

Open Kernel Labs updates embedded hypervisor for full range of mobile phones

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Sector: Mobile Software / Storage & Systems

Event summary

- Open Kernel Labs (OK Labs) released its latest embedded hypervisor, OKL4 3.0, and a new compatible OKL4 Nano, providing a single virtualization technology for a fuller range of mobile devices.
- The new releases accommodate handset manufacturers that typically have product lines inclusive of low-end devices for emerging markets, feature phones and enterprise smartphones as well as cutting-edge multimedia smartphones.
- The OK Labs software allows for creation of applications that can be used with different processors and operating systems, including Linux and Symbian.

The 451 take

By enabling handset makers to use its virtualization layer across their products, OK Labs provides a compelling approach in its OKL4 software. The embedded hypervisor, which sits alongside the OS in feature and smartphones and actually serves as the OS in low-end phones with OKL4 Nano, also gets an update at a time when many hardware and software players are looking to Linux and Symbian, which is being open sourced, to provide a range of mobile devices. OK Labs, which recently reached 1,000 members in its embedded developer community, still faces formidable challengers, but seems to be delivering the right technology at the right time.

Details

Open Kernel Labs has updated its embedded hypervisor for mobile devices in OKL4 3.0 and a new compatible offering, OKL4 Nano, for low-end devices. The company facilitates creation of devices and applications for a single virtualization layer that works with different mobile processors and operating systems. This includes devices from smartphones running two cores, high-level operating systems and rich applications to low-end phones for emerging markets. OK Labs, which says its software runs on nearly 250 million phones in the market, seeks to address the fragmentation and multiplicity in the mobile space with its embedded hypervisor.

The new release builds on OK Labs' Secure Hyper Cell technology, announced in April, which uniquely addresses virtual machines, applications and drivers to separate applications from the OS

and reduce the trusted computing base for better security. Secure Hyper Cell also allows native OKL4 applications to be run and reusable on multiple operating systems. In its own recent market study, OK Labs identified the top issues for customers (mostly semiconductor and handset vendors) as: protection of legacy code, secure design, application environment independence and hardware platform independence. OKL4 3.0 is freely available under the BSD open source license and under OK Labs' commercial license that does not require code availability.

Competitive landscape

In response to the fast pace of the mobile industry and, more recently, disruption from **Apple's** iPhone, many hardware, software and carrier players are turning to open source, including Linux and **Symbian** (which is being open sourced by **Nokia** following its \$410m acquisition of the full Symbian assets in August). Despite this concentration of vendors, assets and strategies, mobile Linux is still marked by fragmentation and lack of a standard OS for hardware and application development. This is where OK Labs sees opportunity in providing a single software layer that will work with different variables.

Others offering embedded hypervisors include **Trango Systems**, which, similarly to OK Labs, recently increased its support for Symbian. Another similar player is **VirtualLogix**, which is OS agnostic but is also a member of the LiMO mobile Linux consortium and pitches its real-time virtualization software as a bridge to Linux. Other real-time OS competition comes from **LynuxWorks**, **Microsoft Windows CE**, **QNX Software Systems** and **Wind River**. OK Labs' SDK and other tools also highlight the current battle for mobile and embedded developers, who have new choices such as Apple with iPhone and **Google** with Android, in addition to the traditional device, hardware and software players.

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