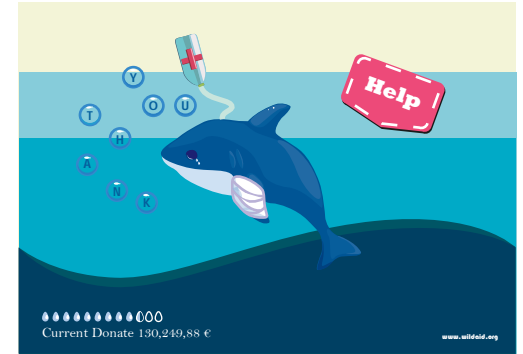


Yue Mao 11174
Media Art and Design
Summer Semester 2012.7
Prof. Jens Geelhaar
Faculty of Media
Bauhaus-Universität Weimar



Interactive Donation Boxvvv

Interface Design 4 / Interaction and Experimental Interfaces



catalogue

Instruction

Concept

Reserches

Realization

Acknowledgment



Introductions:

“Interactive Donation Box” is a Project for Interface Design project module, summer semester 2012. Media art and design.

This project is a completely new kind of donation box.

Though this is not a perfect solution, it gives us a new method of donation box designing.

This documentation including conceptual explanation and programming source file.

If you have questions or/ and suggestions, please contact me via:

bunyyueyue@gmail.com

Yue Mao

Why I want to save wild animal? --Birth of my idea.

Along with the development of human civilization,
our material wealth has increased,
but at the same time, in order to met people's desires,
humans do more cruel to harm to animals,
For instance, bear gall, fur, ivory, rhinoceros horn, shark fin. . .

Putting whether they live happily or not aside, fristly they must at least be alive.
Think of those animals that are on the edge of extinction.
We are duty-bound to protect them.
Start with myself!



How can I save wild animal?

Animal Rescue wouldn't be realized without monetary donations.

My personal economic ability is limited.

But I'm able to encourage more people get involved into this activity.

Humans kill more
than 100 million
sharks each year



Reaserches on Donation types

Donate on-line

1. By using Paypal or credit card to transfer.
2. By purchasing products of those institution.

Donate off-line

1. Bank transfer
2. Cheque
3. Cash
4. Pysical goods
5. Marrow transplant(or other medical treatment)



Current News

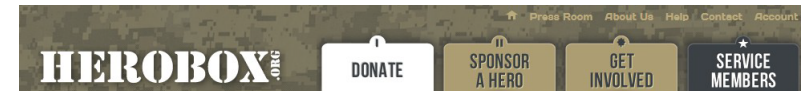
Ben Nevis Hike, 25th Aug 2012

Thanks for showing interest in hiking UK's highest mountain to support the work of Khalsa Aid! Majestically rising 1,344 meters (4,406 feet), Ben Nevis sits amidst the hills and Monroe's of the Scottish Highlands. Read on and join the Khalsa Aid Ben Nevis Hike 2012 to experience the beautiful walk with other Sangat from across the UK



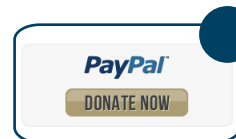
Please Donate Now

Khalsa Aid can only carry out its relief work due to the generosity of the public. We deeply appreciate your support and thank everyone who has donated to Khalsa Aid since its launch in 1999.



DONATE MONEY

HeroBox is a 501(c)(3) non-profit organization. 100% of your donation is tax deductible. To make a secure online donation, please choose from one of the below sites. To mail or drop off your donation, please visit one of our locations.



