

Presentation 29C3 Hamburg, 28.12.2012 Alexis Wiasmitinow wiasmitinow@gmail.com 1



Index: what's coming?

- 1. Hardware
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Why EveryCook? Hardware Problem





Further thoughts: stupid industry!





What is the Difference between a rice cooker and a deep fryer?

Basket and Thermostat That's it!



Are electronics expensive? Nope!

So why this:



Instead of that:



And that:





Analog? Nice! Programmable? Nicer!

But wait! Then we can:

- Add more sensors
- Add a timer
- Think if-then-else
- Start talking to the user



Talking is exchange of Information

What information could we use?

We are in the «Information Age», right?

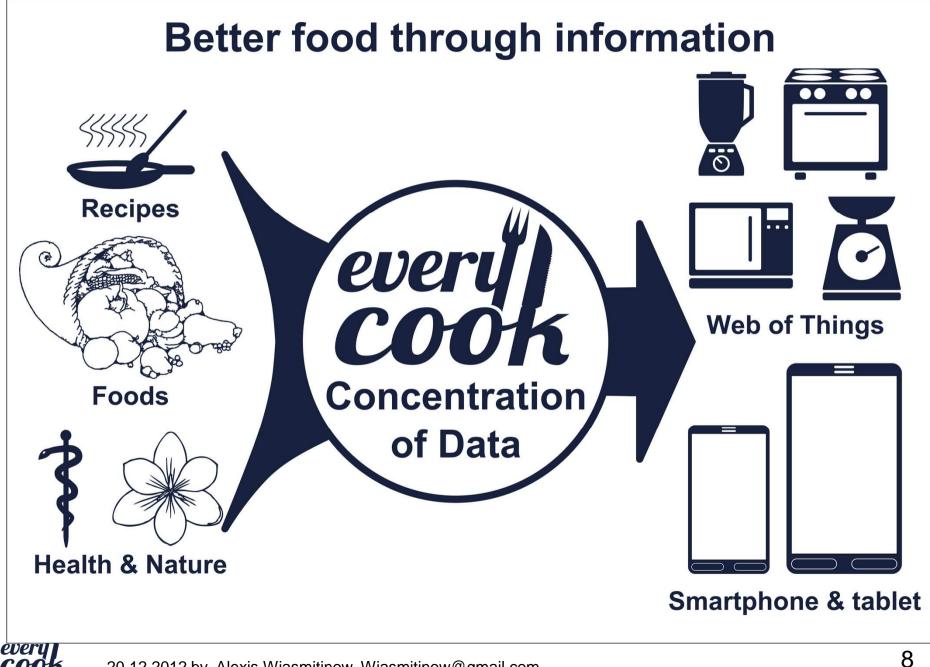
So we can access information easily?

Let's get ALL information!

Let's go on line!

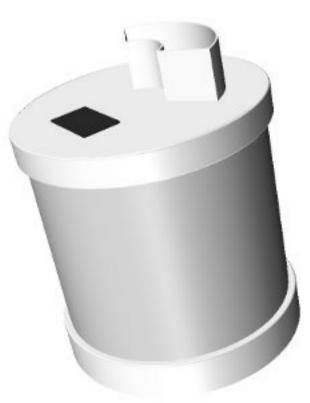


In 2008 the idea of EveryCook was born



2009

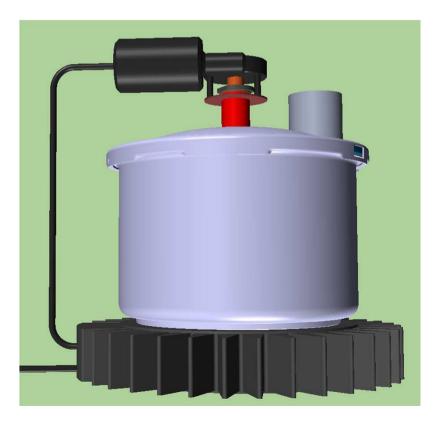
- Thinking about possibilities
- Desk research about technologies
- CAD Model concept





2010

- Talks to manufacturers
- Reactions: «interesting» but no real support
- Detailed CAD Model





2011

- Make it real: First prototype
- Pressure cooker + fiberglass + epoxy
- Arduino + EEEpc
- Hacked induction heater
- Motor from trash
- Some lasercut parts
- Database as xml files
- Some php code
- Works!

