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Adding Linux to Your Design

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Why Linux?

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- High-level language support
- Flexible networking stack
- Multitasking
- Hardware abstraction and portability

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Why Linux in particular?

- Free is good
- Examples/Community
- It runs everywhere

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Why Linux, *really*?

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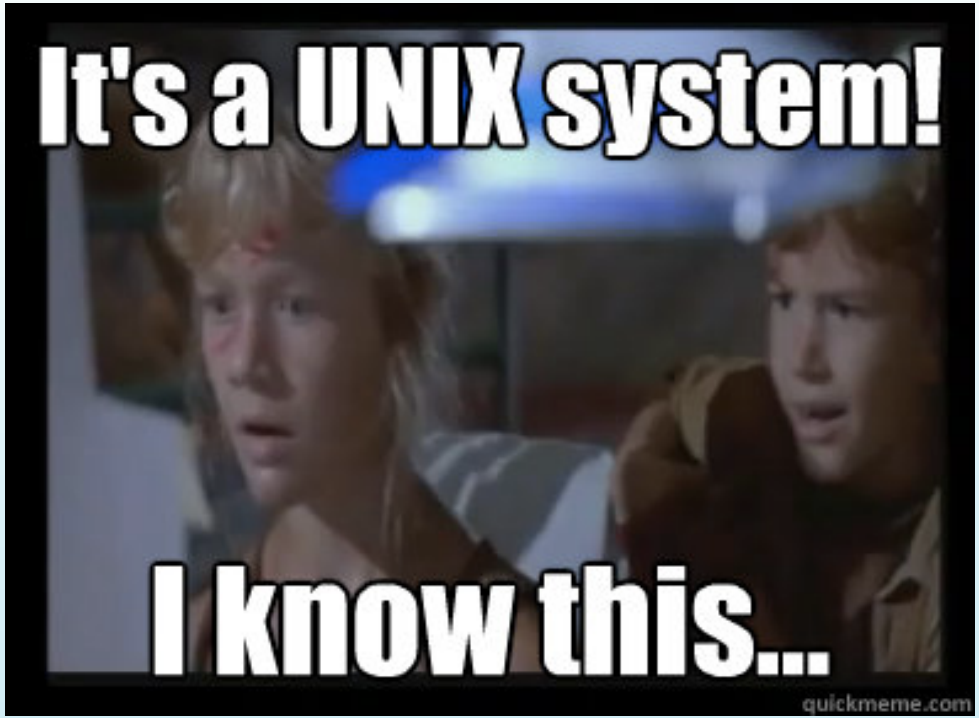
Why Linux, *really*?



”Jurassic Park" by Universal Pictures. Used without permission.

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Why Linux, *really*?

- Hackability
  - "It's a Unix system, I know this"
  - Lots of eyes on security vulnerabilities
- When you know it will save you time
  - Prototype fast
  - Something will go wrong

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Examples

- What types of machines get value out of Linux?

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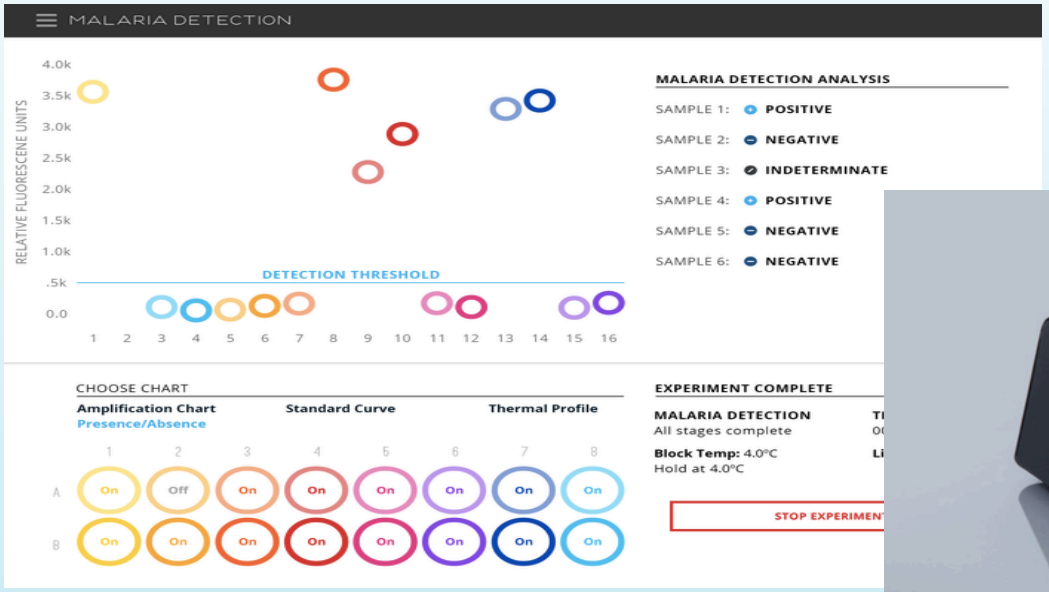
Open qPCR

