Moderator

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NFC Forum
Today’s Moderator
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Today’s Speaker
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Near Field Communication (NFC) is a standards-based, short-range (a few centimeters) wireless connectivity technology that enables simple and safe two-way interactions between electronic devices.

What is unique about NFC? It allows electronic devices to interact with the physical world with just an intuitive touch.
Wireless Market Space

- **Wireless USB/Ultrawideband**
- **WiFi**
- **WiMax**
- **Bluetooth**
- **3G**
- **NFC**
- **ZigBee**
- **GSM**
NFC Core Capabilities

- Connect Electronic Devices (Peer-to-Peer Data Exchange)
- Access Digital Content (Reader/Writer)
- Make Contactless Transactions (Card Emulation)

- Data transfer between devices
- Access info on-the-move
- Mobile Payment & Ticketing

Battery-less tags
NFC can be put in Multiple Devices for Multiple Purposes

- Get information by touching smart posters
- Use your NFC phone as an event ticket
- Print from your camera by holding it close to the printer
- Share business cards with a touch
- Pay for goods with a tap of your NFC phone
- Get on the bus by waving your NFC phone
- Set up your wireless home office with a touch
Payment and ticketing with mobile have lead the way

- Easy to build on existing contactless infrastructure
- Mobile devices are becoming personal devices and easy for the consumer to use and understand
- Players are in place
- Business case issues being worked out
But NFC is not just mobile

• Early applications have exploited the convenience of today’s mobile phone
• But NFC brings value to many other electronics as well
And there are many other use cases

- Enhance loyalty programs
- Deliver coupons
- Gather content
- Access rooms and buildings
- Transfer content
- Manage assets
- Provide reporting
- Make connections
Example: Transit

• **Payment**
  – Pay for tickets or taxi rides with NFC phone
  – Pay at transit area retail stores with NFC phone
  – Top up a transit card stored in an NFC phone

• **Ticketing**
  – Download tickets to NFC phone

• **Access**
  – Use an NFC phone to enter gates/ board transit vehicles

• **Information Gathering**
  – Schedules read from smart poster to NFC phone
  – Download maps from smart poster to NFC phone
  – Special offers downloaded from smart poster to NFC phone
  – Order a taxi or bus via tag and phone
  – Transfer address and map phone-to-phone for taxis

• **Loyalty**
  – Get discounted travel offers for frequent travel to your phone
Example: Airlines

- **Ticketing**
  - Download tickets to NFC phone

- **Payment**
  - NFC phones to pay for airport purchases
  - NFC phones to pay for in-flight services

- **Loyalty**
  - Store frequent flyer mileage number and check balance on NFC phone
  - Redeem miles at the gate for upgrades

- **Access**
  - Store boarding pass on NFC phone and tap to enter gate

- **Information Gathering**
  - Special offers for premium passengers transferred from smart poster to NFC phone
  - Schedules downloaded from smart posters / URLs to NFC phone

- **Asset Management**
  - Baggage tracking
  - Luggage ID tags
Example: Retail

• Payment
  – Pay with NFC phones at contactless POS
  – Add and use a prepaid gift card in an NFC phone

• Loyalty/ Couponing
  – Add or redeem points with NFC POS and NFC phone
  – Download coupons from smart poster to NFC phone
  – P2P - transfer coupon to friend, recommend products
  – Redeem / send coupons between NFC phone and POS

• Information Gathering
  – Read product history / warnings from tag to NFC phone
  – Touch tags to collect shopping list
  – Touch a tag and opt-in to get SMS store or mall offers (tracks customer entry as well)

• Asset Management
  – Use NFC phones to read smart tags per product

• More…
  – Collect deposit from bottle recycling machine
  – Activate electronic devices after purchase
Example: Public Sector

• **Payment**
  – Pay with NFC phones at contactless POS
  – Store vouchers –
  – Pay for parking

• **Information Gathering**
  – Download benefits phone numbers from smart posters to NFC phone
  – Record parking stall in NFC phone

• **Access**
  – Secure building access with NFC phone and contactless reader
  – Access to parking stalls

• **Phone as ID Card**
  – Physical and logical log on
  – Replaces passport
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
Example: Medical/Pharmaceutical

- **Payment**
  - Pay with NFC phones at contactless POS

- **Information Gathering**
  - Read prescription information from smart tag to NFC phone
  - Check authenticity of drugs by reading tags with NFC device
  - Read dosage information from tags with NFC phone

- **Asset Management**
  - Use NFC phones to read smart tags on prescriptions to track inventory

- **Reporting**
  - Transfer prescription from phone to pharmacy

- **Online Medicine/Telemedicine (patient monitoring)**
  - Capture readings from blood glucose measurement or blood pressure meter
Example: Automotive

- **Payment**
  - Use NFC phones with contactless car reader to buy music/video content

- **Access**
  - Store electronic keys on NFC phones; use to open car with contactless reader

- **Information**
  - Access car service information (km driven, tire pressure, remaining fuel, service appointments, etc.)
  - Personalize vehicle (seat position, favorite radio station, heating/cooling…)

- **Loyalty**
  - Bonus / loyalty programs from car dealer or service stations

- **Asset Management**
  - Use NFC phones to read smart tags per part

- **More**
  - Use with GPS for route planning
  - Bluetooth coupling with car phone / radio
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: Travel and Entertainment

• Payment
  – Use NFC phones to pay with contactless POS within venues

• Loyalty
  – Add or redeem points with NFC POS and NFC phone

• Ticketing
  – Store theater / attraction / event tickets on NFC phone
  – Collect tickets using NFC phone

• Access
  – Redeem tickets to enter venue using NFC phone and contactless reader
  – Hotel check-in
  – Order food with “tagged” menu/ read food ingredients, wine detail

• Information Gathering
  – Read smart posters to NFC phone with information such as:
    • Movie/ show schedules
    • Upcoming movie trailers
    • Tourism information (historical background, maps, etc)
    • Favorite sports team updates
  – Read smart billboards to customize traveler experience
Example: Business

- **Payment**
  - Store and access vouchers
  - Make cafeteria/ vending purchases

- **Access**
  - Create secure building access
  - Perform secure PC log-in
  - Report work time
  - Track conference/ meeting attendance

- **More…**
  - Exchange electronic business cards in a quick and simple way
What Else?

• Our challenge to you:
  – What other businesses can use NFC to move into the physical world??

The possibilities are endless!
Q&A Session

Q&A Dialog Box – Enter your name and question here

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Q&A Session

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The 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 do NOT sell NFC services or products!
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, have speaking opportunities and participate in meetings
Upcoming NFC Forum Events

• NFC Forum Members Meeting
  – December 1-5, Monaco

• NFC Forum Global Competition Entry Deadline
  – January 20, 2009
  – Learn more at:  www.nfc-forum.org/competition
  – Send questions to:  competition@nfc-forum.org

• GSM Mobile World Congress, February 16-19, Barcelona
  – Visit us at Booth 2 D93

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