Looks dangerous to Investors



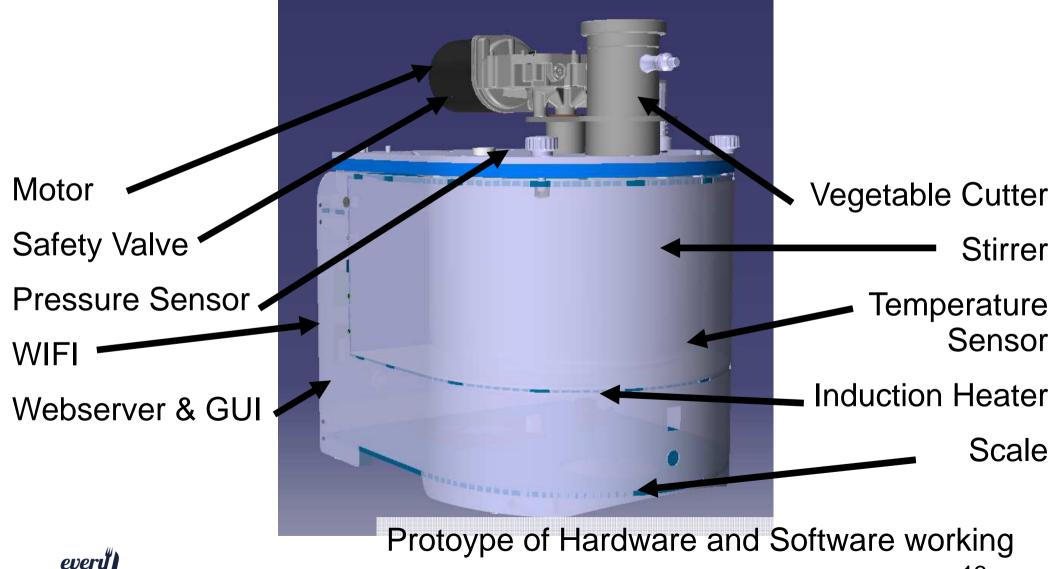
2011: Insights

- Motor is heavy: we nee a hinged cover
- Motor is too slow
- Home-made blades are blunt
- 10 bit ADC of Arduino is bad for scaling
- Pressure sensor would also be nice
- Hacked induction heater is a black box
- Database must be completely redesigned
- Php code also
- I need a team with at least one good coder

Back to the desk!



Intelligent Hardware Features



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2012: Version 2 prototype

- Expensive blades from a professional machine
- Maple mini has 12bit ADC
- Embedded PC instead of EEEpc
- Adjustable OP-Amp for the scale from Con
- OSHW induction heater from Con
- Samuel joins the team. Others leave...
- Samuel improves MySQL Database
- Samuel writes lots of PHP & JavaScript
- Second prototype goes to production

Looks much better!



2012: Insights from prototype 2

- RaspberryPi would be great
- 12bit ADC is not enought
- Adjustable OP-Amp does not help
- OSHW induction heater is buggy

But the base is good! Minor changes:

- 24bit ADC with integrated Amp
- Samuel learns SPI
- Connections to China for Induction
- Special RaspberryPi shield







We want the most intelligent cooking device

We need software!

