An Open Laboratory for Microbial Ecology

Russell Neches @ryneches
Meg Pirrung @megalodonatron
**Ignicoccus hospitalis**

**Nanoarchaeum equitans**
YSI CastAway

$6500
First prototype...
Second prototype...
Russell's pH Meter

I am an Open Hardware prototype device for collecting and transmitting water chemistry data from the field. I am part of @ryeches's dissertation project.

Davis, CA  http://vort.org/

Tweet to Russell's pH Meter

@RussellsPHMeter

Tweets

@RussellsPHMeter
The latest pH measurement is 6.85, battery voltage 3.00, temp 22.53C

@RussellsPHMeter
The latest pH measurement is 6.85, battery voltage 3.00, temp 22.56C

@RussellsPHMeter
The latest pH measurement is 6.85, battery voltage 3.00, temp 22.58C

@RussellsPHMeter
The latest pH measurement is 6.85, battery voltage 3.00, temp 22.51C
(...although that may have to change)
Software...
First production model...
Wait a second.
I am not an engineer.
Building blocks

Arduino Leonardo

Seeed Studio Solar Shield

Seeed Studio GPRS Shield
Thanks Seeed Studio!
Thanks Seeed Studio!
Thanks Limor!
We depend on these machines...
Science was born when researchers stopped keeping secrets.
1. Geospiza magnirostris.
2. Geospiza fortis.
Science Needs You

...to design open instrumentation