NFC Forum
Panel Discussion

Cartes
November 2009
Panelists

• Dave Wentker, Visa, Inc.
• Peter Preuss, Nokia
• Mohammad Khan, ViVOtech
• Yo Tabayashi, SONY
• Ian Keen, Innovision Research & Technology
• Jean Philippe Betoin, INSIDE Contactless

• Moderator: Paula Berger, NFC Forum
Proximity Payments

Dave Wentker
Visa

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Visa Mobile Strategy

Extend payments and related services to mobile users in both emerging and developed markets

**Payment**
- Point of Sale (POS)
- Mobile Visa payWave payment
- Remote
  - Via IVR, text, mobile Internet

**Value-Add**
- Offers
  - Mobile offers and discounts
- Alerts and Notifications
  - Customer set parameters; issuer triggered alerts

**Money Transfer**
- Remittances
  - Cross-border and domestic

**Acceptance**
- Mobile Acceptance
  - Mobile device enabled to accept Visa payments

**Mobile Marketing Platform**
- Turnkey Advertising
  - Visa and client application of core marketing campaigns
Visa’s proximity programs have yielded significant insights and learning necessary for commercialization.
<table>
<thead>
<tr>
<th>Ecosystem Drivers</th>
<th>Challenges</th>
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<tbody>
<tr>
<td>High penetration of credit, debit, and prepaid card products</td>
<td>Card products are extremely reliable and cost-effective vs. unknowns in mobile</td>
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<tr>
<td>Established and growing merchant base for contactless</td>
<td>New acceptance technology requires significant investment by merchants</td>
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<td>High penetration of mobile subscribers</td>
<td>Limited availability of NFC enabled handsets</td>
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<td>Success of the iPhone is driving open software access to mobile devices</td>
<td>Hardware requirements for proximity necessitate significant MNO involvement</td>
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<td>Alternatives to NFC are emerging: microSD, passive &amp; active stickers, etc.</td>
<td>Alternatives lead to different user experiences and business models</td>
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<td>Bank and MNO interest continues to build</td>
<td>Development of proximity business models is complex and time-consuming</td>
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NFC Payment and Ticketing
NFC Value Propositions for Retailers

Mohammad Khan
ViVOtech

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NFC Provides a Personalized, Dynamic Location-Based Connection to the Customer

From Back Pocket to Front Pocket

From Paper to Mobile Offers

Near-Store to In-Store Experience

From Mass to Personalized

From Expensive to Preferred Payments

NFC – Near Field Communication Based on ISO Standard & Compatible with Contactless Payment Standard
NFC Smart Posters Enable Touch Points In and Near Store

Convert Browsers to Buyers

Near Store:
- Mall’s entrances
- High-traffic areas such as food court, escalators

Touch Points:
- Digital signage
- Kiosks
- NFC Smart Posters

In Store:
- Store’s entrances
- Every department
- Merchandise fixtures
- Every wrap stand

Touch Points:
- Kiosks
- Price-checkers
- NFC Smart Posters
- Contactless readers at the POS
Benefits to a Retailer

- Lower Cost, More Effective Retailer Card/Loyalty
- Revenue Growth
- One-to-One Marketing
- Real Time Customer Analytics

Deliver WHAT Customers Want WHEN Customers Want It!
Value Proposition 1: Drive Impromptu Traffic Using Location Based, Personalized, Mobile Marketing

1. Customer Taps NFC Smart Poster at Retailer

2. Consumer and Tag ID info sent to Back-End

3. Marketing server issues personalized promotions to phone based on location, interest and personal profile.

Customer #1

Customer #2

Electronic Redemptions

Tag I.D.

Consumer I.D.

Patent pending
Value Proposition 2: Tap on Smart Poster to Up Sell with Time-Limited Offers

1. Consumer taps poster to save time and find matching accessories and outfits

2. Based on pre-defined matches, consumer profile and store inventory server replies with options in different categories

3. A follow-up message gives an incentive for the consumer to buy the combination today for a discount.
Value Proposition 3: Drive Easy Distribution of Retailer Prepaid Cards

- User taps the NFC phone to the Retailer Smart Poster
  - NFC phone will connect to Retailer content website
- Browser will ask user to confirm Retailer gift card download
  - Phone receives the SMS and open wallet application
  - Wallet will initiate the communication with OTA server
  - Wallet will initiate the card download through OTA servers
  - Card is successfully downloaded and ready to use by customer
- User can use the card at point of sale terminal for top-up or payment

Note: Card could be co-branded or private level

Patent pending
Value Proposition 4: Drive In-Store Online Up-Sell of Low Inventory Products

- User taps the NFC phone to Retailer Smart Poster
  - NFC phone will open ViVOwallet application
- Wallet will provide product description based on Smart Poster
- Wallet will display product cost when user clicks “Buy”
  - At check out, wallet will display all credit/debit cards in wallet for payment
  - Customer will select card for payment
  - Wallet will show the confirmation page with the check out basket
  - Wallet will connect to retailer back end for authorization and display tracking information
- Product will be shipped to customer ship to address.

