E-Commerce and Online Banking: Transaction Processing System in Action

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Topics we are covering

- Online banking and e-commerce are excellent examples of transaction processing systems in the business and consumer world
- This report will discuss four major areas regarding online banking and e-commerce
Consumer Account Information and Access

“One of the biggest reasons customers go onto their bank’s Web site is to view transactions”

Sanjay Gupta, e-commerce executive, Bank of America
• Account Information must be:
  – Quickly and easily accessible
  – Accurate
  – Up to date

• If a consumer is able to remain informed of their account activity, there is a greater chance that they will make use of other products and services offered online by the financial institution
• Banks are providing more comprehensive account access services
• Users may now access extended account information such as loan or financial investment status
• Drawback: different services may require separate user names and passwords
• Solution: “Financial Service” or “Account” aggregation

• Account aggregation allows users to access all account information (immediate and extended) using one user name and password
• Banks are also employing IS that provide real-time access to account information
• Banks are allowing customers to access account information through wireless systems
  – Users can customize their service to provide an automatic account update at regular intervals
  – Users may also specify the requirements for an update
Online Billing

• First offered in 1995
• referred to as Electronic Bill Presentment and Payment (EBPP)
• “Bill presentment” ~ receiving & viewing bill
• “Bill payment” ~ transferring $ to the vendor either electronically, or with a paper check
Online Billing Requirements

- Set up checking accounts with banks that offer online services
- Possess modems or other dial-up devices
- 2 ways to pay bills:
  - launch onto computer, authorize payments from bank directly to vendor
  - bill presentment
Advantages

• Environmentally friendly (70 pounds of paper bills used by Toronto household in 2003)
• Convenient medium
• Up-to-the-minute information
• Savings on postage
• No longer required to travel
Disadvantages

• Unable to attach payment coupons to bill
• Technical problems may lead to delay or discredit on account
• Privacy issues
• Security precautions: i.e. risks of snail mail
Online Cash Systems

• Grew to satisfy the needs of the Internet
• PayPal was founded in 1998
• A medium to transfer and receive funds
• Structure based on normal bank accounts
Advantages

• Easy to manage and flexible
• Global and Worldwide usage
• No Processing Fees
• Fast and convenient
• Recognition
Disadvantages and Problems which Online Cash System Faces

• Possible error in payment or payee
• Speed of adoption for businesses in real life
• Software and Hardware Issues
• Privacy
Electronic Cash

• Also known as E-cash or Digital cash
• This includes smart-card, digital coins and digital cheques, all of which is represented in bits
• Stored in financial institution’s computer, the customer or merchant’s computer or on a smart card carried by the customer or merchant.
Different types of Electronic Cash

• Debit Card
• Basic Digital Coin
• The Blinded coin
• Electronic traveler’s cheque
• Electronic Purse
Disadvantages to Electronic Cash

• Reduced privacy due to the creation of highly detailed consumer profiles
• Why?
• Traceable Data if the World Wide Web becomes a fee-based system in which readers are charged per access.
Cont’d: Disadvantages to E-Cash

• “Internet may become the opposite of anarchy: life in a transparent data ocean, a life in which data recording everyone’s movements, tastes, purchases, medical history, reading habits and contacts”

- Michael Froomkin
In Summary

With the increase in the use of online banking, consumers can expect to see greater development in the services offered by various private companies and financial institution. These improvements will further enhance the operations and efficiency of business transactions, resulting in better customer services.