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GSM Association Calls for NFC-Enabled Cell Phones

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The mobile service provider association has called for Near Field Communications functionality to be built into commercially available mobile handsets in mid-2009, but the plan is unlikely to become a reality unless service providers begin placing orders.

By Claire Swedberg

Nov 24, 2008—The GSM Association (GSMA), an organization composed of licensed GSM mobile network operators and the technology vendors that serve them, has announced that it has asked manufacturers of cellular phones to include, by the middle of 2009, a Near Field Communications (NFC) chip with a single-wire protocol and a SIM chip in all of the handsets they produce.

The GSMA announcement, issued by the global trade group at its Nov. 18 meeting in Macau, China, is intended to spur the global use of NFC phones. This step follows on the heels of four years of GSMA-led NFC pilots, many launched under the name of Pay-Buy-Mobile, carried out at various sites worldwide (see Cell Phone Service Providers Start Global NFC Initiative).

However, says Jonathan Collins, principal RFID and contactless analyst at ABI Research, that call is not a mandate and may not be realistic without specific orders for such handsets by Mobile Network Operators (MNOs).

"I think the call from the GSMA is interesting, and an indication of mobile network operator support for the potential of NFC," Collins says, but adds that it will not impact vendors as would actual orders from MNOs. "Most handset vendors have looked at NFC, and have designs to enable their new handsets to support the technology, but production awaits solid orders from MNOs. So far, those orders have not been placed."

NFC—a short-range high-frequency (13.56 MHz) RFID technology—enables the exchange of data between two devices over a distance of a few centimeters. It can be employed to make contactless payments with mobile phones using an NFC chip that transmits an ID number to RFID interrogators at point-of-sale locations in retail, or at train stations. NFC technology in mobile phone handsets can also be used to open locked doors, or to download a URL or other information from a separate NFC device, such as an NFC tag embedded in a smart movie poster.

Most NFC phones currently available are GSM models that utilize the SWP standard, which specifies the interface between the Universal Integrated Circuit Card (UICC), or SIM card, and the NFC chip embedded within the handset. The SIM card, which can be removed from the phone, contains data managed by the phone service provider, such as the user's payment information. The European Telecommunications Standards Institute (ETSI) has endorsed the SWP standard.

Mobile phone vendors that have provided SWP NFC phones to GSMA members include Sony Ericsson, LG Electronics, Motorola, Nokia and Samsung. The vendors contacted for this story have declined to comment on whether they could meet the GSMA's call by mid-2009, though a Sony Ericsson

spokesperson (who has asked to remain unnamed) says, "Sony Ericsson has a wealth of experience in NFC technology through our initiatives in the Japanese market, and we are investigating how to best bring the technology to other markets."

The GSMA's Pay-Buy-Mobile pilots were designed to test NFC hardware and data-collection technology, and to determine consumer interest. The results of those pilots indicate a vast majority of consumers would like to use the technology. Thus far, however, it is not yet installed in phones on a large-enough scale for any permanent deployments. The GSMA wants to change that by specifying the type of NFC technology to be installed in the phones, and by setting a deadline to encourage sales of NFC handsets.

The CDMA Development Group—a consortium of equipment vendors and operators of cell phone service that use CDMA technology, instead of GSM—has not offered any recommendations regarding NFC technology, and has not participated in the Pay-Buy-Mobile pilots. However, CDMA service providers have undertaken multiple NFC pilots, a spokesperson for the consortium notes. CDMA is the protocol in use by many North American mobile service providers, including Verizon and Sprint Nextel, while GSM is more prominent in Europe and Asia. CDMA phones containing NFC chips do not utilize SWP, Collins says, though CDMA vendors could install SWP technology if they so choose.

GSMA's announcement is "sending a very clear message," says Jean-Philippe Betoin, Inside Contactless' VP of strategy and device marketing. That message, he states, is "We want single-wire protocol. People are happy with this technology, and we want vendors to execute it." Inside Contactless, which is not a member of either GSMA or the CDMA Development Group, provides NFC chips to mobile phone manufacturers.

"We are, so far, the only NFC chip vendor with a qualified and working SWP interface to the SIM," Betoin says. "So that is a significant announcement for us, and we hope it will boost demand for our Microread NFC chip from handset vendors."

The call from the GSMA is good news for the NFC industry as a whole, says Peter Preuss, marketing chairman of the NFC Forum. GSMA is a member of the NFC Forum, an organization whose members and board of directors also include MasterCard Worldwide, Microsoft, Nokia, NTT Docomo, NXP Semiconductors, Samsung, Sony and Visa, and whose mission is to promote NFC technology in all of its forms, including its use with mobile phones.

"The NFC Forum appreciates this development," Preuss says, "We're pretty happy that our members are taking this action." Infrastructure is now in place to enable the use of such NFC phones, he adds, with about 300,000 NFC readers at point-of-sale locations already deployed across the United States byViVOt , and NFC-enabled door locks across Europe provided by VingCard.

According to Betoin, results from the Pay-Buy-Mobile pilots have proven that consumers are more enthusiastic about the NFC capabilities in mobile phones than they are about previous technologies,

such as Bluetooth and camera phones. "People really found this technology convenient," he says. "We had tremendous feedback."

Until now, the production of NFC-enabled phones has been stalled, in what Betoin calls a "chicken and egg" scenario. "Vendors were waiting for a clear signal from the telecommunication companies," he explains, "and the telcos were waiting for a viable answer from prototypes [that proved the technology worked]." Now, he adds, with the pilots completed and data coming in, that clear signal from the telecommunications firms has arrived.

The Pay-Buy-Mobile trials took place in eight countries: Australia, Canada, France, Japan, Korea, Malaysia, Taiwan, Turkey and the United States, while further pilots are currently planned across 14 additional countries. One recent example is Philippine mobile network operator Smart Communications (SMART), which has begun a Pay-Buy-Mobile trial project using Nokia NFC-enabled mobile phones, MasterCard's contactless payment platform and Giesecke & Devrient (G&D) SIM cards.

Despite the pilots and GSMA's latest call for NFC phones from vendors, Collins says, it will ultimately be the mobile network operators that influence the phone industry to commercialize NFC technology by purchasing the handsets. "When MNOs are ready to start ordering the handsets, there will still be a lag to finalize designs and customer requirements," he states. "That would mean, even if orders were placed today, a mid-2009 deadline would be difficult."

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