YOU CAN MAKE A DIFFERENCE

Donate Money

Donate Items

Donation Box

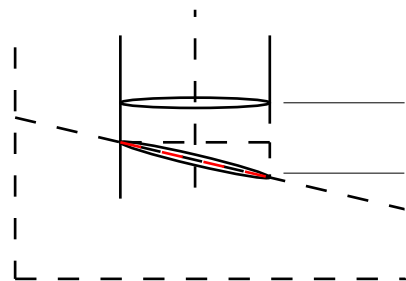
Program Support

Connect to Us

Event Calendar

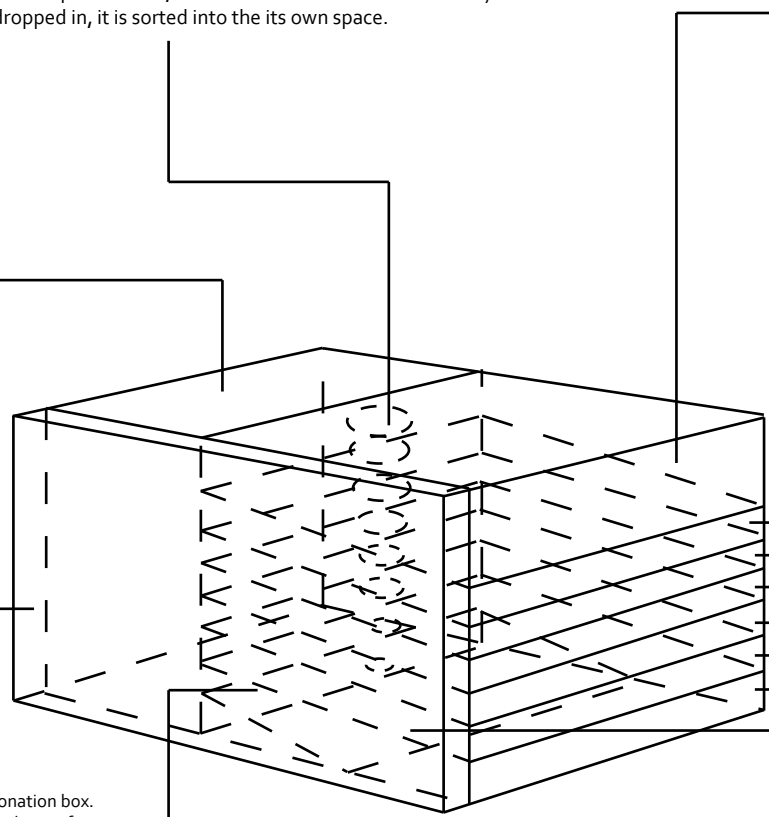
Gear Shop

Flowchart



This is real coin's diameter.
 But inside the box, in order to sort different denominations, I gave every isolation board a certain angel.
 And of course the holes on the board become tilt.
 For this reason, the hole's diameter is larger than the coins themselves.
 More over, from top to bottom, the size of each hole declines one by one.
 When coin dropped in, it is sorted into the its own space.

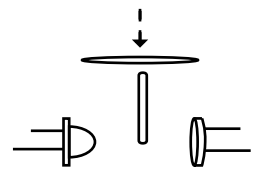
Arduino bord and electronic lines installed in this space.
 It is connected both with computer and sensors.



