



TI France Innovation Day

Building the colorful mobile future

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What we'll cover today

- Our world of mobile convergence
- PC-level performance migrating to the mobile world
- TI's offerings for robust mobile designs
- A new level of experiences:
 - Stereoscopic 3D (featuring Archos)
 - Gesturing (featuring Parrot)
- Solving the *big* problem of *little* power as new features emerge



The bustling mobile market

We are entering a world of true convergence, expanding beyond smartphones and into other vertical markets



CONVERGENCE

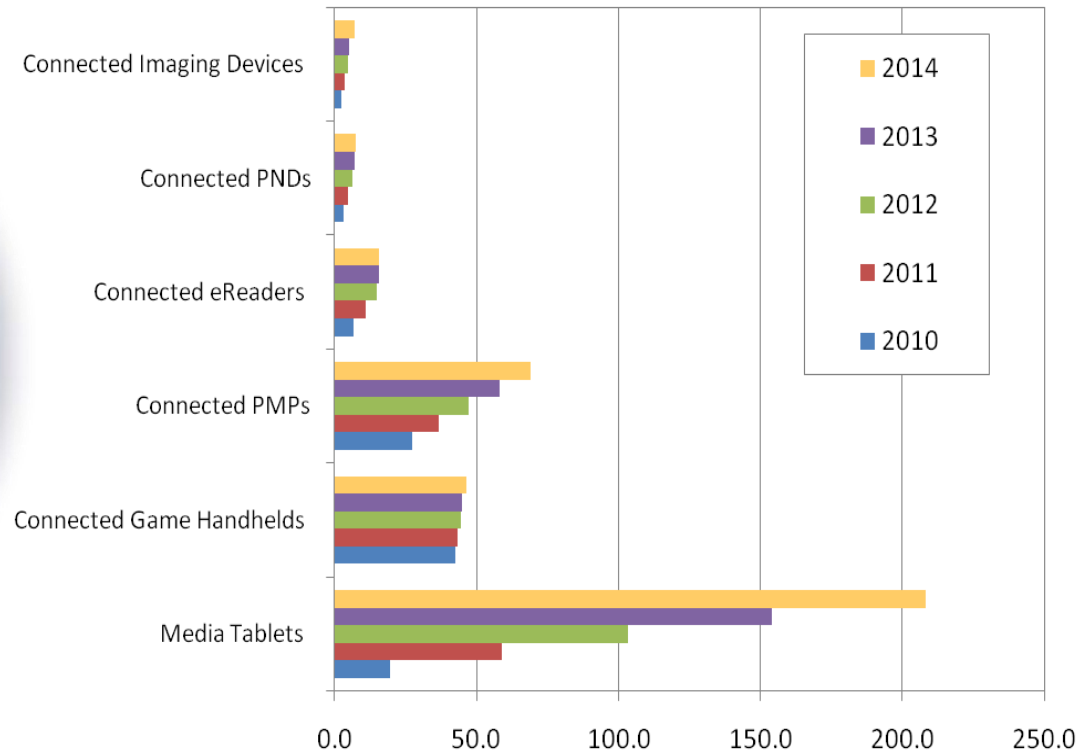
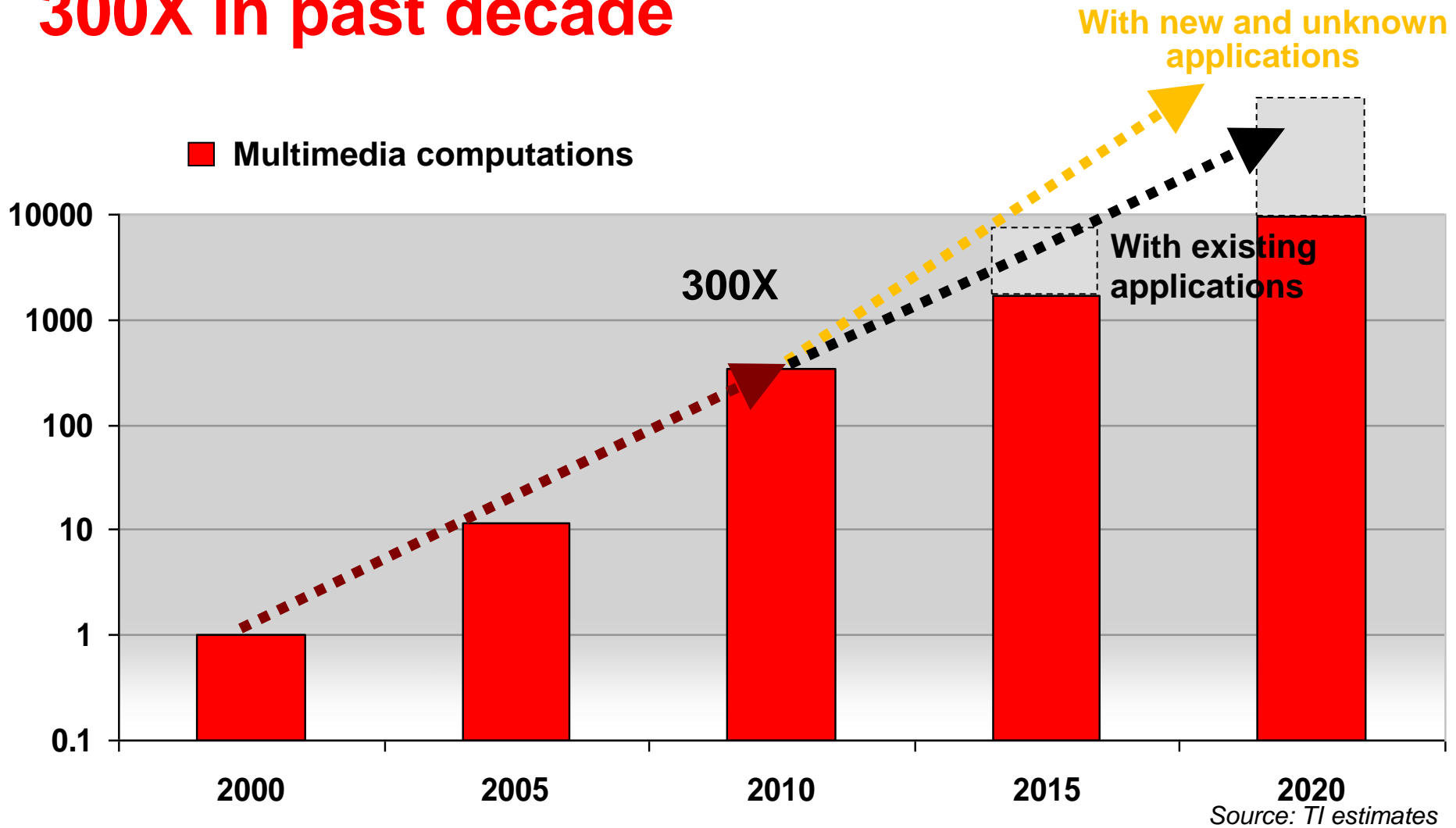


