

Exploring different facets of the bustling mobile content world



Part two of In-Stat and TI wireless' 2010 webinar series
September 22, 2010

Moderated by Frank Dickson, In-Stat

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Welcome to our 2010 webinar series!

Today's agenda:

- 5-minute market overview
- 35-minute discussion by panelists
- 20-minute live Q&A

Today's host:

Frank Dickson
VP Research
Mobile Internet
In-Stat



Webinar archives available: www.ti.com/wirelesspresentations and www.instat.com

Today's panelists:



Kevin Hoyt
Platform evangelist
Adobe



Wade Vesey
CEO, North America
Movial



Fred Cohen
Director, OMAP wireless ecosystem,
TI



Overview

- **What is mobile content? (Frank)**
 - Today's mobile Web
 - The power of mobile applications
 - Video content: Changing the landscape
- **Experience matters (Kevin)**
 - Adobe Flash innovation: Flash on!
 - “Consumerization” of IT
- **What's enabling mobile content? (Wade)**
 - Performance and experiences
 - Content use and creation
- **Chips driving the mobile content revolution (Fred)**
 - Technologies bringing mobile Web to life
 - Fueling today and tomorrow's features



What is mobile content?



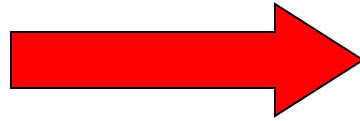
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What is content in a mobile world?



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What is the mobile Web today?

- Basic communications
 - E-mail, messaging
- Advanced communications
 - VoIP, video, social networking
- Passive entertainment
 - Gaming, books/publications, movies, TV shows
- Interactive entertainment
 - Online gaming, gambling, electronic treasure hunts, fantasy sports
- Internet access
 - Information searches, e-commerce
- Content manipulation
 - Photos, video, basic graphics
- Client server applications
 - Databases, spreadsheets, word processing, presentations, industrial automation and control

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The power of the app

- Old argument in mobile about UI
 - Custom UI
 - Semi custom UI
 - Standard browser
- Argument based on finite screen real estate
 - Remember when the RAZR was the rage
 - Even today's smartphones are relatively small
- Changes the Internet usage model

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Smartphone application types

- Calculators
- Entertainment (not games)
- Games
- Mapping and directions
- Music and radio
- E-Readers
- News (not sports)
- TV and Video
- Productivity
- Specialty business and enterprise applications
- Search and reference
- Social networking
- Sports information and news
- Travel

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IP-based client/server devices

