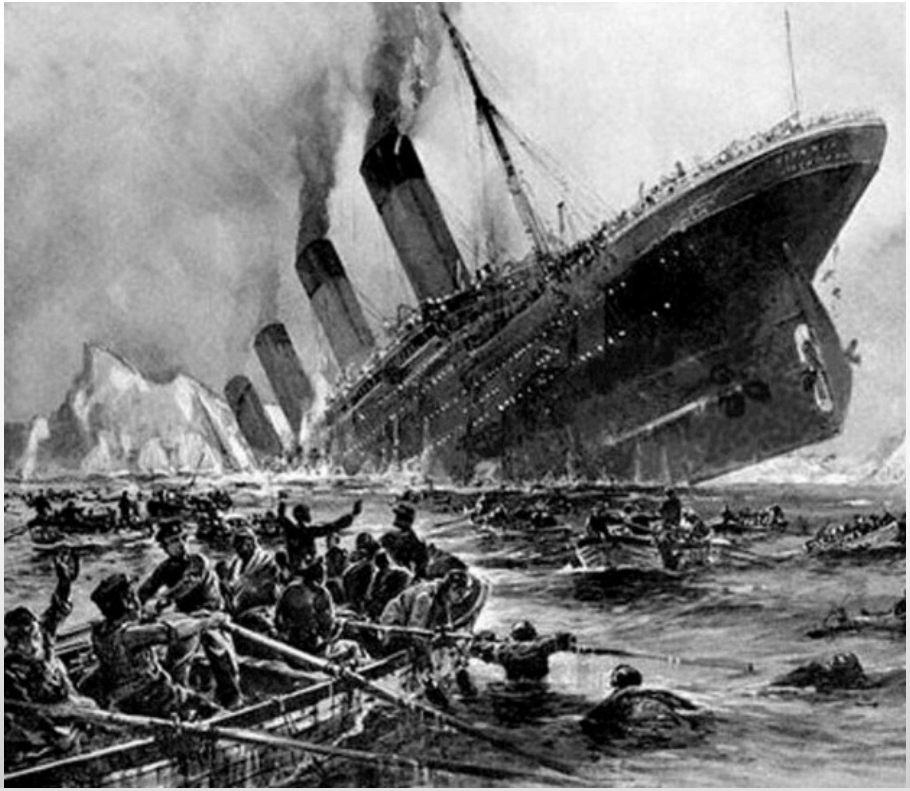
JavaOne™

Will it Float [in Java]

Stephen Chin (@steveonjava)

Will it Float?



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What Runs Java?

Example of devices powered by Java

SMALL

- RFID Readers
- Parking Meters
- Intelligent Power Module
- Smart Meters

MEDIUM

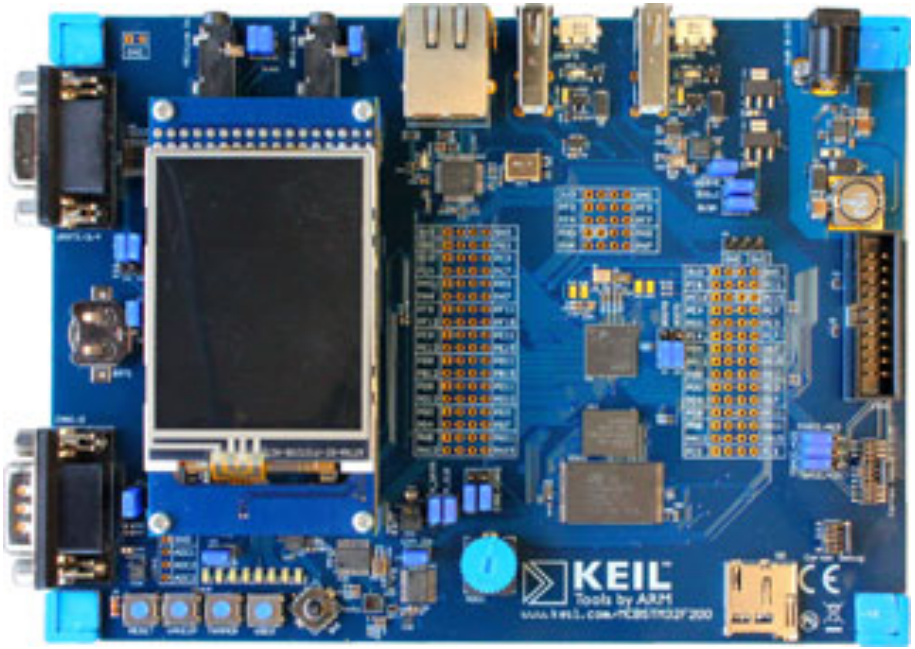
- Routers & Switches
- Storage Appliances
- Network Management Systems
- Factory Automation Systems
- Security Systems

