Motorola M-commerce Overview
- M-commerce fits with Motorola’s strategy of seamless mobility
- Mobile Devices are becoming personal multi-function devices
- Inc. brand loyalty due to potential “stickiness”

- M-commerce drives related applications and opportunities
- There is a risk in not participating
- Potential for revenue
Consumer Desires In M-Commerce

- I want transactions to be as fast as possible
- I want convenience down to small details
- I want safety and security I can see and feel
- I want financial benefits for using
- I want to feel responsible and generous with money
- I want to be in total control of my money

Consumers look for ways to save time while engaged in a transaction.

Consumers expect discounts, privileges or points for being a loyal customer.

Consumers need a safe way of carrying money, and avoiding fraud.

Consumers want to be able to help out family and close ones financially.

Consumers want to feel responsible and generous with money.

Consumers want to be in total control of overall finance management.
Enable a Seamless Lifestyle by seamlessly and simply performing secure mobile commerce, credentials, access, passwords, and authentication within a universally available hand held device.
**M-Wallet**
Motorola takes banking, credit card retail purchases and bill payments to a whole new level of mobile financial access and transactions that is as simple as pressing a few buttons.

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<td><strong>Add Client Based Features</strong></td>
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<td>The vision: Seamlessly and simply enabling secure mobile commerce, credentials, access, passwords, and authentication within a universally available hand held device</td>
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**Motorola Labs**

Networks & Enterprise

Mobile Devices

Motorola takes banking, credit card retail purchases and bill payments to a whole new level of mobile financial access and transactions that is as simple as pressing a few buttons.
Near Field Communication is a standards-based, short range (a few CM) wireless connectivity technology. NFC allows consumers to perform safe contactless transactions, access digital content and connect electronic devices with a single touch.
• NFC is a unique wireless technology enabling easy, intuitive and convenient one- and two-way interaction with electronic devices.

• NFC enabled devices can function as a RFID Tag, Reader or Writer

• NFC supports an open loop system it can be used at multiple terminals and retailers

• NFC evolved from Contactless RFID and interconnection technologies

• ISO Standards based technology [ISO 18092, ECMA-340, ETSI TS 102 190, ECMA-352], and is compatible with ISO 14443A, Philips MiFare and Sony Felica

• NFC is in use today millions of MiFare and Felica cards in circulation

• NFC is supported by major mobile device manufacturers, carriers, and financial institutions.
Sharing Experiences

- Easy and simple connection method
- Intuitive initialization of wireless networks: zero configuration

Links or information from physical objects

- Provides method of communicating with non-self powered devices
- Fast session initiation: Compliments Bluetooth and Wi-Fi as an initiator

Simple and easy transactions

- Does not require line of sight
- Works in RF intensive environments
- Conserves power: active versus passive mode
- Open loop system: can be used at multiple terminals/retailers
- Short distance adds inherent security

Inherent Benefits of NFC

Links or information from physical objects

Sharing Experiences

Simple and easy transactions
Near Field Communications (NFC) is a technology that enables wireless communication between devices over short distances. It is essentially an RF tag and reader combined into a single component, as specified in ISO 18092 standard. The components highlighted in the diagram include:

- Secure Over-The-Air (OTA) Download Capability
- User Interface
- Secure Storage Chip
- Near Field Communications (NFC) = RF Tag + Reader [ISO 18092]
• NFC has the ability to generate RF and transmit Energy to the target and read data from the target

• Passive Device RFID, Tag Powered by Reader Active Device Reader, Generated RF Field NFC is backward compatible with RFID

• Key NFC Characteristics

  NFC operates in the 13.56 MHz frequency range, over a distance of typically a few centimeters

  Data exchange rate up to 424 kbit/sec

NFC technology is standardized in ISO 18092, ECMA-340, ETSI TS 102 190, and ECMA-352. NFC is also compatible to the broadly established contactless smart card infrastructure based on ISO 14443 A, i.e. Philips’ MIFARE technology, as well as Sony’s FeliCa card
NFC complements and eases setup for Bluetooth, WiFi and other bearers.
By EOY 2011, 50% of all mobile devices sold will be NFC enabled.*

**NFC Market Potential**
- Proximity Payment
- Multimedia Marketing
- Peer To Peer Networking
- Public Transportation
- Home Entertainment
- Keyless Vehicle Entry
- Toll Collection
- Parking
- Supply Chain
- Pharmaceuticals
- Medical Services
- Identity Management
- Retail Sales

* ABI Research

According to a recent Mobile Payment World Survey, 82% of industry professionals felt NFC would reach critical mass.
1. **Touch and Go**
   Events where the user only needs to bring the device storing the ticket or access code close to the reader.