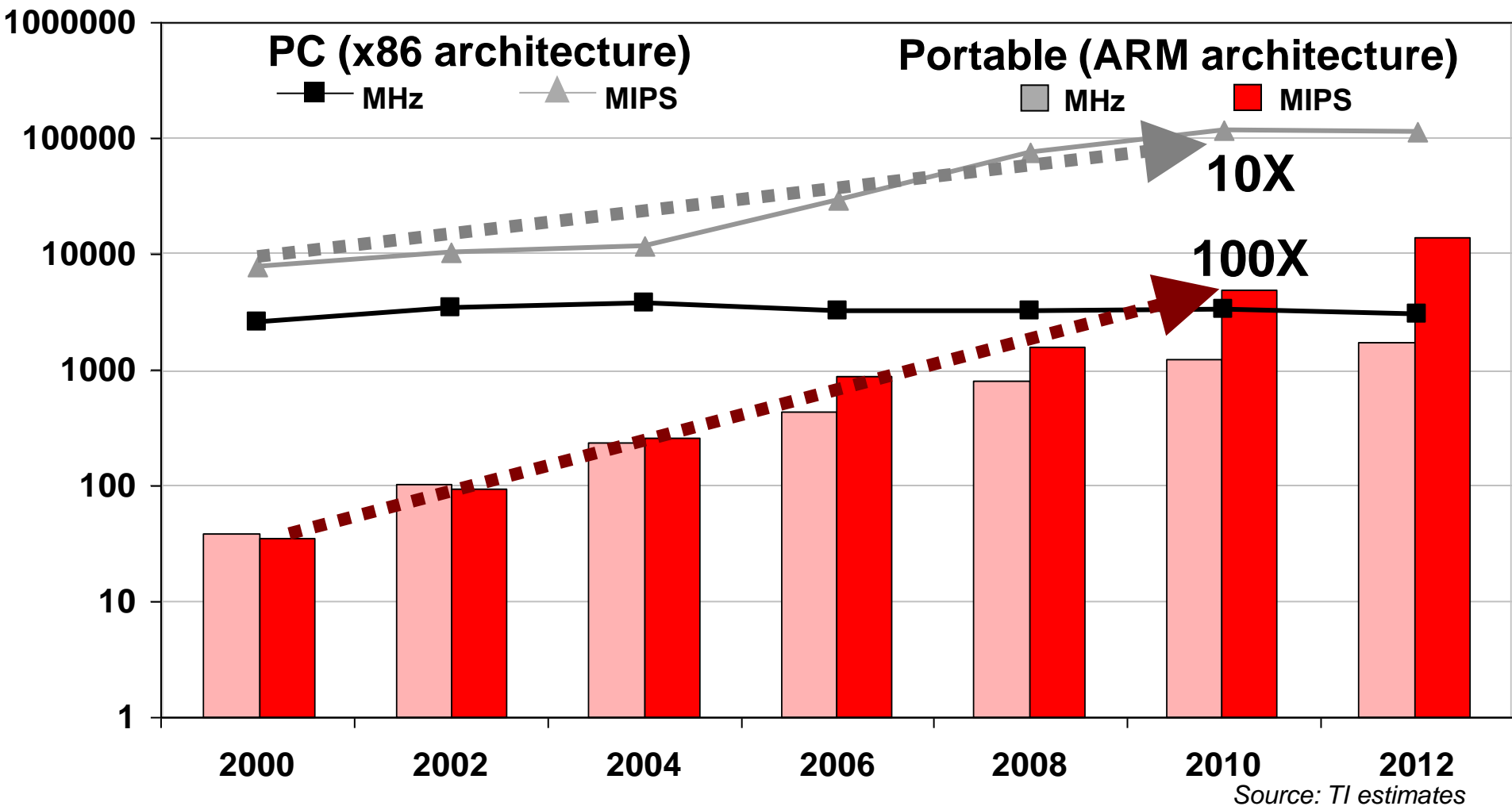
Chart source: *Gartner Forecast: Connected Mobile Consumer Electronics Sales to End Users, Worldwide, 2008-2014 (October 2010)*