LARGE

- Multi Function Printers
- ATMs
- POS Systems
- In-Flight Entertainment Systems
- Electronic Voting Systems
- Medical Imaging Systems

ARM-powered

Keil MCBSTM32F200



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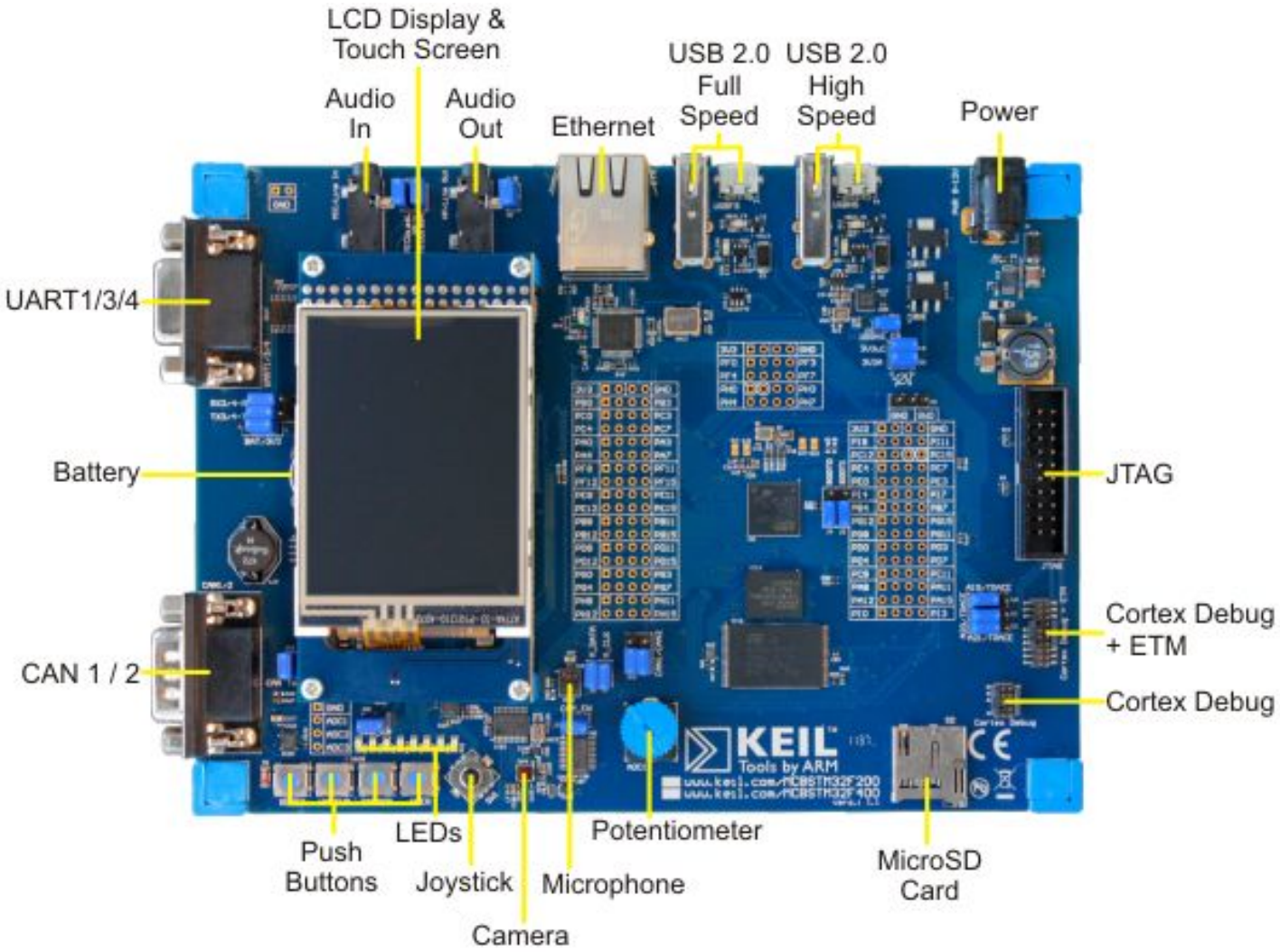
LCD Display &
Touch Screen
Audio
In
Audio
Out
Ethernet
USB 2.0
Full
Speed
USB 2.0
High
Speed
Power
UART1/3/4
Battery
JTAG
Cortex Debug
+ ETM
CAN 1 / 2
Cortex Debug
KEIL
Tools by ARM
Push
Buttons
LEDs
Joystick
Camera
Microphone
Potentiometer
MicroSD
Card

