Mobile payment systems & threats

Today

- Carrier billing systems (phone bill) vs. credit card or other payment source
- Carriers sell ringtones and some content -- no hard-goods (tangibles)
- Off-deck SMS & network payment systems (billmycell, PayPal) for hard-goods
  - Billing systems today are either s/w or SMS
  - SMS more prevalent, mostly on-deck, but changing
- Access to cellphone messaging via “shortcodes” such as 87021 used with a password to send messages

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Uses Today

- Money transfers person-to-person (C2C) and to businesses (C2B)
- Ringtones, concert tickets, taxi and parking payments, credit card/checking transfers, delivery/mobile business payments, music (content), gift cards

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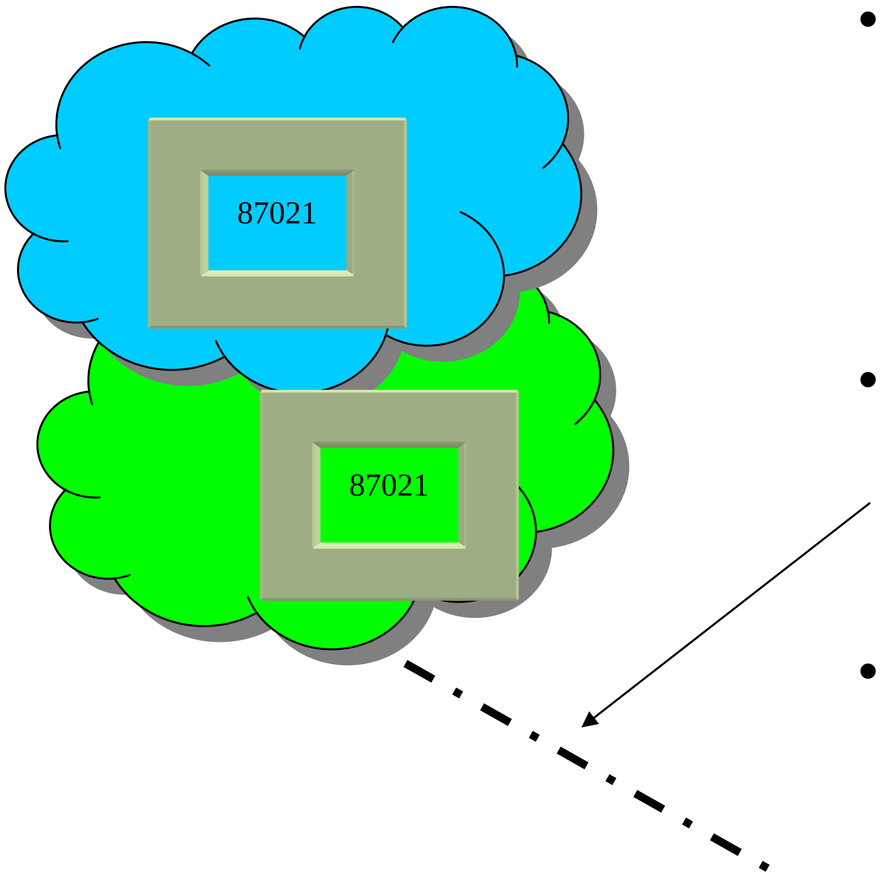

- Shortcodes are a false sense of security, and can be impersonated just like websites (carriers slow to restrict this)
- Digital transmissions fairly secure (more potential weaknesses with move to IP traffic)
- As value and use of mobile transactions grows, so will interest in obtaining data and illegitimate use

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Tomorrow

- More mobile transactions
- RFID integration increases ease-of-use, and opens new security risks
- More Point-of-Sale (POS) integration increases adoption, and opens new security risks
- Upgraded phones will have operating systems (i.e., Nokia Series 60, etc) that are more susceptible to viruses, and more smartcard data make devices more valuable

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Tomorrow

- Biometrics will further increase security, but the authentication method can be a security risk
- Increased location-based services actually add to security as well as marketing and usability
- Back-end security will be more of a “honeypot”, and more IP data means more opportunities for sniffing, caching, archiving, and hacking
- Payment fraud will be an issue via false entry/data copying, but more serious problem will be identity impersonation and large-scale disclosures