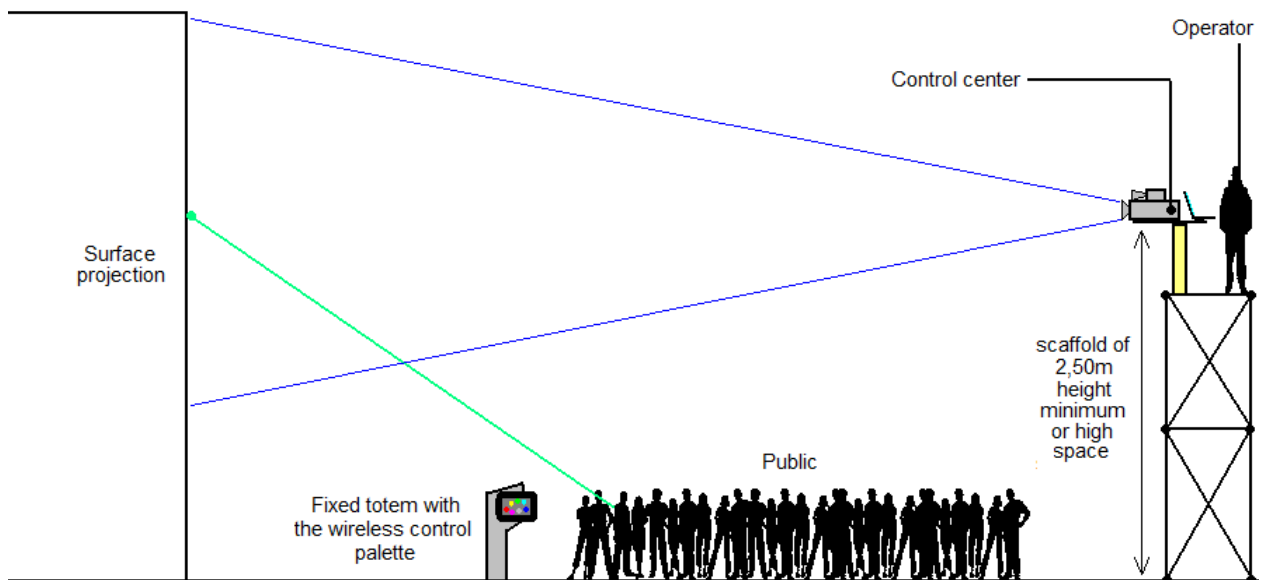
- The acceptance of our project, will motivate us to, optimize the code and add more features.. Final product could be even better.

