

**Bricolabs workshop, april 2007, St Ouen.**  
*two rings connecting then calling the genius*

Mal au Pixel, theme: *Democracy or Die.*

Denis Jaromil Rojo: *If no privacy then no democracy. We must be the critical other. Our code of respect is to challenge ourselves with our ideas.*

*Where:* Mains des Oeuvres, Rue Charles Garnier. The Rue leading up to the venue is le Rue Blanqui.



*Who:*

Participants:

Denis Jaromil Rojo,  
Venzha Christiawan  
Rob van Kranenburg  
Jean-Noël Montaigné  
Benoit Campo  
Aude Gilbert  
Wassily Kosinets  
Maël Primet  
Marie-Anna Tsagouris  
Marion Louisgrand  
Joe Holmberg

Veronika Benova  
Kamon Ayeva



*Interests:* GPL, open source developments, ethics at the level of code, computer science, signal accessing/image processing, self learning, open source concepts  
meubles/metalles artisanale, dakar, cybercafés in africa, public notion of public space, open source development for public space, philosophy behind social practices, seeds for change.



Jaromil and Venzha setting up.

*Rob van Kranenburg: brief intro of bricolabs;*

- from Brazil's next step of the pontos de culturas, open source content, software and hardware gambiarra
- from the growing notions of security and transparency of top down ambient intelligence (rfid, smart cameras, biometrics) coupled with a policy of fear and distrust; bricolabs as bottom up ambient intelligence
- from a need to feel again more positive and empowering about technologies
- from the recognition that these are global trends and there are only local solutions informed by these global trends; bricolabs as a transnational operation

*Denis Jaromil Rojo : reverse engineering and recycling as major bricolabs practice alongside/before developing new own hardware:*

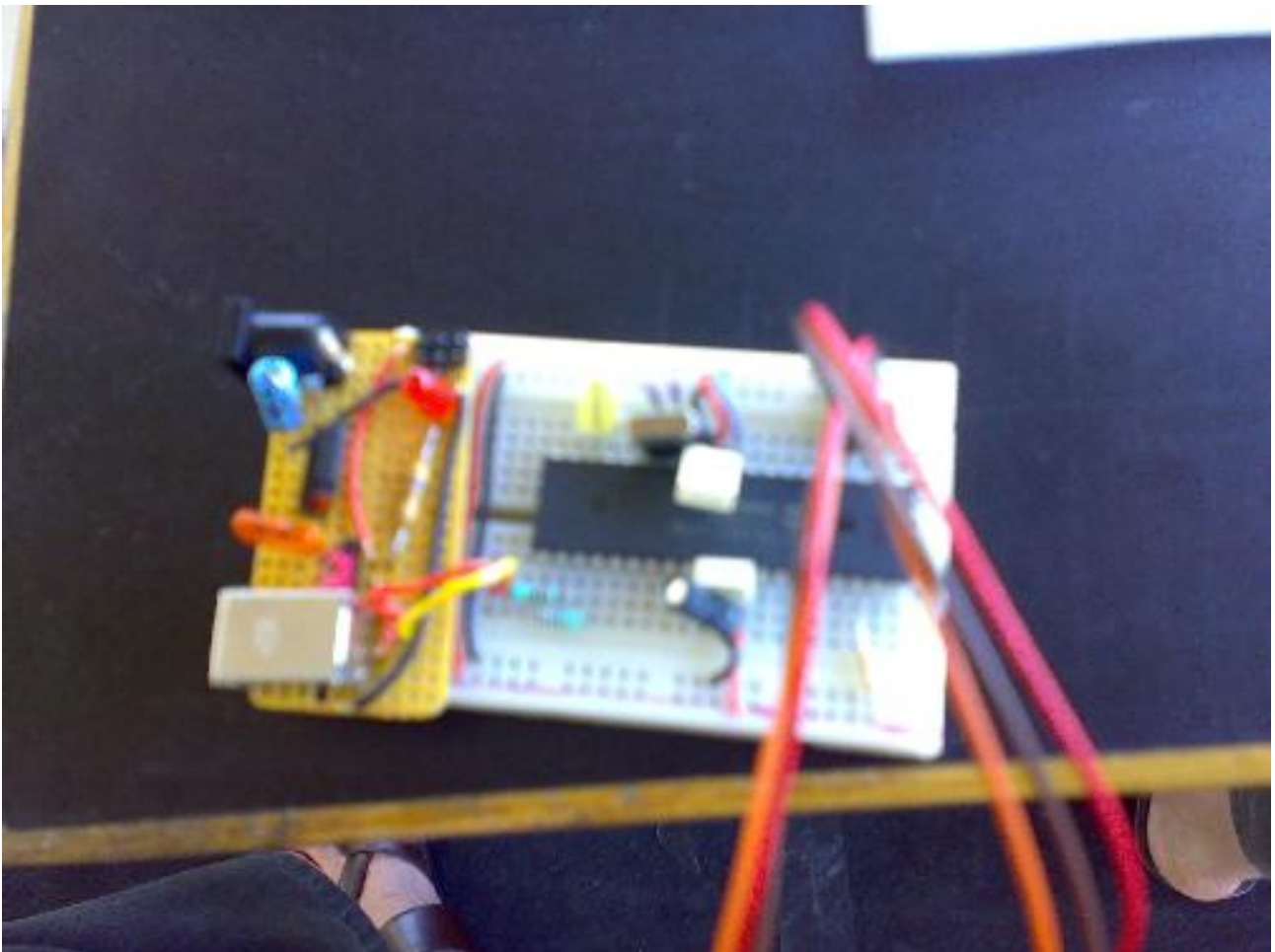
- check on what is already there, focus not only on cultural but also on engineering protocols and practices of large companies (buying prototypes and halting their development)
- acknowledge that there is no sense of progress in only one spot, development is everywhere, also technological development should be seen in local directions. The key to ensure honesty of operators across networks is found in the example of the free software foundation: a web of

