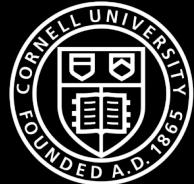


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Design with Embedded Operating Systems

Prof. Joseph F. Skovira

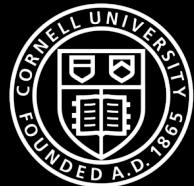


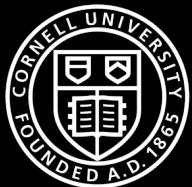
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The Big Shift

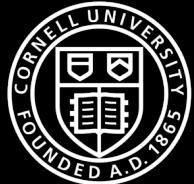
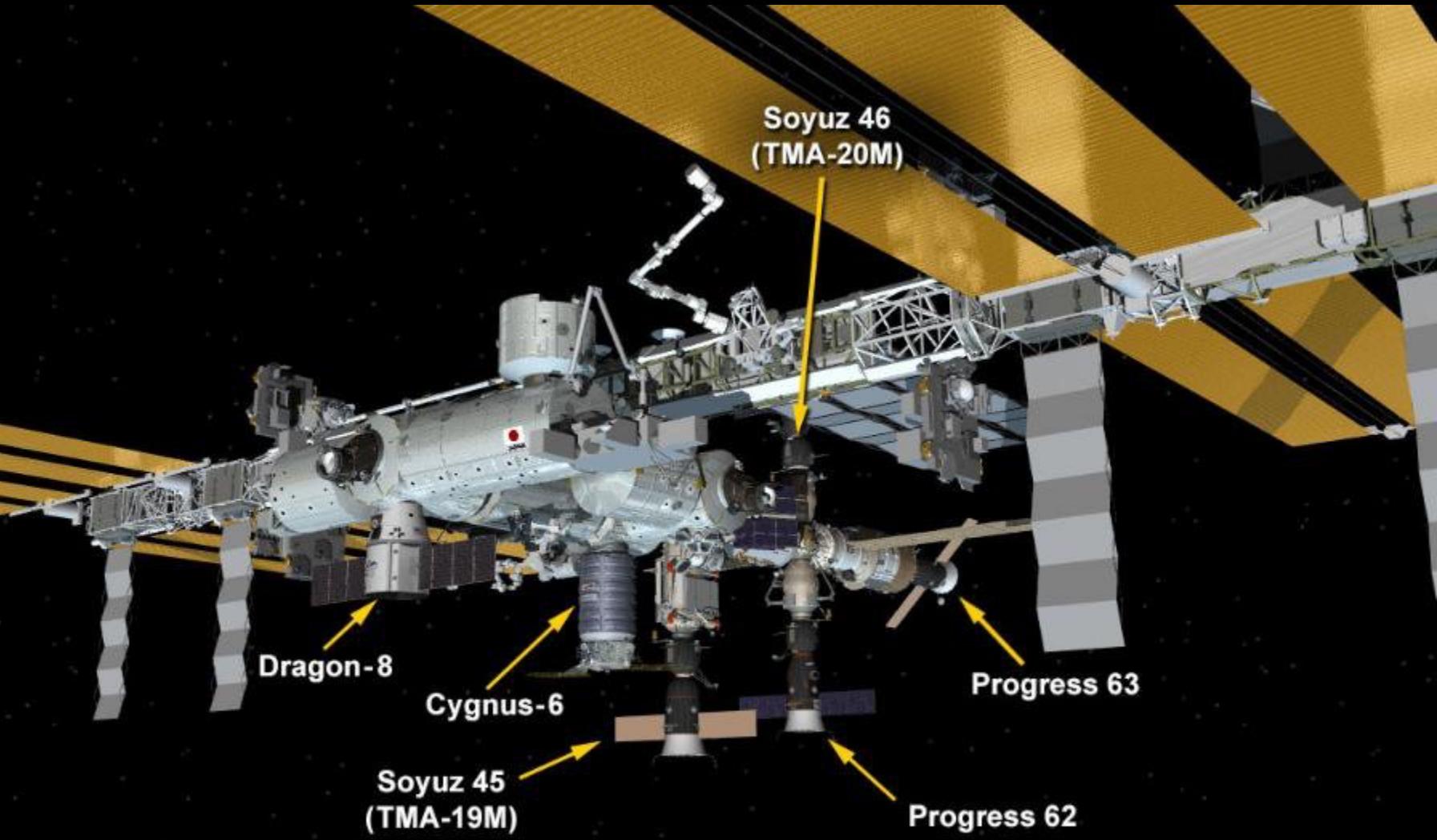
Microcontrollers
Unix/Linux
Perception