ORACLE

Java and 3G in a Tiny Package

Cinterion EHS5

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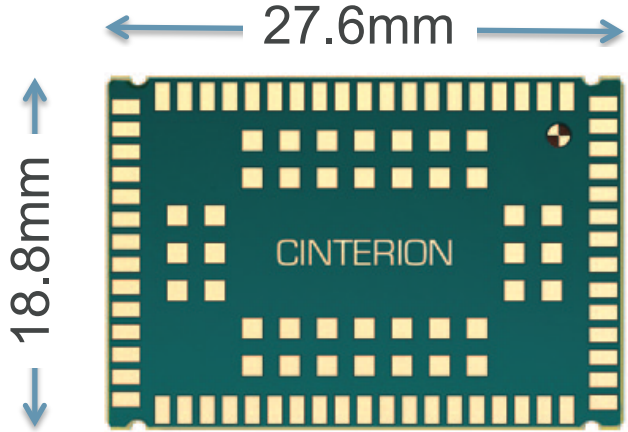
Really Tiny…



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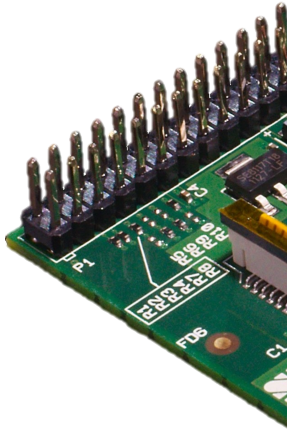
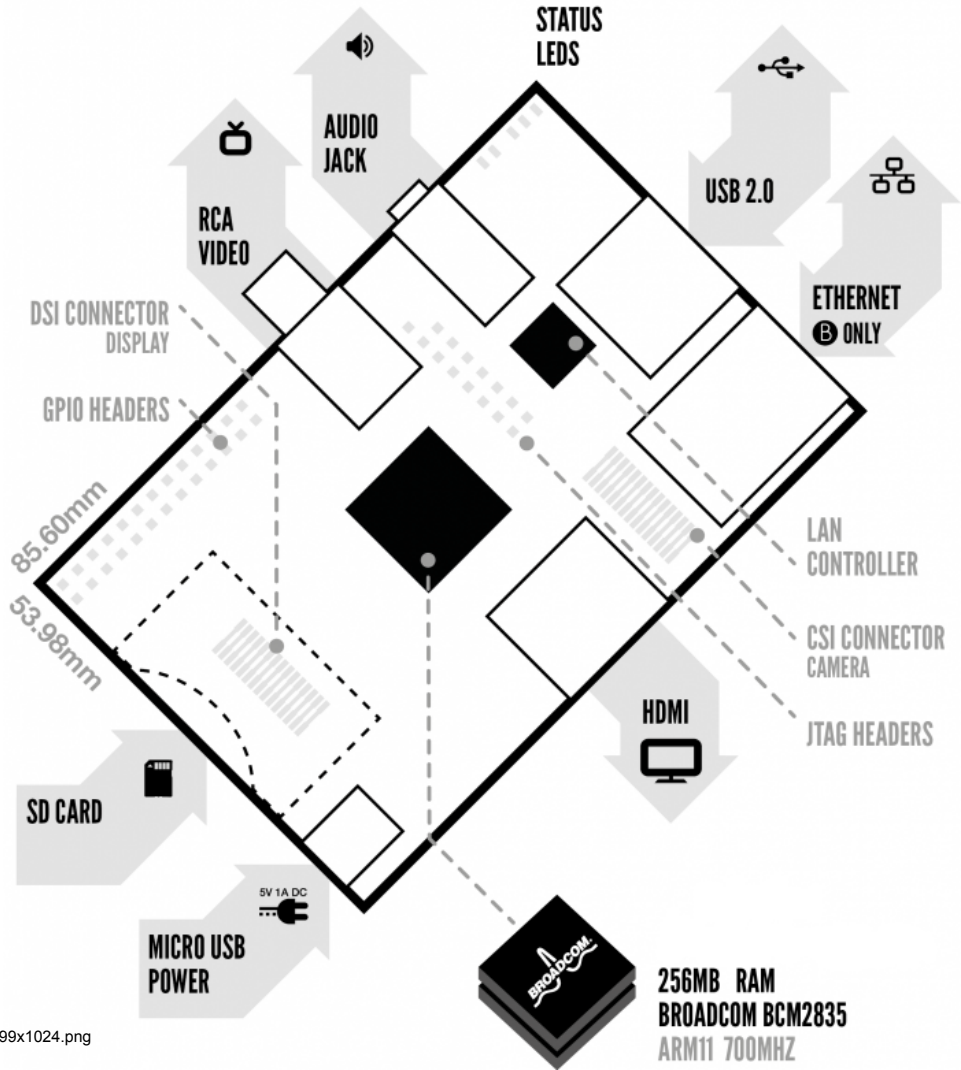