DNA Diagnostics for Everyone



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OpenROV

Open source underwater robots for exploration and education

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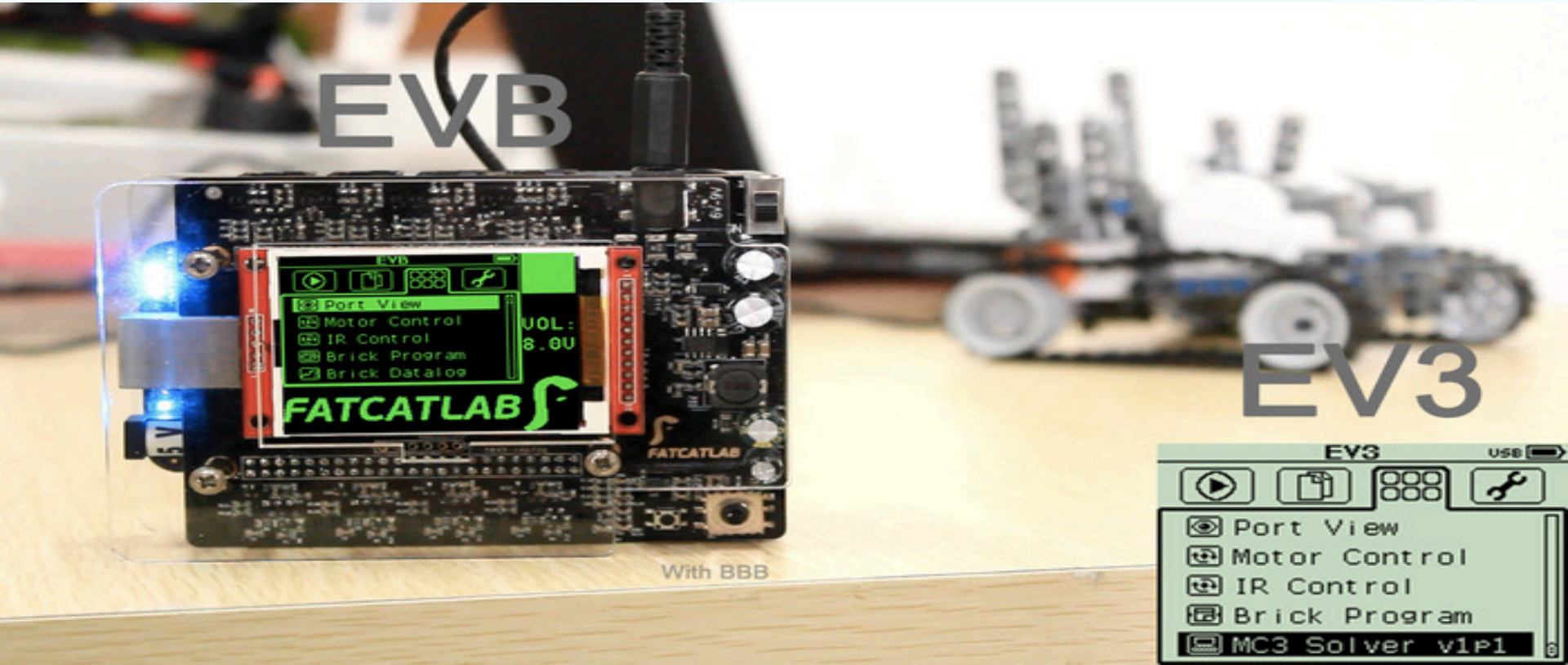
LEGO EV3 and derivatives