Note: Customer can also use retailer card or coupons during purchase

Patent pending
How Does A Retailer Benefit?

**Cost Savings**
- Lower transaction fees
- Reduced fraud
- Chargeback/fraud protection

**Revenue Growth**
- Convert browsers into buyers
- Drive traffic to stores
- Generate up-sell & deliver convenience

**One-to-One Marketing**
- Offer personalized promotions
- Deliver location-based real time offers
- Generate high impact with “tap and go”

**Real-time Customer Analytics**
- Collect demographic data
- Gather shopping habits and customer insight
- Measure campaigns/product-placement effectiveness

Deliver WHAT customers want WHEN customers want it!
NFC in the CE Industry

Yo Tabayashi
SONY Corporation

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NFC in CE devices

- NFC is integrated in
  - Notebooks/PCs
  - Personal Health Device
  - Consumer Electronic devices e.g. LCD-TV
  - Game Console
Spread of “PC RW”

- Migration to NFC has been started.
- Current use cases are e-money / transport top up and PC log on
- Open NFC application is coming.

8M RW as of Mar.2009
- PC integrated RW: 5,950,000
- USB RW: 2,090,000

PC integrated-RW
- DELL
- TOSHIBA
- NEC
- Sony

USB-RW

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ADVANCING NEAR FIELD COMMUNICATION TECHNOLOGY
Open NFC: Wellness

- Collect (sensor) data from the equipment and upload to a data server

- Healthcare / Wellness
- Remote medical care

- Pedometer
- Blood pressure monitor
- Thermometer

Server

Built in NFC Dynamic Tag

Touch!
New RF Remote Commander

- Easy to control TV, Video, Audio and Video On Demand.
- Easy to pay to viewing charge in the network.

VOD

NFC RW activation

NFC RW

NFC RW module for Battery-operated Devices
1. Mobile site push service which provides TV information on real time.

2. Remote Commander sends mobile site URL from NFC to handset.
Use Case Example: Topaz® 96 Byte NFC Type 1 Tag

Ian Keen
Innovision Research & Technology

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Topaz Sample Kit
In 2009 mobilkom austria launched a new NFC handset: the Nokia 6212 classic, complete with Topaz® NFC tags in box.

Each handset was sold with four Topaz ID-1 PVC cards which each contained WAP links to the Vodafone live! Mobile website:
- Access to ÖAMTC travel information
- Download new ringtones and wallpapers
- Get latest sports news from Austria’s sports channel Laola1
- ÖBB Handy Ticket: to allow ticket purchase on the mobile
A New NFC Package

- The package of the Nokia 6212 Classic 3G phone with 4 Topaz NFC tags was launched by mobilkom austria in the spring of 2009.
- mobilkom austria distributes the Nokia 6212 classic together with the four Topaz NFC tags in the box, to enable quick, safe and convenient access to mobile services with a single touch.
Enabling single touch service initiation

• This is made possible by the four WAP-links pre-programmed into each of the four Topaz tags.

• The consumer simply touches the appropriate tag with their NFC phone and follows the link to the desired Vodafone live! WAP page.

• The use of NFC technology allows the consumer to more easily access ringtones, pictures and animations.

• Other services made accessible include traffic information and fuel price updates provided by the Austrian automobile club (ÖAMTC) and sports news provided by Austria’s sport channel Laola1.
The Fourth Tag – The ÖBB Handy Ticket

- The fourth Topaz NFC tag features the link to the WAP page for purchasing ÖBB Handy-Tickets
- The NFC tag featuring the ÖBB Handy-Ticket was also used in a NFC-chipcard ticketing pilot from January to March 2009 by mobilkom austria, ÖBB and Nokia
- Participants in the trial simply place the mobile ticket order by touching the ÖBB Handy-Ticket Topaz NFC tag with their NFC phone to receive an electronic ticket which will be validated via NFC by the train conductor
Why NFC?

- NFC improves the user experience of mobile services and makes service initiation more convenient, which is critical for broad adoption of mobile services.
- A recent survey compiled by mobile firm Mformation found that 85% of users reported they were frustrated by the difficulty of getting a new phone up and working.
- NFC tags such as Topaz from Innovision R&T can be programmed to enable the consumer to access services such as up-to-the-minute sports results, news or traffic reports, simply by touching the NFC phone to a tag and following a link.
- Topaz can also be used to help pair the handset with other devices such as Bluetooth headsets at a touch.
2010 Landscape

Jean-Philippe Betoin
INSIDE Contactless

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2010 Landscape

- Larger scale pre-commercial launches
- Breaking the ice between Telcos and Service Providers
- The retailers effect
- Make it simple! Pragmatic, closed loop, iconic projects.
- Bridge products: benefits for MNOs and Service Providers.
- Emerging segments: Health, Access Control and Professionals
Thank You!

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Questions?
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