

Democratizing Access to Supercomputing with Open Hardware

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2013 Open Hardware Summit



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The \$99 Parallella Board

Zynq dual core ARM- A9
(with FPGA Logic)

16-core Epiphany
Coprocessor

Gigabit
Ethernet

uUSB

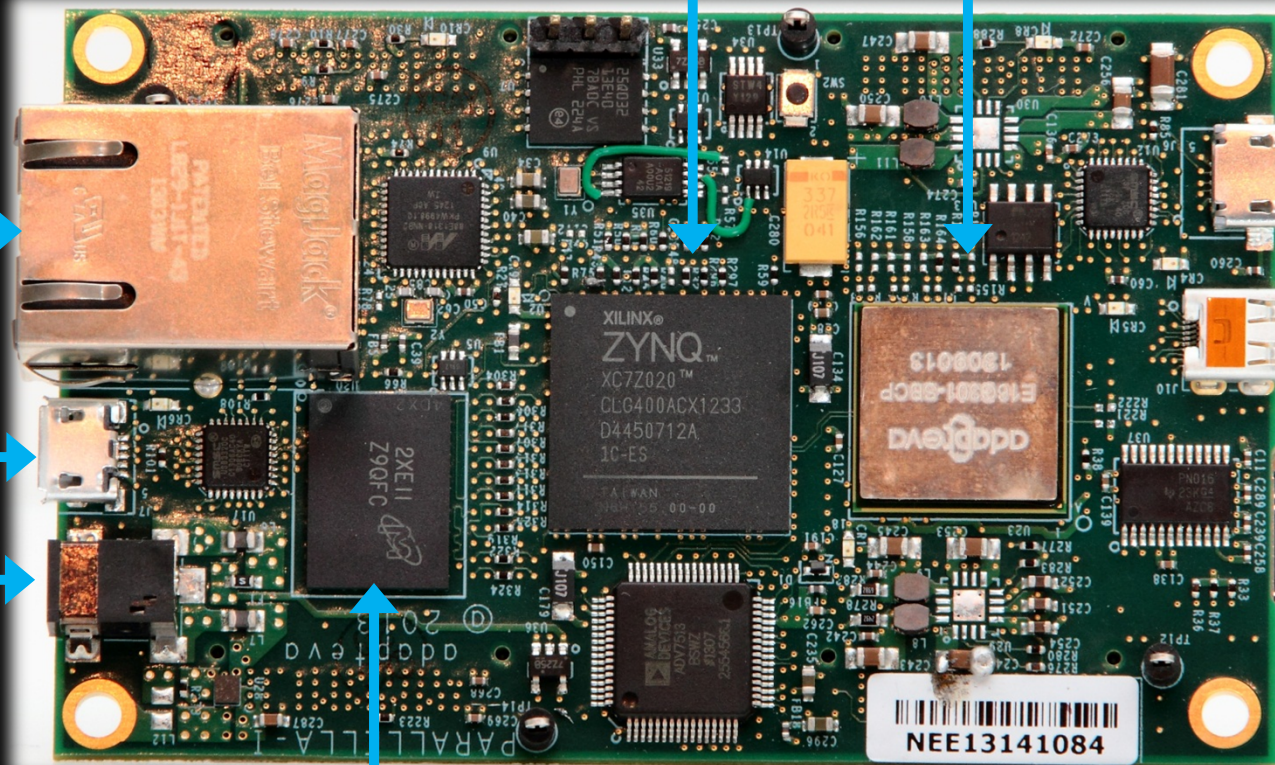
uHDMI

uSD

uUSB

5V DC

1GB SDRAM



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THE FUTURE IS PARALLEL!!!!!!!!!!!!!!

No Computing

Parallel Computing

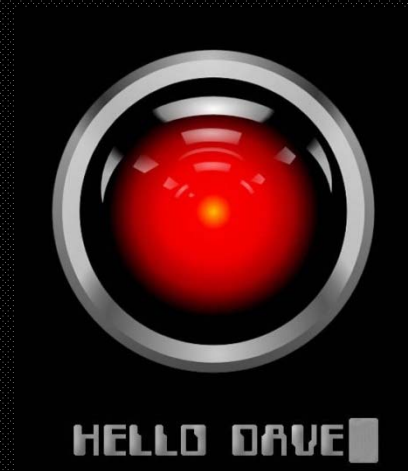
No Electronic
Computing
-1943

“Von Neumann Age”
Serial Computing
1943-2013?

Parallel Computing
2013-??



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How the \$#@% Do
We Program This
Thing?