http://upload.wikimedia.org/wikipedia/commons/3/3d/Cloud_forest_Ecuador.jpg

Have Java With Your Dessert

Raspberry Pi

=





 http://elinux.org/File:Raspi-Model-AB-Mono-2-699x1024.png

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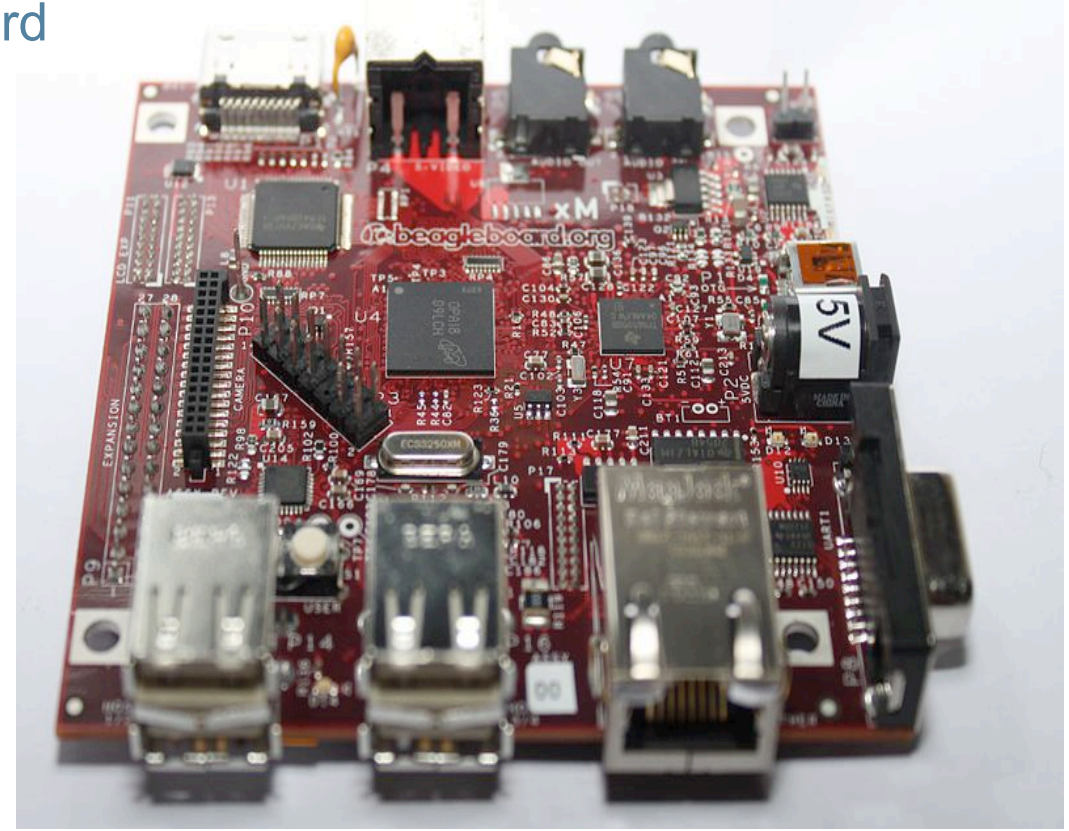
+ ARM v7 + PowerVR

