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2011: Launching Year for NFC Mobile

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After multiple years of industry preparation and field trials, 2011 will see Near Field Communication (NFC) mobile enter markets where contactless payment and transit solutions are most popular.

Drivers for launching NFC mobile in 2011:

- i) Add-on NFC accessories and software for existing Smartphone models
- ii) Release of multiple new NFC Smartphone models
- iii) Growing acceptance of Contactless NFC payments in specific markets
- iv) Increased clarity of business models for ecosystem players

Add-on NFC Accessories and Software for Existing Smartphone Models

An add-on NFC accessory is an NFC device that can be easily added to numerous existing Smartphone models including Blackberry, HTC, iPhone, Nokia, Samsung, and others, turning them into NFC mobile payment devices. Today, there are many NFC accessory options being used such as uSDs, SIM add-ons, sleeves/jackets, clip-ons, and Bluetooth stickers.



Enabling a Blackberry Model with NFC uSD from Device Fidelity



Enabling iPhone Model with NFC enabled with Case & uSD from Device Fidelity

ViVOtech, a leading NFC software vendor, has integrated its mobile wallet, Over the Air (OTA) provisioning software, and coupon redemption software with NFC-enabled uSD and Case accessories from Device Fidelity for multiple Blackberry models (9000, 9630, and 9700) and for the iPhone 3G and 3Gs models.

In 2011 consumers in specific markets will be able to easily upgrade their existing Smartphone models with a branded NFC mobile wallet when they buy NFC add-on accessories with supported ViVOtech mobile software and associated bank mobile payment services. In just a few minutes, they can download their payment cards from supported bank services and start using their Smartphone handsets to make payments at any Contactless enabled merchant location and start enjoying mobile coupons and offers.

Add-on NFC accessories allow leading card issuers to offer NFC payment options to their card holders without having to wait for integrated NFC handsets or the cooperation of mobile network operators (MNO).

Release of Multiple NFC Smartphone Models

Handset vendors have finally started to get serious about incorporating NFC technology into their future Smartphone models. Nokia is taking the lead again and has recently announced their plans to release some Smartphone models with NFC in 2011. Nokia, as one of three co-inventors of NFC technology along with Philips Semiconductor (now called NXP) and Sony, was also the first to provide early NFC handset models for field trials so that NFC software vendors like ViVOtech could field test complete mobile payment and marketing solutions working with industry ecosystem players.



Blackberry Device with ViVOtech Mobile Wallet Application and Device Fidelity uSD Solution



In addition to Nokia, Sagem has also announced two new models of NFC phones: Clysso targeting seniors and the Netribe an Android-based slick phone geared towards a broader user base.

Rumors that multiple handset vendors besides Nokia and Sagem are planning to release Smartphone models in 2011 are getting stronger.

NFC software is also staged for early commercial roll out in 2011. ViVOtech has made sure that its NFC payment wallet, OTA provisioning backend servers and mobile marketing/loyalty/coupon software are available for deployments at a millions of consumers' level. ViVOtech's has single NFC infrastructure software is capable of supporting all types of NFC handsets on a service provider's network, such as add-on NFC accessory enabled handsets, new embedded NFC handsets, and new SIM-based NFC (Single Wire Protocol) handsets.

Between new NFC handsets and existing Smartphone handsets with add-on NFC accessories, there will be millions of NFC handsets in circulation by end of 2011.



Sagem's Wireless Netribe Android Handset Combines NFC, Biometrics, and Good Looks

Growing Contactless NFC Payment Acceptance in Specific Markets

Thanks to the roll out of contactless payment programs under the brand names of American Express Expresspay (US only), Discover Zip (US only), MasterCard PayPass and Visa payWave, there are close to one million contactless readers deployed across the world over last five years. All of these contactless readers are backward compatible with NFC technology and are capable of branded payment transactions from NFC handsets. ViVOtech has shipped 750,000 of these one million Contactless NFC readers to 35 countries, including the United States, Canada, Australia, UK, Turkey, Taiwan, Hong Kong, Korea, Singapore, and Poland.

These specific countries are well positioned for NFC mobile payments roll out. Especially the United States, where more than 20% of Tier-1 brand name merchant locations (over 200,000 locations) are already enabled with contactless NFC readers and are ready to enjoy NFC mobile payment acceptance. An increasing number of merchants are realizing the value of NFC-enabled mobile loyalty and marketing programs and the ability to drive increased acceptance of their preferred payments through NFC mobile wallets.