10 Reasons to Go Open

Tired of all the BS

Fear, Uncertainty, Doubt

Enables a community

Visibility

Better support

Scale

Technical feedback

Life is too short

Easier to partner

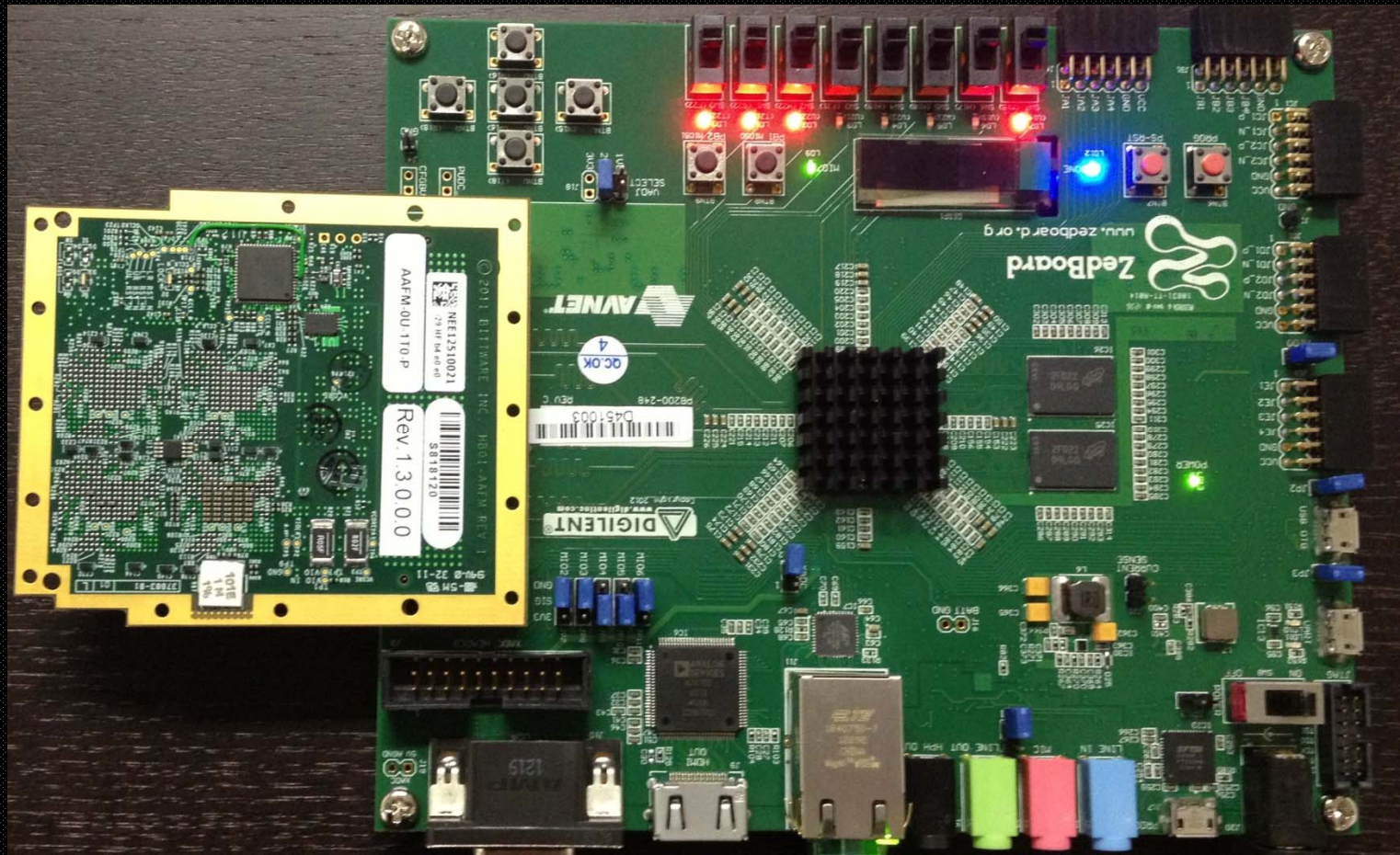
It's more FUN



The Eve of KS Launch (Sept-2012)



