100+ Million Devices: What Do We Owe Consumers Now?

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Sony
Chairman, NFC Forum

WIMA USA
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For years we looked forward to the commercial availability of NFC devices ...
... and then ...
NFC Phones Available Now

- Acer Cloud S500
- Acer Liquid Glow
- Acer E320 Liquid Express
- BlackBerry Bold 9790
- BlackBerry Bold 9900/9930
- BlackBerry Curve 9350/60/70
- BlackBerry Curve 9380
- Cmii 1/3
- Casio DT-X8
- Casio Ruggedized IT-800 RGC 35
- Fujitsu Arrows μ F-07D
- Google Galaxy Nexus
- Google Nexus S
- HTC Droid Incredible 4GLTE
- HTC Evo 4GLTE
- HTC Incredible
- HTC One X/XL
- HTC Ruby / Amaze
- Huawei Ascend Y201
- Huawei Sonic/Turkcell T20
More NFC Phones Available Now

- Lenovo K800
- LG Optimus 3D Max/ 3D Cube
- LG Optimus 4X HD
- LG Optimus Elite
- LG Optimus L5/L7
- LG Optimus LTE/2
- LG Optimus LTE Tag
- LG Optimus Net
- LG Optimus Vu
- LG T530/ Ego
- LG Viper
- Mobiwire Cosyphone
- Motorola Droid Razr
- Motorola Razr i
- Motorola MC75A HF
- Motorola Photon Q 4G LTE
- Nokia 603
- Nokia 700
- Nokia 701
- Nokia 801T
- Nokia 808 PureView
More NFC Phones Available Now

- Nokia C7 / Astound
- Nokia N9
- Nokia Oro
- Orange San Diego
- Pantech Eluga
- Pantech Sky Vega LTE
- Pantech Sky Vega Racer
- Porsche Design P’9981
- Prada by LG 3.0
- Samsung Galaxy Ace 2
- Samsung Galaxy Mini 2
- Samsung Galaxy Note
- Samsung Galaxy S Advance
- Samsung Galaxy S Blaze 4G
- Samsung GALAXY S II
- Samsung GALAXY S III
- Samsung S5230/S5260
- Samsung SHW-A170K
- Samsung Wave 578
- Samsung Wave M / Y
- Sharp Aquos Phone Series
More NFC Phones Available Now

- Sonim XP3300 Core NFC
- Sonim XP and NFC
- Sony Xperia acro S
- Sony Xperia ion
- Sony Xperia J
- Sony Xperia S
- Sony Xperia Sola
- Sony Xperia T
- Sony Xperia V
- Turkcell MaxiPRO5
- Turkcell T11 Maxiphone/ZTE Racer II
- Xolo X900
- ZTE Blade II
- ZTE Kis
- ZTE Turkcell MaxiPLUS5

And more being released…
NFC Tablets Available Now

A fast-moving new segment, with several models recently announced and put on the market with more rumored to be in the works:

TazPad from TazTag aimed at retail was launched in France

Google Nexus 7 was announced in June 2012, and is now available in the US, UK, France, Germany, Spain, Canada, and Australia

The Sharp RW-T110 NFC Tablet announced in March expands on the NFC capabilities of the RW-T107 Tablet from 2011

Samsung Galaxy Note II phone/tablet with NFC went on sale in November. Samsung also is rumored to be prepping a new tablet with NFC functionality
More NFC Tablets Available

Some NFC enabled tablets currently on the market or announced as coming soon…

- Asmaitha Sruta 7” Tablet
- Asus Vivo Tab/Tab RT
- DLI 9000
- Google Nexus 7
- Kuoziro FT701W
- Lenovo ThinkPad Tablet 2
- LG Optimus Vu
- Panasonic BizPad
- Samsung Galaxy Note/Note 2
- Samsung Windows RT Ativ
- Sharp RW-T107/T110
- Sony VAIO Duo 11
- Sony VAIO Tap 20
- TazTag TazPad
Examples of additional types of NFC devices, available now and on the way…

Smart Meters for utility companies

NFC "Digital Gum Goods" by Razorfish

Nintendo Wii U controllers

Payment wristbands

Moneto: NFC microSD for the iPhone & Android

Glidepoint NFC trackpad

Sony RC-S380 reader/writer

RhythmTrak Heart Monitor

ViVOtech NFC payment terminals

Revosys V5 interactive taxi terminal/tablet
Momentum is Building

- Berg Insight
  - 100 million cell phones using NFC technology predicted to be sold this year alone