Portable multimedia computations grew 300X in past decade



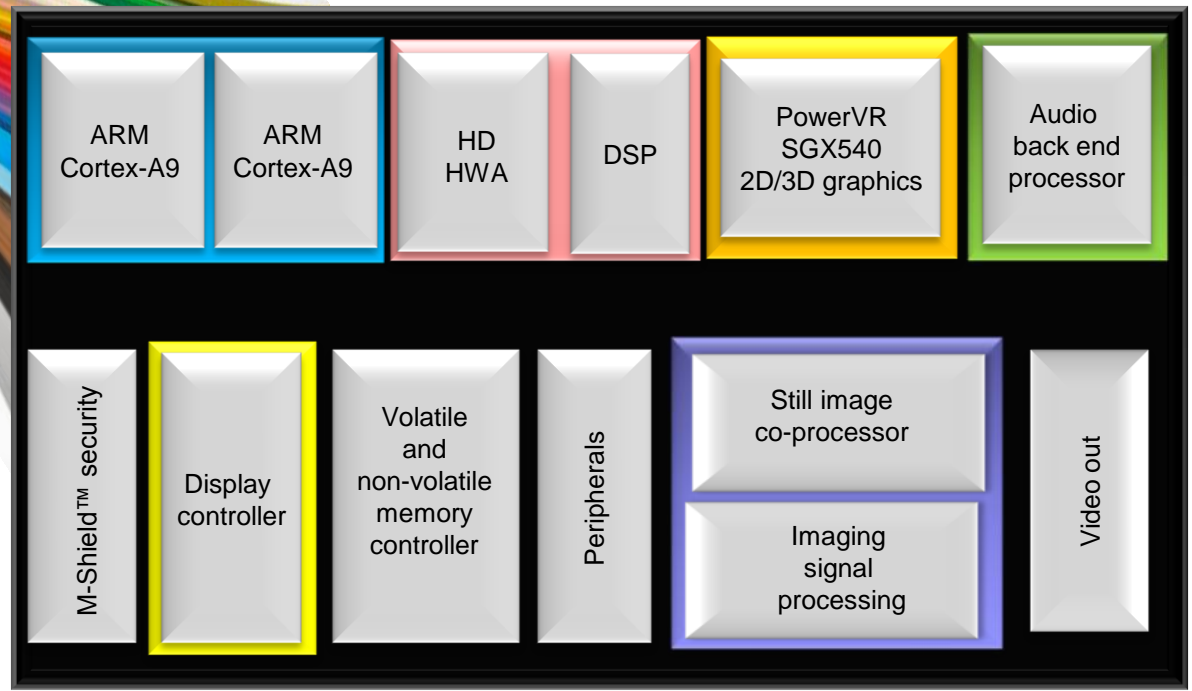
Multimedia includes: imaging, graphics, video, display and NUI

