MeeGo OS fading fast? Intel says it's 'still committed'

An Asia-based report surfaced today that claims Intel will temporarily halt development of its MeeGo operating system for tablets and smartphones due to lack of interest. Intel, however, says it's still committed.

The DigiTimes report claimed that Intel plans to “temporarily discontinue development of its MeeGo OS due to a lack of enthusiasm for the platform from handset and tablet PC vendors.”

MeeGo hasn't been ignored completely, however. It is also an operating system for the so-called embedded market, such as in-car devices and industrial equipment, where it is doing relatively well, according to Intel. So, MeeGo may be sticking around but don’t expect to pick up a consumer device at your local electronics retailer running the software.
Automotive: next hot mobile platform for MeeGo

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Outline

• Automotive software systems: IVI

• The MeeGo IVI project

• (lack of) hardware support for IVI

• nobdy and ExoPC demos
What is “in-vehicle infotainment”?

What “infotainment” calls to mind

What IVI could be
Ad hoc networking saves energy

Collision avoidance is key!
Mobile sensor platforms

![Diagram of mobile sensor platforms](image)

About 30 electric/electronic systems and more than 100 sensors

![Diagram of car functions and sensors](image)

Figure 1: Car functions and the respective sensors (source: based on DaimlerChrysler)
Mobile sensor data collection coverage

Sensor data fusion: way beyond real-time traffic!
Inserting smarts into big dumb docking stations

Cars can tether and sync rural businesses and homes?
Challenges 1: security

Backseat kids changing nav system's destination... mechanic at shop installs malware.
Challenges 2: safety

Driver must receive alarms but not modify many parameters.

Prevent malfunctioning systems from interfering with driving.
Challenges 3: HW needs

CAN bus, MOST bus, wheel rotation sensors, oil level . .

Not just RT audio, but RT video too!
Maybe what we want is Android . . .

. . . from the Open *Handset* Alliance?
How about MeeGo?

MeeGo = lightweight GNU/Linux with a Qt face.
Why consider MeeGo?

Closer to traditional GNU/Linux distro than Android.

Courtesy Nathan P. Willis, http://tinyurl.com/3m4loer
Many automotive players participating, few public announcements.
MeeGo IVI 1.2 Home Screen

Intended to be reskinned, not as a shipping product.
MeeGo IVI Audio Architecture

Courtesy Laci Jalics, Delphi.
What IVI reference hardware should devs use?

- Despite ARM world domination, Atom still has a place in IVI.
- Atom boards with CAN bus and GPS are very expensive.
- Nice ARM boards (e.g. BeagleBoard) far cheaper.
- Multiple display outputs preferable for IVI.
- Touch and/or gesture interface likely.
Tripzero: How do I test this in my car?

- ELM compatible scantool
- Any tablet/smartphone/laptop that runs meego

http://sf2011.meego.com/program/sessions/vehicle-communications-meego
Tripzero: Handset/Tablet + meego ivi

In the near future...

http://sf2011.meego.com/program/sessions/vehicle-communications-meego
Getting IVI & nobdy working on ExoPC and Pandaboard

- Intel gave away heaps of Lenovo netbooks and ExoPC slates.
  - NO subsequent software support.
- Running IVI on slate requires a mash-up of “Tablet Preview” and IVI Uxes.
- MeeGo 1.2 repositories support EMGD graphics only, while ExoPC has i915.
  - “zypper update” auto-overwrites drivers and X11 SO libraries.
- ExoPC camera and HDMI out are not working even with Windows pre-install.
- Support from nobdy's tripzero is excellent!
- Stopped work on Pandaboard with OMAP4430 processor (ARMv7) because of ABI break in MeeGo 1.2 and subsequent lack of HW accelerated graphics.
MeeGo Hardware Adaptation Process

Update from wrong repo

Hand-craft extlinux.conf

Use installer defaults

Maybe not that kernel

Multi-hour “zypper up”
IVI is the part of MeeGo with the most traction.

Finding appropriate hardware to test and develop on remains a problem.

Many companies are participating, some local to Bay Area.

Opportunities at all levels: HW, accessories, embedded, platform, apps, entrepreneurs and big companies
Resources

- IVI wiki: http://wiki.meego.com/In-vehicle
- Official site: http://meego.com/downloads/releases/1.2/meego-v1.2-in-vehicle-infotainment-ivi
- Mailing list archive: http://lists.meego.com/pipermail/meego-ivi
- Mp3car.com
- #linuxice and #meego-ivi IRC on freenode.net
- Nobdy: wiki.openice.org/index.php?title=Nobdy&oldid=4637 (current version is spam)
- My notes and instructions
  - on ExoPC: http://wiki.meego.com/MeeGo_IVI_on_ExoPC
  - on Pandaboard: http://wiki.meego.com/Hardware-accelerated_graphics_on_Pandaboard_using_MeeGo