OPEN SOURCE WASHING MACHINE PROJECT

a Bricolabs project
http://www.bricolabs.net

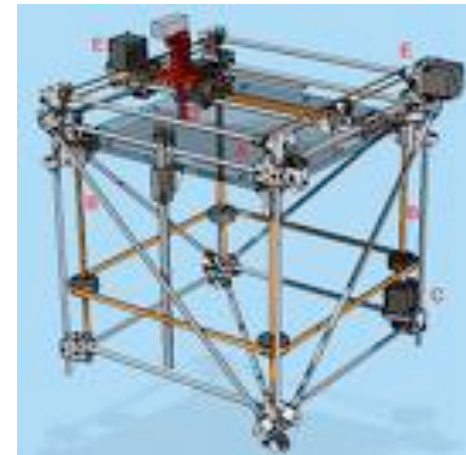Jean-Noël Montagné
from craslab.org

Bricolabs network

A distributed network for global and local development of open source generic infrastructures incrementally developed by communities.

A global platform to investigate the new loop of open content, software and hardware for community applications, bringing people together with alternative technologies and distributed connectivity, unlike the dominant focus of IT industry on security, surveillance and monopoly of information and infrastructures.

Open source hardware ?

- no patents but an open source licence on the design

- open source software in programmable electronic components

- possibility to DIY, modify, share, copy, distribute, sell the products freely.

- examples: Freeduino, OScar, RepRap, Monome etc.

Context of the washing machine project ?

- most people (mostly women) on the planet washes clothes by hand.

- It's a huge amount of time

- hard work (for the back, the hands, the feet in cold/hot water)

- toxic chemicals for washing

- dirty water & pollution problems

some years ago in Europe

Magdalene Laundry in Ireland

folkloric event in an open air museum, Europe

TOGO

would they prefer to play games ?

or going to school ?

Ecuador

Mozambique

Mozambique

China

China

China

Egypt

Guatemala

Haïti

Irak

India

India

Laos

Madagascar

Mali

South Africa

at home

San Domingo

Romania

laundry in Senegal

Laundry in
India

laundry in India

laundry in
India

carrying heavy wet clothes home

India

Honduras

What did our grand-mothers say in the fifties, when electricity or washing machines came ?

-*the arrival of washing machines was a revolution in my body.* No more pain.

-*the arrival of washing machines was a revolution in my week programm.* No more time wasted.

-*the arrival of washing machines was a revolution in my psychology.* Cleaning the piss, shit, dirt and sweat of others is not a vocation.

Is it possible that every family in the world soon possesses a washing machine, western style ?

NO WAY

-Problem of water

-Problem of electricity

-Problem of money

A recent example in a urban area:

3 adults and 4 children family in Dakar, Senegal

- washing by hand 3 times a week/ running water with low pressure and many interruptions/ electricity with many interruptions during the day.
- the mother is washing/drying from 9 AM to 4 PM
- heating big water tanks is dangerous for children running around
- pays sometimes a worker (woman) when she is too busy or too tired.

*Can we find new technologies
or new concepts for washing clothes ?*

yes

*Can we create technological & sociological concepts
adapted to the different contexts ?*

hard work and long term project...
but possible in a network organisation

the open source washing machine project aims to define

-a panel of technologies

-a panel of materials for the different technologies

-a panel of DIY and ecological detergents

-a panel of people/knowledge to build prototypes (everywhere) and

test them into the adapted contexts

-a panel of methods for DIY /dissemination workshops

-a panel of people to give the first dissemination workshops

There could be a hundred different designs,
each design adapted to the different places

Brainstorming

Individual or collective washing machines ?

both could be explored,
collective, first.

Technology

About materials :

Materials & technologies adapted to each context

-recycling washing machine parts + freeduino board as programmer

-recycling and building with vehicles parts (cars, bikes)

-building in wood and bamboo

-recycling plastic parts

-other materials ?

About energy:

energy for mecanics, energy for heating water

-using wind power,
-water power,
-solar power,
-animal power,
-human power
...?

Washing technology:

agitating water+detergents+clothes...

-rotating systems ?
-vibrating and sonic systems ?
-shocking systems ?
-brushing systems ?
-bubbling systems ?

