



ADVANCING NEAR
FIELD COMMUNICATION
TECHNOLOGY

Forging the Link Between Global Interoperability and New Business Opportunities

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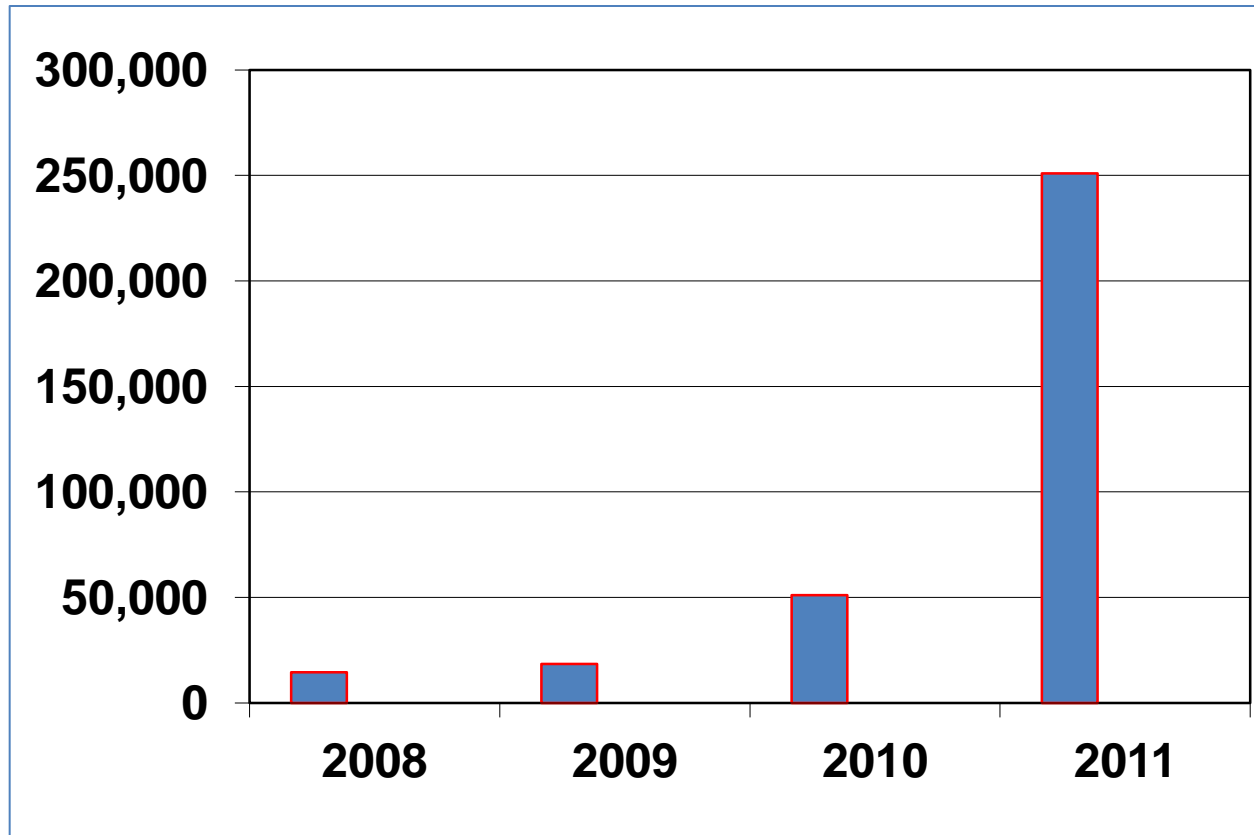


WIMA USA
November 30, 2011

Marketplace Situation

NFC Forum Google Hits

Increasing Year to Year!



Global Market Developments

- Business models are coming together to launch major NFC initiatives
 - MNOs and financial service providers are collaborating
 - Handset manufacturers, governments, financial service providers, universities, and retail companies are joining forces
- Transport operators are mandating use of NFC
- Stadiums are implementing NFC for ticketing
- NFC enables quick and secure connection handover, which is useful for Bluetooth pairing, WiFi set up, and more
 - 10,647 new Bluetooth-approved devices just in the last year (source, Bluetooth.com)
- Consumer acceptance and excitement are high with approval ratings up to 85%

NFC Is More Than Payment and Mobile Phones

- NFC mobile phones are for more than payments:
 - Secure access to buildings and PCs
 - Inventory control with tags and readers
 - Security patrols
 - Patient monitoring
 - Information gathering with educational tags

- NFC brings value to many electronics in addition to phones --and these are shipping as well!



Example: 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 set-up
 - Fast data transfer
 - Audio handover
- Information Gathering
 - Read product history from smart tag to NFC phone
- Asset Management
 - Use NFC phones to read smart tags per product for inventory control



Is the Market's Focus Too Narrow?

Could simple tags be a killer app?

- Controlled by the consumer
 - *Am I interested enough to tap?*
- “Tap and Read”
 - Simpler than QR or bar codes
- Easy and inexpensive to deploy
- Unlimited informational and promotional opportunities across every vertical



New NFC Solutions



Download a FREE Coles & Curtis video recipe right here.