trust of pragmatic people sharing an ethic and then active also on lobbying levels.

*Venzha Christiawan: bricolabs practices are already very real in the Indonesian context where the government puts out how to's on radar and wireless boosters:*

The situation in Indonesia is very complex, both open and closed software schemes are proposed and supported. However there are some very interesting hardware developments going on. LIPI the governmental agency for research and development has produced a cheap sea and air radar at one tenth of the general price condition together with the How to to make it and a very accessible and illustrative manual to boost wifi range for free access, called *ndeso* (no brand). Both in Indonesia and Brazil there are pleas to open up 2.4ghz as a free zone.

In Indonesia currently there is very little open source, little hacking experience inside the schools or university. Young people set up media spaces, honf (venzha in jogjakarta), ruangrupa (ade in jakarta), common room (gustaffharriman in bandung). These are all in Java, small island, but the biggest in media centres. There is no transfer knowledge within the academy, nor interdisciplinary practices. In fact, one of the roles of HONF (House of Natural Fibre) is to play the bridge between these different places and practices (for example honf brings together people in biotechnology, bioethics, tattoo artists). For us the story of why and how of global media art is important, we need it to trigger the local creative community, also because our own practices get reread in these histories and played back to a local audience that only then may realize what it is we are trying to do.



*Denis Jaromil Rojo on recycling, dyne, game platforms: a scenario:  
Security doesn't exist. There can only be a higher degree of security.*

For me it is always interesting first to see how to recycle, how to create real situations for people to make a decent living of their practices. My main reason to work on these issues has always been a surprise and anger on people putting out platforms that not allow you to work on them nor to recycle them: whole economic models have been built on closing such possibilities (see printers-cartridges).

Several systems have been developed as closed black boxes for the people using them, enforcing the concept of "trust" as a mask for marketing in the business of information, leading to loss of privacy and the tracking of individuals: just another attempt of branding security to legitimize the use of control techniques. Still, trusted computing is conceptually sound - you should know what runs on what you use - but it is only productive in programming terms if we can build our own parameters, open to all players.