Application

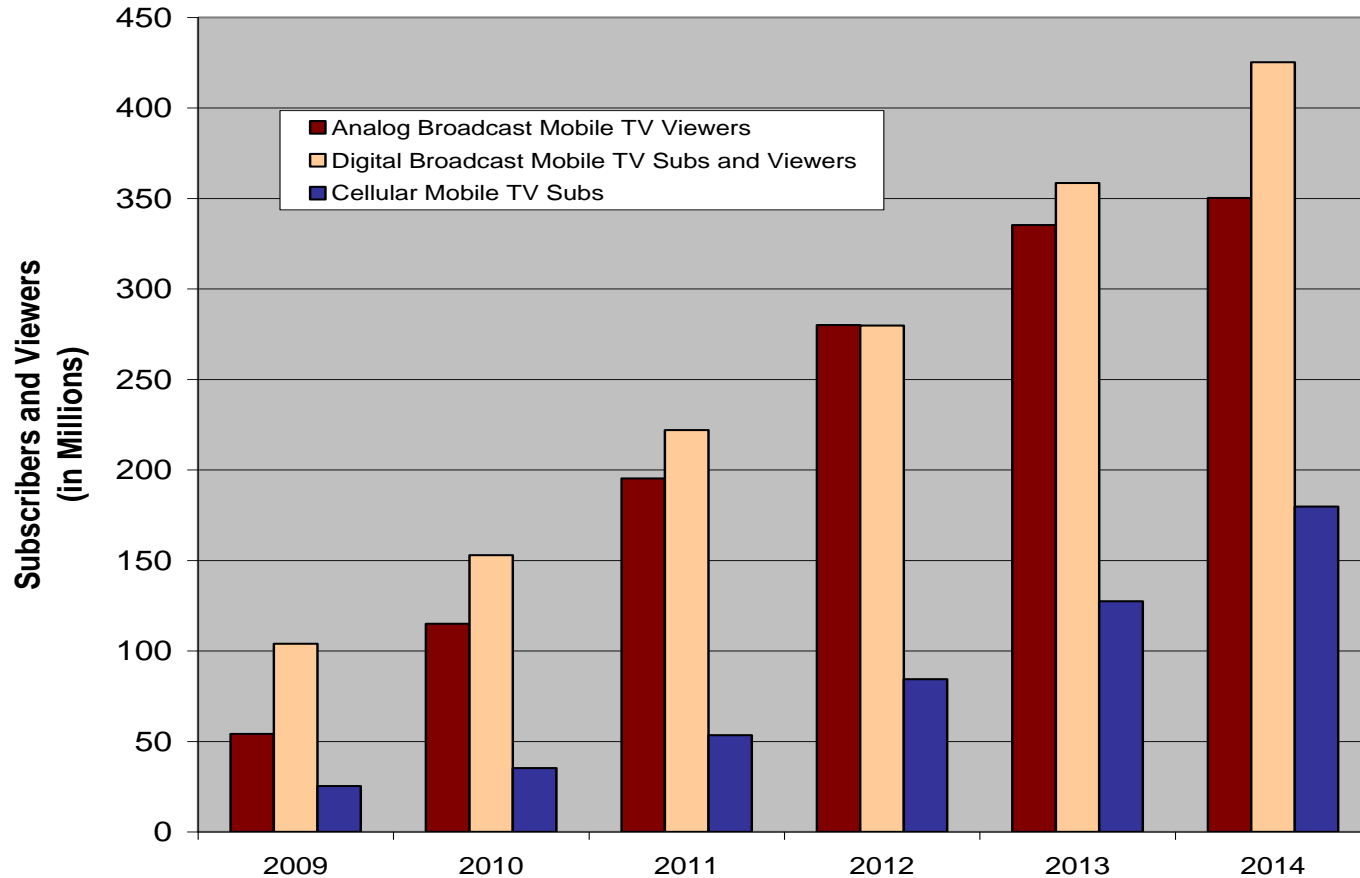
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- Travel

Mobile Web?

- Yes/no
- Mobile web-based
- Yes/no
- Mobile web-based
- Mobile web-based
- No
- Mobile web-based
- Yes/no
- Yes/no
- Mobile web-based
- Mobile web-based
- Mobile web-based
- Mobile web-based
- Mobile web-based



