Mobile number portability

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Introduction

- Introduction
- A culture of defiance
- Competition, portability and churn
- Fixed number portability
- Subsidiarity, light-touch regulation
- Mind-numbing complexity
- Internet names and addresses
- Conclusions

¡No Pasarán!

- Dolores Ibárruri Gómez (1895-1989)
- La Pasionaria (the passion flower)
- Communist Party of Spain
  - Secretary General (1944–1960)
  - President (1960–1989)
- Statue at Customs House Quay, paid for by Glaswegian anti-fascist veterans

3D strategy of the MNOs

- Deny:
  - there is no evidence anybody wants this service
  - but the mobile market is already competitive
- Delay:
  - it should be left to the operators to reach agreement
  - we need to get software written
- Degrade:
  - it is much easier to take a new number
  - the discounted handset is not available

Definitions

- ***Number portability*** is the ability or the means by which a user is able to retain their number while taking service from a different operator
- ***Churn*** is a measure of the rate at which customers change to another supplier

Churn is good (to an extent)

- The ability to switch supplier is a sign of a properly functioning market
- Customers should be able freely to move between suppliers
- However, high churn rates indicate:
  - poor quality of service
  - inadequate customer care
  - excessive prices
- Combined with high customer acquisition costs, high churn rates make the mobile sector very inefficient
- Operators try to lock customers in with:
  - handset “subsidies”
  - network specific handset designs
  - tariff schemes
- These invite interventions by NRAs and NCAs
- MNP does not cause churn, it merely frees customers to churn

“Ladder of investment”

- An economic construct for fixed network liberalisation
- New entrants were gradually to build out their networks:
  - international gateway
  - major exchanges
  - local exchanges
  - local loops
- By regulation they were to have access to:
  - Carrier Selection (CS)
  - Carrier Pre-Selection (CPS)
  - Number ranges
- Number portability was considered *essential* to allow customers to change supplier with the least cost and inconvenience

The value of numbers

- Only users create value for numbers
- They propagate their numbers to:
  - customers and suppliers
  - colleagues
  - family and friends
- They generate all:
  - the inbound traffic
  - the revenues

A test case

- In the USA some direct marketing firms used random diallers
- Many people hated these calls
- US Congress enacted Do Not Call register
- Millions of people registered not to receive marketing calls
- The inevitable exemptions for faith-based organisations and political parties

Business customers

- Demand for number portability is very high
- Reluctance to switch providers *without* portability
- Potentially considerable costs of changing numbers:
  - reprinting business cards, packaging and other stationery
  - repainting signs and vehicle fleets
- Threat of loss of business
- Having to persuade people to change numbers stored in:
  - mobile phones and PDAs
  - electronic mail software and diaries
  - databases

Consolidation of contracts

- Typically, because of lack of control in purchasing, mobile telephony is found in a spread of contracts across the firm
- MNP is a vital enabler - you cannot tell employees they must change their numbers!
- Can improve buying power
- Can claim back errors in bills
- Can improve financial controls (Pareto Principle applies)

Small businesses & sole traders

- Many SMEs and sole traders rely on the use of mobile phones
- Often they are early adopters
- Very many use pre-paid
- They are an important part of the market for new entrants
- Without MNP these customers are locked out of the benefits of competition
- Pre-paid MNP is essential

Source: photo is from the Vodafone report on Africa.

Special number ranges

- Specific codes are usually assigned for:
  - toll-free or freephone
  - premium rate
  - short codes on mobile networks
- The simplest solution on an intelligent network is:
  - a central database
  - individual calls and SMS to the number are translated to a “real” telephone number
  - then the call is completed
- Number portability enhances the competition to supply these services
- Competition:
  - drives down the cost
  - drives up the quality
- Portability is a pre-requisite for competition

Tollfree numbers

Fixed networks

- single number for marketing
- competitive supply
- free to the caller
- proved very popular with corporations
- attempts to extend to trans-national services failed

Mobile networks

- not bound by rules for fixed networks
- mostly refused low cost freephone services
- instead pursued “revenue sharing”
- discrimination in the assignment of short codes