But MPU performance hasn't kept up

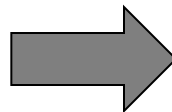
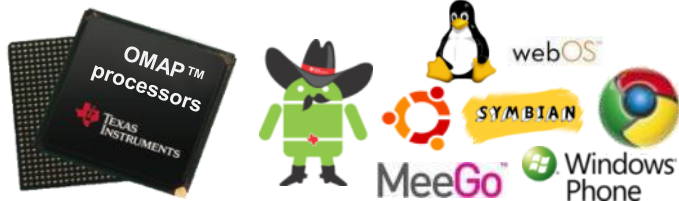


In past decade, 100X MIPS increase in portable apps

OMAP™ processors addresses computational complexity challenges



OMAP™ platform addresses multiple markets



Solid, open smartphone architecture provides the high-performance, low-power to spur differentiation across various markets

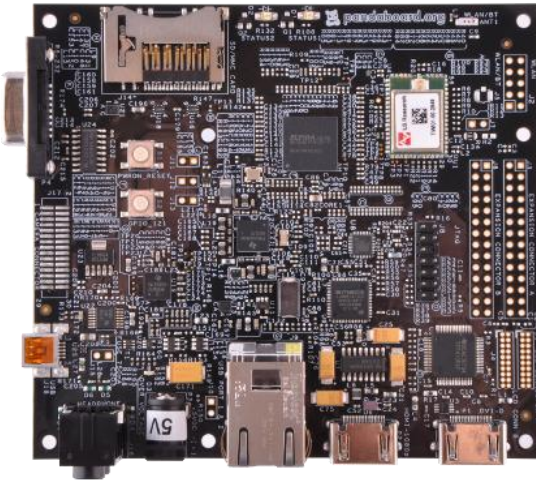
Enabling innovation with PandaBoard



pandaboard.org

Low-cost, open OMAP™ 4 mobile software development platform

- Designed as a vehicle for mobile software development
- Supports Android, Angstrom minimal file system and Ubuntu on initial launch
- Community support for other Linux-based distributions like MeeGo and Chrome OS expected
- Dual-core performance, SMP support, open source foundation, community-driven support
- Out-of-the-box 1080p, WLAN, *Bluetooth*® technology features and more



Available today for
\$174 through DigiKey



Stereoscopic 3D: Experience life in new dimensions!



Users can create and view true stereoscopic 3D content:

- on mobile devices with the naked eye (auto-stereoscopic)
- on external monitors with goggles

- S3D images
- S3D video
- S3D UI
- S3D gaming

The visual content evolution continues to get closer to true life. Consider the path to S3D:

- Silent → Sound
- Black and white → Color
- Color pictures → Color video
- Video → HD
- HD → 3D with goggles
- 3D with goggles → **Barrier-free S3D**

Archos: Leading in S3D experiences

- Henri Crohas, CEO
- Four disruptive technologies in 10 years:
 - 2000: Jukebox 6000 – 1st hard drive based portable MP3 player
 - 2003: AV 300 – 1st Portable Media Player (PMP)
 - 2005: PMA 400 – 1st Mobile Internet Device (MID)
 - 2009: ARCHOS 5 it – 1st Android Internet Tablet
- 2010: Range of 5 Android Tablets