Video content in a mobile world



Source: In-Stat, 6/10

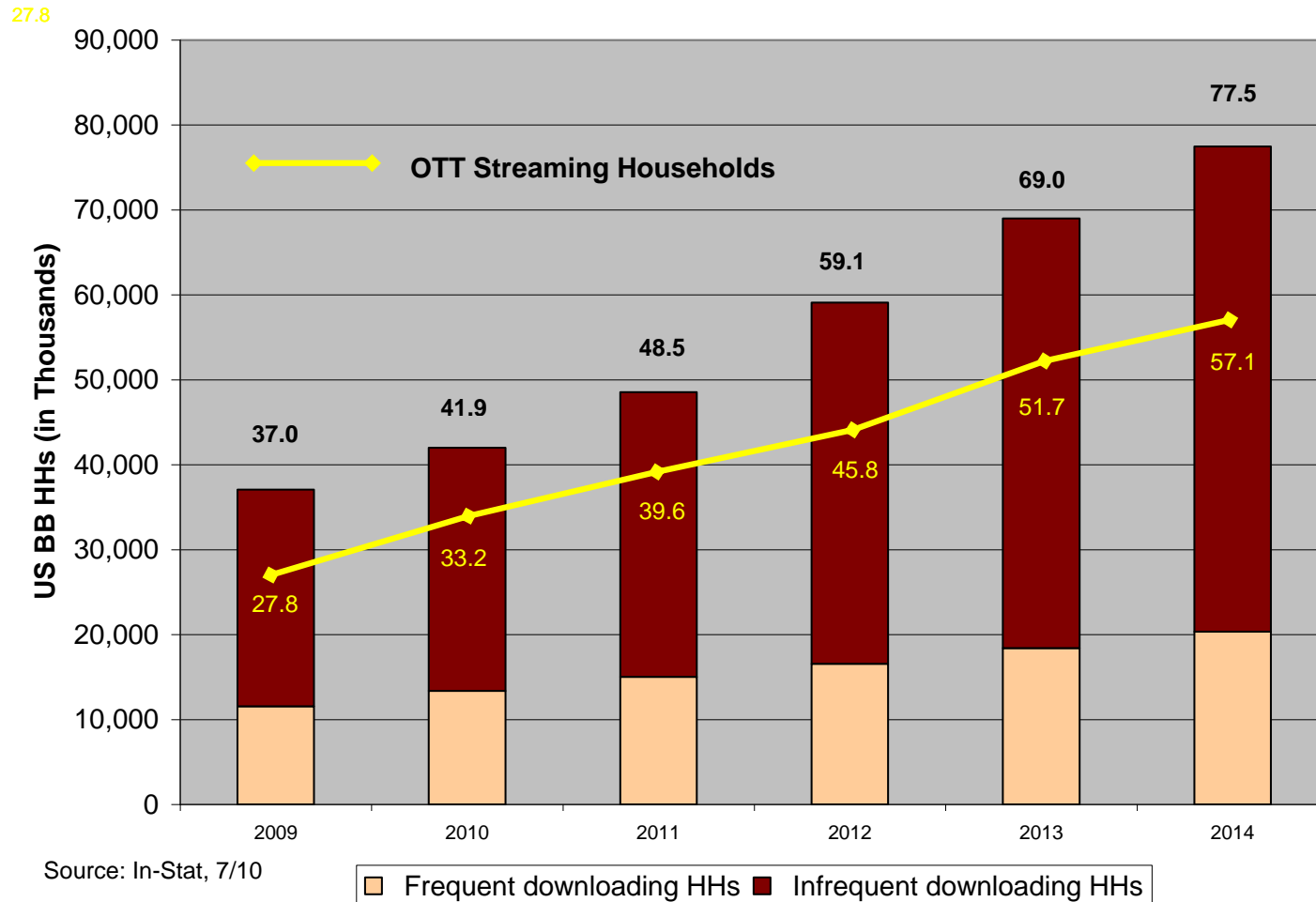
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Consumers are adjusting to an IP lifestyle