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Ninja Sphere

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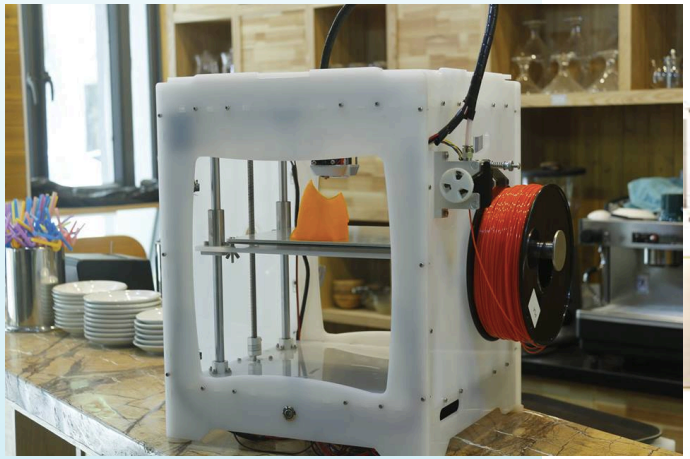
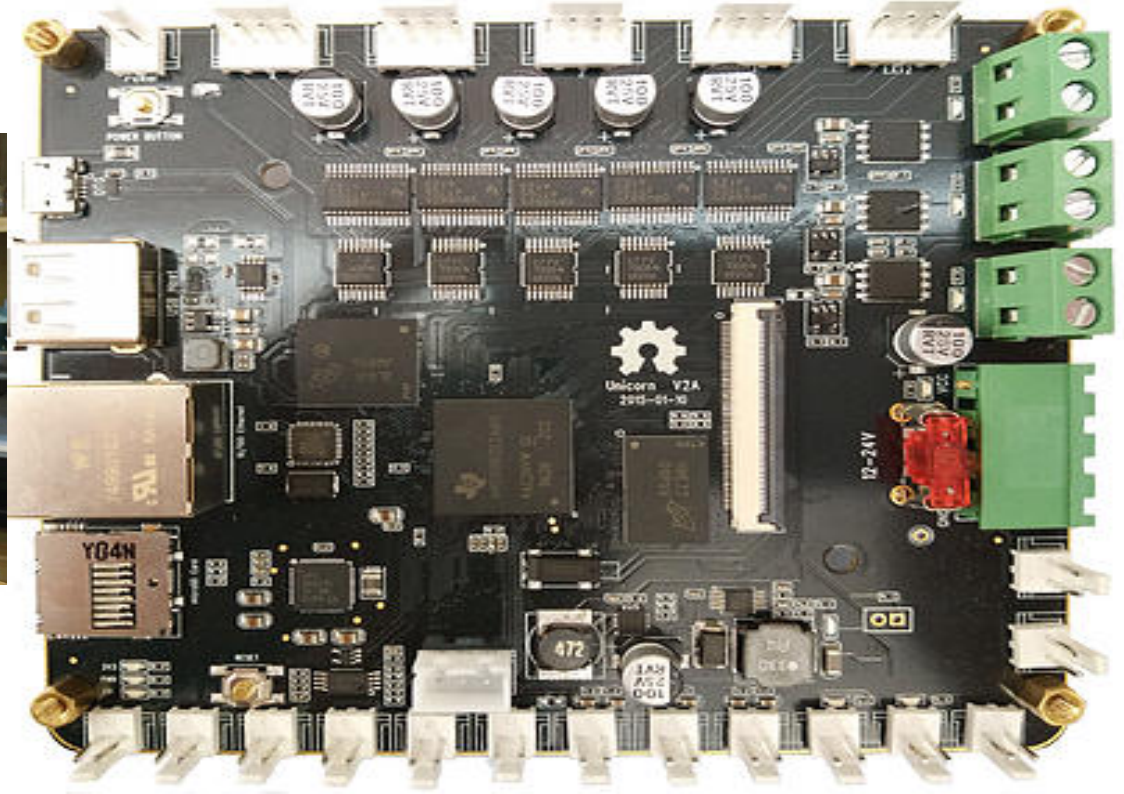
FastbotBBP





