

Personal Health Diagnostic Tool

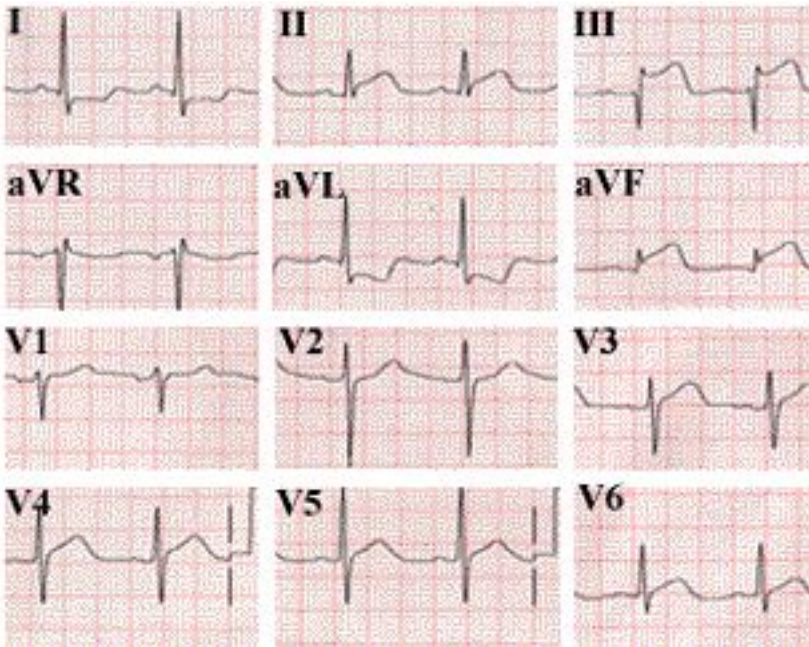
Physical Computing (Fall 2009//Chris Anthony)
canthony86@gmail.com



Concept

More evidence for evidence based Med

This guy needs to be looking at more data



Why?

We have huge health care problem on our hands.

How do we cut cost and offer more comprehensive care?



My Approach...

Go to Dr...Without going to Dr.

Combine several technologies to begin understanding solutions



PHP/MySQL

Technologies//Mobile Processing

Mobile

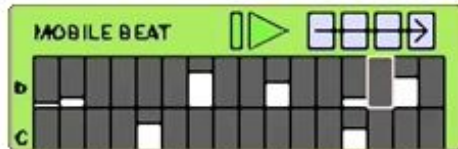
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Exhibition



What's Cooking?

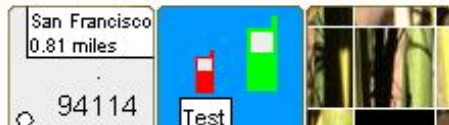
by **Valeria Donati, Maria Tasca and Valentina Venza**



Mobeat

by **Tim Stutts**

Examples



Mobile Processing is an open source programming environment for people who want to design and prototype software for mobile phones. It is based on and shares the same design goals as the open source [Processing](#) project. Sketches programmed using Mobile Processing run on Java Powered mobile devices.

Updates

7 Apr 2009

Spore API application example

I've posted a new example using the new Spore API:

[Read more...](#)

9 Apr 2008

Mobile 0007 released!

I've just released Mobile Processing 0007, which brings the PDE up to date with Processing 0135 as well as incorporates some bug fixes and minor additions to the API.

[Read more...](#)

24 Jan 2008

Documentation temporarily down...

It looks like PHP has been upgraded on the Processing webserver, and it's missing the XML parsing library used by the site to present some documentation. I'm going to try and resolve it as soon as possible...

[Read more...](#)

[Previous Updates](#) \  [Feed](#)

Technologies//Bluetooth (BlueSMIRF)

BlueSMIRF Gold from Sparkfun



Technologies//Processing

Dan Julio ---> creator of Polar module

<http://danjuliodesigns.com/sparkfun/hrmi.html>

Serial library

```
client = new Client(this, "canthony86.com", 80);  
String requestString = "/itp/try.php?sensorValue=" + curHrVal + "&number=" + number;  
client.write("POST " + requestString + " HTTP/1.0\n");  
client.write("HOST: canthony86.com\n\n");
```

Technologies//PHP + MySQL

Data in...