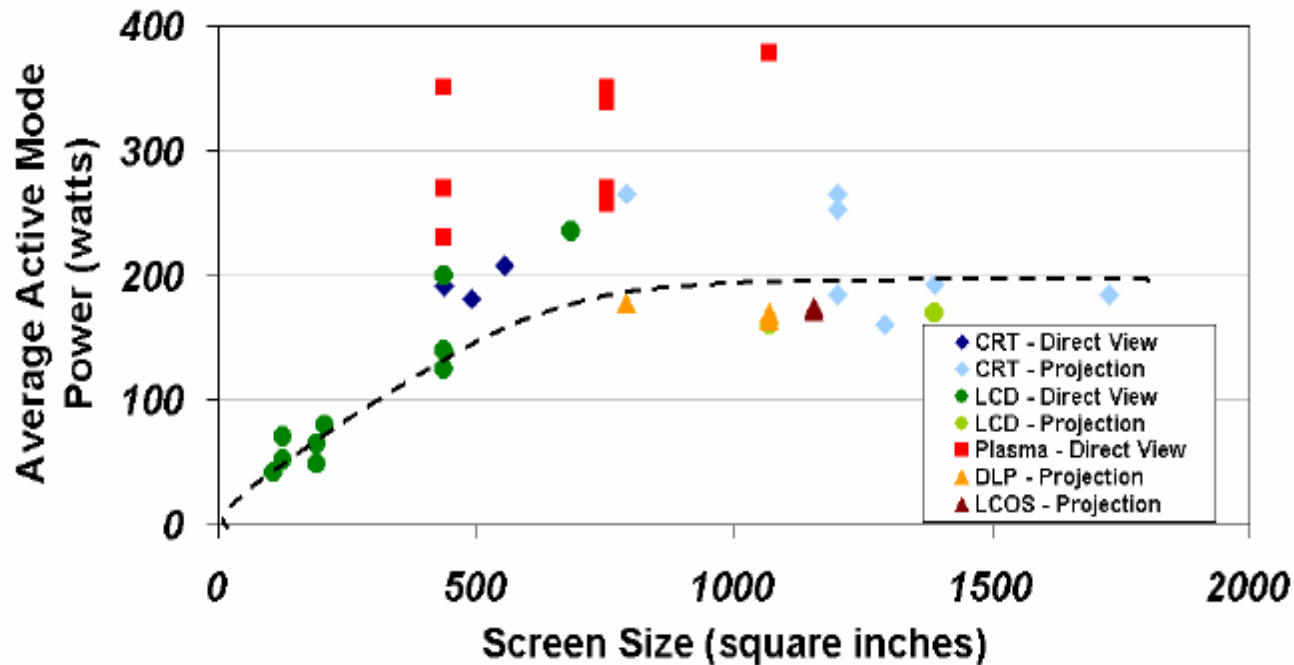
Source: In-Stat, 7/10

■ Frequent downloading HHs ■ Infrequent downloading HHs



Video done poorly can be punishing in a mobile world

“Shrek Test” revealed TVs using higher active mode power than ever before (350 W); wide range of TV power use seen for similar sized models



Source: Noah Horowitz, Natural Resources Defense Council

“Energy Use of the TV ‘Ecosystem’” Presentation

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Experience matters – Flash on!

Kevin Hoyt, Adobe

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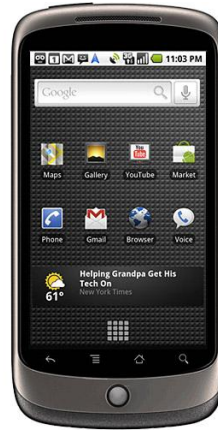


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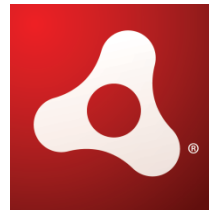
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Runtimes:



Tools:



Servers:



More:



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What's Enabling Mobile Content?

