# ARM, Freescale, IBM, Samsung, ST-Ericsson and Texas Instruments form new company to speed the rollout of Linux-based devices

Linaro unites industry leaders to foster innovation in the Linux® community through a common foundation of tools and software

## **News highlights**

- ARM, Freescale, IBM, Samsung, ST-Ericsson and Texas Instruments have created the not-for-profit company, Linaro, committed to providing new resources and industry alignment for open source software developers using Linux on the world's most sophisticated semiconductor System-on-Chips (SoCs).
- Linaro will invest resources in open source projects that can then be used by Linuxbased distributions such as Android, LiMo, MeeGo, Ubuntu and webOS.
- Linaro will provide a stable and optimized base for distributions and developers by creating new releases of optimized tools, kernel and middleware software validated for a wide range of SoCs, every six months.
- Linaro's base of software and tools will be applicable to a wide range of markets, helping reduce time-to-market for products such as smart phones, tablets, digital televisions, automotive entertainment and enterprise equipment.
- Linaro's first software and tools release is due out in November 2010, and will
  provide optimizations for the latest range of ARM® Cortex<sup>TM</sup>-A family of processors.

**TAIPEI, TAIWAN - June 3 2010** –ARM, Freescale Semiconductor, IBM, Samsung, ST-Ericsson and Texas Instruments Incorporated (TI), today announced the formation of Linaro, a not-for-profit open source software engineering company dedicated to enhancing open source innovation for the next wave of always-connected, always-on computing. Linaro's work will help developers and manufacturers provide consumers with more choice, more responsive devices and more diverse applications on Linux-based systems.

Linaro aligns the expertise of industry-leading electronics companies to accelerate innovation among Linux developers on the most advanced semiconductor SoCs (System-on-Chip). The current wave of "always-connected, always-on" devices requires complex SoCs to achieve the performance and low power consumers demand. Linaro was formed to increase investment in open source, address the challenges in developing products for sophisticated consumer markets and provide the support of a broad array of semiconductor products from multiple companies. By providing the common foundations of tools and software for other distributions and stacks to build upon, Linaro enables greater operational efficiency for the electronics industry.

### Background

Traditionally, the Linux and open-source software communities focused on solving the software problems of enterprise and computing markets with a limited choice of processor platforms. The open source community is transitioning to create advanced Web-centric consumer devices using high profile open source based distributions and a wide range of high-performance, low-power ARM®-based SoCs. Linaro will make it easier and quicker to develop advanced products with these high profile distributions by creating software commonality across semiconductor SoCs, from multiple companies.

#### **Consumer Benefits**

In addition to providing a focal point for open source software developers, consumers will benefit by the formation of Linaro. Linaro's outputs will accelerate the abundance of new consumer products that use Linux-based distributions such as Android, LiMo, MeeGo, Ubuntu and webOS in conjunction with advanced semiconductor SoCs to provide the new features consumers desire at the lowest possible power consumption.

"The dramatic growth of open source software development can now be seen in internet-based, always-connected mobile and consumer products," said Tom Lantzsch, executive officer, Linaro. "Linaro will help accelerate this trend further by increasing investment on key open source projects and providing industry alignment with the community to deliver the best Linux-based products for the benefit of the consumer."

#### **Linaro Software and Tools**

Linaro will work with the growing number of Linux distributions to create regular releases of optimized tools and foundation software that can be used widely by the industry, increasing compatibility across semiconductors from multiple suppliers. As a result, Linaro's resources and open source solutions will allow device manufacturers to speed up development time, improve performance and reduce engineering time spent on non-differentiating, low-level software. Linux distributions, open source and proprietary software projects will benefit from Linaro's investment, with more stable code becoming widely available as a common base for innovation.

To further its mission, Linaro aims to unite the open source engineering resources within its member firms with the broad open source community. Linaro engineers, leveraging their extensive embedded knowledge, will contribute to a wide range of open source projects covering areas such as tools, kernel, graphics and boot code. Linaro intends to work in partnership with the Linux Foundation to align on core operating principles.