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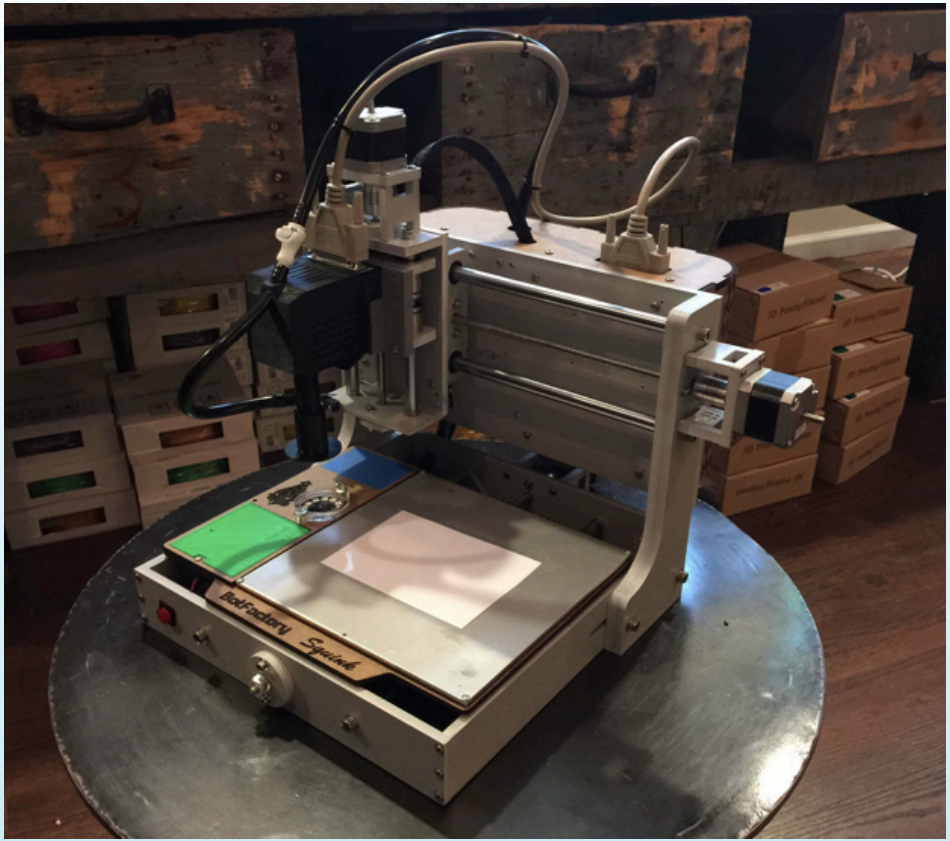
BotFactory Squink