8 Kinds of Euro Coins

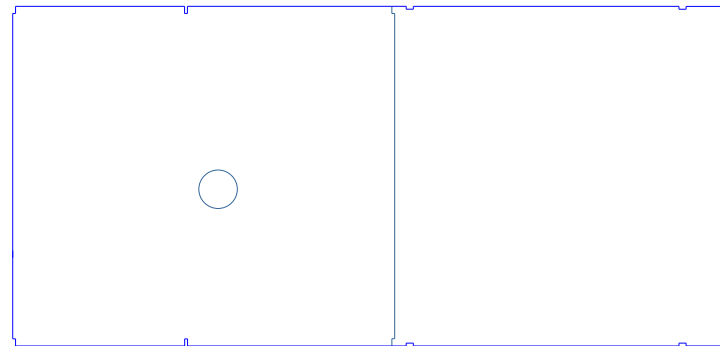
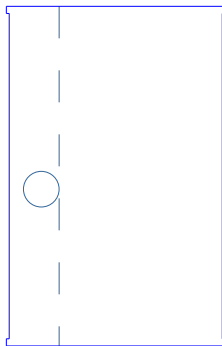
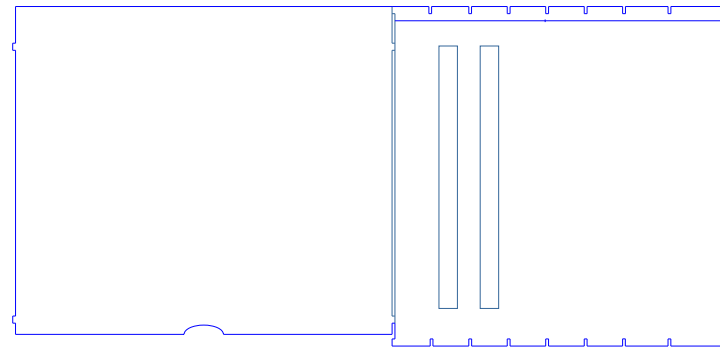
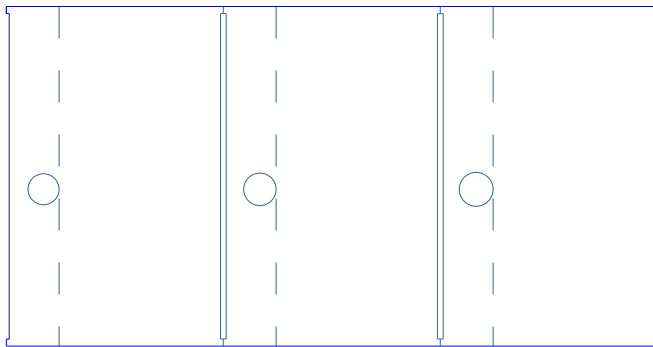
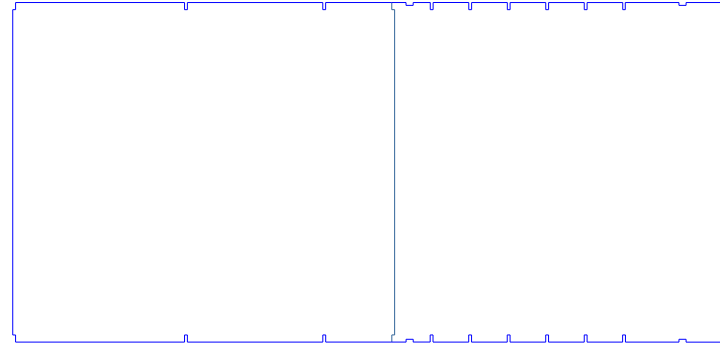
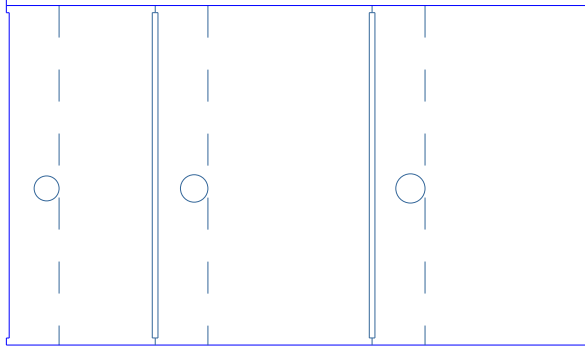
2Euro:25.75mm/8.50g		25mm
50Cent:24.25mm/7.80g		23.75mm
1Euro:23.25mm/7.50g		22.75mm
20Cent:22.25mm/5.74g		21.75mm
5Cent:21.25mm/3.92g		20.50mm
10Cent:19.75mm/4.10g		19.25mm
2Cent:18.75 mm/3.06g		17.50mm
1Cent:16.25 mm/2.30g		

A screen will be put in front of the donation box.
 It plays a simple animation in order to explain what is this activity donate for.
 I take the institution "Wild Aid" for example,
 the animation should be something around Shark protecting.
 To some extent it is more like a cute game than a simple animation.
 Before donate, the blood will decrease when time passed by.
 Once any one donate a coin, the blood will increase.
 And data of the total amount of money will be shown on the screen.
 This is a tangible and immediate feedback.
 It answers the hottest question that all the donators want to know: how much is it now?

