

Intel Embraces Linux for Its Mobile Internet Devices

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Intel's embrace of Linux for its Internet-centric consumer ultra mobile devices will extend its ecosystem of developers and content providers. This move may also signal a shift in the battle over Web content and delivery.

Event

On 18 April 2007, at the Spring Intel Developer Forum in Beijing, Intel announced its intent to pursue Linux as an operating system (OS) alternative for mobile Internet devices (MIDs) and to create a strong Linux ecosystem. China's Red Flag and Canonical, the supplier of Ubuntu Linux, were named as the first Linux OS vendors.

Analysis

The Linux announcement accompanied Intel's introduction of the Ultra Mobile Platform, the silicon to run its ultra mobile devices (UMDs): the ultra mobile PC (UMPC) and the MID. Linux support will be available for MIDs with the next generation of the Ultra Mobile Platform, expected in 2008 and code-named "Menlow." MIDs, with 4- to 5-inch screens, will be consumer-oriented, Internet-centric devices used for "staying in touch," entertainment, information and location-based services. Connectivity to optimize the Web experience will be critical to their success. Expect multiple radios, including Wi-Fi, wireless WAN, Bluetooth and GPS, with WiMax added in the future. Using the Linux OS will enable these devices to:

- Lower costs
- Reduce the software footprint
- Reduce boot and resume times
- Improve performance
- Extend battery life

Linux is also important because the ecosystem that will potentially develop around this OS, as well as the applications that will run on it, are both critical to the success of the device. Although the consumer is unlikely to care what OS is running on the MID, the device can't succeed without attracting a development community to create a robust platform at an affordable price point.

Intel is already an active member of the Linux community, employing hundreds Linux programmers as well as several high-level Linux architects for its server and virtualization development efforts. Even the Spring Intel Developer Forum schedule included a large number of both Linux and "ultra mobile sessions," including one titled "Designing for Linux-Based Mobile Internet Devices."

By encouraging a strong Linux ecosystem for MIDs, Intel moves the personal device argument away from Windows and toward Web technology, and the focus of the discussion away from the OS platform and toward content. As a result, recruiting strong content and service providers will be a critical success factor for the ecosystem, opening it up to new, targeted development.

At the same time, this move away from an OS/platform focus could lead the way to a new round of industry battles around Web content and service delivery. We can imagine a Nokia/Samsung/Intel battle over Linux minitables optimized for the Web (similar to Nokia's N800 Linux tablet). Or, a small MID cellular-enabled Linux minitab with an innovative user interface might compete against Apple and the iPhone.

UMDs in general and MIDs especially will be consumer-oriented, although a small segment is likely to be targeted at vertical applications.

RECOMMENDATIONS

- **Enterprise users:** Consider the current generation of ultra mobile Linux devices as proofs-of-concept and indications of the more mature devices that will appear in 2008 and beyond as Intel introduces more highly optimized UMD processors and chipsets. Until then, it is worth testing some of the current designs for vertical, Linux-based applications.
- **IT organizations:** Recognize that, although MIDs will be mostly consumer-oriented, many employees will buy these devices to access enterprise Web-based applications. Consumer technology is likely, once again, to enter through a "back door."

RECOMMENDED READING

- "UMPC Has Promise but Is Far From Mature" — The UMPC concept has merit but isn't likely to succeed without a few key changes, including a lower price and longer battery life. **By Leslie Fiering, Van Baker and Brian Gammage**
- "Intel Targets Two Platforms for New Devices" — Intel will develop two different platforms in the ultra mobile device category: the ultra mobile PC and a new platform called MIDs. **By Van Baker, Leslie Fiering and Stephen Kleynhans**

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