POURSTEADY
FREE COFFEE!
SIGN UP
TIPS

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Picking a solution

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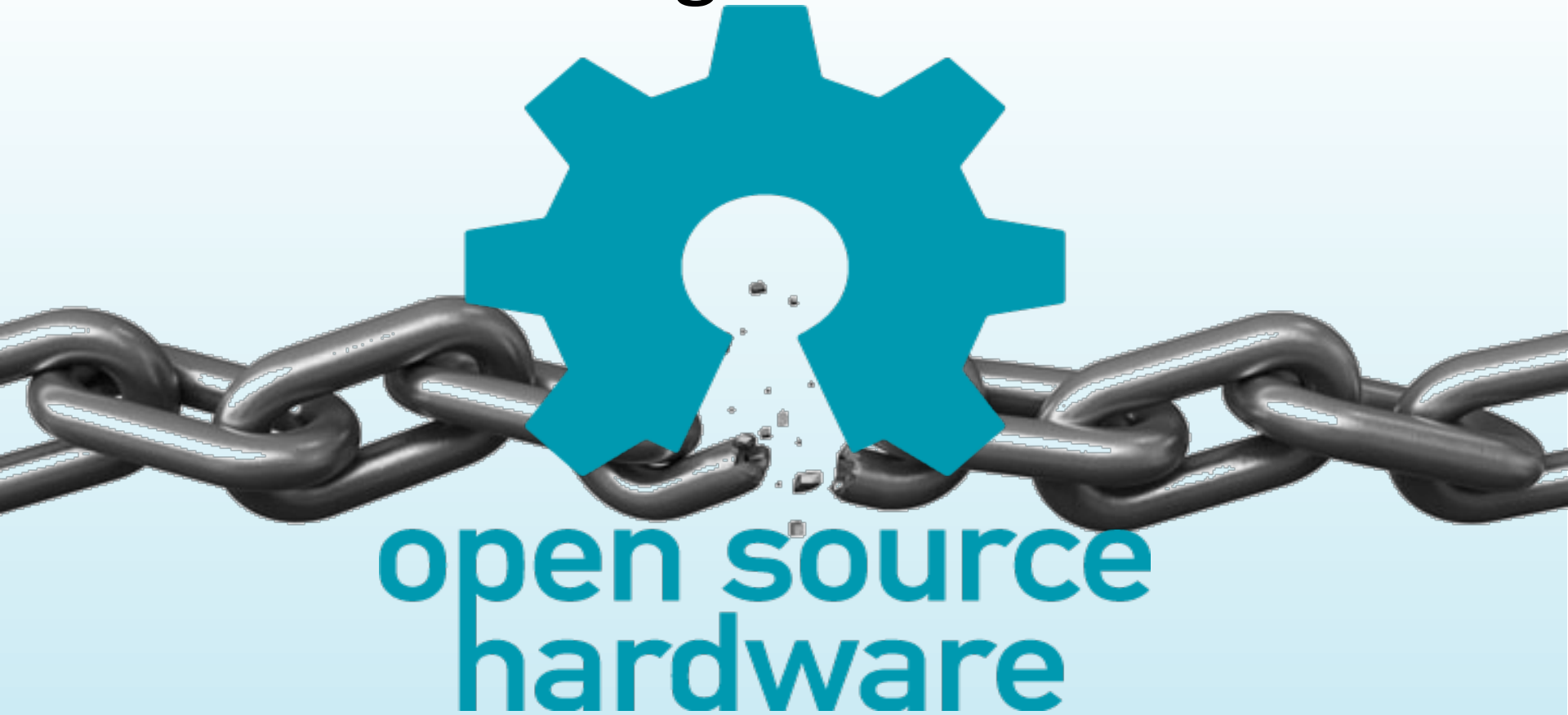
Picking a solution



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Picking a solution

- Open hardware
  - Helps manage supply chain
  - Avoids hidden issues
  - Enables customization
- Mainline support
  - Vendor and community active

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But what about... ?

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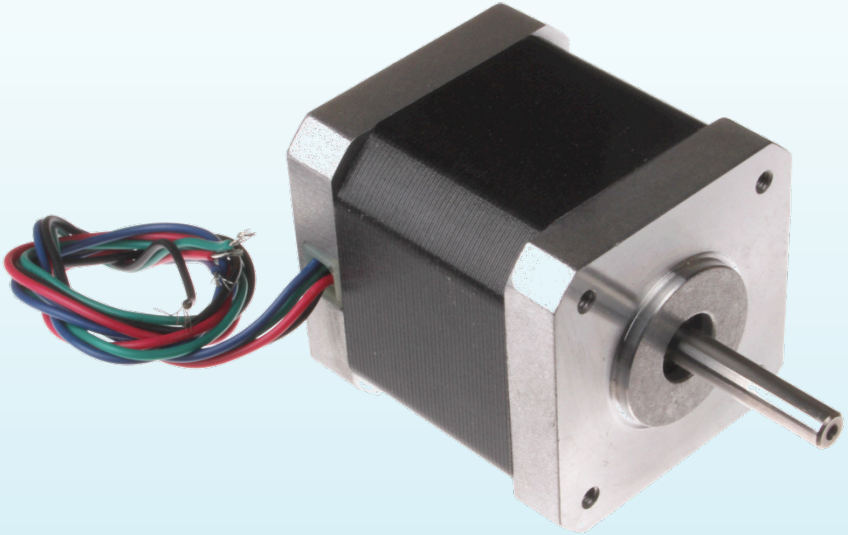