BeagleBoard



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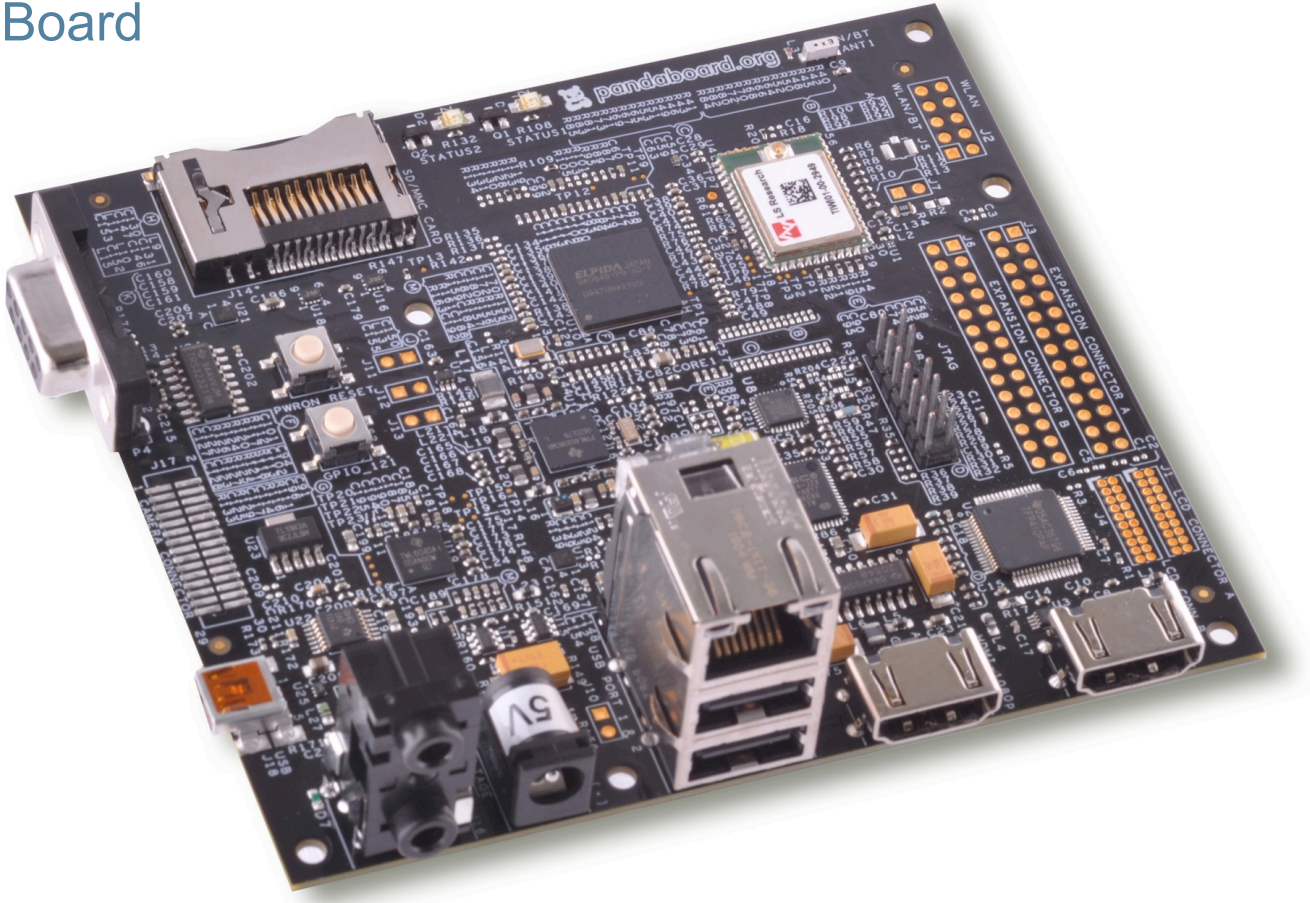
+ Dual-Core + OMAP4