Wade Vesey, Movial

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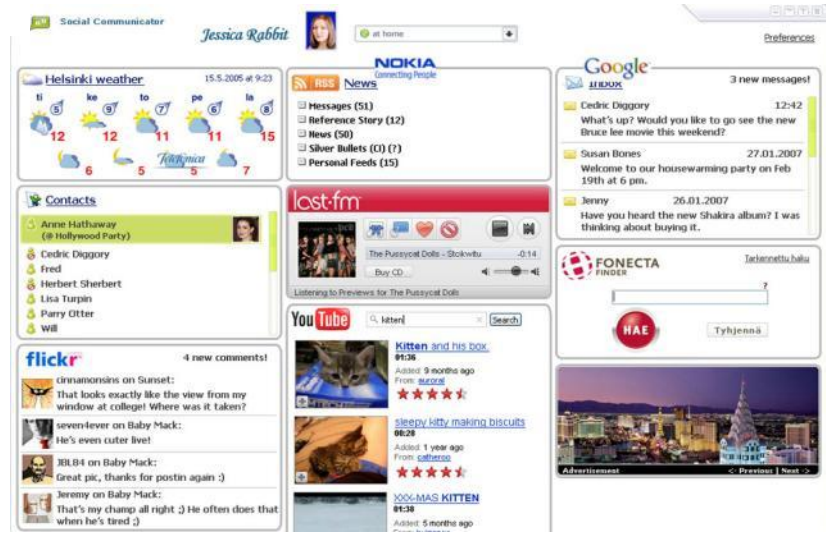
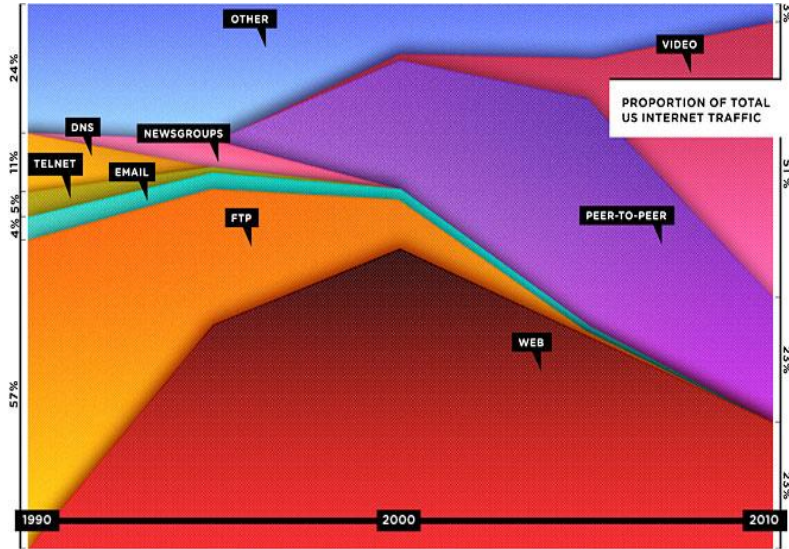
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Driving trends in mobile content

Internet trends are reshaping content . . . but content is expanding exponentially.



... across greater arrays of mobile devices. . . while OS environments consolidate.



symbian

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Web applications

- Offline web apps
- Adobe Flash continues
- Richer UI controls support
 - (date input, number input, range editor, etc)
- Tighter OS integration
 - (notifications etc)
- More APIs
 - (geolocation, sensors, etc)
- Native Video and audio tag
- Better portability
 - web widgets across widget runtimes due standardization



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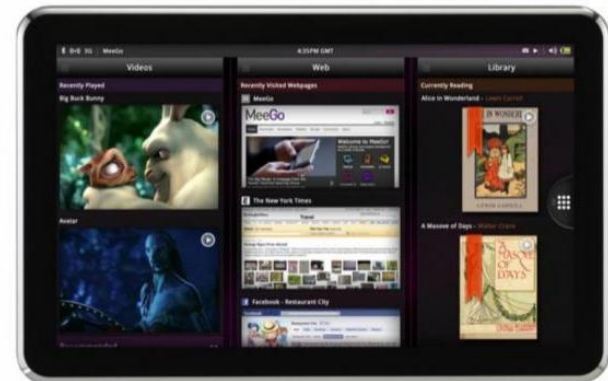
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Performance and effects

- Accelerated 2D graphics
 - with Canvas element
- Accelerated 3D graphics
 - with WebGL
- Partly accelerated CSS3 transformations and animations
- 3D animation
- Even better performance
 - (WebKit 2.0, web workers etc)
- Accelerated Flash content
- Multi-threaded applications, second screen, video analytics



MeeGo™



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Content use and creation

- Increased use of cloud-based apps
 - business and personal life
- Lightweight and quick to use Web apps
 - will gain success due to increased mobile use
- Increased zooming
 - because of mobile browsers, designers cannot expect “pixel is a pixel” on screen any more
- Desktop sites optimized for mobile use
 - (no separate version) with CSS media queries
 - Websites are designed first for mobile use and then expanded to desktop



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Overall implications

- OS is truly consolidating
- Rich applications & widgets proliferate
 - Better performance, more eye candy and faster graphics
- Web applications require deep access to device APIs; integrated to OS
 - Part of application UIs are implemented with embedded web layout engine
- Mobile user experience becomes critical
- Importance of security and privacy increases