http://www.machinekit.io/

"Nema 17 Stepper Motor" by oomlout - STMO-17.
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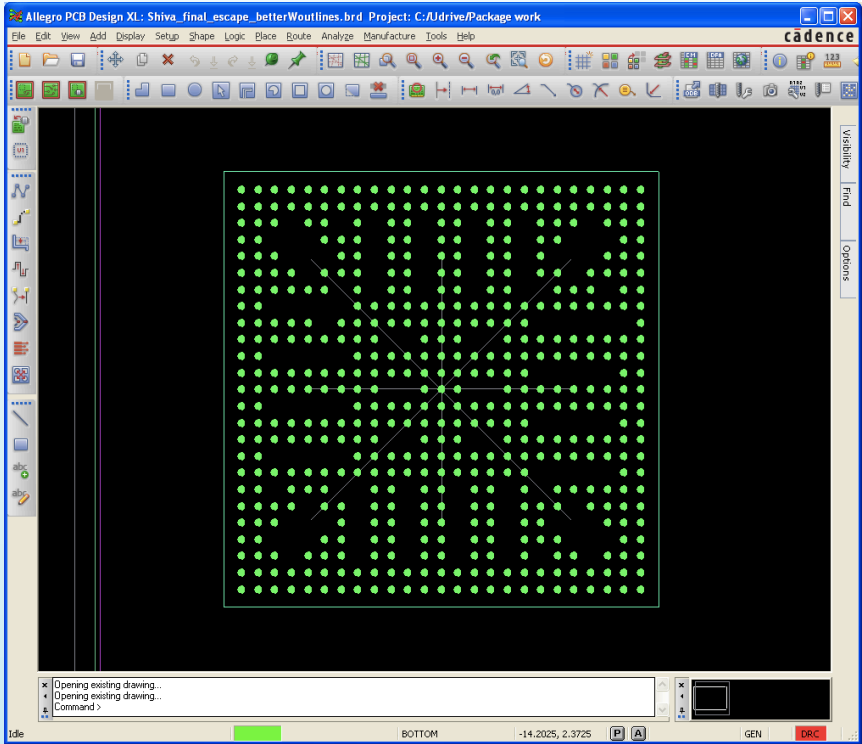
But what about… ?

- Real-time
- Manufacturability



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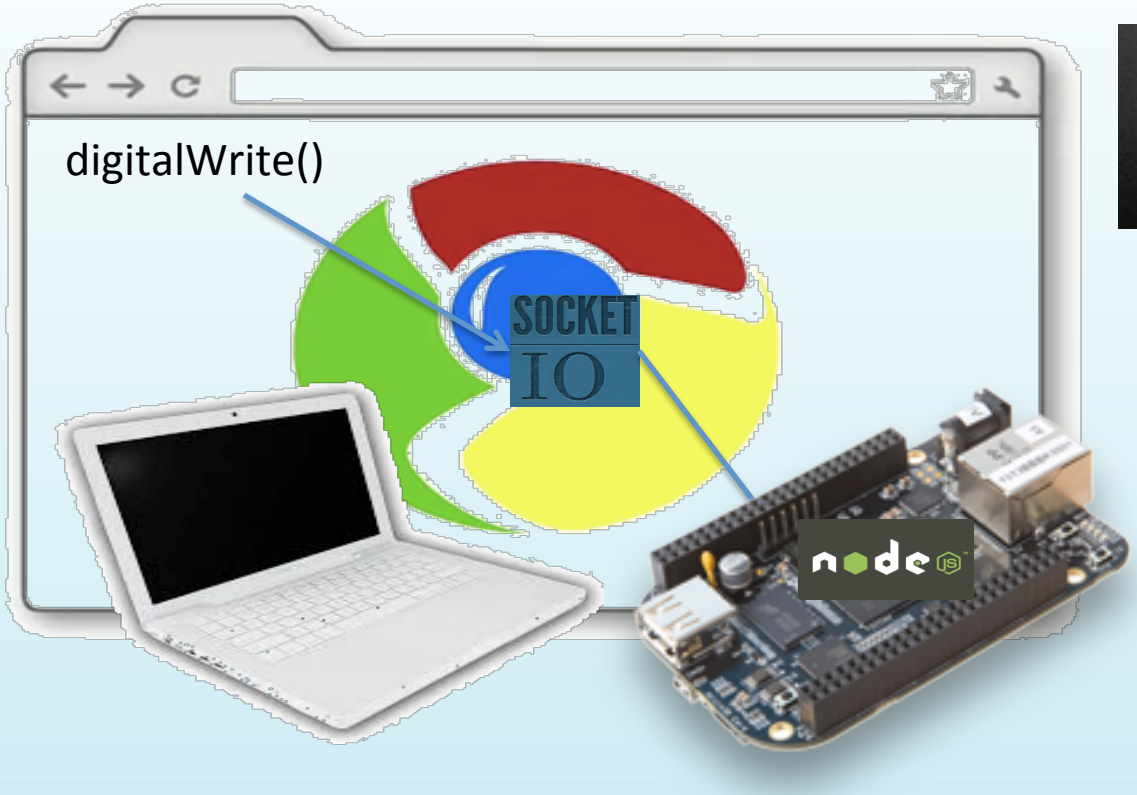
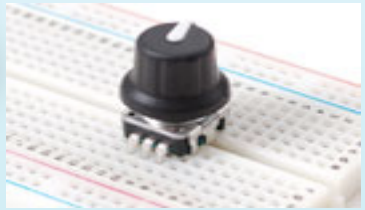
Want to learn Linux?