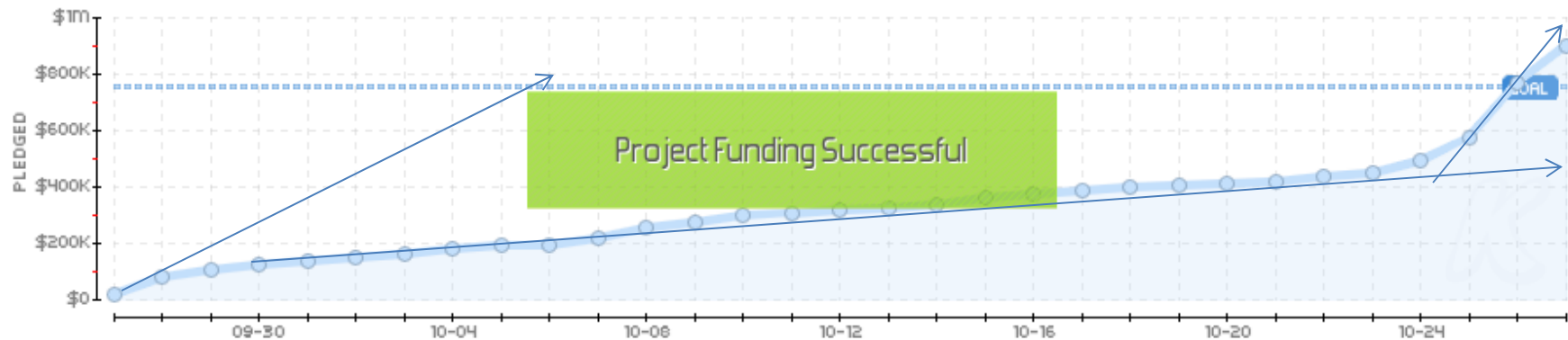
Working Prototype (Oct-2012)



A brutal campaign (Oct-2012)

Funding Progress: Parallella: A Supercomputer For Everyone

Closed at: \$898,602 / \$750k (119%)



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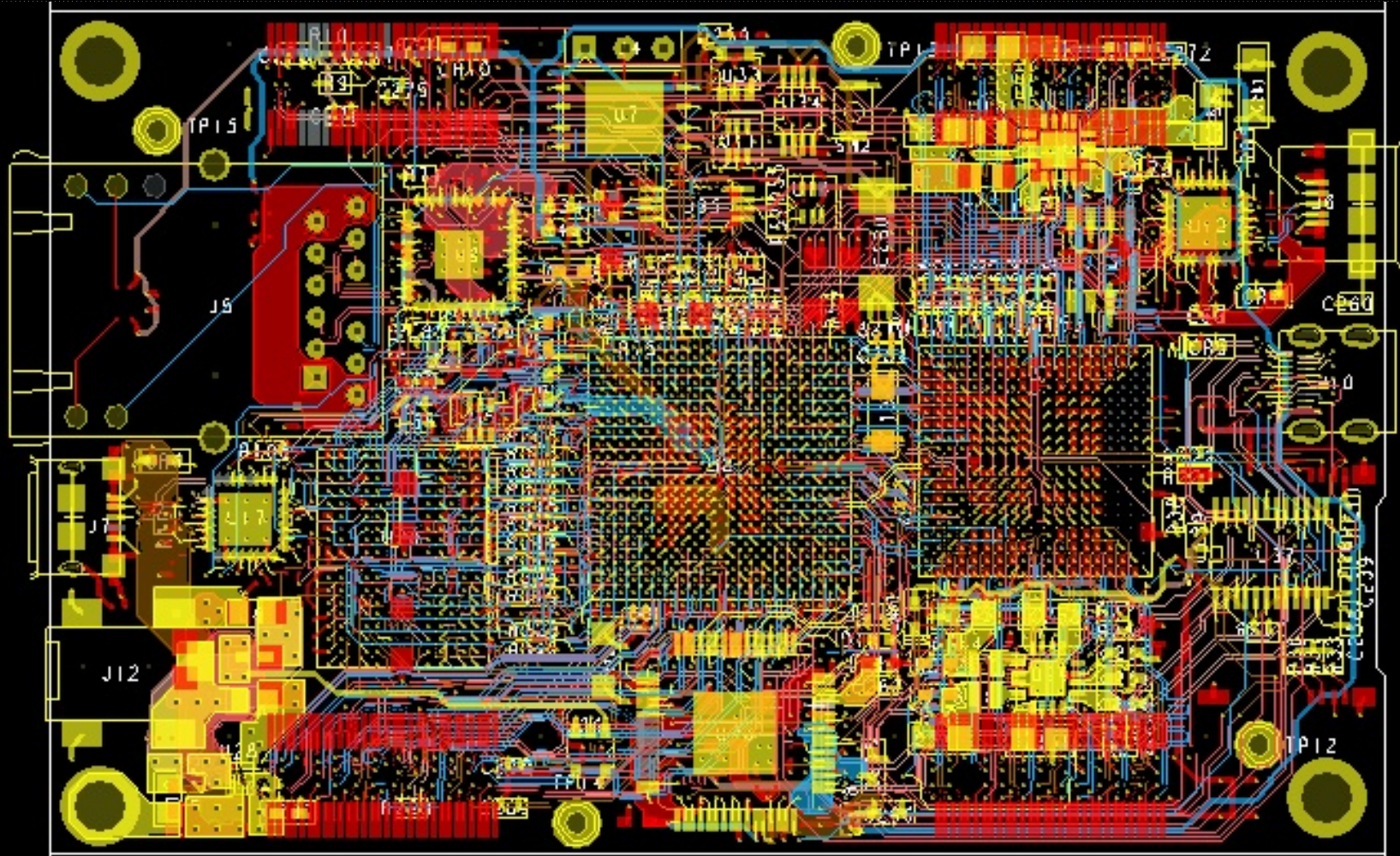
Post KS Celebration (Nov-2012)



