Evolution of Mobile Computing

James Bruce
Director Mobile Solutions
ARM® Partnership Expanding Into All Markets

From Sensors to Servers
Connecting the World

- Over 50 Billion ARM-powered SoCs have shipped since 1993
  - 6 Billion ARM-powered mobile devices
  - Over 2 Billion smartphones currently in use
  - >95% Market share in smartphones
  - >95% Market share in tablets

- Changing How The World Computes
  - Tablets out shipped notebook PCs in 2013
  - Entry level smartphones out shipping all PC’s
  - ARM is your primary computing platform

*Source: ABI Research*
Computing in 2010

- Computing in 2010 was about the “PC”
- Computing was a variation on a theme
- PC was the result of years of gradual change
But Computing Would Never Be The Same After 2010
Why Did Tablets Change Computing?

- ARM & SiP Technology
  - Low power = great battery life
  - Low thermals = heat-sink free
  - SoC Integration = small form factor

- ARM Business Model
  - Multiple solutions = choice
  - Solutions designed for different markets = different price points
  - Innovative software and services

- Exciting new experiences and form factors determine market success
The Computing Revolution Has Created New Opportunities

ARM Tablets RoW
ARM Tablets China SoC
x86 Laptops

100 Million China SoC’s Shipped in 2013
Computing Today

- Wide range of devices with many form-factors
  - From smartphones to tablets and beyond
- Multiple price points
  - From <$50 to $500
- Multiple OS’s
- Software innovation happening around mobile
- Ability to develop regional ecosystems
- Tablets up 250M, Laptops down 50M
  - Consumers have voted with their wallet
Computing Tomorrow: Innovation Happens First on ARM

- Accessing content anywhere, anytime, any device
- Window to our health and fitness
- Next computing revolution will happen on ARM
- Adapting the mobile app experience to all devices
- Enabling constant connectivity and control
Wearables by Users, It Is Not One Size Fits All

- Professional
- Elderly
- Pets
- Animals
- Teenagers
- Health
- Industrial
- Office
- Lifestyle
- Sports
- Extreme sports
- Kids
Wearable Revolution Built using ARM IP

80+ devices in development or already in commercial deployment
Only ARM Ecosystem has the Solutions to Cover All

**Basic Wearable**
- Simple OS
- No Display
- BT Tether

**Midrange Wearable**
- Simple OS
- E-Ink Display
- BT Tether

**Rich OS**
- Colour Display
- Graphics
- Touch Screen
- BT/Wi-Fi
- Audio

**High End Wearable**
- Rich OS
- Colour Display
- Graphics
- Touch Screen
- BT/Wi-Fi
- Audio
- GPS
- Camera

**Wearable Phone**

**Cortex®-M0 , Cortex-M3**

**Cortex-M4, Cortex-A5**

**Cortex-A7**

Oakley Airwave

pebble

fitbit

ARM

KOPIN
Summary

- The ARM architecture scaling from Sensor to Servers
- ARM Ecosystem has changed computing
- ARM is at the heart of the next computing changes
  - Next generation of tablets and clamshells, smartphones
  - And wearables
- ARM Ecosystem has been successful in developing China Computing Industry
  - 100M China powered tablets shipped in 2013
Thank You