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Chips driving mobile Web experiences

Fred Cohen, TI

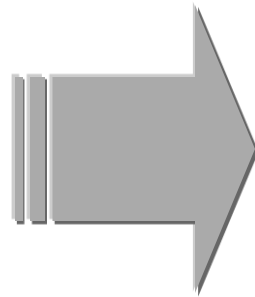
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Beyond WWW: The mobile Web



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“Mobile” enables all new Web experiences




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Technology brings the mobile Web to life



We transform the way
users interact with
devices and with the
Web, using a wide
range of technologies



Flash-10, HTML5, AIR

Advanced Video and Audio codec

Graphics and Physics engine,
artificial intelligence

Image processing

Dual displays

Dual operating systems

Stereo 3D displays

Higher resolution user interfaces

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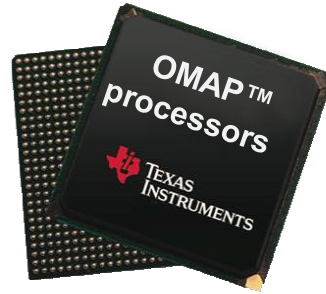
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The OMAP™ processor advantage: High Performance, Low Power, Open Source, NUI

- **The best application processor**



- **Open platform** with concurrent processing sub-systems, for the most innovative applications: ARM CPU, GPU, IVA-HD, ISP, DSP, Audio B/E, DSS, security hardware, and more



- **Lowest power budget:** uncompromised performance at low power levels



- **Focused on Linux distributions and Open Source Cooperation**
- Ahead of market with disruptive **Natural User Interface** technology (NUI)
- Complete with **connectivity** and **Analog** solutions



Fueling today *and* tomorrow's capabilities

We help developers unleash their creative potential by offering Software and Service solution from our OMAP™ partners

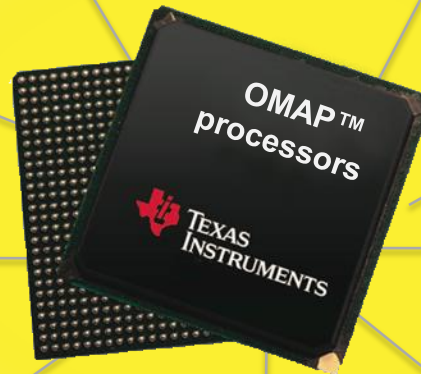
Industry-leading performance at low power levels

Software support, including: Flash, HTML 5, AIR, Codecs, Connectivity, Imaging, more

Dual displays, intense graphics, dedicated engines

Stereoscopic 3D capabilities

Open platform, with multi-OS support



Innovative apps



Mobile development boards



Thriving ecosystem: 300+ software vendors, 50+ service partners

Great resource portals:
www.omapworld.com
www.omapzoom.org
www.ti.com/ecosystem

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Technology in action: Demo

Let's take a look at a TI demo that showcases our ARM® Cortex™-A9-based OMAP™ processor in action, with SMP, 1080p IVAHD, dual display, contextual browser, Adobe® Flash® Player 10, HDMI, display subsystem... **and more!**



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What's in store for tomorrow?

Stereoscopic 3D

Natural User Interfaces



Multiple displays



Projected image interactions



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Summary

- Consumers want a full web and content experience on their mobile devices. The mobile device is just one of a consumer's daily screens.
- To deliver the best experiences across various screens, developers and OEMs maximize the utility of their offerings.
 - Take advantage of the strength of each platform
 - Minimize the weakness of each platform
- Performance, power and security are increasingly important in the mobile environment
- Technologies “under the hood” will continue to fuel tomorrow's content experiences in a mobile world.
- ***Mobility is driving the future!***

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Q & A

- To participate, click on the Ask a Question link on the left side of the interface; enter your question in the box on the screen; hit “Submit.” We’ll answer them during the Q&A session or after the webcast.

www.ti.com/wirelesspresentations

http://e2e.ti.com/blogs_/b/mobile_momentum/default.aspx

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