2. Diagrams

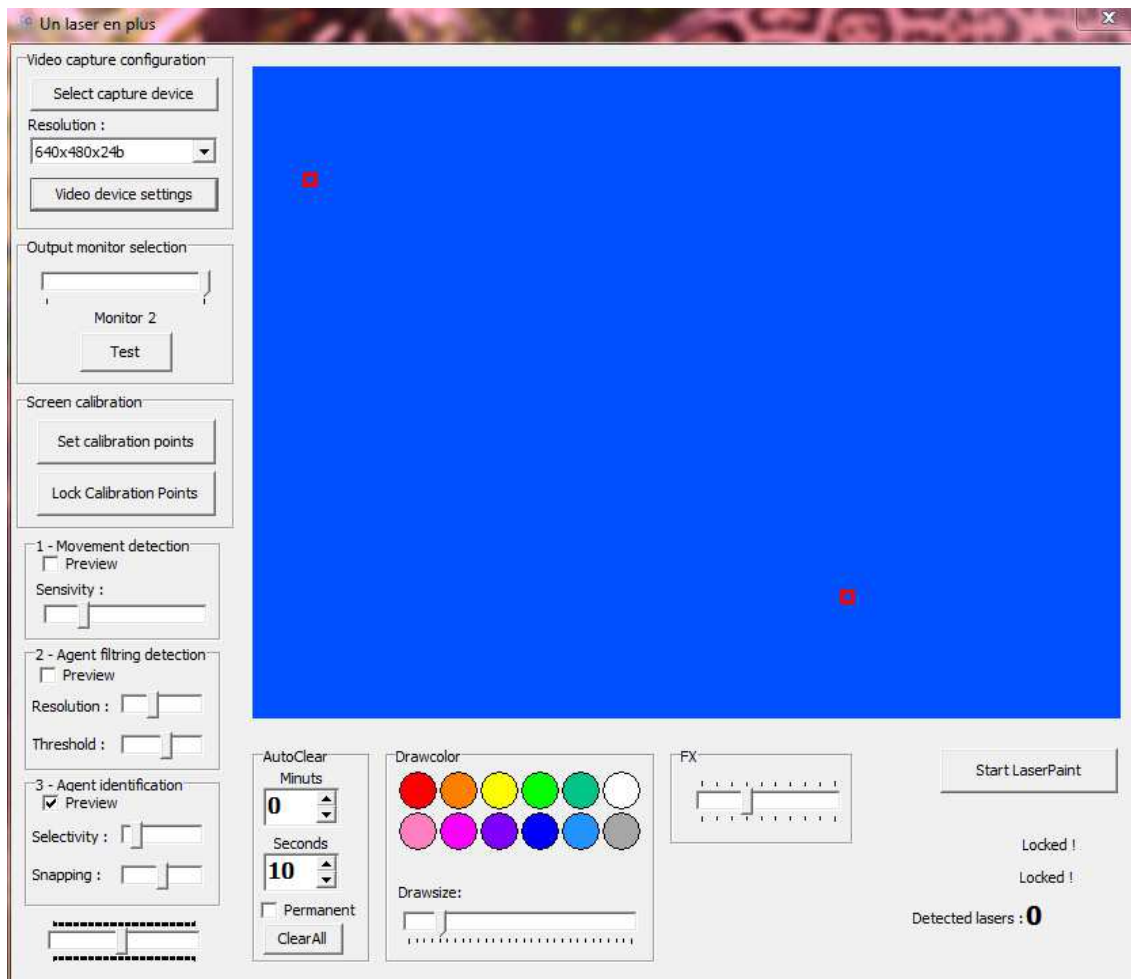
2.1 Technical map



2.2 Lateral map



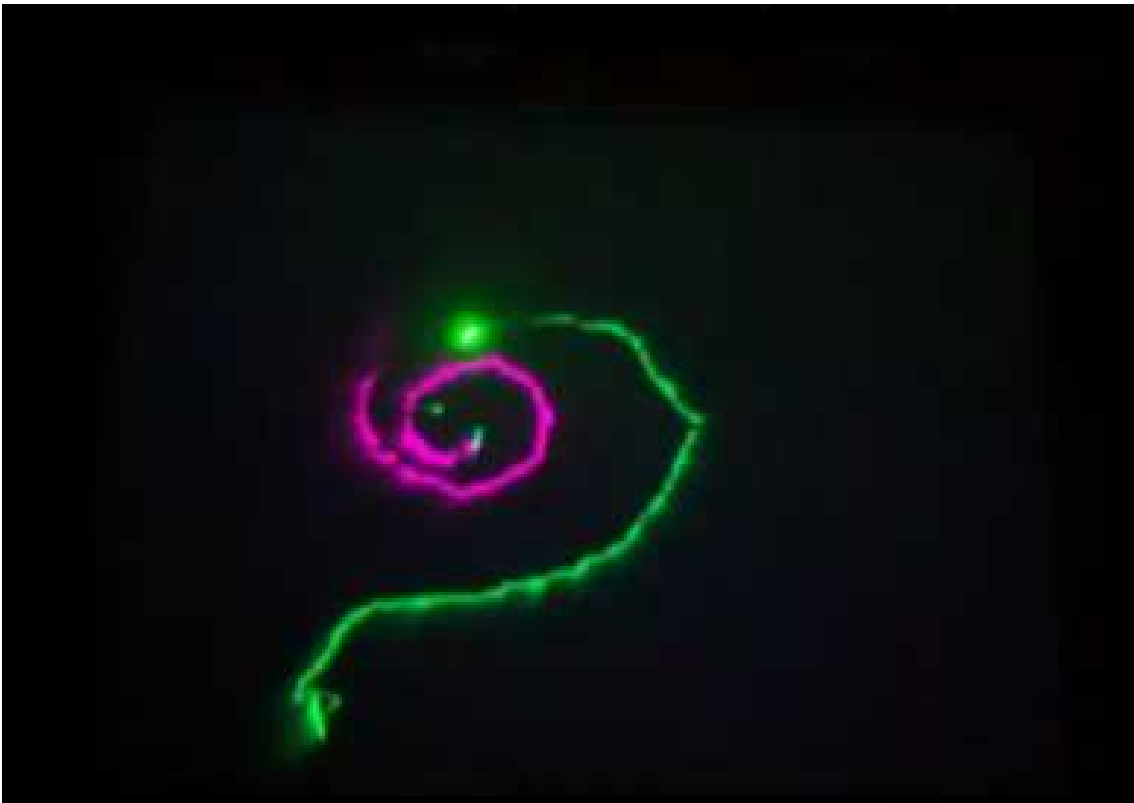
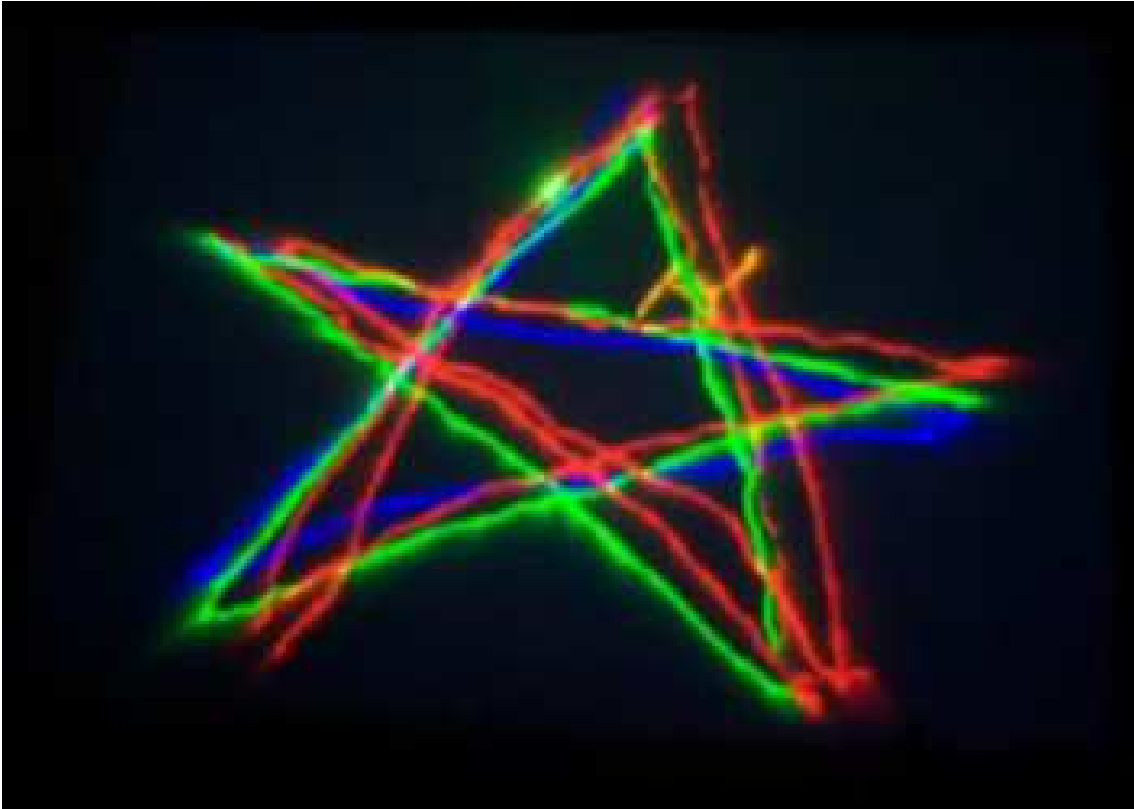
2.3 Screen captures of the software



