

Mobile Technika Meets Growing Demand for Wi-Fi IP Services

MobbyTalk and MobbyTalk253 Phones Built on Wind River's VxWorks

Mobile Technika develops products to meet the needs of the Internet Protocol (IP) communications marketplace. For example, it offers the xCube IP communications server, MobbyTouch Softphone, and MobbyTalk Wi-Fi IP phone. The company also provides fixed mobile convergence (FMC) services for the IP communications marketplace.

Mobile Technika's MobbyTalk Wi-Fi IP phone offers businesses an alternative to the internal Personal Handy-phone System (PHS), enabling fixed IP phones to switch to wireless communications. This phone uses the open Session Initiation Protocol (SIP), which is the standard protocol for IP phones, and also supports the IEEE802.11b standard. The company released its next-generation product, the MobbyTalk253, with significant enhancements.

"We developed the wireless IP phone to increase wireless local area network (LAN) usage in light of the increasing popularity of IP phone services and the expanding possibilities that Voice over Internet Protocol (VoIP) represents," explains Tsuneo Tanaike, Chief Technology Officer, Core Technology Center, Mobile Technika.

MobbyTalk phones are used with Mobile Technika's xCube, an application server with router functions/VoIP gateway/Private Branch eXchange (PBX) functions all integrated within a single unit. In addition to xCube, Mobile Technika is developing a new service to support the customization of the next-generation MobbyTalk253 to IP PBX (SIP servers).



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— Takashi Matsukura, Development Sales Department Manager, Mobile Technika

Company Profile: Mobile Technika, Inc.

- Offers products and services for the IP communications marketplace
- Headquarters in Tokyo

Industries

- IP communications and phone handsets

Solution

- Wind River's VxWorks

Results

- Fast boot times
- High sound quality
- Improved handover performance (the ability to hand off a call from one IP access point to another without losing the call)
- Enhanced power management

Wind River Delivers Enhanced Boot Time, Voice Quality, Handover Performance

Mobile Technika adopted Wind River VxWorks for both MobbyTalk and MobbyTalk253. Wind River's VxWorks operating system (OS) enabled the company to achieve the following strengths for its wireless IP phones:

- Fast boot times
- High sound quality
- Improved handover performance
- Enhanced power management

"We considered operating systems other than VxWorks; however, problems persisted in the areas of being unable to decrease boot times, and to overcoming the barriers to improvements in sound quality due to sound packet delays, etc.," says Tanaike-san. "In light of this, I'm confident that we made the right choice in adopting VxWorks."

"VxWorks offers a long history of reliability that no other OS affords," adds Takashi Matsukura, Development Sales Department Manager, Mobile Technika. "It offers good performance in the low-layer sections for software and hardware for power management, for example, and provides good balance between stability and performance. Under current conditions, we require a standby time that exceeds 100 hours, and thanks to good power management, we've been able to extend this to 180 hours with the next generation."

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MobbyTalk253 incorporates a Freescale Semiconductor i.MX21 processor and achieves high sound quality through the use of software DSP through its adoption of Global IP Solution's VoiceEngine™ Embedded. Matsukura-san points out that this is partly due to the agility of VxWorks.

Glossary of Terms

Soft phone: This software allows you to make phone calls over the Internet using a standard PC (e.g., Skype).

Wi-Fi IP phone: This phone routes calls through the Internet using Internet Protocol (IP) wirelessly over a Wi-Fi connection rather than cellular service.

Personal Handy-phone System (PHS): This digital wireless technology was developed in Japan and deployed by NTT DoCoMo (and other Japanese operators). PHS offers two-way communications, data services, and Internet access.

IP communications server: Relative to the VoIP environment, this is the back-end server that processes Wi-Fi calls.

VxWorks' compression mode allowed Mobile Technika to expand the program from flash memory to synchronous dynamic random access memory (SDRAM), easily achieving the less-than-30-second target time for booting up. In addition, VxWorks' capabilities to fine tune task priorities enabled further increases in handover features, such as lowering power consumption.

"These VxWorks' features really make things easier," Matsukura says. He also gives VxWorks high marks for its development environment.

"VxWorks provides a very friendly setting so there are no problems with operability," Matsukura says. "The compiler also has a high level of compatibility. Thanks to its 100 percent compatibility rate, I've been able to make full use of legacy assets without any modifications."

Learn More



For additional information about the products mentioned in this case study, visit:

www.mobiletechnika.jp/
www.windriver.com