Big Shift
Industry Examples?





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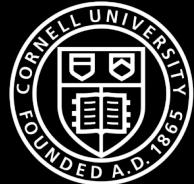


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The Big Shift

How can you identify the ‘Big Shift’?

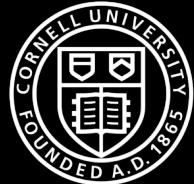
Other Examples?



The Big Shift

Microcontrollers
Unix/Linux
Perception

Big Shift
Industry Examples?



Convergence

1960s

1970s

1980s

1990s

2000s

present

Unix

Unix/Linux
GNU

Unix
wars

Ubuntu,
Debian,
Arch, ...

BSD
UC
Berkeley

Minux

Linus Torvalds
Linux Open Source

4004 8008

80186

80286

80386

Pentium

Nehalem

Xeon

Arduino
Pic32

ARM
MSP430

FPGA
GPU

Mainframes

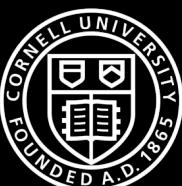
PCs

Game
Consoles

Cell
phones

iPhone
android

Wearables
IOT
iEverything



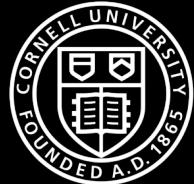
The Big Shift

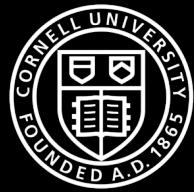
What does this have to do with you?

Are we reaching a shift?

What does it mean for future development?

Plenty!





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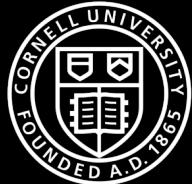
What about Us?

What does this have to do with us?