- ABI Research
  - 102 million NFC handsets to ship in 2012; 285 million will ship in 2013
  - NFC-enabled smartphone shipments are anticipated to increase by 481% from 2012 to 2015

- Deloitte
  - In 2013 there may be as many as 300 million NFC smartphones, tablets and eReaders sold

- Frost & Sullivan
  - By 2015, NFC will be the most-used solution for mobile payment, enabling worldwide transactions totaling about $151.7 billion

- Gartner Research
  - 50% of smartphones will have NFC capability by 2015

- Juniper Research
  - By 2017, 1 in 4 US consumers will use NFC-enabled devices to pay for goods in-store
What Device Availability Means

- Greater visibility
- Growing familiarity
- New business opportunities
- Growing consumer demand
What Is Needed Now?

- More applications
- More services
- More innovation
Mobile payment is not the only “killer app”
Consumer Non-Payment Opportunities

- Advertising
- Consumer Electronics
- Gaming
- Healthcare and wellness
- Hospitality
- Retail (POS tag reading)
- Social media

...and many more
Consumer Electronics

- **Pairing NFC Devices**
  - Home computer components
  - In-car devices
  - Home entertainment systems
  - Headsets and handsets
  - Cameras and printers / digital frames

- **Connectivity**
  - Quick and secure Bluetooth and Wi-Fi setup
  - Fast data transfer
  - Audio handover

- **Information Gathering**
  - Read product history from smart tag to NFC phone
NFC can simplify the task of adding a new device to a Wi-Fi network or to create a Wi-Fi connection between two devices.

Existing (proprietary) implementations show the attractiveness of the Wi-Fi + NFC use cases (e.g., S-Beam on the Samsung Galaxy SIII, numerous apps in ‘Android Play’).

Further standardization and certification is required to reach interoperability.
NFC and Wi-Fi Example

Data Transferring...
Wi-Fi Authentication

NFC Device Detected.
Handover to Wi-Fi.
Connecting…
Business Non-Payment Opportunities

- Access control
- Distribution
- Healthcare
- Mobile workers
- Security
- Utility metering
- Workforce management
NFC and Active Packaging

Commercial Uses
- Package tracking
- Content identification
- Temperature exposure log
- Authentication
Example: Opus One Wines

- NFC tags used to authenticate high-end product
- Complementing location-based services, tracks bottles from production to end user
- Protects against counterfeit and fraud
A tag is placed on each bottle label holding a unique identifier, vintage, bottle size, and validation code.

Bottle is scanned before placing in a wooden case, which is also tagged.

The case tags are matched against palette tags.

The palette tag is matched to the invoice upon delivery.
How the NFC Forum is Helping

- Specification development
- Compliance program
- Ecosystem development
18 NFC Forum specifications approved and adopted spanning core functions:

- Data exchange formats
- Tag types
- Record type definition
- Device interface controller
- Protocols
- Reference applications
Compliance Program Components

- Certification Program
- Certified Device
- Interoperability Program
- Plugfests
- Compliance Program
Enhancing Compliance

The NFC Forum is:

• Preparing to launch Wave 2 of the Certification Program
• Exploring joint certification efforts with other organizations (EMVCo)
• Expanding the number and frequency of Plugfests around the world
Ecosystem Development

- NFC Forum Plugfest events
- Liaisons and partnerships
- Industry events
- Speaking engagements
- Media outreach
- Membership recruitment
Members – November 2012

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Building Communities of Interest

Increase focus on:

- Promoting best practices
- Encouraging vertical industry solutions
- Exploring common interests
- Enabling opportunities for shared solutions
Vertical SIGs

- 2-way communication makes this work
  - Obtain business requirements for possible specifications and certification implications
  - Jointly work on education and guidelines for each industry (e.g., white papers, demos, best practices, how-to guides, etc.)
  - Look at NFC from the consumer perspective and make sure the value proposition is there

CE       Airlines       Retail       Health Care       Payment       Transit       New

“First Generation NFC”
Our Solution

- Build a platform for Special Interest Groups (SIGs) to get involved with NFC

Rationale:
- Give industries the resources to figure out how NFC can work in their vertical
- Provide a common approach to achieve industry-wide interoperability, usage of marks, consumer education, etc.
- Facilitate discussion and development
Thank you!

and

Join us!