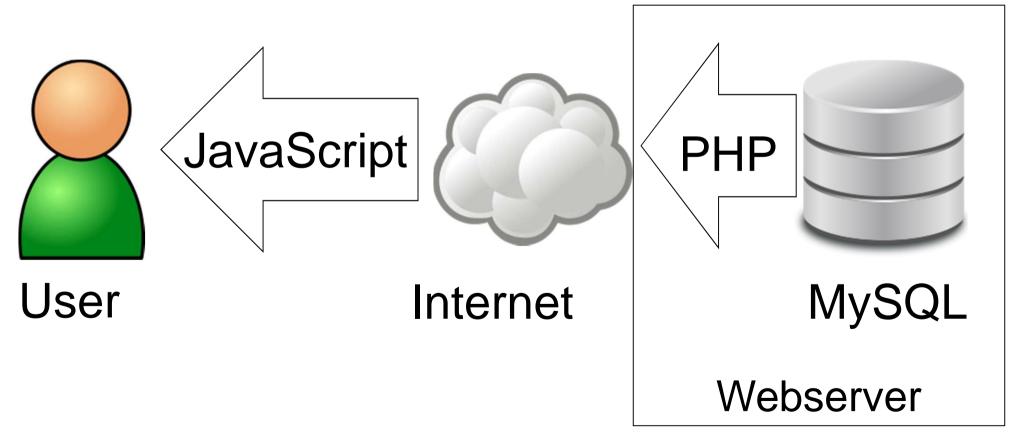


Intelligence means to us:

- Minimise the input from the user
- → The machine reads the recipe and knows what to do
- Maximise interactivity with the user
- \rightarrow Progress bar for scaling
- \rightarrow Time planner so it gets ready on time
- → Help beyond cooking: Shopping, Health, Sustainability
- \rightarrow Sharing of experience with others