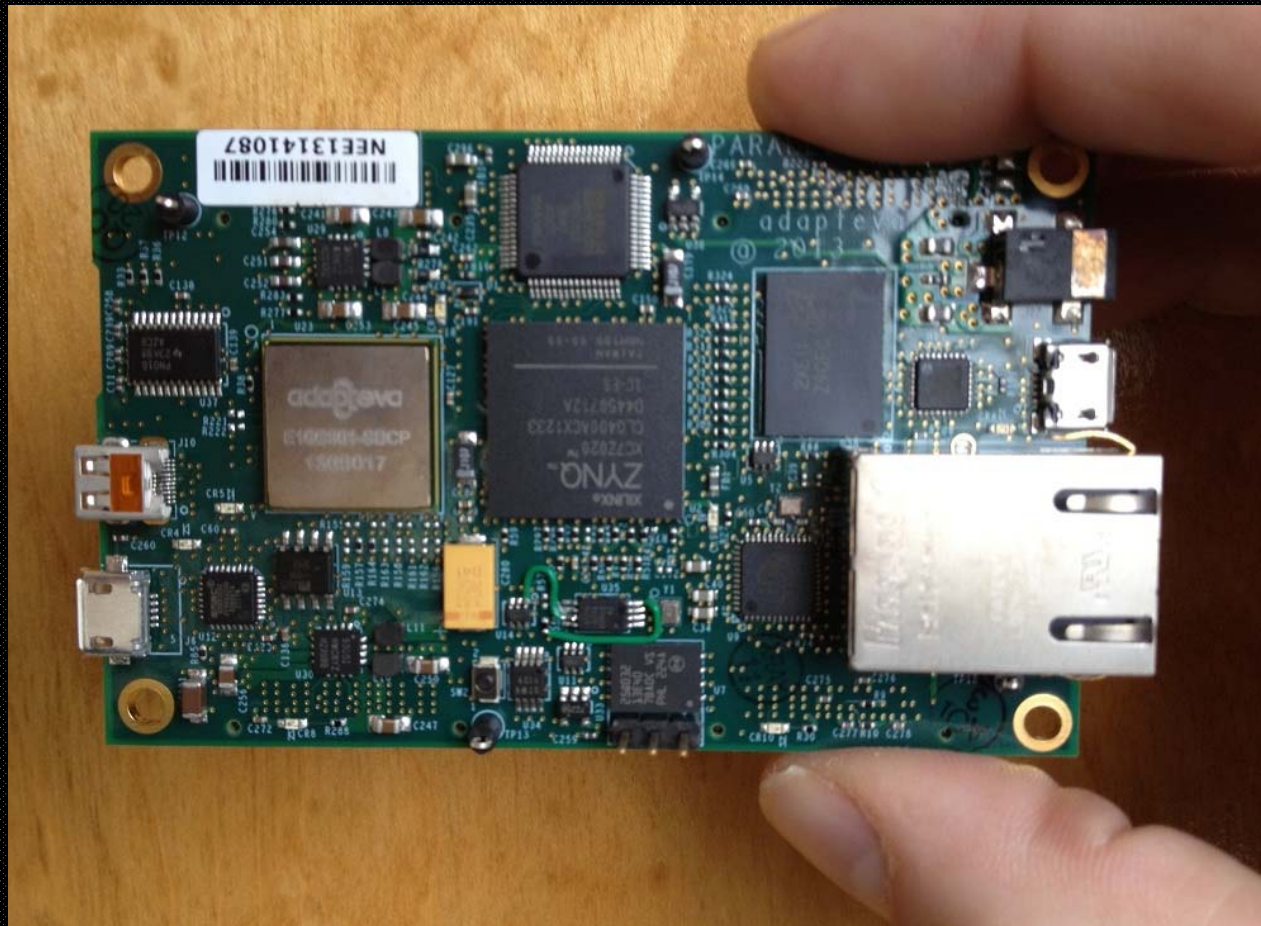
Working Cluster (Jan-2013)



