



Virtual Goods
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Trading Privacy

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Content – Trading Privacy

- Introduction
- Personal and Private Data
- Virtual Goods
- PIT vs. PET
- Trading Personal and Private Data
- Data Collection Services
 - Google, Prize Competitions, Payback
- Counter Measures
- Conclusion



Introduction

- Personal data is generated by using the Internet
- Different channels
 - Web, e-mail, chat, telephone
- Methods of analysis are getting more precise
- Business decisions are based on personal data of customers



Personal and Private Data

- Personal Data: Needed to offer service (e.g.):
 - Name
 - Address
 - Bank account
 - Email-address
- Private Data: **NOT** needed to offer service (e.g.):
 - Health
 - Criminal record
 - Hobbies
 - Religion

 - Telephone number?



Virtual Goods

- No physical appearance
- Every copy is an original
- No reproduction costs
- Demand on the market
- Data remain fresh after selling



PIT vs. PET

- PIT - Privacy Invading Technologies
- PET - Privacy Enhancing Technologies



PIT

- Internet protocol
 - IP address
- HTTP protocol
 - USER_AGENT: Browser, platform
 - REFERER: last visited webpage, variables
- Sessions / Cookies
- Forms
- Email addresses
 - Harvester
- Log-Files



Examples of Data - Data Collection

- Historical data
 - Customer contractual data
 - Gender
 - Address
 - Telephone number / Mobile phone
 - User-ID
 - Communication with customer
 - Transaction Data
- Buying addresses / personal data
- Public listings
 - Telephone number
 - Addresses
- PIT
 - Footprints in Internet



Examples of Data - Data Mining

- Behaviour during communication
 - Living conditions
 - Creditworthiness
 - Risk of leaving customer relationship
 - Value of customer
 - ...
 - Branch specific data
 - e.g. mobile provider, software provider
- Decisions
- New offers, new prices, new customers



Trading Personal Data

- Address dealer
 - callcenter-adressen.de
 - adressen-im-trend.de
- Spam mail
 - "The first 1.000.000 email addresses for free"
- Internal use



Prices

- Data value determination
 - Increasing response rate
 - Reduced cost of advertisement campaigns
- Trading addresses
 - Evaluated addresses: 0,10...0,50 EUR / piece
 - Spam addresses: <0,01 EUR / piece



Data Collecting Service - Google

- Data sources
 - Search / search results followed
 - Advertisement viewed / clicked
 - Gmail
 - Google Desktop, Google Toolbar, Blogger...
- Principle
 - Different services at one point against private data
- Purpose of data collection
 - Selling advertisement to Google customers



Data Collection – Prize Competitions

- Data sources
 - Forms – filled out by customers
 - Online surfing behaviour
- Principle
 - Trade: data against a chance to win
- Purpose of data collection
 - Confirmed addresses
 - Legalization of customer advertisement (opt-in)
 - Individualized advertisement



Data Collecting Service - Payback

- Data sources
 - Forms – filled out by customers
 - Shopping checkout data (partner card)
- Principle
 - Trade: bonus points against shopping behaviour
- Purpose of data collection
 - Marketing research
 - Individualized advertisement



Countermeasures

- Awareness
 - Offer minimal data
- Anonymization tools
 - REFERER removing tools
 - Cookie removing tools
 - Proxy servers / MIX networks
 - Remailer
- Payload data encryption
 - Email encryption (PGP)
 - Internet encryption (SSL)
 - Virtual Private Network (VPN)



Conclusion

- Personal and private data are virtual goods
- Users unaware about the value of their data
- Knowledge is needed
 - Education
 - Law
 - Privacy policies



THANK YOU

Welcome to Koblenz next year



IFIP-„Virtual Goods“ Workshop
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