   **Examples:**
   - *Smart Poster*
   - *Access control*
   - *Transport/Event Ticketing*

2. **Touch and Confirm**
   Applications where the user has to confirm the interaction by entering a password or just accepting the transaction.

   **Examples:**
   - *Meter Readings*
   - *Mobile Payment*

3. **Touch and Share**
   Linking two NFC-enabled devices to enable peer to peer transfer of data.

   **Examples:**
   - *Downloading music,*
   - *Exchanging images,*
   - *Synchronizing address books, or Sharing Application State*

4. **Touch and Explore**
   NFC devices may offer more than one possible function. The consumer will be able to explore a device’s capabilities to find out which functionalities and services are offered.

   **Examples:**
   - *Picture Printing Kiosks*
Benefits to EcoSystem Partners

• Why Would Mobile Operator Adopt NFC?
  – New Channel For Existing Operator Services
  – Potential Revenue sharing through co-branding
  – Increased ARPU
  – New Business Opportunities (Financial Services)
  – Additional Customer Stickiness
  – Attract High Quality Customers

• Why Are Big Banks/Card Issuers Pushing It?
  – Displace Cash (Increased Transactions)
  – New Customers
  – New Services
  – Enhanced identity management
  – Reduced Cost For Card Issuance

• Why Are Big Retailers Paying Attention?
  – Reduced Cash Handling
  – Fast Transactions
  – Stronger Customer Loyalty
  – Ability to bring e-commerce features to a brick and mortal environment
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<th>NFC Payment Ecosystem Roles</th>
<th>Function</th>
<th>Potential Revenue</th>
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<td>Specification/Application Licensing</td>
<td>Card Association Fees &amp; Clearance Fees</td>
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<tr>
<td><strong>Card Issuer</strong></td>
<td>Application Provider Application Card Life Cycle</td>
<td>Card Holder Fees Transaction Fees (From Merchant) Interest</td>
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<tr>
<td><strong>Trusted Third Party (TTP)</strong></td>
<td>Key Management Secure Module Life Cycle</td>
<td>OTA Personalization (Per Card) Integration with Card Issuer (Soft apps)</td>
</tr>
<tr>
<td><strong>OTA Server</strong></td>
<td>OTA Secure Connection To The Mobile Device Download of Application</td>
<td>Hardware and Services OTA Personalization Carrier Integration Revenue</td>
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<tr>
<td><strong>Carrier</strong></td>
<td>Cellular Network Mobile Distribution Service Offering</td>
<td>New Card Bounty, Inc. Data Usage Customer Loyalty, Transaction Fees Customer Service Revenue</td>
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<tr>
<td><strong>Wallet Manager</strong></td>
<td>User Interface Wallet Manager</td>
<td>Server: Hardware / Serv. Subscription Fees. OTA Transaction Fees, Upgrade Fees</td>
</tr>
<tr>
<td><strong>Mobile Devices</strong></td>
<td>NFC: Hardware / Software Security / Authentication</td>
<td>Hardware, Application Development</td>
</tr>
<tr>
<td><strong>POS</strong></td>
<td>Point of Sale Terminal</td>
<td>Hardware, Application Certification</td>
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Operator Payment Business Models

**Banks Involvement**

- **High Banks Involvement**
  - Multiple-banks scheme
    - Partnerships with multiple banks
      - E.g. Telenor/BankID, WPS (Canada), Mobipay (Spain)
    - Partnerships with a single bank
      - E.g. Telenor MobilHandel

- **Low Banks Involvement**
  - Operator-centric m-payment account
    - Acquisition of a banking license
      - E.g. Mobilkom and ONE (Austria)
    - E.g. Orange, Vodafone m-pay cards

**Operators Involvement**

- **Low Operators Involvement**
  - Independent solution, network-agnostic
    - Partnership with an independent player
      - E.g. Obopay-Amp’d
    - ‘Do nothing’ strategy and let Paypal, etc. address this market
      - E.g. T-Mobile
  - Independent solution, licensed to operators
  - Wallet facilitating remote card payments

- **High Operators Involvement**
  - Multiple-banks scheme
  - Operator-centric m-payment account