The company's first release is planned for November 2010 and will provide performance optimizations for SoCs based on the ARM Cortex™-A processor family.

In addition to ARM and IBM, four of the world's leading application processor companies, Freescale, Samsung, ST-Ericsson and Texas Instruments, will align open source engineering efforts within Linaro.

Linaro is a growing organization with additional partners expected to join, thus expanding the range of expertise that is brought to the open source community. Companies interested in joining are invited to discuss membership with Linaro executives. For more information on the company and future access to software and tools, visit <a href="www.linaro.org">www.linaro.org</a>

## **Founding Member quotes**

"ARM and our partners have a long history of working with, and supporting, open source software development for complex SoCs based on the ARM architecture," said Warren East, ARM CEO. "As a founding member of Linaro, we are working together with the broader open source community to accelerate innovation for the next generation of computing, focusing on delivering a rich connected experience across the diversity of devices in our daily lives."

"Freescale is taking a leadership position in shaping the future of consumer electronics by enabling entirely new categories of smart mobile devices based on processors," said Lisa Su, senior vice president and general manager of Freescale's Networking and Multimedia Group. "Linaro represents an important step forward in developing the ecosystem for these smart mobile devices through dramatically speeding and simplifying software development cycles and leveraging the power and strength of the open source community."

"IBM believes that leadership with Linux solutions begins with effective collaboration in the community, and IBM's ten year history of working with the Linux community has resulted in a strong, mutually beneficial relationship," said Daniel Frye, vice president, open systems development, IBM. "IBM's ongoing collaboration has contributed to the widespread adoption of Linux throughout the data center. We are strong proponents of working with partners such as ARM to further our commitment, ensuring Embedded Linux is the leading platform for innovation in the mobile and consumer electronics markets."

"Samsung is an industry leader in high performance, low power application processors for mobile handset and other consumer devices. We fully appreciate the significance of having an optimized Linux software foundation and tools for our ARM CPU core base products, to support our customers' needs with high quality solutions," said Yiwan Wong, vice president, System LSI marketing, Samsung Electronics. "We are pleased to join Linaro as a foundation member and work together with ARM to serve the interests of our customers."

"Open source has become an engine for innovation in the smart phone and consumer electronics market," said Teppo Hemia, vice president, 3G Multimedia Platforms Business Unit of ST-Ericsson." Being an active contributor in the open source community, we are excited to be one of the founding members of Linaro and expect our combined efforts to accelerate the development of Linux-based devices."

"Linaro is intently focused on delivering critical open source components to enable developers building on ARM-based processors. An important element of that delivery is a more complete, higher quality development toolset that increases performance. In our leadership role, TI will support Linaro's efforts by leveraging our open source expertise—evidenced by our participation in Linux kernel enhancement submissions and our support of popular industry development boards," said Remi El-Ouazzane, vice president and general manager, OMAP Platform Business Unit, TI.

# **Industry quotes**

"The existence of Linaro will significantly simplify the process of making Linux-based consumer devices available to market," said Jane Silber, CEO of Canonical. "By standardising many of the core software components, companies can focus on creating great user experiences on embedded devices through to smart phones. Canonical is delighted to participate in what will be a significant driver of the success of Linux on ARM, in the consumer electronics market."

"We welcome the launch of Linaro as a new industry organisation with similar values and a complementary focus to LiMo Foundation," said Morgan Gillis, executive director of LiMo Foundation. "We look forward to working collaboratively with Linaro to deliver greater efficiency within the mobile Linux value system."

"The Linux Foundation is happy to see ARM and Linaro increase their investment in Linux," said Jim Zemlin, executive director of The Linux Foundation. "We are supportive of any investment that contributes to the mainline kernel and the many upstream open source projects that make up Linux based operating systems today."

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#### **About Linaro**

Linaro™ is a Not-For-Profit (NFP) software engineering company that works with the open source community to make it easier and faster to develop open source based devices. Linaro has the aim of investing new resources and aligning efforts from the industry to continuously improve and optimize open source software and tools on the ARM architecture with the goal of accelerating industry innovation.

www.linaro.org

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