Main control form



Projected calibration grid



Output captures samples



Android tactile wireless control palette

3.Material needed

3.1 Technical material

- A Beamer/video projector of 15 000 Lumens type Sanyo PLC-HF15000L. (It depend where you want to install the Laserpaint) with adapted optics.
- A power cable for the video-projector.
- A DVI-Cable male-male of 5 meters
- A laptop compatible PC x86 x64 with DVI output and OpenGL graphic card and the operating system Microsoft Windows 7 or Linux (Debian or Ubuntu).
- An USB video capture camera EyeToy of SonyPlaystation 3.
- A USB extension lead of 5m.
- A 230VAC extension lead of 5m.
- A 230VAC multitasking.
- A green laser pointer of 50mw.
- The totem for the android tablet
- A 2m long chain to lock the laser pointer at the totem.
- An android tablet
- Batteries for the laser pointer and the tablet.
- Software Laserpaint Hypernoika.

3.2 Material to realize the installation

- A scaffold of 2,50 height minimum.
- Gafer tape
- Plastic ties

4. Electrical needs

We need a standard electrical alimentation 230VAC 50Hz of 2000W. If we use a video projector type PLC-HF15000L, we will need 1850W + 150W with the laptop. Approximately we will need 2000W of power.

5. Renting materials

Hypernoika can't bring these things for the event, so we will have to rent it.

- A scaffold of 2,50 height minimum.
- Electrical alimentation 230VAC 50Hz of 2000W
- A Beamer/video projector of 15 000 Lumens type Sanyo PLC-HF15000L, with adapted optics. (It depend where you want to install the Laserpaint)

6.Contact

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