S3D market momentum

Significant momentum around S3D

- Movies: From kids animation to mainstream feature movies
- Home TVs – becoming mainstream in large screen TVs
- Broadcast – ESPN S3D broadcast
- Laptops – S3D polarizing or shutter screen
- Gaming – Nintendo 3DS
- Projectors – with S3D support
- Capture – S3D DSC and Camcorders
- Standardization

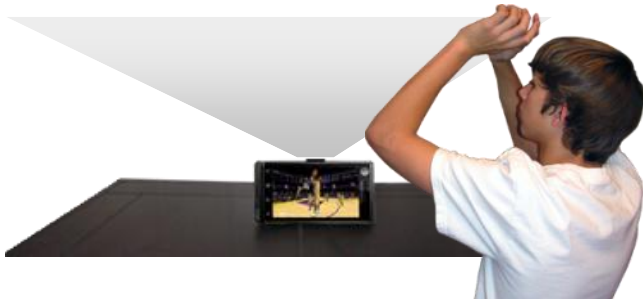


Mobile devices are a “natural fit” for S3D

- Auto-stereoscopic display allow “glasses-less” viewing of S3D
- Mobile devices are a single viewer experience in a controlled angle and distance – fits well with auto-stereoscopic display
- Mobile devices can provide an end-to-end S3D experience – consumption, gaming, browsing, S3D UI, capture, sharing, driving an external display

Touchless gesture recognition

Intuitive control, larger workspace, safer interactions



Uses a single, low-resolution camera to enable new experiences

- Users are no longer physically tethered to mobile devices
- Consumers no longer need to physically hold devices to control them
- Devices can anticipate actions by recognizing gestures before “clicking”

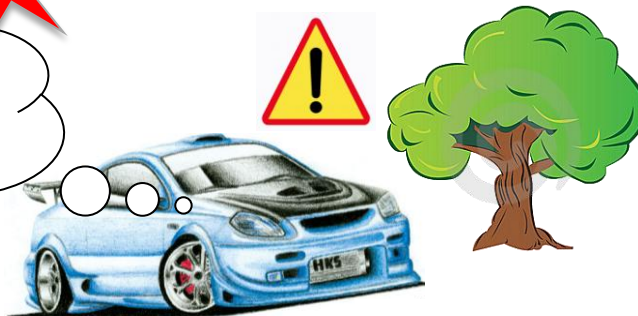
Parrot: A global leader for connectivity interfaces in the car

Guillaume Pinto,
CTO



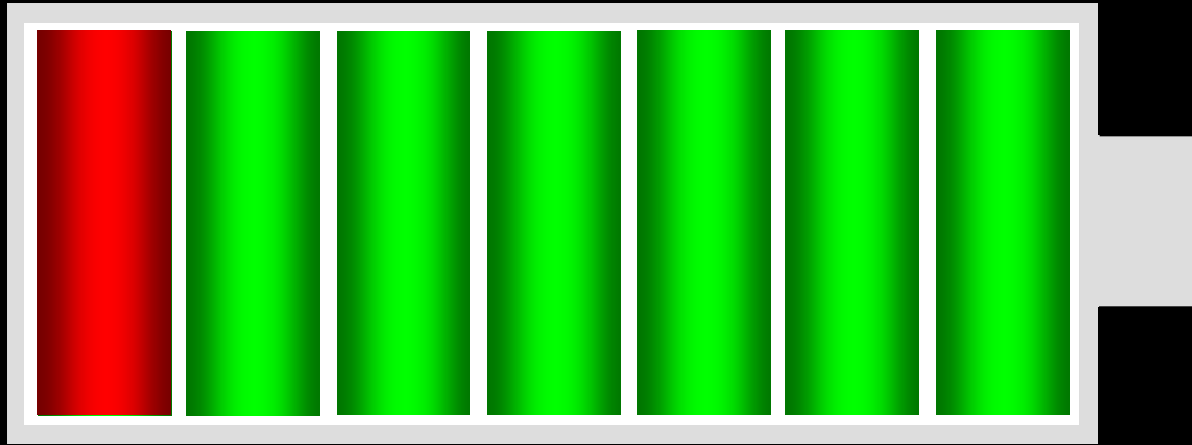
From button MMI, to voice, to gesture

Call John at
the office!