Quality food costs less | coles

N- Mark

N-Mark



- Consumer-facing mark
- Shows where to touch another N-Mark to use NFC
- No cost to use, free license, available to everyone
- For use TODAY on smart posters, cards, labels, etc. using NFC Forum tags and in software
- For use as a touchpoint on certified devices

What the Analysts are Saying

- **Juniper Research:**
 - NFC-based mobile transactions are expected to reach nearly \$50 billion worldwide by 2014
 - 1 in 6 users worldwide will have an NFC-enabled phone by 2014
 - 500 million people around the world will use their mobile devices as travel tickets on metros, subways and buses by 2015; NFC will drive this growth
- **Frost & Sullivan**
 - By 2015 NFC technology will be the most-used solution for mobile payment
- **Forrester Research**
 - Named NFC to its Top Mobile Trends for 2011
- **Yankee Group**
 - Global mobile transactions predicted to be US\$241 billion in 2011 growing to more than \$1 Trillion by 2015

NFC Forum

Mission and Goals

- The mission of the NFC Forum is to advance the use of NFC technology by:
 - Developing standards-based specifications that ensure interoperability among devices and services
 - Encouraging the development of products using NFC Forum specifications
 - Educating the market globally about NFC technology
 - Ensuring that products claiming NFC capabilities comply with NFC Forum specifications

We're Well Into The Journey

Define and Stabilize
Technology

Support Interoperability
Enhance Technology
Support Ecosystem

Refine Technology
Expand Ecosystem
Promote End User Usage

2008

2009

2010

2011

2012/13

Members – November 2011

SPONSOR MEMBERS



PRINCIPAL MEMBERS



Members – November 2011

ASSOCIATE MEMBERS

IMPLEMENTER MEMBERS

NONPROFIT MEMBERS

Current Focus of Work

- Establish the N-Mark as the global symbol of NFC functionality
- Continue to develop and enhance specifications to meet market demand
- Expand and simplify the Certification Program to speed products to market
- Focus on educating the ecosystem about the potential of NFC

16 Specifications Published

Specification	Milestone	Date
Data Exchange Format Technical Specification		
NFC Data Exchange Format (NDEF) Technical Specification	Adopted	24-JUL-2006
NFC Forum Tag Type Technical Specifications		
NFC Forum Type 1 Tag Operation Specification 1.1	Adopted	13-APR-2011
NFC Forum Type 2 Tag Operation Specification 1.1	Adopted	31-MAY-2011
NFC Forum Type 3 Tag Operation Specification 1.1	Adopted	28-JUN-2011
NFC Forum Type 4 Tag Operation Specification 2.0	Adopted	28-JUN-2011
Record Type Definition Technical Specifications		
NFC Record Type Definition (RTD) Technical Specification	Adopted	24-JUL-2006
NFC Text Record Type Definition (RTD) Technical Specification	Adopted	24-JUL-2006
NFC URI Record Type Definition (RTD) Technical Specification	Adopted	24-JUL-2006
NFC Smart Poster Record Type Definition (RTD) Technical Specification	Adopted	24-JUL-2006
NFC Generic Control Record Type Definition (RTD) Technical Specification	Adopted	7-MAR-2008
NFC Signature Record Type Definition (RTD) Technical Specification	Adopted	18-NOV-2010
Reference Application Technical Specifications		
NFC Forum Connection Handover 1.2 Technical Specification	Adopted	7-JUL-2010
Protocol Technical Specifications		
NFC Logical Link Control Protocol (LLCP) 1.1 Technical Specification	Adopted	20-JUN-2011
NFC Logical Link Control Protocol (LLCP) 1.0 Technical Specification (deprecated)	Adopted	11-DEC-2009
NFC Digital Protocol Technical Specification	Adopted	17-NOV-2010
NFC Activity Technical Specification	Adopted	18-NOV-2010
NFC Simple NDEF Exchange Protocol (SNEP) specification	Adopted	31-AUG-2011
NFC Device Internal Technical Specifications		
Certification Documents		
NFC Forum Device Requirements (.zip file including the document and two exceptions)	Adopted	24-OCT-2010
Device Test Application Specification for NFC Digital Protocol and NFC Forum Type 1/2/3/4 Tags	Adopted	27-OCT-2010

Last updated 06-JUL-2011

Potential New Technical Work Streams

- Keeping up with market demand
 - Incorporation of Peer to Peer Active Mode in the NFC Forum specifications
 - Securing NFC communications
 - Supporting ISO 15693
 - APIs for NFC Support in Operating Systems
 - Support of Higher Bit Rates
 - Use of alternative technologies for touch based communications

Compliance Committee Outreach

- Program and announced players in place for first Certification Wave
- Work continues on second Wave activities
- Business Goal: Make certification easier, faster and more economical for vendors
- Strategy: Develop B2B relationships to endorse or potentially cross-recognize our program
 - Discussions underway with EMVCo to analyze specs and testing for commonalities and discrepancies
 - Reaching out to other liaison partners
 - Identifying key bodies representing vertical industries to approach

Outreach is Critical

Liaison	Category
GSMA	Mobile
EMVCo	Payment
Asia Pacific Smart Card Alliance (APSCA)	Smart Cards
National Retail Federation (ARTS)	Retail
Mobey Forum	Mobile
American Public Transport Association (APTA)	Transit
Open Mobile Alliance (OMA)	Mobile
Smart Card Alliance	Smart cards
ETSI	Telecom
Continua	Health care, advertising

Ongoing technical and business development conversations for joint programs

NFC is a “Horizontal” Technology

- Reaches across multiple devices and multiple use cases
- Our work is to ensure smooth and timely deployment
 - Specs that cover all uses now and in the future
 - Certification program that ensures compliance without undue complexity
 - Educational programs in conjunction with vertical market players to show and encourage the breadth of possible uses

NFC Forum and WIMA Present: Tap Into Innovation: NFC Global Competition 2012

- Press announcement today here at WIMA USA
- Promotes development and deployment of innovative and exemplary NFC solutions
- No charge to enter
- Five awards:
 - Best innovation
 - Best business viability
 - Best user experience
 - Jury award
 - Audience award
- Entry forms available at: www.nfc-forum.org

Thank you!