HR Monitor -> Arduino -> Bluetooth -> Processing -> Web

Processing PHP POST

Webserver PHP \$_REQUEST

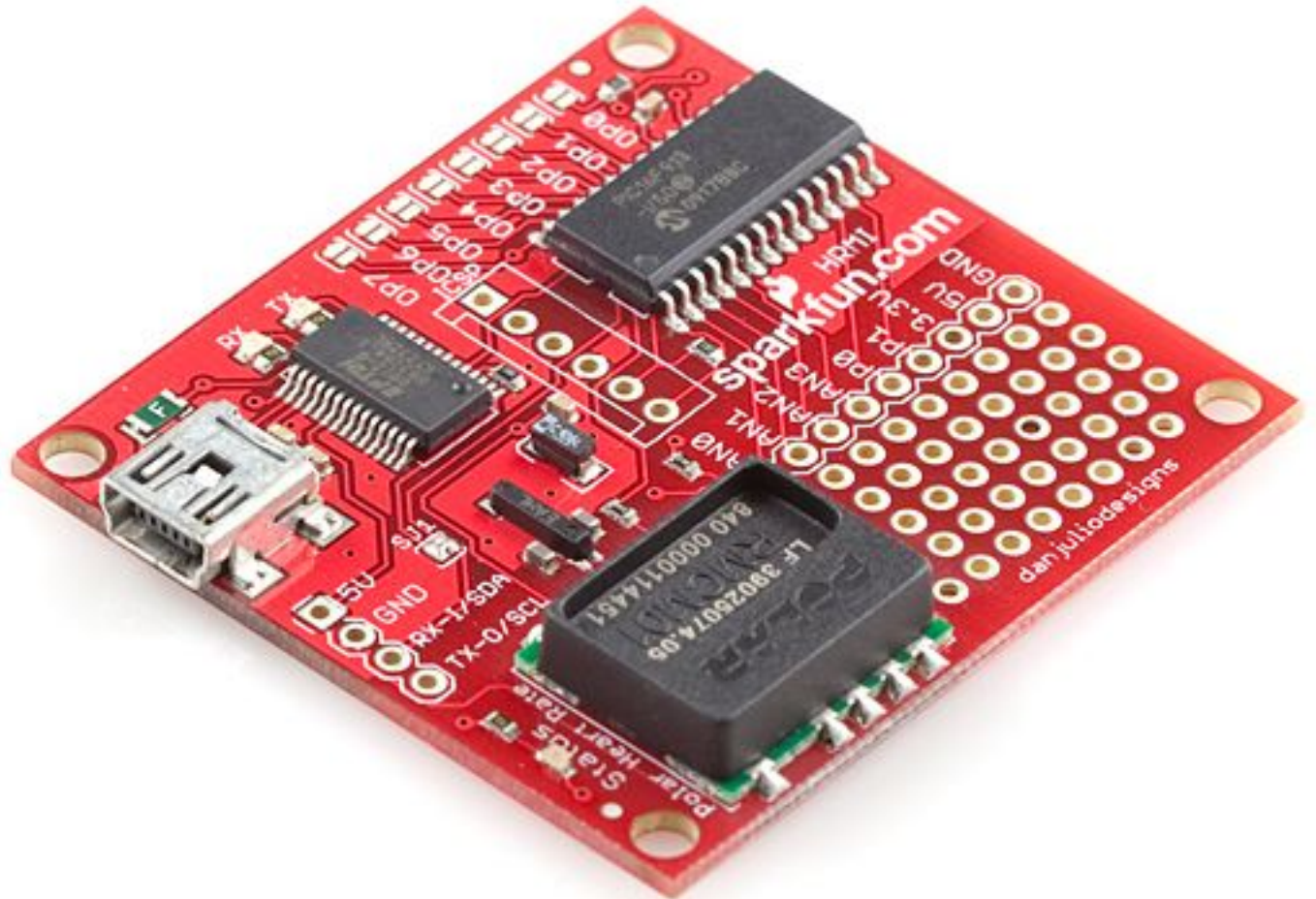
```
$stuff = $_REQUEST["sensorValue"];  
echo "e" . $stuff . "number";
```

Webserver PHP -> MySQL

Data out...