PandaBoard



ORACLE

And you can do cool stuff like this…

https://bitbucket.org/stephanj/tweetwall

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Will it Float?

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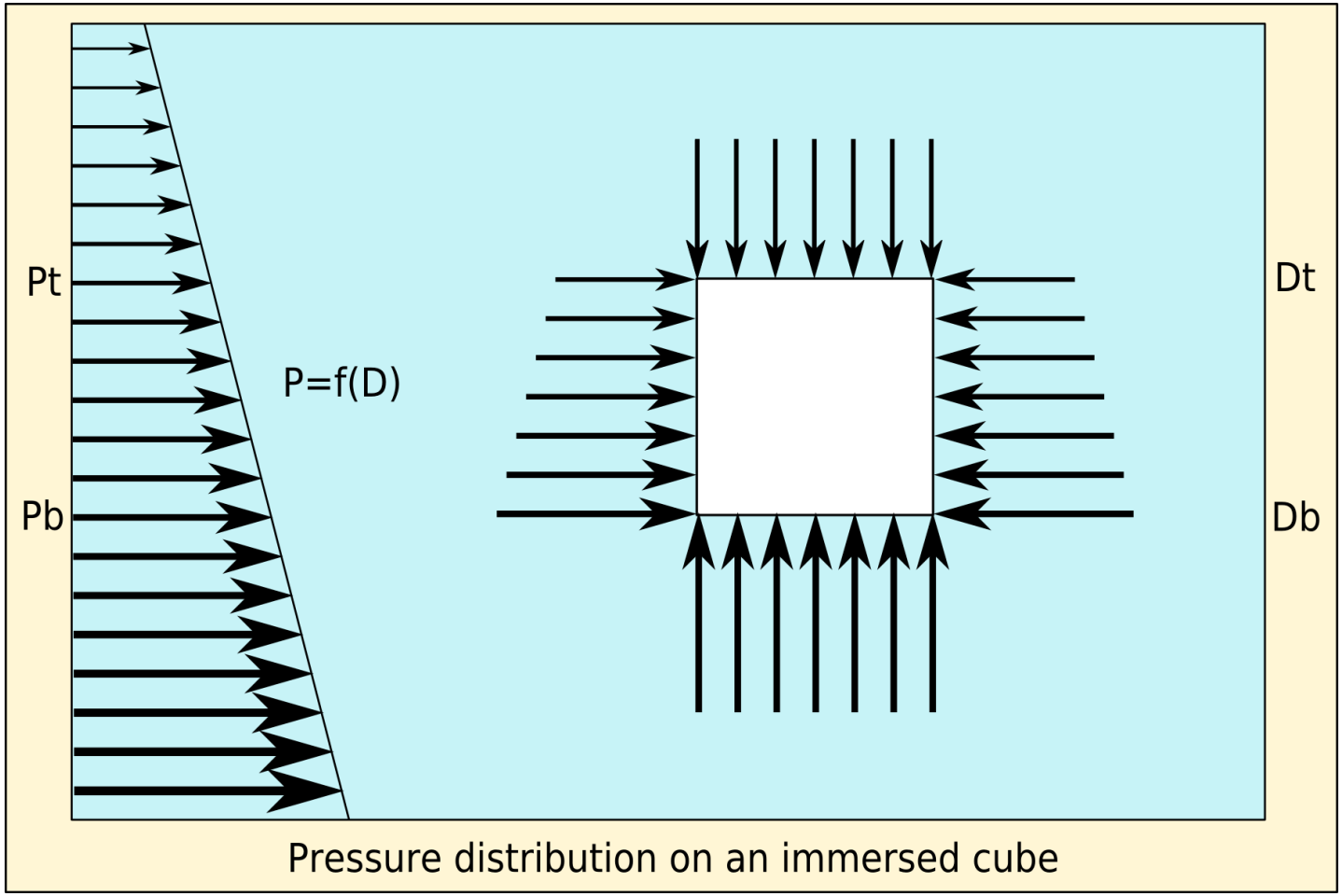