Other ideas

-uv light systems ?
-bacterials systems ?
...?

How to motivate ingeneering/design/biology schools
to work on some new concepts ?

Technology

About rotating systems western style :

(not very adapted to poor contexts)

-using horizontal rotations ?
-vertical or oblique rotations ?
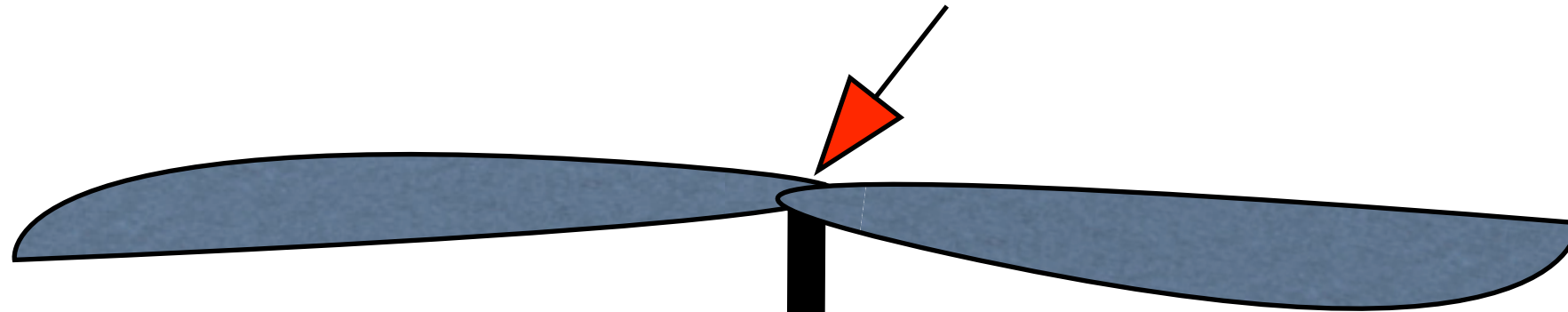-helicoidal systems ?
-six-sided tanks easier to build

Vibration systems

very easy and cheap to create
with windmills, watermills...
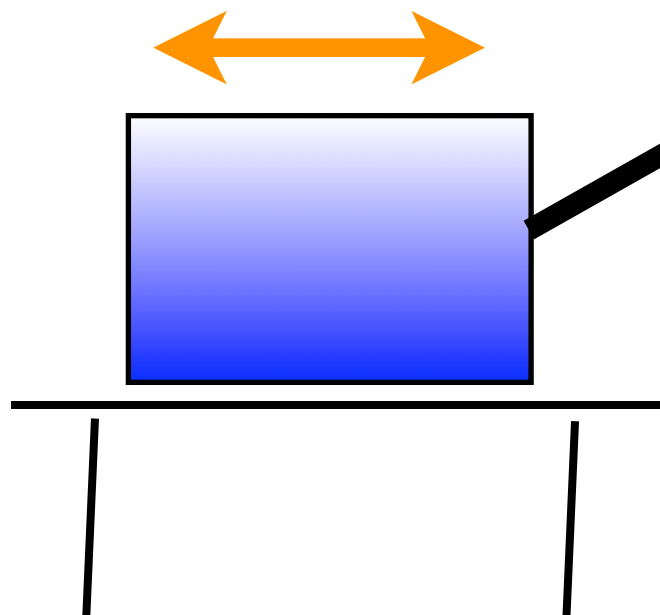
an example of very simple design:

Desequilibrated DIY windmill (easy...!), to create vibrations

all could be in wood, except the axis here

Closed tank with
clothes and detergents

with a metallic tank, the friction can also
create free heat to warm the water ...!!

Transmission of vibration through this branch

open source design by JNM

Materials

DIY detergents :

-how to build soaps and detergents with natural products, plants and trees.

-how to grow soap plants and trees

-how to manage, clean and recycle water

to do in the project:
-global inventory of soap plants
-bibliography on the subject

The open source washing machine project needs a network of different competences, as well as simple observers, linked all over the world by the exchange of knowledge on the web.

contact:

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