Webserver PHP -> MySQL -> Web interface (HTML/CSS)

Technologies//Polar HR setup

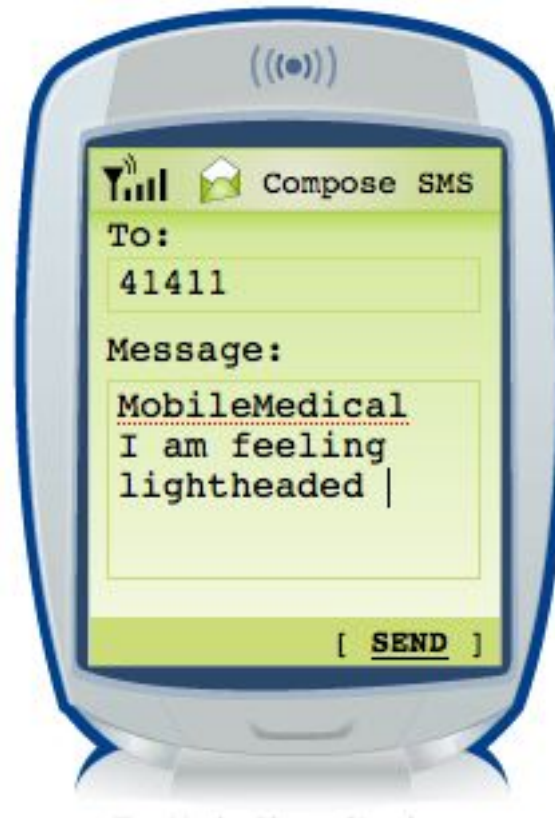


Technologies//Text Marks

Text in symptoms to Mobile Medical

Text message gets inserted into DB via PHP

Symptoms associated with data gathered before and after symptom onset



www.textmarks.com

What I learned

- **New Technologies**

- Bluetooth/networking
- Mobile Processing
- Polar interfacing
- Mobile interfacing/development

- **Further solidified growing skill sets**

- Arduino
- Processing
- PHP/SQL

- **Power of associating data with symptoms**

- How I'm "feeling" is quantified

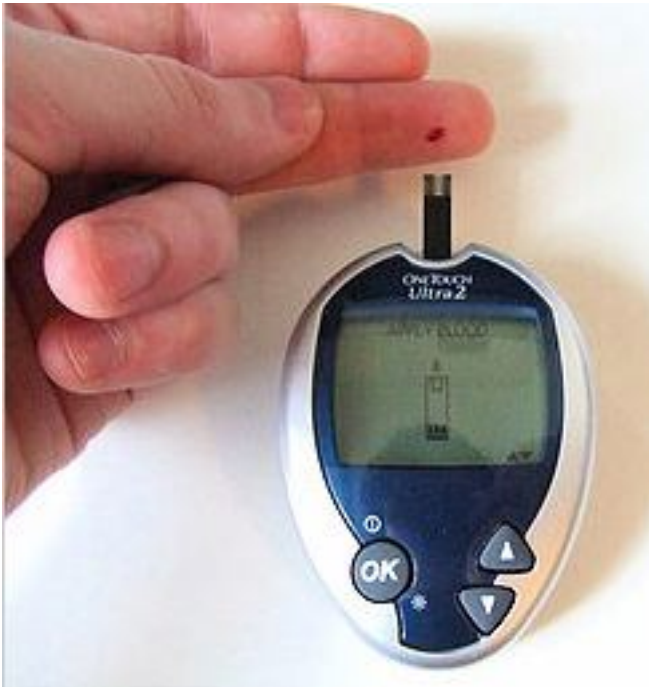
- **Further understanding of user/patient interactions requirements and Physician/medical professional needs**

Going forward//What does future hold?

Large chasm

- Bio-data gathering is large/bulky

Large=obtrusive



Small=Integrated



Going Forward//Solutions

We need to continue to get smaller (Carbon nanotubes)

