Forging the Link Between Global Interoperability and New Business Opportunities

Debbie Arnold
Director, NFC Forum

WIMA USA
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Marketplace Situation
NFC Forum Google Hits

Increasing Year to Year!

Year

2008
2009
2010
2011

Google Hits

0
50,000
100,000
150,000
200,000
250,000
300,000
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
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.

More Video Cookbook recipes at coles.com.au

Quality food costs less | coles
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
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

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

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<tr>
<td>NFC Data Exchange Format (NDEF) Technical Specification</td>
<td>Adopted</td>
<td>24-JUL-2006</td>
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<tr>
<td><strong>NFC Forum Tag Type Technical Specifications</strong></td>
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<tr>
<td>NFC Forum Type 1 Tag Operation Specification 1.1</td>
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<td>13-APR-2011</td>
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<td>NFC Forum Type 3 Tag Operation Specification 1.1</td>
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<td><strong>Record Type Definition Technical Specifications</strong></td>
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<td>NFC Record Type Definition (RTD) Technical Specification</td>
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<td>NFC Text Record Type Definition (RTD) Technical Specification</td>
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<td>NFC URI Record Type Definition (RTD) Technical Specification</td>
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<td>NFC Smart Poster Record Type Definition (RTD) Technical Specification</td>
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<td>NFC Generic Control Record Type Definition (RTD) Technical Specification</td>
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<td>7-MAR-2008</td>
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<td>NFC Signature Record Type Definition (RTD) Technical Specification</td>
<td>Adopted</td>
<td>18-NOV-2010</td>
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<td><strong>Reference Application Technical Specifications</strong></td>
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<td>NFC Forum Connection Handover 1.2 Technical Specification</td>
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<td><strong>Protocol Technical Specifications</strong></td>
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<td>NFC Logical Link Control Protocol (LLCP) 1.1 Technical Specification</td>
<td>Adopted</td>
<td>20-JUN-2011</td>
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<tr>
<td>NFC Logical Link Control Protocol (LLCP) 1.0 Technical Specification (deprecated)</td>
<td>Adopted</td>
<td>11-DEC-2009</td>
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<td>NFC Activity Technical Specification</td>
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<td>NFC Simple NDEF Exchange Protocol (SNEP) specification</td>
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<td><strong>NFC Device Internal Technical Specifications</strong></td>
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<td><strong>Certification Documents</strong></td>
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<td>NFC Forum Device Requirements (.zip file including the document and two exceptions)</td>
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<td>24-OCT-2010</td>
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<tr>
<td>Device Test Application Specification for NFC Forum Type 1/2/3/4 Tags</td>
<td>Adopted</td>
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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 | Heath care, advertising
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
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!