



ADVANCING NEAR
FIELD COMMUNICATION
TECHNOLOGY



NFC Forum NFC Use Cases

Peter Preuss
Nokia

Chairman
NFC Forum Marketing Committee

September 2009

THE NFC FORUM

History and Membership of the NFC Forum

- Established in 2004
- Founded by Philips, Nokia and Sony

Now 140 members from all areas of NFC ecosystem

SPONSOR MEMBERS



Our Vision

The vision of the NFC Forum is to enable users to access content and services in an intuitive way, leading to...

a world of secure universal commerce and connectivity

in which consumers can access and pay for physical and digital services

anywhere, at any time, using any device



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 between 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 have come a long way, but there is much to do

- Consumer feedback from projects has been extremely positive
- We now understand the complexity of the ecosystem and are sharing lessons learned in projects around the globe
- The NFC Forum still faces major milestones to facilitate development and deployment and ensure interoperability
- The best talents, companies and knowledge in the NFC industry are in the NFC Forum and will work together to make NFC grow

We Are Well into the Journey

Phase One
Define and Stabilize Technology

Phase Two
Enhance Technology
Support interoperability
Support Ecosystem

Phase Three
Refine Technology
Expand ecosystem
Promote End User Usage

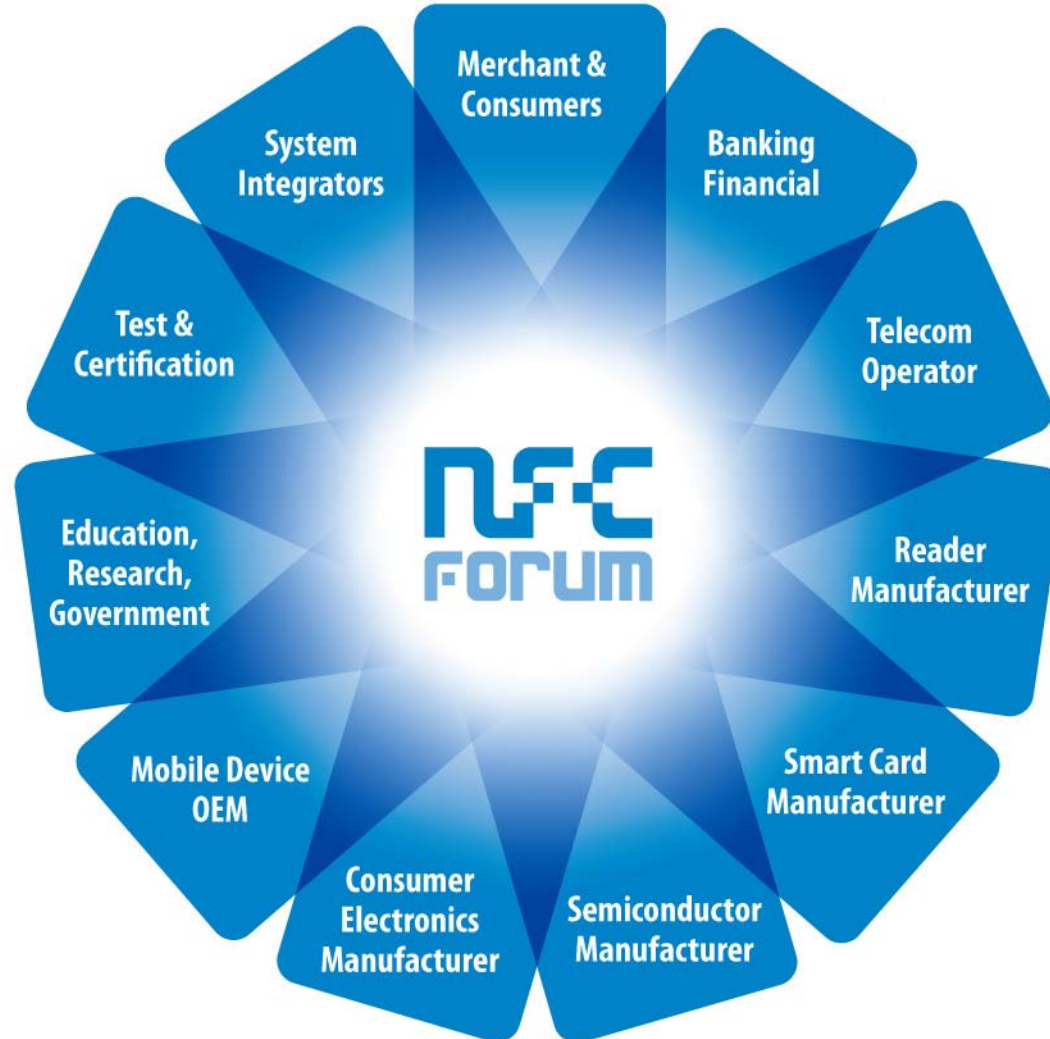
2007 2008 **2009** 2010 2011/12

Cooperation is Key to Success

- NFC is an ecosystem – new services, new opportunities, intersection of multiple industries
- NFC deployment will be service driven, not a technology push
- Payment, access and ticketing via NFC phones are the first applications; others, especially for consumer electronics, will follow
- Building the NFC ecosystem requires cooperation among the stakeholders

We have the right people,
programs and tools to do it!