Pressure distribution on an immersed cube

http://en.wikipedia.org/wiki/File:Pressure_distribution_on_an_immersed_cube.png

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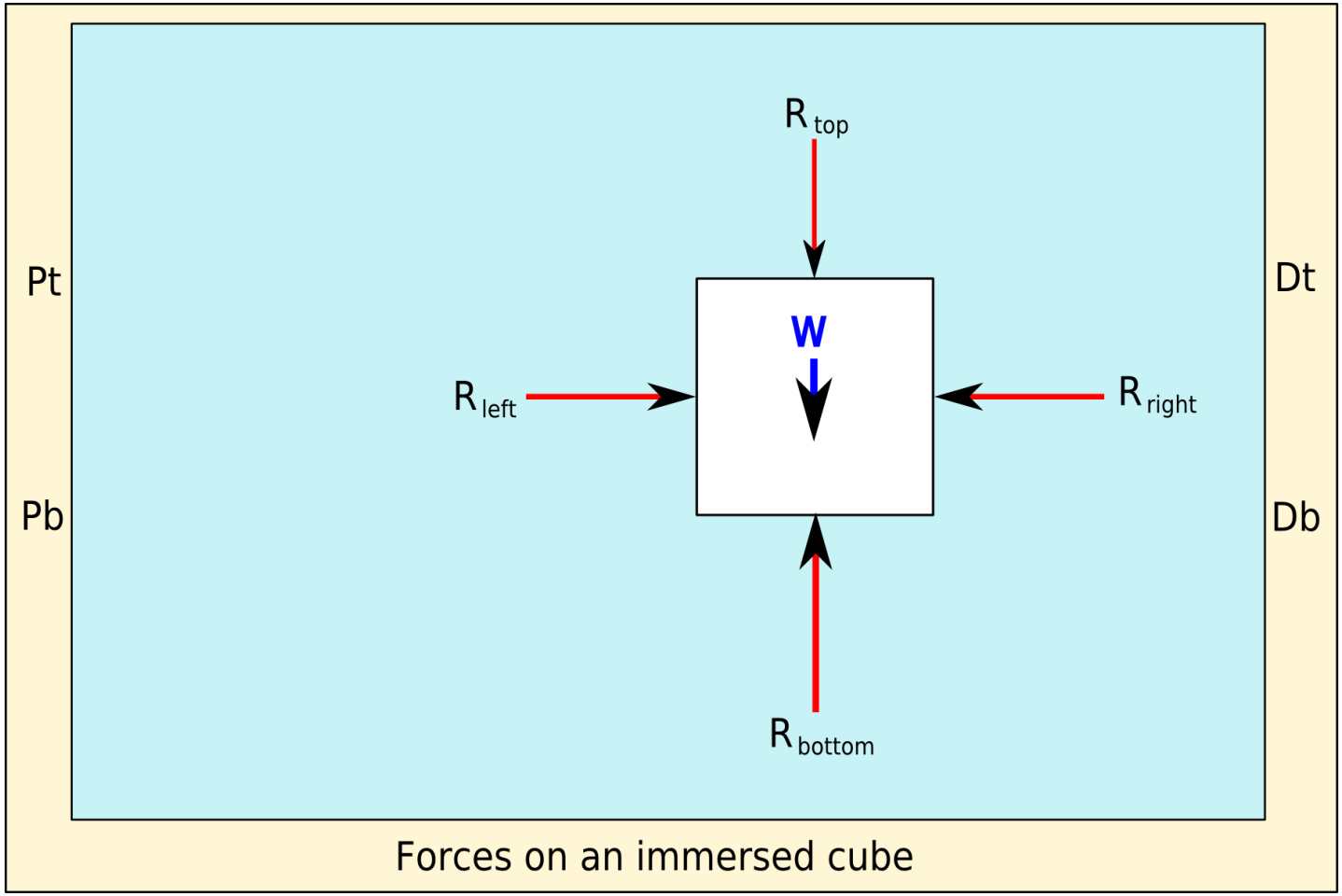