Due to stronger interests in NFC mobile, ViVOtech has started to see increased deployment of contactless NFC payments in United States. ViVOtech has also started offering integrated PCI 2.1-compliant Contactless NFC PIN pad readers like the ViVOpay 8100e with EMV contact and magnetic strip card support – driving the premium price for Contactless NFC down to less than US\$50 from \$100 per unit a year ago.



New Generation of Contactless NFC PIN Pad, ViVOpay 8100e, is Making Premium Price for Contactless NFC Feature Much Lower

Increased Clarity of Business Model is Driving NFC Mobile

Another important development leading to the launch of NFC mobile in 2011 is the recognition of an effective NFC business strategy by all major ecosystem players including leading card issuers, mobile network operators (MNOs), handset vendors, and brand name merchants.

Earlier this year in Bangaluru, India, Citi in collaboration with Vodafone, MasterCard, and Nokia utilized ViVOtech NFC software to conduct Tap & Pay, one of the largest Mobile NFC Proximity Payment trials involving over 3,000 users. Edgar, Dunn and Company, an independent consultant, reported in March 2010 that the trial revealed interesting incremental business for a card issuer using NFC mobile payments and promotions as shown below.





NFC Mobile Payment & Promotion Trial
Business Results : Drives Incremental Revenue for An Issuer

3000+ Participants Purchased NFC Phones at 200+ NFC enabled merchants in India

	Solicited Adopters	Self Adopters
Growth In Total Number of Transactions :	33%	140%
Growth in Total Purchase Value:	54%	150%
Increase in Number of Merchants Where Shopped	66%	156%

In addition to the clear business advantages for banks, both MNO's and handset vendors are recognizing that NFC handsets can be used to drive new multiple revenue opportunities by enabling merchants to drive mobile loyalty, mobile marketing and preferred payment programs. MNOs and handset vendors are also recognizing that a powerful mobile media channel can be developed through an NFC mobile infrastructure that provides a trusted channel for targeted communication to consumers on behalf of merchants, service providers and consumer product companies based on who they are, where they are, and what they are interested in. Consumers will be able to show their interest in items through interactive opt-in NFC tap technology built into their new generation of NFC handsets.

Below is an example of a consumer tapping her NFC phone on a smart poster to show her interest in receiving a coupon from a specialty store. Using VIVOtech wallet software, smart poster technology, and backend marketing campaign software, a specialty store will be able to deliver a personalized coupon based on her profile, her location and the time of day.

Merchants have started to recognize NFC mobile as a powerful media for their loyalty, merchandizing and marketing programs. Additionally, merchants have started to see the value of NFC mobile to solve the wallet share issue they have struggled with for years - plastic media used for their payment cards are only effective if consumers have them in their wallets and/or purses.

We anticipate mobile phones will become central to a consumer's shopping experience. NFC mobile will help us to find the right place to shop and the right products to buy. We will be able to simply tap our NFC phones on a shelf tag or even product tag to get more information about the product before we make a purchase. Along with the product information, there is the potential to receive an incentive if the purchase is completed within a pre-determined time frame.



Mobile phones will allow merchants to provide personalized services to consumers based on who they are and where they are. Merchants and manufacturers will be able to effectively reach out target consumers with offers and discounts through specific opt-in mobile programs. Mobile is quickly becoming the most efficient merchandizing and marketing device for at our disposal.

There is a business case for all major ecosystem players, whether they are card issuers, mobile network operators, handset vendors, or merchants.

In a year timeframe either by adding NFC technology to existing phones or with new NFC-enabled Smartphone models, NFC will start playing a major role in the lives of consumers at least in major markets where Contactless acceptance is most prevalent. The era of NFC mobile payment pilots will end and we will enter the phase of large scale commercial deployments using the experience gathered in these pilots to create innovative NFC-driven business cases based on payments, mobile loyalty, mobile merchandising, and mobile marketing.

NFC technology roll out starting in 2011 will produce major opportunities for merchants, card issuers, mobile phone operators and service providers to offer more differentiating services to their existing customers. Leading companies in this new era will be able to capitalize on their existing assets through NFC-enabled mobile infrastructure and produce new revenue streams through increased customer loyalty, additional customer base, and a new set of personalized mobile services. And the NFC mobile device will become an even more powerful tool for consumers to interact with the world around them – securely and intuitively.