The NFC Ecosystem is Broad and Complex



Why Join?

- Gain an in-depth understanding of how NFC works and its many applications
- Influence how the technical specifications are written and get an advance look at how the technology will evolve
- Meet other organizations that are working with NFC and jointly find new uses for the technology to create new business opportunities
- Contribute your knowledge to build the infrastructure faster and more profitably
- Highlight your company as “tech savvy” and consumer friendly
- Create a platform to be represented at global trade shows, special Forum events, have speaking opportunities and join meetings

Member Benefits

- Access to the NFC Forum Members Community Website
- One copy of all Forum specifications without charge
- Attendance at plenary meetings of the Forum
- Access to Forum research, technical information, and other resources
- Opportunities for peer-to-peer collaboration
- Your company name, logo and press releases cited on the Forum Web site
- Use of the NFC Forum logo on your Website to indicate membership
- Notification of and comments on proposed new Working Groups

- Implementer Membership
 - Aimed at businesses with existing or planned NFC programs
 - Participation in all marketing activities
 - Low cost entry

Want More Information? Visit www.nfc-forum.org

- Get Webcast slides and recording
www.nfc-forum.org/resources/presentations/
- Download Specifications
www.nfc-forum.org/specs
- Send questions to info@nfc-forum.org
- NFC Industry News and Events
www.nfc-forum.org/news/ and www.nfc-forum.org/events/
- Join the NFC Forum!
www.nfc-forum.org/join

The N-Mark Now Available!

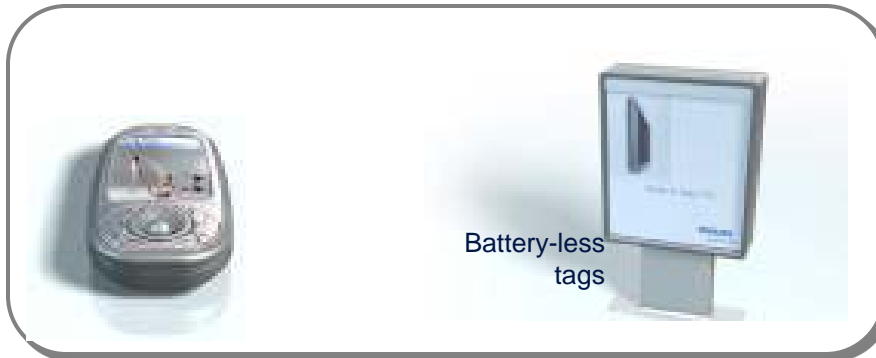
For use in smart posters
Free license at
www.nfc-forum.org/n-mark



NFC Core Applications



**Connect
Electronic Devices**



**Access
Digital Content**



**Contactless
Transactions**

Major (Public) NFC Projects Globally



Over 100 NFC projects, trials and commercial deployments, world-wide have shown strong adoption and positive feedback from users about ease-of-use

Payment and ticketing with mobile have lead the way



But NFC is much more...



ADVANCING NEAR
FIELD COMMUNICATION
TECHNOLOGY

New Business Opportunities

Target Verticals that can benefit from NFC



- Financial services
- Transportation
- Retail
- Health Care
- Automotive
- Travel and Entertainment
- Consumer Electronics



...and many more!

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 WLAN 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



Example: Health Care/ Social Benefits

- **Payment**
 - Pay with NFC phones at contactless POS
- **Information Gathering**
 - Use NFC phones to read patient history from smart card or phone-to-phone
- **Access**
 - Ensure secure hospital area access for personnel with NFC phone and contactless reader
- **Asset Management**
 - Use NFC phones to read smart tags on prescriptions to track inventory
- **Reporting**
 - Use NFC phones to track patient visits
 - Record activities performed by health care workers with NFC devices and smart tags



NFC:

So what's it
going to take to
make it real?

Step #1: Stable Specs

- The Forum has finalized 11 specifications, with 2 candidate specifications pending
- These will enable a basic level of interoperability
- Members are already using them in over 100 projects around the world



Core Specs
Late 2009

Step #2: Compliance Program

- The Forum has priority work to introduce a Compliance Program, with testing tools, a certification mark, and mechanisms to establish product and service interoperability
- This will enable vendors to build global products



Step #3: Build the Ecosystem

- The Forum announced its liaisons with ETSI, Mobey Forum, Smart Card Alliance, GSMA; many more, including EMVCo, are in progress
 - Liaisons are key to building out the ecosystem and ensuring interoperability
 - Some are technical to ensure compatible specifications, simplify testing procedures, etc
 - Others are strategic or marketing-oriented to build the ecosystem
- The Forum's new Implementer level of membership intended to attract business interests and vertical market players

Core Specs
Late 2009

Compliance
Fall 2010

Ecosystem
Ongoing