

## privacy and identity in a (more) mobile world

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# INTUG contents

- INTUG
- what users want
- principles
- threats and risks
- location
- roaming
- cameras
- conclusions and issues



# INTUG what is INTUG?

- members
  - national associations
  - corporations
  - individuals
- activities
  - ITU and WTO
  - OECD
  - APEC TEL, CITELE and EU



# INTUG our aims

- real and effective competition
- genuine choice for users
- lower prices
- higher quality
- more innovative services
- constructive co-operation with
  - international bodies
  - governments
  - regulators



# INTUG priorities

1. open access to global mobile networks
2. regulatory best practice
3. liberalization
4. leased lines
5. IP telephony
6. digital divide
7. universal access
8. numbering



# INTUG principles

- economic growth:
  - openings for innovation
  - removal of barriers to adoption
- privacy and data protection
- technological neutrality:
  - issues are ubiquitous
- open access



# INTUG wants and needs

## Consumers:

- secure
- private
- free choice:
  - networks
  - operators
- low price
- new services

## Service providers

- open networks
- fair and non-discriminatory access
- secure transfer of:
  - data
  - transactions

Free choice of telecommunications platform.  
GSM, cdma2000, BCN, Wi-Fi, PSTN, etc.



# INTUG accenture definition

- always on
- always aware
- always active
- continuously analysing situations to provide access to content and services that are relevant and useful





# OECD Recommendation on protection of privacy

- obtained by lawful and fair means and with the knowledge or consent of the data subject
- relevant to the purposes for which they are to be used, and accurate, complete and up-to-date
- limited to the fulfillment of those purposes
- should not be disclosed for purposes other than those specified except:
  - (a) with the consent of the data subject; or
  - (b) by the authority of law.
- protected by reasonable security safeguards against loss or unauthorised access, or disclosure



# INTUG European Union directives

- 15 member states, plus accession countries and copied elsewhere
- similar to OECD Guidelines
- 95/46 Data protection
- 02/58 Electronic communications
- transposed into national law with variations



# INTUG police and security services

- wire-tapping with a court order:
  - e.g., USA Communications Assistance for Law Enforcement Act (CALEA)
- retention of traffic data:
  - Cybercrime Convention of the Council of Europe
  - European Union 02/58 Article 13
  - definition and scope of data
  - duration of retention



# INTUG additional data

- location:
  - time and place of an individual
  - can give patterns of movement
  - can be combined with
    - call data
    - locations of family and friends
- content:
  - what and when and where?
- payments and micro-payments

some parallels in bank  
and credit card data



# INTUG fixed and mobile threats

- spam, spim, pop-up ads, etc
- viruses, trojan horses, worms, etc
- hacking and phishing
- identity theft
- mobile:
  - physical loss/theft of devices
  - snarfing (address book, photos, files)

systemic weaknesses,  
not least people.



# INTUG profiles

- used on fixed and mobile (e.g., login ID and cookies)
- mobile is more clearly a given individual through X.164 number
- can be linked to home address and socio-economic data
- also transaction data
- also location data
- also content data



# INTUG location

- on a national network:
  - triangulation or GPS from device
  - used by operator or third party
- from a local network:
  - 2G/3G micro-cell
  - Wi-Fi, Infra-red, bluetooth, etc
  - RFID
- inferences from location and time

already concern over the use of GPS  
location data by car rental firms



# INTUG the “threat” of RFID

- Radio Frequency IDentification tag
- very small and very cheap
- commonly on goods at pallet level
- increasingly on individual products
- already raised significant privacy fears
- how do you get the right balance?





# INTUG international roaming

- in a different legal jurisdiction
  - are the rights/duties different?
- with a different operator(s)
  - are their policies different?
- potentially greater value of location based services when abroad
- severe legal problems for operators in complying with data protection legislation across borders



# INTUG ENUM

- mapping E.164 number to multiple URIs
- heavily promoted
- but no security
- tried to map one person to one number:
  - a residence can have several residents, not all human (appliances, etc)
  - an individual can have several numbers
- functions can be delivered by SIP and instant messaging



# INTUG multifunctional device

- phone
- personal digital assistant
- electronic purse
- camera
- identity document
- banking card
- music and games players

attempts at “wearable” telephones



# INTUG cameraphones

- potentially concealed
- policies to exclude cameraphones for certain locations:
  - locker rooms
  - factories
  - R&D facilities
  - some offices
- some devices will make a camera noise



# INTUG commercial communications

- immense volume of obviously illegitimate
- TACD survey shows a big discrepancy between senders' and recipients' views of what is legitimate
- new forms of communications:
  - SMS, MMS, etc
  - location based adverts
  - locally broadcast “neon” ads in cyberspace
- adverts may pay for/towards a service



# INTUG risks

- how to strike the right balance for a given market?
- which market players have brand strength for security?
  - handset manufacturers
  - operators
  - third parties
- will bad communications drive out the good?



# INTUG conclusions

- ubiquity of threats and risks
- but smaller and weaker devices
- added value in attacking a personal device
- a personal device reveals more
- human weakness with a “personal” device



# INTUG issues

ITU/MIC, Seoul 4-5 March 2004

[www.INTUG.net](http://www.INTUG.net)

- how to maintain a balance that is:
  - reasonable
  - proportionate
- can we keep up with the hackers?
  - they innovate very rapidly
- can operators restrain the threat?
  - without harming competition
- can the law keep up?
  - legislators, police, judiciary, etc
- can it be controlled across several networks?





# INTUG thank you

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