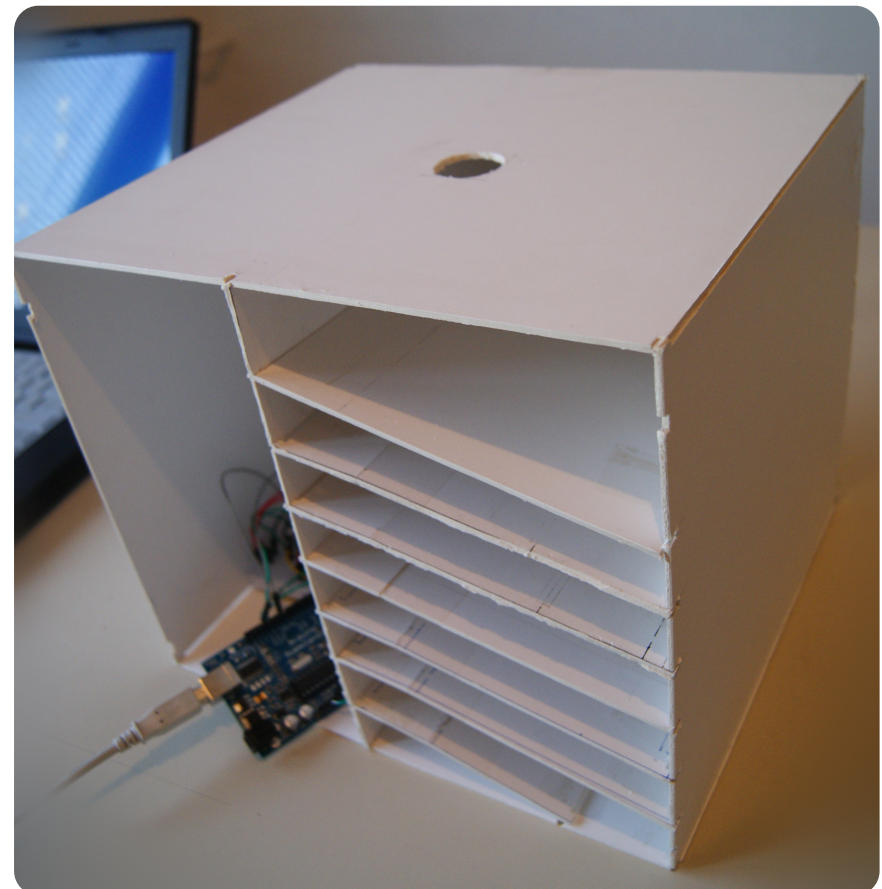


Under every hole, there is a set of infraed LED and a light sensor.
 With these two things, data could be traced when a coin sorted.
 Because, once a coin go through a hole, it will resist the infared light, and the sensor cannot receive the signal.
 Processing can judge if there is a coin going through by such variation.
 In this way, the number of the total money can be calculated.

planar graph



Real object



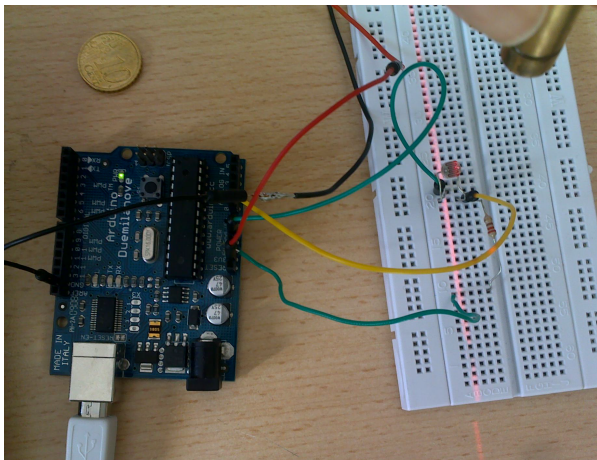
Advantages compared with traditional ones



