

# Wireless Payment Protocol (WPP)

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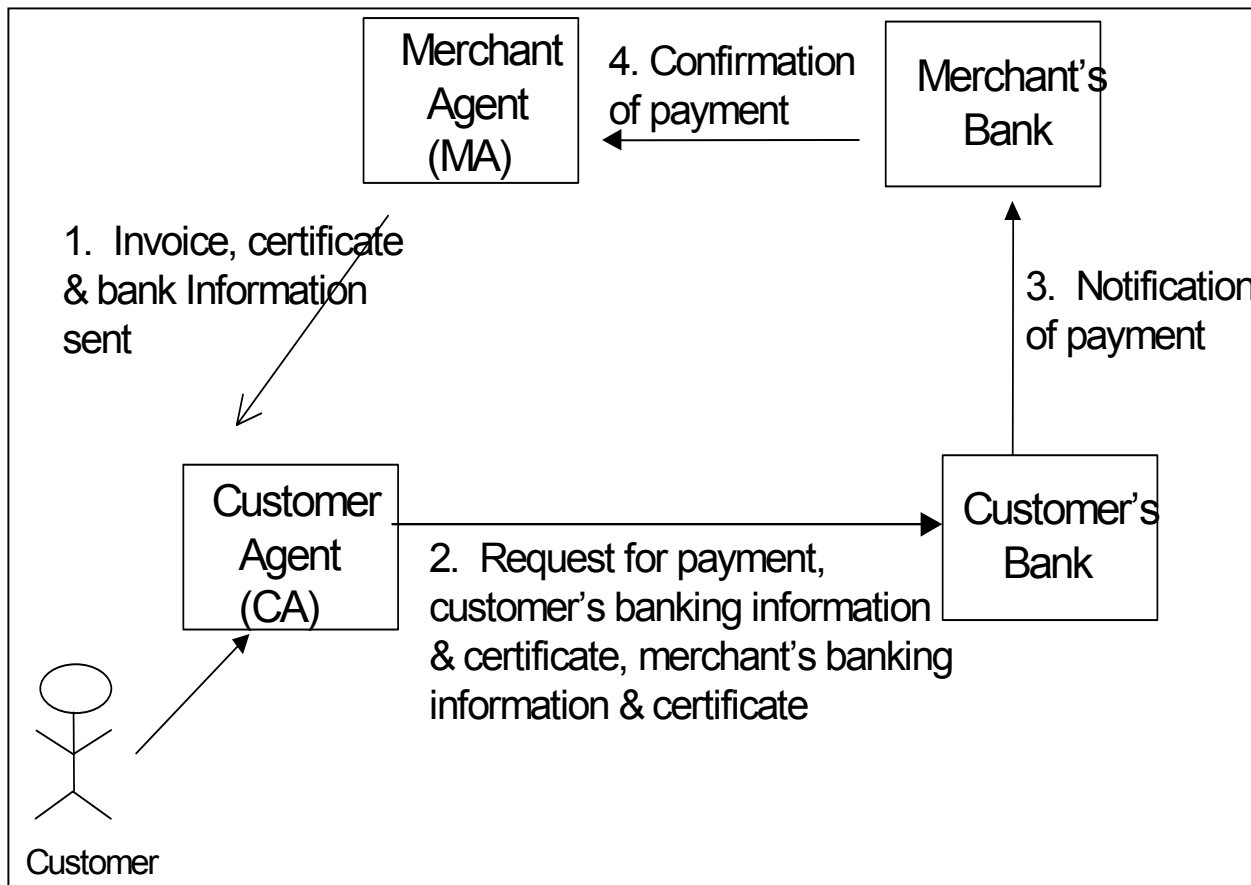


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# Introduction

- Problem
  - Electronic credit card and debit card transactions over wireless networks
- Contribution
  - Wireless Payment Protocol
    - Supports both credit- and debit-card transactions
    - Uses WAP's Wireless Transport Layer Security
    - Combines smart card technology

# WPP



# Transaction Flow

- Customer Agent to Customer's Bank (no intermediary – Merchant Agent)

# Security

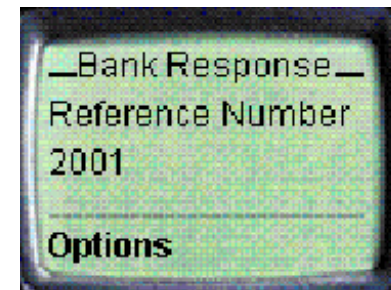
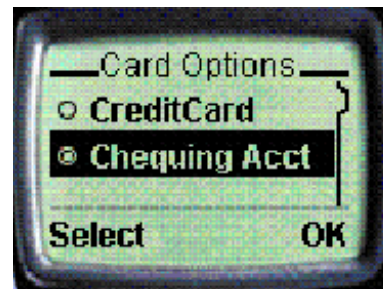
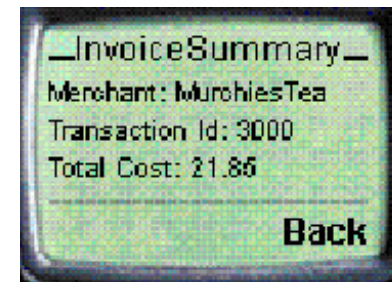
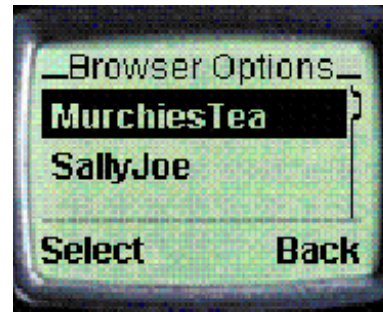
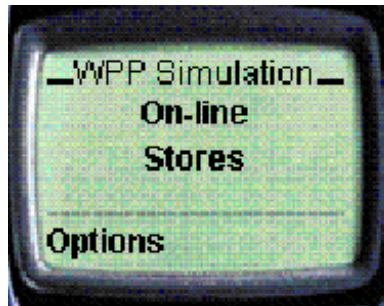
- Payment instructions not sent to merchant
- Encryption provided by Wireless Transport Layer Security
- Merchant's banking info and Customer's payment instructions are digitally signed
- Smart Card stores customer's encrypted banking info
- PIN authorizes access to Smart Card, doesn't travel over the net

# Implementation

- Uses Nokia's WAP server and toolkit
  - Merchant's site and Nokia phone
- Uses Java 1.2 and Java Cryptographic Extension
  - Banking service
  - Certificate distribution service



# Execution



# Conclusion

- Non-proprietary solution
- Support for credit and debit card payments
- Customer's private data sent directly to the bank
- Confidential information not transmitted to the merchant
- PIN numbers don't travel over the network
- Lightweight