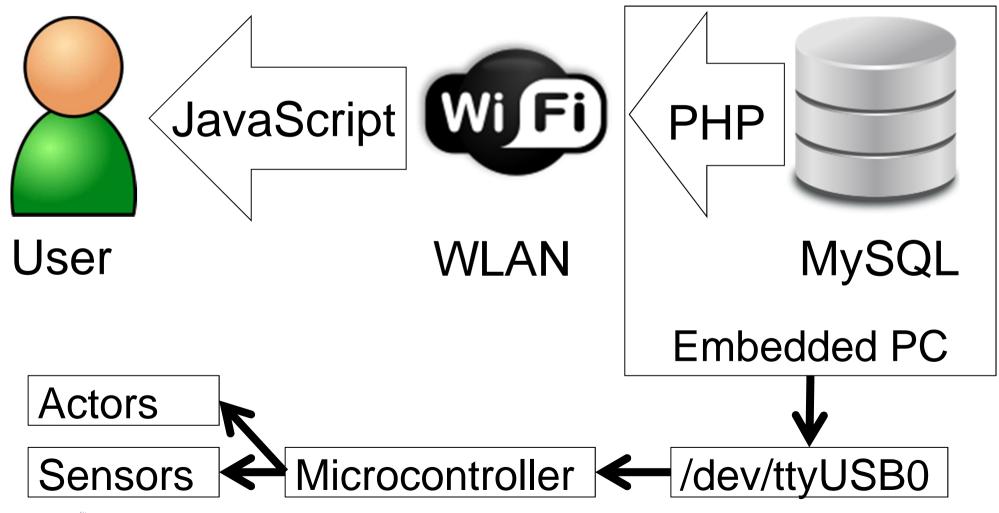


Platform infrastructure



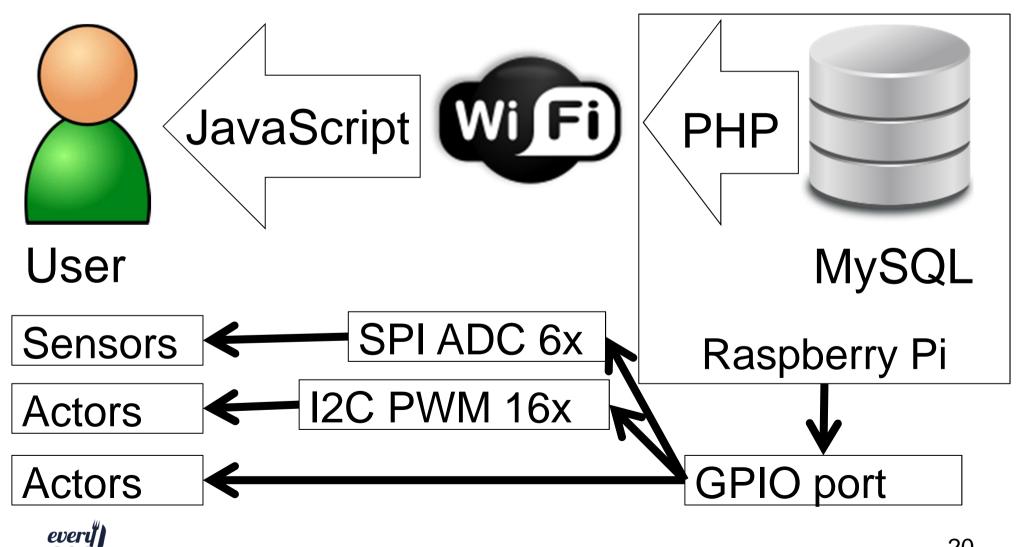


Cooker infrastructure: old scheme





Cooker infrastructure: new scheme



Data: Better food trough information

Intelligence comes from knowledge and combination.

So what do we want to know?

Whatever we can get legally!



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Data: Recipes

We want machine readable recipes in an open format.

We divide each recipe in steps.

Each step is mathematically defined:

- Temperature or pressure
- Weight of added ingredient
- Rpm of stirring, runtime, pausetime
- Duration of step
- Stepmode



Communication Format

```
{
"T0":100,"P0":0,
"M0RPM":0,"M0ON":0,"M0OFF":0,
"W0":0,
"STIME":30,"SMODE":10,"SID":0
}
```

\rightarrow JSON Array, so it can directly be used by a browser



Data: Ingredients Each recipe is linked to ingredients. Those ingredients have attributes like:

- State: fresh / dried / frozen
- Storability: 3 days or 6 months
- Link to nutrient data
- Link to products



Data: Nutrient information

Currently we use the US department of agricuture (USDA) nutrient database as it is freely available for download.

This gives us scientifically researched data about more than 40 nutrients for over 7'000 ingredients.

This is very useful for people who make diets to loose weight or because they have to (diabetes, allergies, sport)



Data: Products

When we want to eat we need to buy food. These are products of a farmer or a shop.

Everyone selling or giving away food can place it in our database.

Also food that is not accepted by supermarkets (like bent cucumbers or heart-shaped potatoes)

Products are linked to shops where you can buy them.



Data: Product quality and validation Food quality can be defined in many ways, so we will assign badges like:

- Vegan, Halal, Kosher
- Happy Animals, No Overfishing, Dolphin Safe
- Locally produced
- Organic
- Gluten-Free Lactose-Free

These badges will be verified by non-profit organisations and the community.



Data: Shops

Shops are places where one can buy products, i.e. food. These can be:

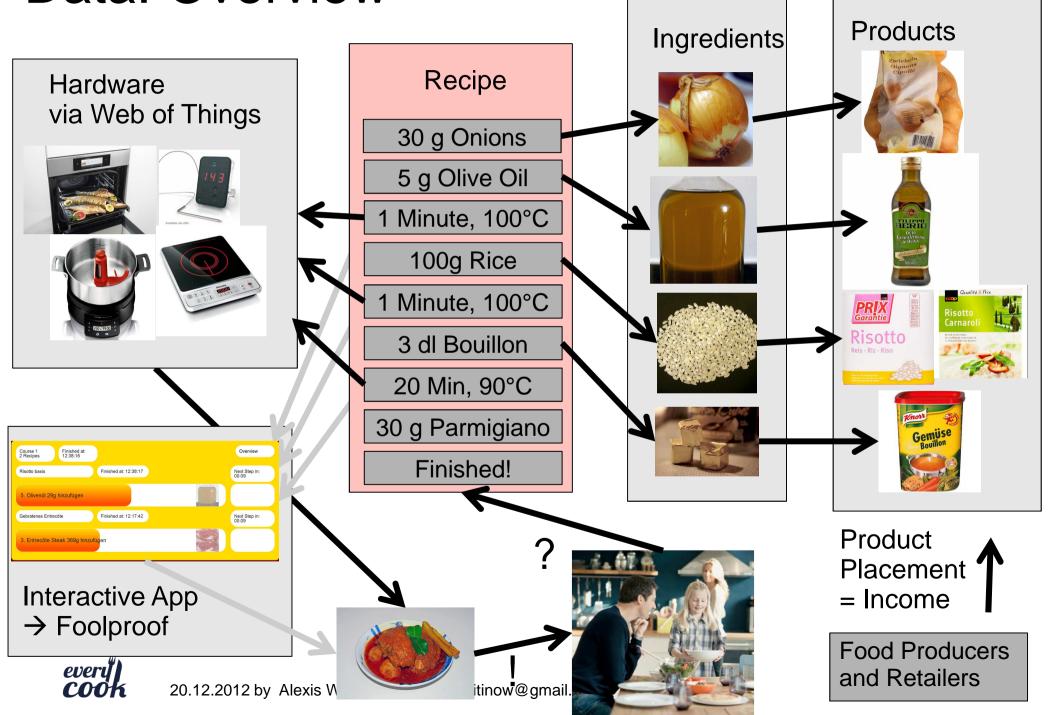
- Farmer's shop on the farm
- Small independent food shop
- Stand on a market
- Online shop
- Supermarkets of international companies

Every shop is listed with GPS coordinates so it can easily be found.

We are open to everyone. We don't qualify the products but the communities and the NPOs do.



Data: Overview



Opportunities

«Opportunities are often missed because they come in overalls and look like work.» Thomas A. Edison

EveryCook offers a reange of opportunities, but making them real will need some work...



Opportunities: Hardware

With RaspberryPi putting a computer into nearly everything is not a problem any more.

We could build EveryCook intelligence into:

- A kitchen scale
- An oven
- A stove (temperature sensor is challenge)
- A microwave oven
- A fridge
- Hack and improve existing «intelligent cokers»



Opportunities: Hacking Competitors



Vorwerk Thermomix

Kuhn Rikon Duromatic Relax





Kenwood Cooking Chef

Philips Home Cooker





Opportunities: Software

Besides making the existing functions better we could add features like:

- Text-to-speech output for user actions
- Route planner for shopping
- App for collecting data in supermarkets
- Keeping track of the food in the fridge
- CO2 and water footprint calculation
- Special diet plans
- And so much more...



Needs

It would be wonderful, if we could do it by ourselves, but we can't so we need:

- Web Programmers (PHP/HTML5/JavaScript)
- Hardware Programmers (C/C++)
- Web/GUI designers
- Industrial designers
- Electronics enginners
- Mechanics engineers
- Community/Social media managers
- Marketing person
- Finance expert



Needs: compensation

Nobody works for nothing. So we offer:

- Fun
- Challenge
- Learning
- Some shares for achievements
- Money? Nope. We have no money

So we also need:

- Investors with a vision (maybe you know one?)
- That could solve all above mentioned needs



Core Team: Who we are



Alexis Wiasmitinow

Samuel Werder

CEO

M. Sc. Mechanical Engineer

2 years of StartUp experience3 years managing big projects2 years product development

«The parts of the puzzle exist. I'll bring them together! Developer

Over 10 years of programming

Over 5 years of Web development

«I handle any kind of bits or bytes...»

Friends and Consultants



er)er

Conradin Döbeli

Hardware Manufacturer

Mechanical Engineer

10 years of protoype development and manufacturing 20.12.2012 by Alexis Wiasmitinow, Wiasmitinow@gmail.com





Cooked in several 3-Star Restaurants

Lerned cooking with Gordon Ramsay

Fine Food import from Italy

Thank you for your attention