The business market is betraying its own terms as corporations build hardware restricting software development as accessible only to business partners - it is not an open market, it is not even competition: it is a colonizing monopoly of information technology.

*Game platforms:*

Currently there is no artisanal scale in the game industry. After Commodore went bankrupt, all consoles were closed. If I am an independent programmer I have to deal with the company that makes the hardware. Hackers did a lot in this field to open up the hardware. The most advanced restriction and copy protection techniques have been already deployed by the game industry in the past decades, without any success. Resistance is futile, as digital nature will take its course (see Eben Moglen's account on the digital revolution) laws belonging to other contexts are made to be broken. And while this happens, piracy creates new markets.

Game consoles are hacked everywhere. A lot of dry, technical papers are online on how to mod the chip. In border nations and the peripheries of the cities, piracy is a stable (the only stable) source of income for a large mass of poor and immigrants - has been like that with cigarettes monopolies before. How to develop then? How to match it with trusted computing? How to cope with the people who sell pirated videos? And how we are going to interact with the consumer approach: player free-producer buy? In 2002 we cracked the Xbox console to run GNU/Linux on it. In certain places of the world dyne:bolic was the first GNU/Linux CD reviewed and distributed by game magazines: it was a cultural and technological hack. We made the 100 dollar computing without polluting the world with more hardware.

For me, bricolabs is about affordable used hardware that can run anything, available in large numbers, democratic and hackable. Several hackers are focusing on devices as the Gp2x and the NDS, they have a computing power comparable to the Amiga ten years ago.

The Gp2x now runs Linux and is almost completely open source. It is vetted by the Free Software Foundation and the Korean developers are cooperating to disclose all sources. It has a huge breakout on markets, as employing emulators it can run almost all games done until 15 years ago on every other console, in the palms of your hands. This situation leads to new business models where you don't need the platform provider to produce and distribute your game: just realize your idea and market it as you like. This can create huge communities, and a lot of co-development. But the Gp2x misses input, it only has output, so is not a suitable tool for hacking new ways of communication.

Far more interesting for its communication possibilities is the NDS: a very powerful wireless enabled device featuring a microphone and a touch screen as ways of interaction. It is relatively cheap (150 EU) and has the same functionalities as a 400 EU PDA. Once on the second-hand market its price can go down to a 100 and even 50 EU. It is possible to do ad-hoc networking, employing any protocol build for it, although the antenna is not so powerful. Unlike the Gp2x, the NDS doesn't let you run homebrew software: you need an encrypted code, yet a lot of companies already sell modded cards, so there is a lot of homebrew already out for and on the Nintendo DS. The point is to make it legitimate to run whatever we want on it. Either that way, either business monopolies will just treat large masses of kids with criminal imputations. My goal is to honestly produce services and added value for these systems, that is why we plan to negotiate as bricolabs with major players on the hardware market, of course we're open to dialogue with any company. The horizon of Bricolabs is shared with recent developments on GNU/Linux: provide easy to use toolchains to compile software for these devices and documentation on how to do it. Digital artisanal practices claim a market that should be left open by corporate powers holding their rights on all what we use.



Let's take the example of furniture manufacturing: we need to discern the ownership of the scalpel employed in the process of creation: if you buy a table you should be able to work on it to make it more your own, to better fit your surroundings or even to sell it. It doesn't matter who produced and sold you the scalpel or the table.



*Jean Noël Montagné explained the Craslab sensor and actuator lab set up ( movie online soon).*

*Jean-Noël Montagné :*

My focus on open source movement and Bricolabs initiative is driven by the necessity to give other possibilities to citizens in their day life to face the actual global economic model . We must start new democratic processes plainly integrating local and global contexts in economy, environnement, education, science , culture etc, and plainly restoring the citizen as a major actor in the global community.

We all know open source software, documents and recently hardwares, and we just discover now that the open source concepts, techniques and ethics concern all schemes of human presence in this small and fragile planet. The Bricolabs laboratory is one opportunity to contribute to such discoveries and applications.



