Intrinsyc tapped for VoIP phone BSP design

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Sophia Systems and Intrinsyc Software have announced a new systems integration relationship. Under its terms, Intrinsyc will develop a Windows Mobile-based board-support package (BSP) for Sophia's Sandgate 3-P VoIP phone development platform, according to the companies.

Based on a Marvell PXA310 ("Monahans-LV") processor clocked at 624MHz, the Sandgate 3-P design is intended to run Windows CE 6.0, Windows Mobile 6, and Linux. It includes 128 MB of RAM and 256 MB of flash, expandable via a MicroSD slot.

The design includes a 2.2-inch, 64K-color QVGA (640x480) LCD screen and a 1.3-megapixel digital camera. In addition to 802.11b/g WiFi and Bluetooth, the device also supports "W-SIM" cards.

W-SIMs have the same fingernail-sized form-factor as the SIMs (subscriber identity modules) used in GSM/GPRS phones. However, they integrate an entire radio baseband subsystem, including antenna. The idea is to enable designers to inexpensively add cellular radio capabilities to all kinds of low-cost consumer electronics devices -- apparently including IP phones. Currently, W-SIMS appear to be available only for the somewhat-dated "Personal Handyphone" operated by Japan's Willcom, however.

Sophia characterizes itself as "one of the world's most substantial embedded solution providers." It claims to have designed devices marketed under some of the biggest brands in the electronics industry, and announced the Nani, its own-brand combination phone/portable media player (PMP) earlier this year.

Sandgate 3-P
(Click to enlarge)

Sophia says it supplies its hardware reference designs with not only a BSP, but also with tools and optional third-party offerings, such as OS porting services, middleware, drivers, and driver development services. It claims this approach makes its designs "much closer to a final product."

Sophia has said the Sandgate 3-P design will enable manufacturers to simultaneously develop hardware and software. The company offers a USB

bus-powered "EJ-Debug" JTAG emulator and Watchpoint debugger software. The combo is said to support "source level debugging, branch trace reconstruction, and access to specific functions of the PXA built-in register sets." Other features include direct downloads to flash memory, and support for "various OS development environments," specifically including Microsoft Visual Studio and the Windows CE Platform Builder tool.

Tasuku Kashihira, chairman of the board for Sophia Systems, said "Intrinsyc has deep expertise in Windows Mobile and Embedded CE software technology, backed by many years of experience. This latest agreement with Intrinsyc will allow our customers to leverage this software development know-how to speed the introduction of new handheld devices."

Intrinsyc will demonstrate an alpha version of the Sandgate 3-P's Windows Mobile BSP at this week's Embedded Technology Conference and Exhibition (ET2007) in Yokohama, the companies said in their statement. In addition to producing the BSP, Intrinsyc will also perform software engineering services for select Sandgate 3-P development platform customers.

In addition to such services, Intrinsyc is also known for Soleus, a Windows CE-based software stack targeting feature phones that may lack the resources to run Windows Mobile. However, Sophia and Intrinsyc provided no indications as to whether Soleus may have a role to play on the Sandgate 3-P VoIP phone.