# The dynamic role of open, Linux-based architectures in today's mobile world

#### **CELF Embedded Linux Conference Europe**

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#### What we'll cover today

# "Innovation is the whim of an elite before it becomes a need of the public."



**Ludwig von Mises** 

- Infinite possibilities on the Linux road ahead
- Why "open" is important in today's competitive landscape
- TI's unwavering support of the Linux community
- Technologies that will help fully deliver the Linux promise
- OMAP™ processors' role in fast, cold, cool Linux designs
- Wildly exciting innovation, thanks to a new animal in the TI family
- Wrap up, call to action, questions



#### **Infinite possibilities with Linux!**





#### How do we get there?



## pen" is key to...

- Increased innovation
- Faster time to market
- Higher-quality products
- Differentiated solutions that span all markets
- More brain power behind the industry's hottest advancements
- New community collaboration, enabled by current-generation hardware



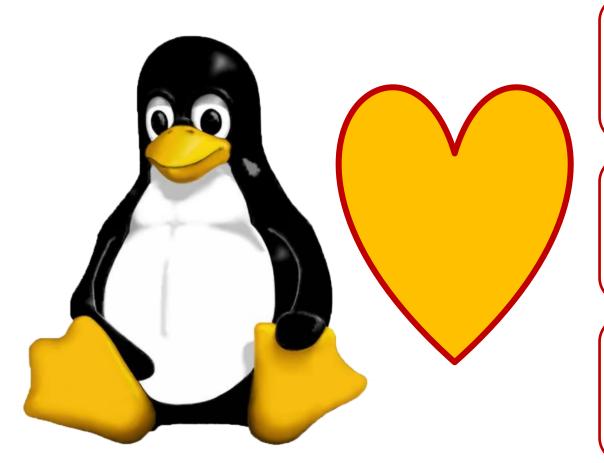
## **Committing and acting**



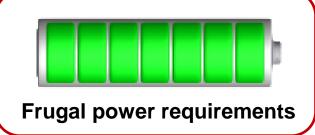
- Restructured organization to focus on "openness"
- Dedicated team, committed to and focused on Linux kernel work
- Building open platforms and foundations
- Enabling access to technical documentation
- Contributing to Linux-OMAP to develop an exciting technology leveraging TI platforms



## Supporting the full Linux promise



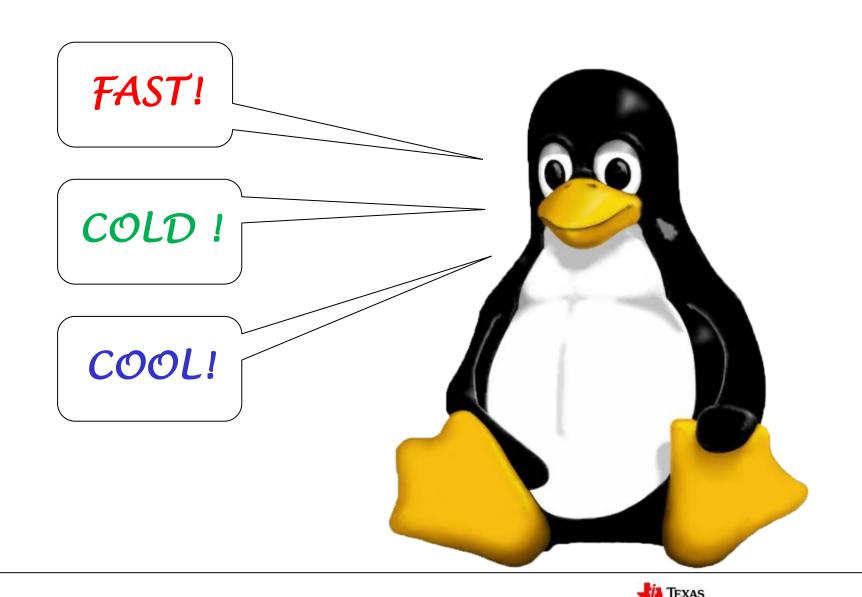








## With TI's OMAP 4 processors, Linux is:



#### With TI OMAP 4 processors, Linux is...





Laptop MPU performance, with 1.5GHz Cortex-A9 SMP dual-core capabilities:

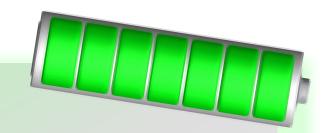
- Set-top-box quality video playback, up to 1080p60 fps
- DSC/Camcorder multimedia performance
  - 20+ Mpix
  - Full HD H264 w/ SloMo
- Handled 3D gaming console UXP



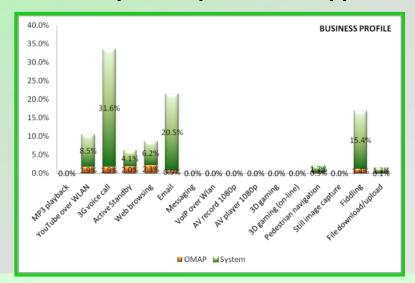
#### With TI OMAP 4 processors, Linux is...