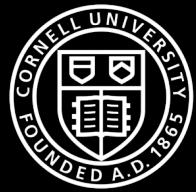
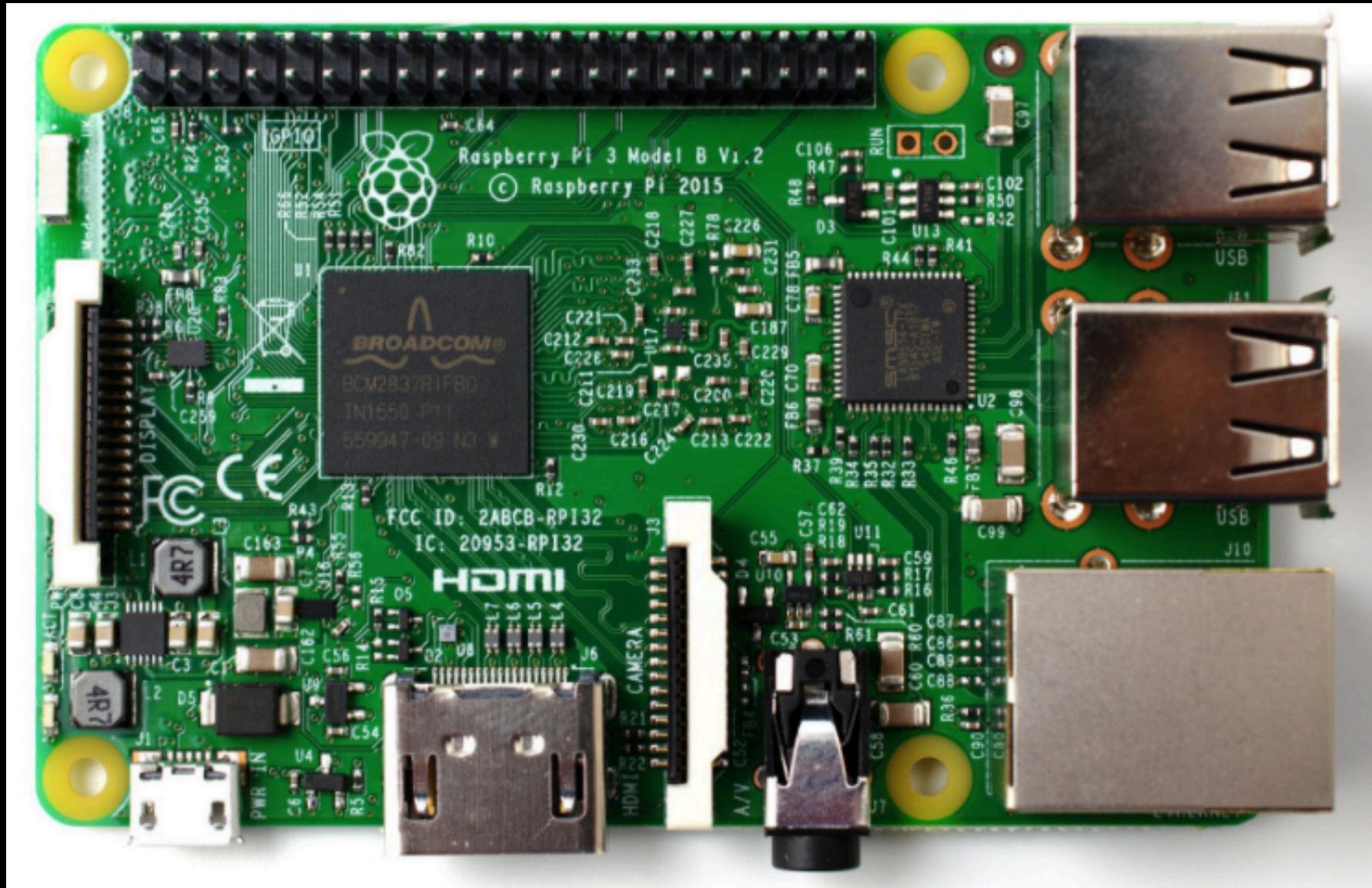
SpaceX, Tesla, Facebook, Twitter

Any Local Examples?

Winkler Lab



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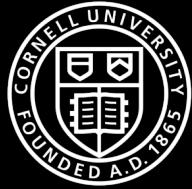


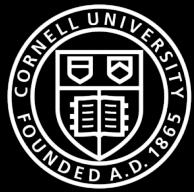
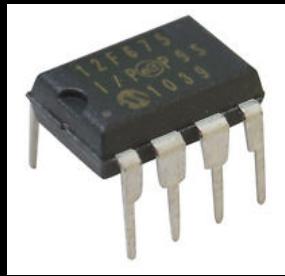
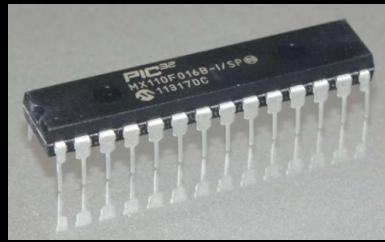
ECE 5725

ECE 5725 server

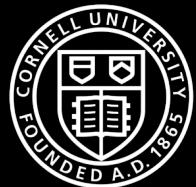


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B Rev 1



B Rev 1 links



A



B Rev 2 (256 MB)



B Rev 2 (China)



B Rev 2.1 (UK)



B Rev 2 (Chinese)



B Rev 2 (Blue Pi)



Compute Module



2B



B+



B+ (Chinese)



A+



2B 1.2



Zero 1.2



Zero 1.3



Zero W



Compute Module 3



Raspberry Pi® family

Feb 28 2017

RasPi.TV