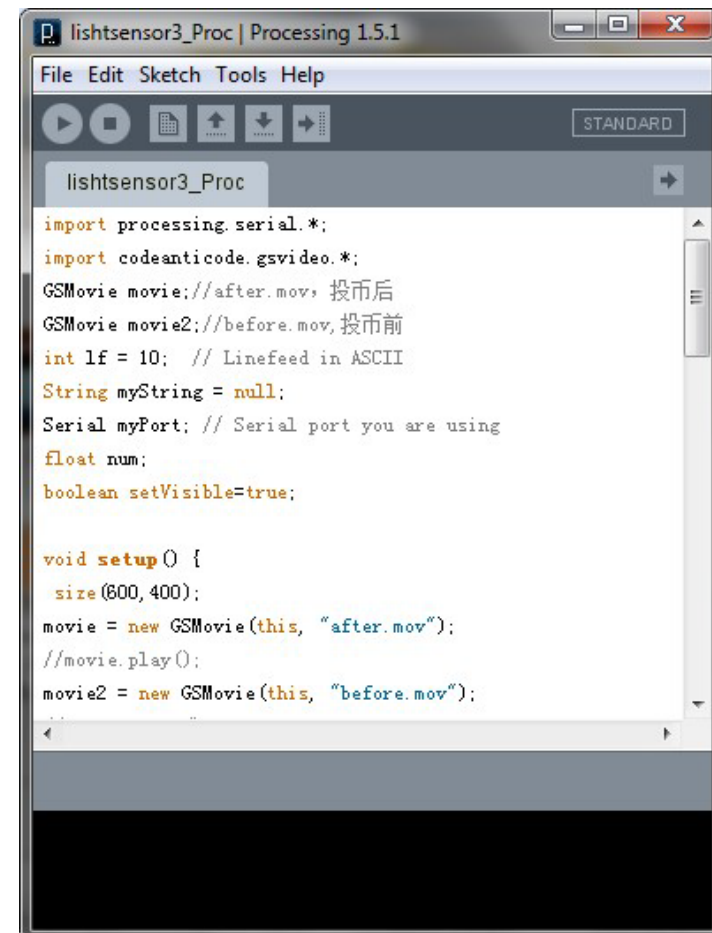
1. Automatic coin sorter
2. Purposeful
3. Realtime feedback
4. Impressive & easy to remember
5. Dynamic & Attractive
6. Maximise the institution's influence

Technical stuff

Hardware



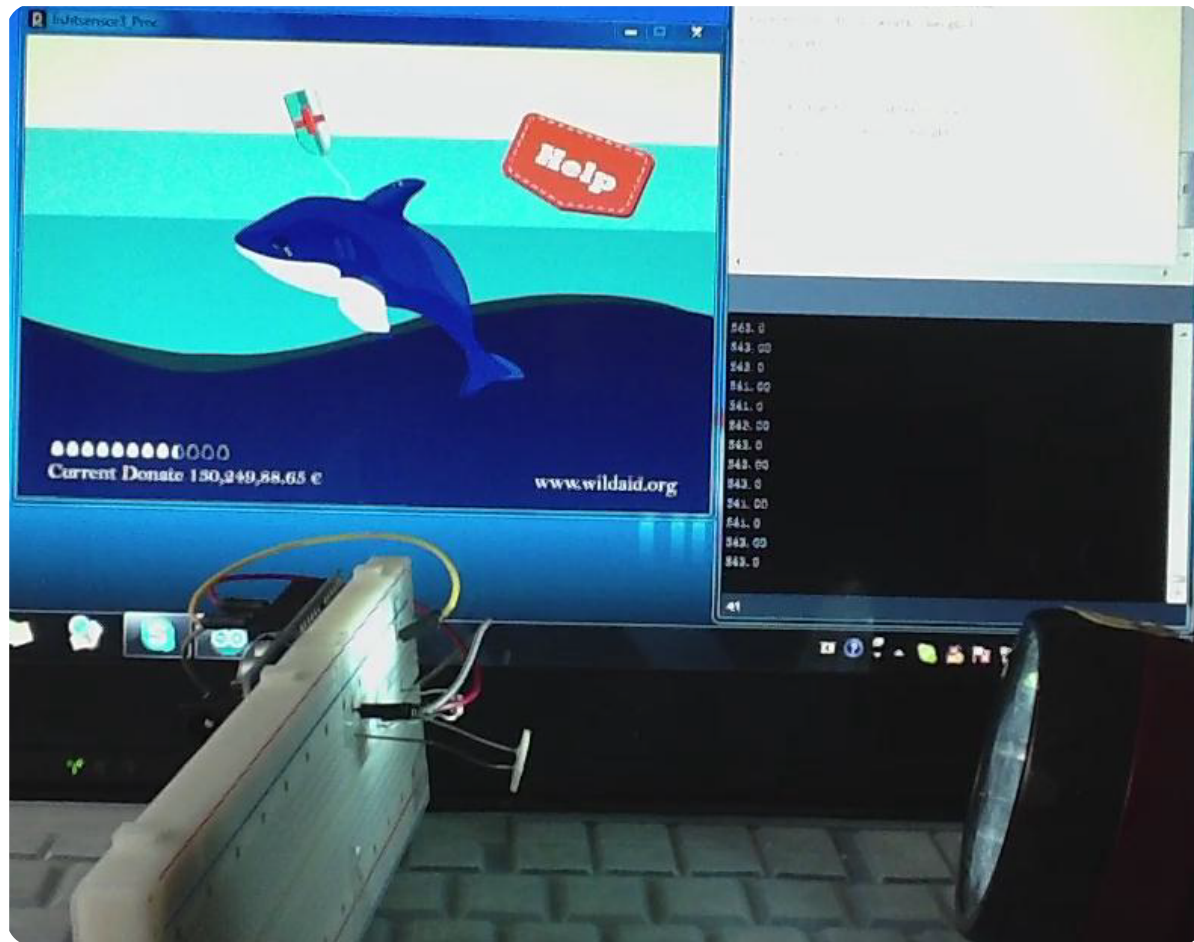
Software



```
lishtsensor3_Proc | Processing 1.5.1
File Edit Sketch Tools Help
STANDARD
lishtsensor3_Proc
import processing.serial.*;
import codeanticode.gsvideo.*;
GSMovie movie;//after.mov, 投币后
GSMovie movie2;//before.mov, 投币前
int lf = 10; // Linefeed in ASCII
String myString = null;
Serial myPort; // Serial port you are using
float num;
boolean setVisible=true;

void setup() {
  size(600,400);
  movie = new GSMovie(this, "after.mov");
  //movie.play();
  movie2 = new GSMovie(this, "before.mov");
```

