



Mass market phones open to Linux

Open-Plug unveils Linux environment for mass market phones based on its FlexibleWare™ technology

Sophia Antipolis, France, February 16th, 2004 – Open-Plug an innovative provider of software frameworks for the mobile phone industry has opened up mass market mobile phone development to the Linux community. For the first time Open-Plug will demonstrate a Linux framework based on its FlexibleWare™ technology at the 3GSM congress.

The functionalities demonstrated at 3GSM include a SDK, allowing development and simulation of Linux-based applications in a PC environment, an embedded framework, allowing automatic integration and validation on the mobile terminal and a prototype of its update framework allowing users to download/upgrade the Linux-based software components on the mobile terminals. The initial product offering will be demonstrated on Texas Instruments' leading and widely deployed Calypso chipset platform.

According to Andreas Malzach, V.P sales and marketing, “Open-Plug’s FlexibleWare™ technology in combination with its Linux Plug, opens mass market chipset platforms to the world’s large Linux developer community for the first time. The offering goes far beyond the common Linux API exposure; most importantly it includes a component based framework facilitating rapid integration into/validation of the mobile-phone platform. FlexibleWare™ also provides great SDK support for the developer community allowing easy application development and simulation for mobile phones and supports remote download onto the phone of critical maintenance and deployment of applications.

Linux-FlexibleWare™ Offering

The FlexibleWare™ suite from Open-Plug is a software development platform, consisting of the FlexibleWare™ tools and the FlexibleWare™ framework (a small engine running on the phone). The tool suite includes a SDK for partner networks, which supports proprietary API's as well as Open APIs (Linux/Java) targeted at software developers, chipset and handset makers, and network operators.

The tools suite turns any type of software at object code level into isolated and optimised executable components, which run on top of a small engine integrated on a standard phone’s processor. This not only makes configuration of new handset designs fast, easy and cost-effective, but also allows upgrades to be distributed to groups or individual users in the field without compromising overall software stability.

At the heart of the FlexibleWare™ framework is the OP-Engine, which controls communications and access rights of the software components, created and integrated with the help of the FlexibleWare™ tool suite. This makes inter-compatibility between software components easier to control and allows software components to be stored in a library and easily deployed on a variety of handsets. Typically, the FlexibleWare™ Framework occupies less than 40k bytes of code and has no measurable RAM or MIPS overhead. A complementary set of modules are also available, such as an accelerator, which dynamically uses fast



memory resources for critical components, a multi-processor module, which allows transparent distribution of component based systems on multi-processors architectures, as well as a FireWall module, which allows device makers/operators to set access rights to any component of the system.

Visitors to 3GSM will be able to view the FlexibleWare™ suite based on Texas Instruments' Calypso chipset platform on the TI booth. The product will be deployed shortly afterwards to a selected number of customers and partners. During the second quarter of 2004 the suite will become generally available.

Development platform

For software developers, the FlexibleWare™ SDK enables them to generate components from scratch or to automatically convert existing code into isolated executable software components. These can be validated and optimised at a component level in the SDK's simulation environment supporting open Linux and Java APIs, as well as the proprietary APIs of major chipset and handset makers.

Handset or chipset developers can drag and drop new phone features from a library of available software components, using the FlexibleWare™ Console. A range of complementary features that allow easy system integration, validation and optimisation are made available. The FlexibleWare™ Framework can easily coexist with legacy code, standard Real Time OS, and does not require any FlexibleWare™ dependent modifications to any legacy code.

The OP-Update environment allows individual software components to be updated partially or entirely, once the phone is in the field. This can be done over the air, by wire or by add-on modules, using SMS, HTTP or any other available transportation layer to the mobile phone. OP-Update provides operators with a low-investment way to update individual or group phone firmware with complete security.

About Open-Plug:

Open-Plug was founded in the summer of 2002 by a team of developers with a strong background in embedded mobile software development, and familiar with the quickly expanding challenges associated with it. The company's aim is to provide to the mobile phone industry a tool framework, providing a unique software design flow, which seamlessly and efficiently supports the value chain of embedded software development for mass market mobile terminals.

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