First Layout (Mar-2013)



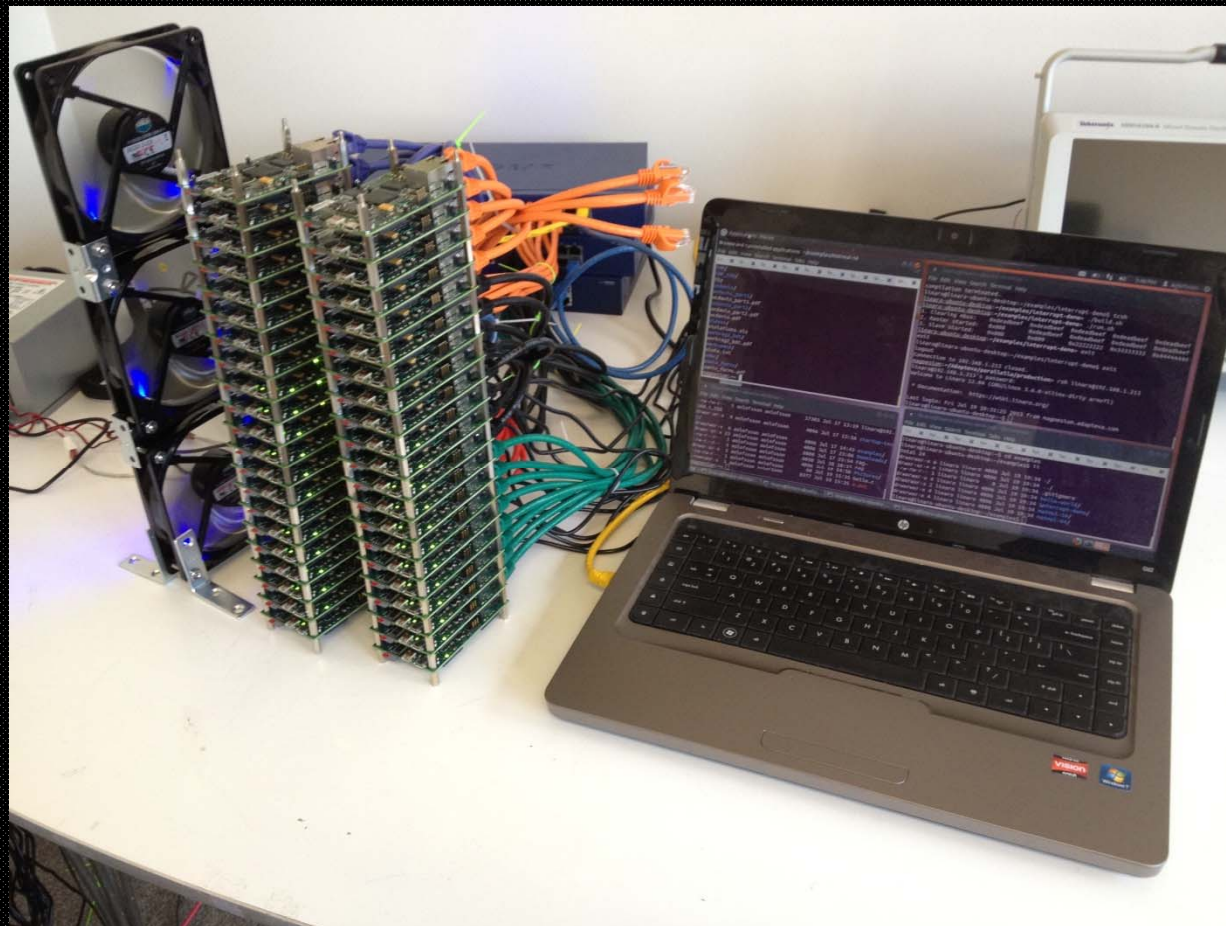
First Power-up (Apr-2013)



Chaos! (May/June-2013)



756 Core Parallella Cluster (Jul-2013)



First Shipments (Aug-2013)



Almost there...(Sep-2013)



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Check Us Out @ the MIT Table