http://www.adafruit.com/

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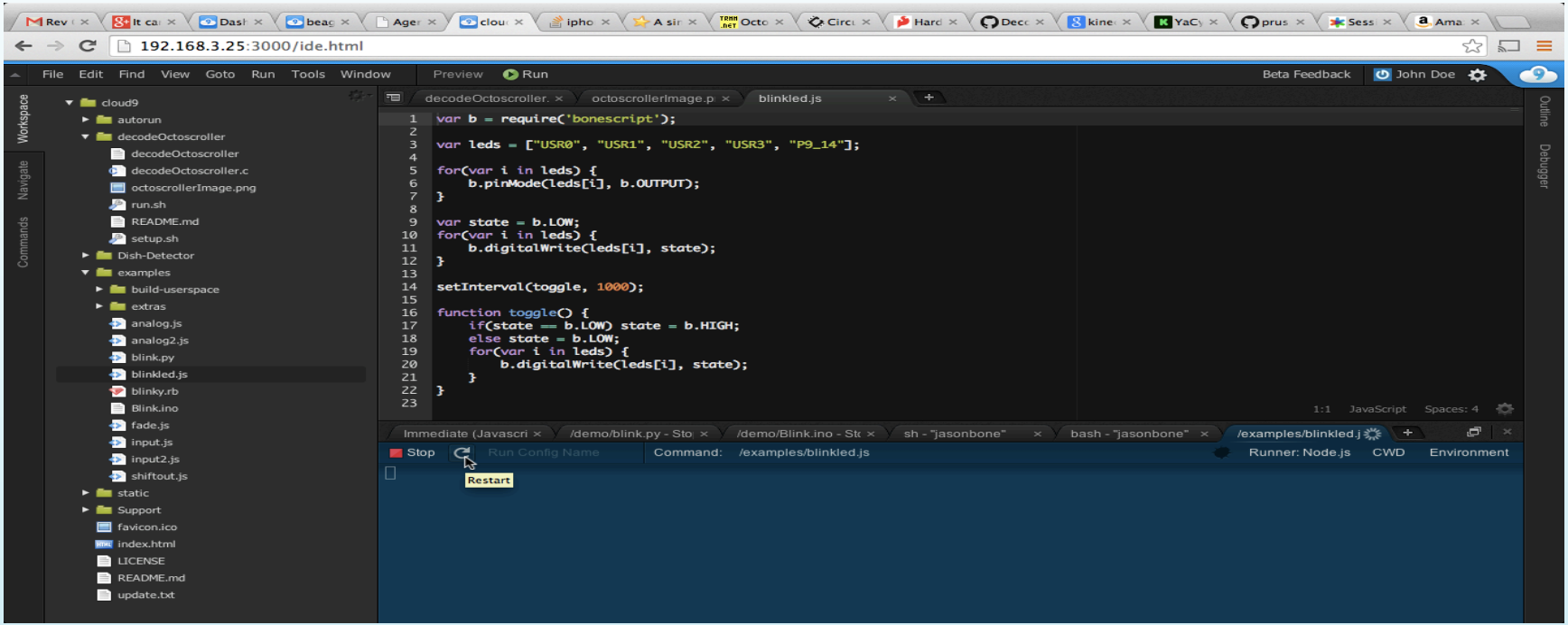
Cloud9 IDE included



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Thanks!

Join http://beagleboard.org/chat and http://beagleboard.org/discuss to chat about Linux in making

Contact me at jkridner@beagleboard.org