Solving the **BIG** problem of little power

Power, Power, Power



And Size

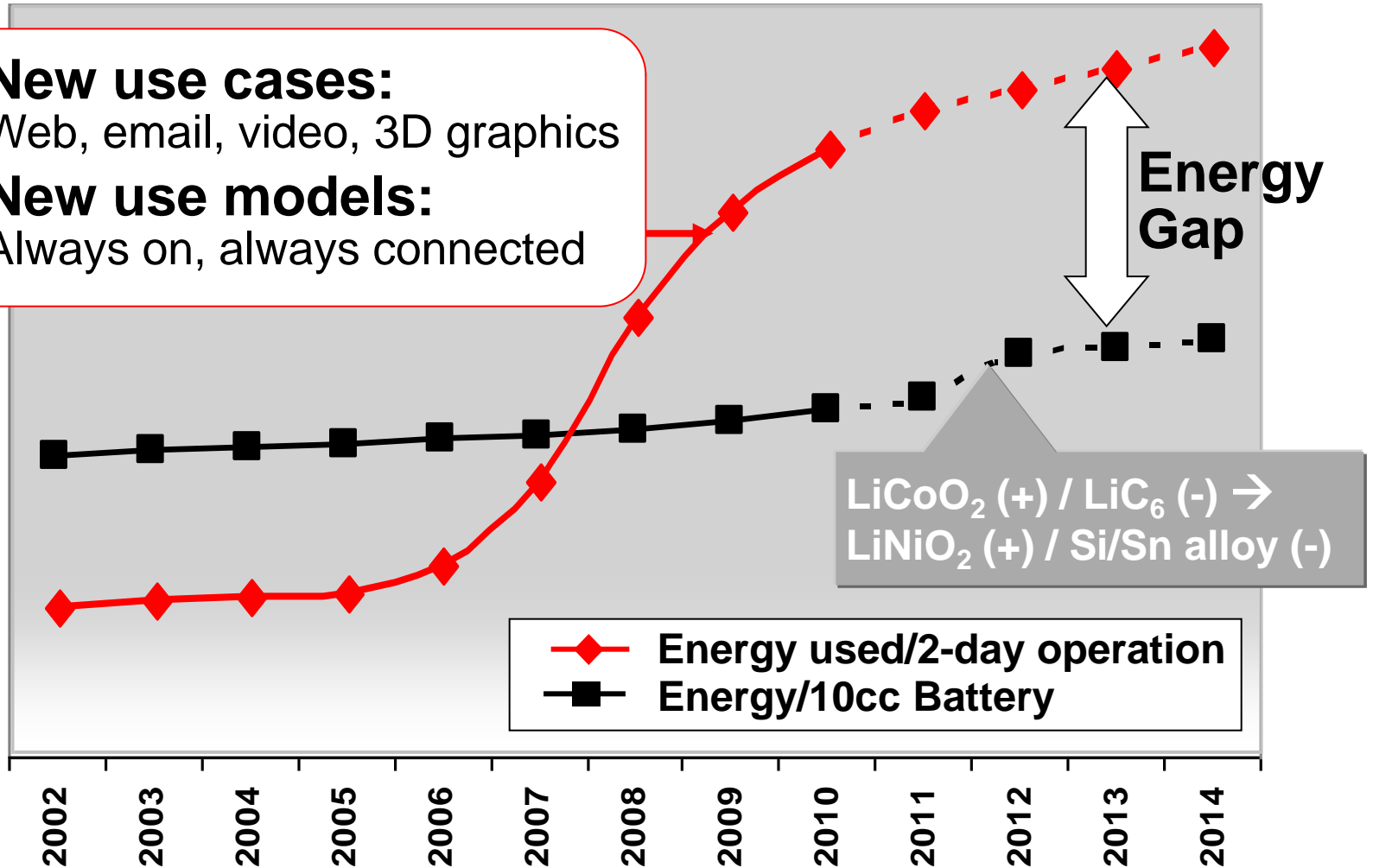
Energy gap of a mobile device

New use cases:

Web, email, video, 3D graphics

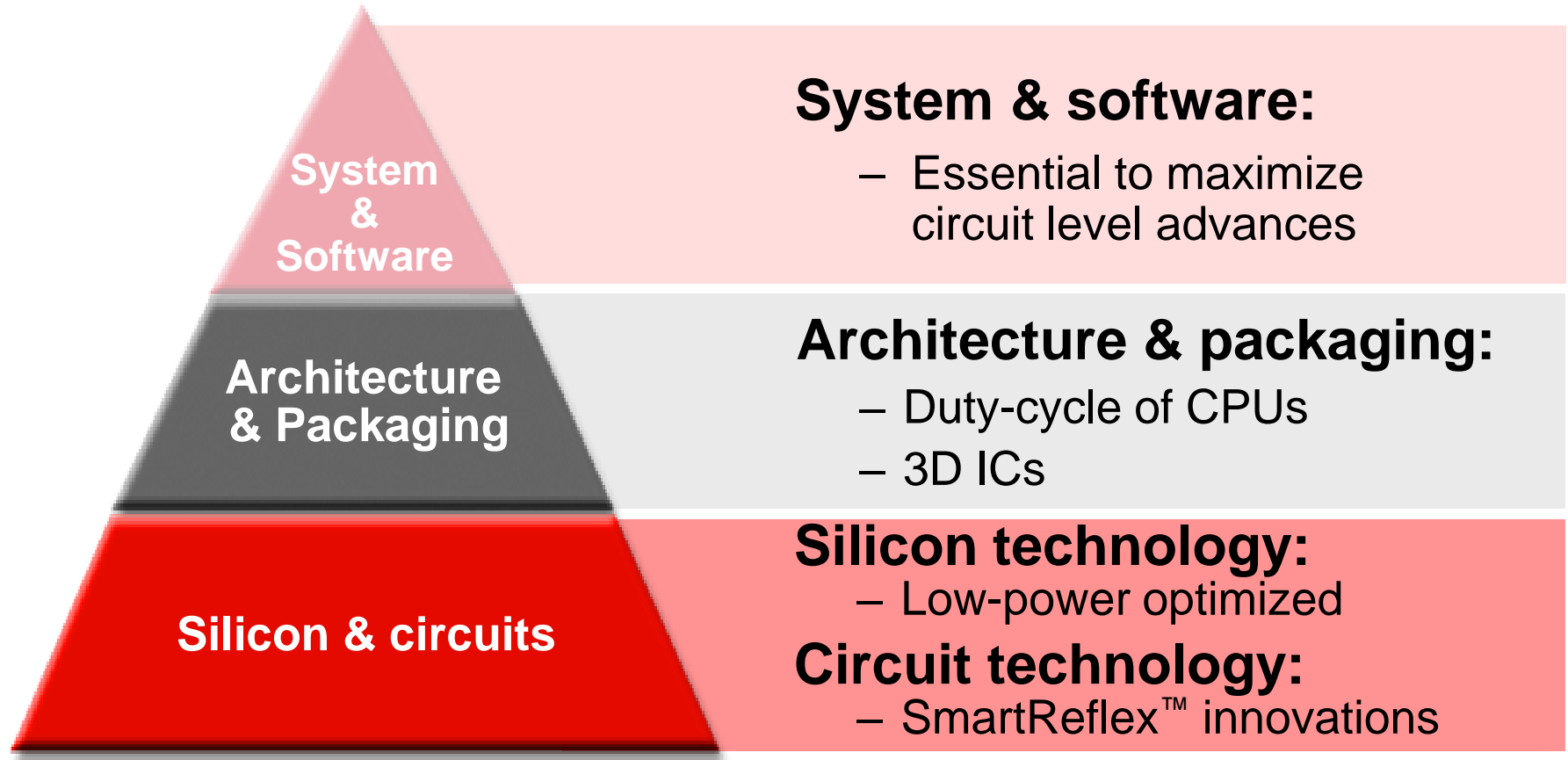
New use models:

Always on, always connected



Source: Öfversten [IWPC'08], Samms [IWPC'08]

Optimizing the system requires collaboration and co-design



In summary

- **Mobile users and their applications are demanding more – and its not just about smartphones**
- **TI's OMAP platform is ideal for enabling next generation user experiences like S3D, touchless gesturing and interactive projection**
- **Power + performance optimization is crucial for success**