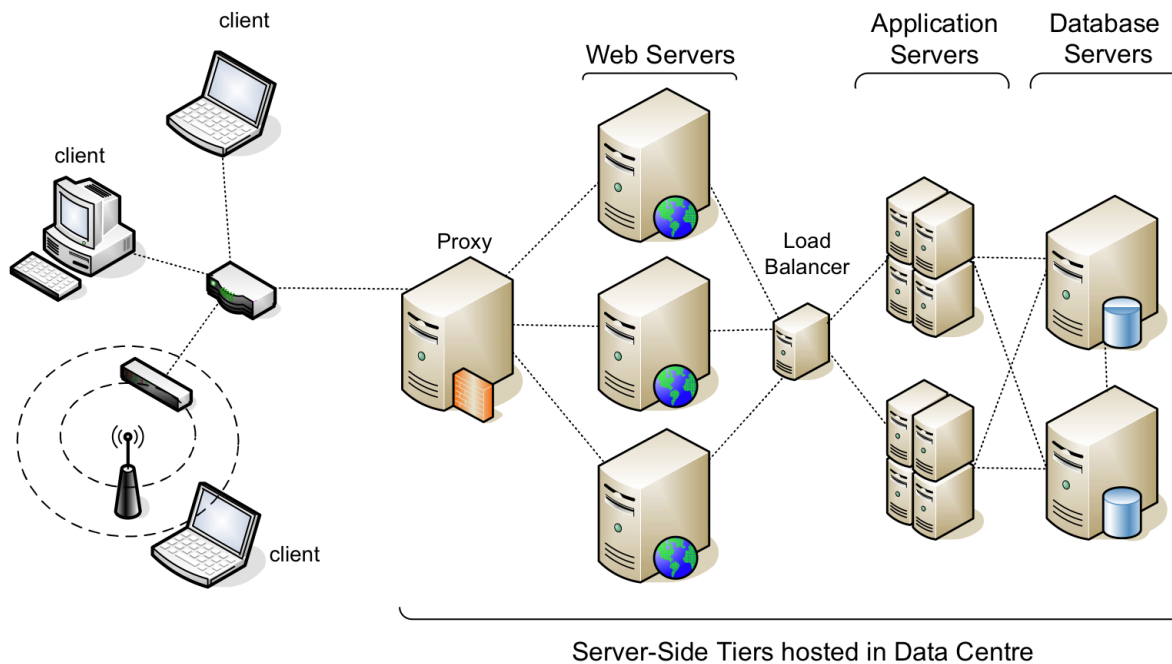
Prototype



How to improve my design scheme?

One key question is for an charity institution, only one donation box is not enough.

Extending from single box to multiple boxes and feedback the total number of money in realtime is the main point.





Acknowledgment

**Greatest thanks the support of
Prof. Dr. Jens Geelhaar
Ferderic Gmeiner
Martin Schied**