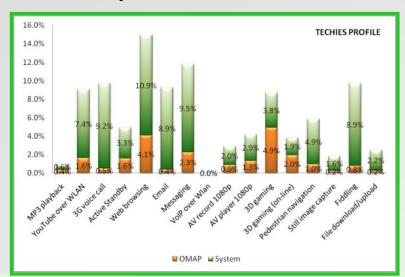


# ...cold!



- All capabilities driven in a very tiny power budget
- Large panel of power reduction/power savings software/hardware techniques
- Global power optimization approach from real user profiles

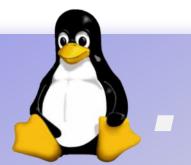




Source: Internal TI modeling tool



### With TI OMAP 4 processors, Linux is...



# ...coo!!



#### Passport for innovation!

- NUI (Natural User Interface) with advanced gesture recognition
- S3D video and gaming applications
- Cool connected cloud applications

#### Innovation everywhere!

- In your pocket with Smartphones
- In your car renewing driving experience
- In your living-room with SmartTVs



## **Developing specific codes**





#### **Collaborating**



- Infrastructure supports incorporation of worldwide talent
- Ecosystem developed to engage with and support experts in various fields
- Extended solutions portfolio through technical partnerships



#### **Engaging and enabling**



#### **Higher learning support**

- France, India, U.S.
- Basic, advanced Linux training
- Hands-on projects assistance
- Introduction to expertise during local facility tours



#### **Board member**

- Easing Linux development challenges
- Creating tools to remove complexity
- Speeding project development

### Sponsoring open source community development boards and supporting related community projects



Media & Storage App Development (OMAP-L138 processor)



General Application Development (OMAP3530 processor)



Video App Development (DM355 & DM355 processors)



## **Announcing...PandaBoard!**



#### Introducing the world's first open, OMAP™ 4 processor-based mobile software development platform

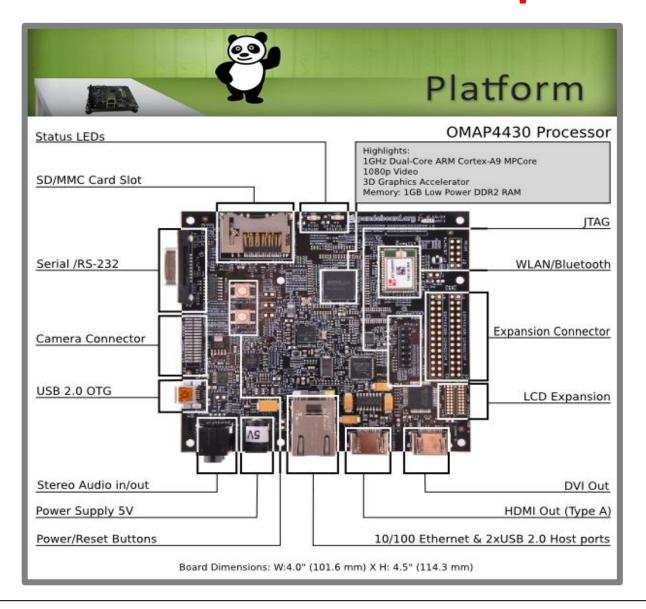
- Dual-core performance, SMP support, open source foundation, community-driven support
- Ideal for development and enhancement of mobile platforms and products
- First-time access to ARM® Cortex™-A9 processors on an open development board
- Low-cost access to OMAP 4 processor's low-power, rich multimedia capabilities
- Out-of-the-box 1080p, WLAN, Bluetooth® technology features and more!

Project Name	Date Added▼
Wireless sniffer Application on PANDA using wl1271	1 day 1 hour ago
Gentoo Linux support	3 days 17 hours ago
MeeGo on PandaBoard	3 days 17 hours ago
GeeXboX	3 days 19 hours ago
OpenBricks	3 days 19 hours ago
Pandroid	4 weeks 3 days ago
Ubuntu on PandaBoard	4 weeks 3 days ago



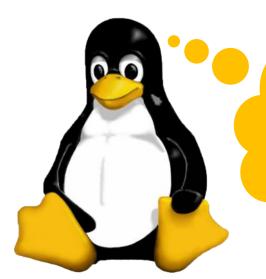


## What makes PandaBoard unique





## TI: Enabling the Linux future, today



Linux-based designs are starting to usher in natural user interfaces!

#### **Multi-display support**



#### **Touchless gesturing**





Stereoscopic 3D





**Interactive projection** 







#### Wrap up, call to action: Remain pragmatic

# All the pieces are in place for you to bring Linux-based innovations to market faster!



- There are infinite possibilities on the open Linux road ahead
- TI can help you achieve success with Linux-based designs
- PandaBoard is available today as another example of our support



Together, we bridge the worlds of innovation and openness!



## Thank you for joining me!