http://en.wikipedia.org/wiki/File:Forces_on_an_immersed_cube.png

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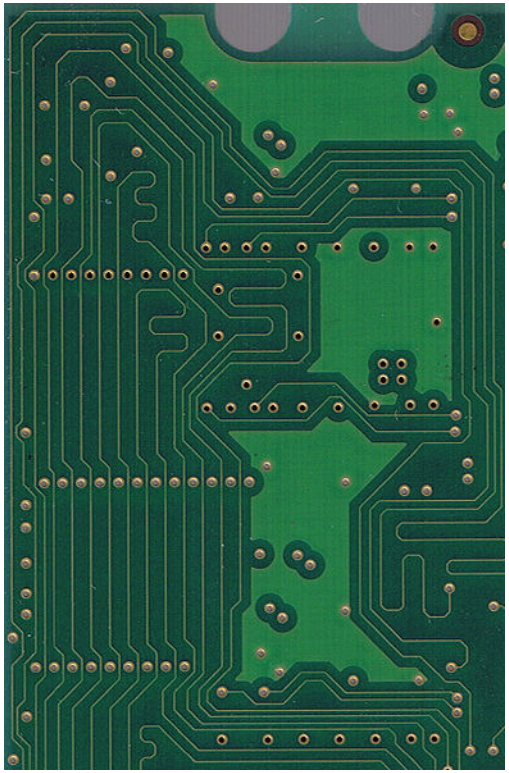
Material Density

Specific gravity/density

- Air: 0.001225
- Water: 1
- FR-4: 1.85
- Silicon: 2.33
- Aluminum: 2.7
- Copper: 8.96



http://commons.wikimedia.org/wiki/File:Pcb.jpg

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Specific Gravity of Coffee

- **1.0058** Krups drip brewer with filter
- **1.0082** Brewed coffee at Peet's
- **1.0141** Nespresso capsule brew
- **1.0145** Victoria House concentrate
- **1.0189** Starbuck's, Los Altos
- **1.0173** Filtron cold-brewed conc.
- **1.0193** Solis automatic
- **1.0209** Ken Davids' Saeco Vienna
- **1.0233** An old Italian lever machine
- **1.0221** Rancillo booth at SCAA
- **1.0294** Pasquini Riviera machine
- **1.0298** Peet's, Palo Alto, California
- **1.0857** Cafe' Vivace, Seattle

Source: http://coffeegeek.com/forums/coffee/machines/203992

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Conclusion (A)

- Java runs on devices of all sizes
- Full Java SE is available on ARM processors
- JavaFX gives you 3D accelerated mobile graphics

But sadly coffee doesn't give you these same benefits…

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Conclusion (B)

- Java runs on devices of all sizes
- Full Java SE is available on ARM processors
- JavaFX gives you 3D accelerated mobile graphics

And, you can float your hardware in coffee![1]

1. CAUTION: Don't try this while it is powered on

Stephen Chin
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blog: http://steveonjava.com

Nordic NightHacking Tour

JAN 25 – Feb 7

NIGHTHACKING.COM