Numbers as a tariff indicator

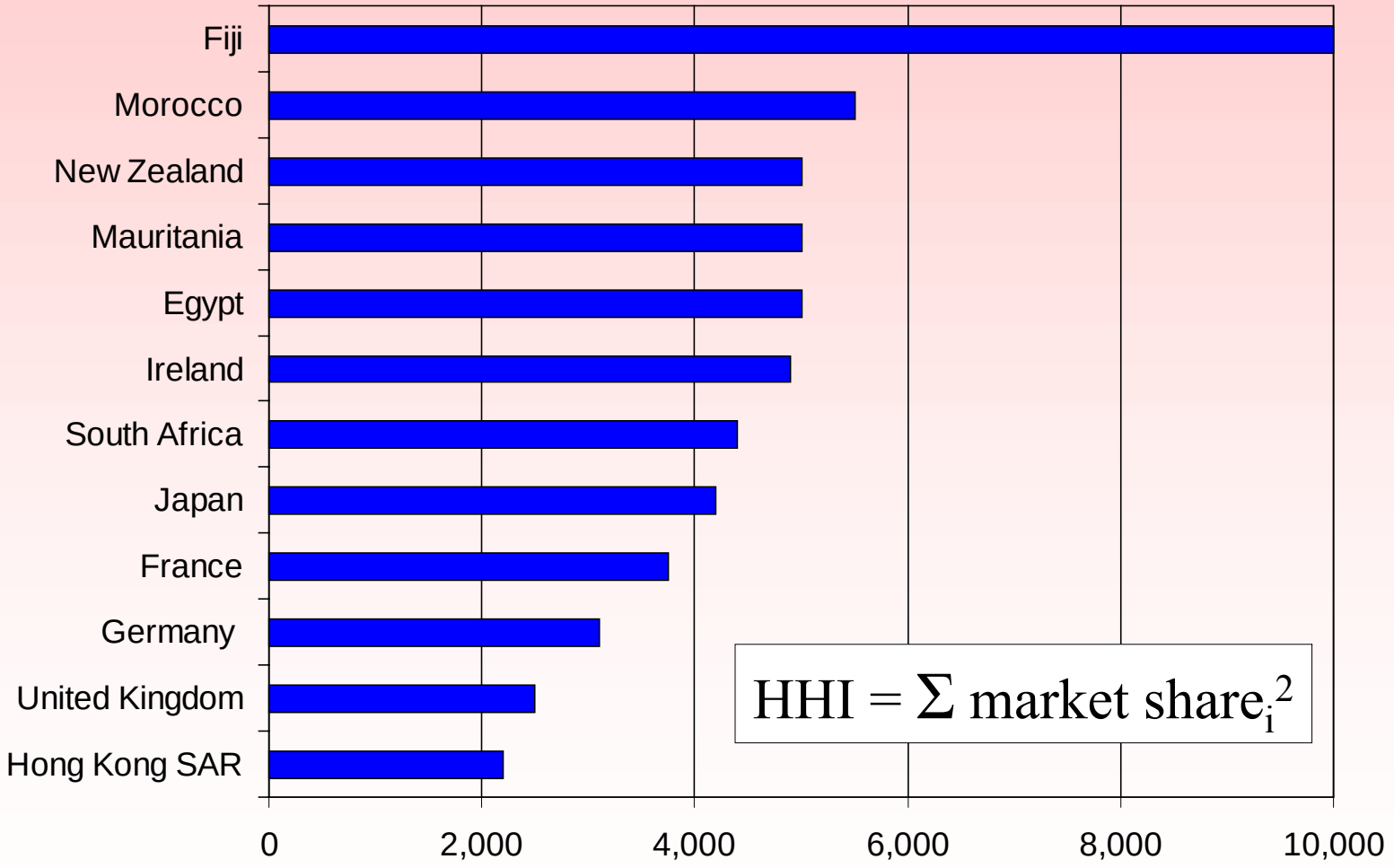
- Historically, numbers indicated the price of a call
- In many countries numbering and tariff schemes have been made so complex that few people can accurately predict the cost of calls
- Increasingly calling plans are flat-rate, so the identification is no longer relevant
- Number portability is making geographic, network and service-based numbering schemes no longer relevant

Uncompetitive mobile markets

- Extremely complex tariff schemes
- Very high termination rates
- Outrageous international roaming charges
- Blocking of alternative technologies
- Some markets show price tracking
- Even cases of collusion

The underlying cause is the very high degree of concentration and lack of competition.

Herfindahl-Hirschman Index



Entry onto the mobile market

- Many customers will have existing mobile numbers, especially the higher spending subscribers
- New entrant operators will wish to compete for their business
- Customers want to keep their existing numbers, especially businesses
- Established operators have tried to frustrate the introduction of MNP
- MNP is a *prerequisite* for effective market entry

Bahrain – TRA

- “It is counter to the goal of increasing benefits to customers and would be unfair to businesses if they were required to incur these costs because number portability was not available.”
- “Appeals by incumbents against the introduction of number portability have consistently failed; competition commissions and appeal courts have found in favour of the competitive benefits to the consumer.”
- “As a result of its own studies and considerations the TRA is satisfied that available evidence consistently points to the competition enhancing benefits of MNP and considers that MNP may be especially important in a maturing market that is currently served by a single operator”
- “It is accordingly the position of the TRA that it should require the implementation of MNP within Bahrain.”

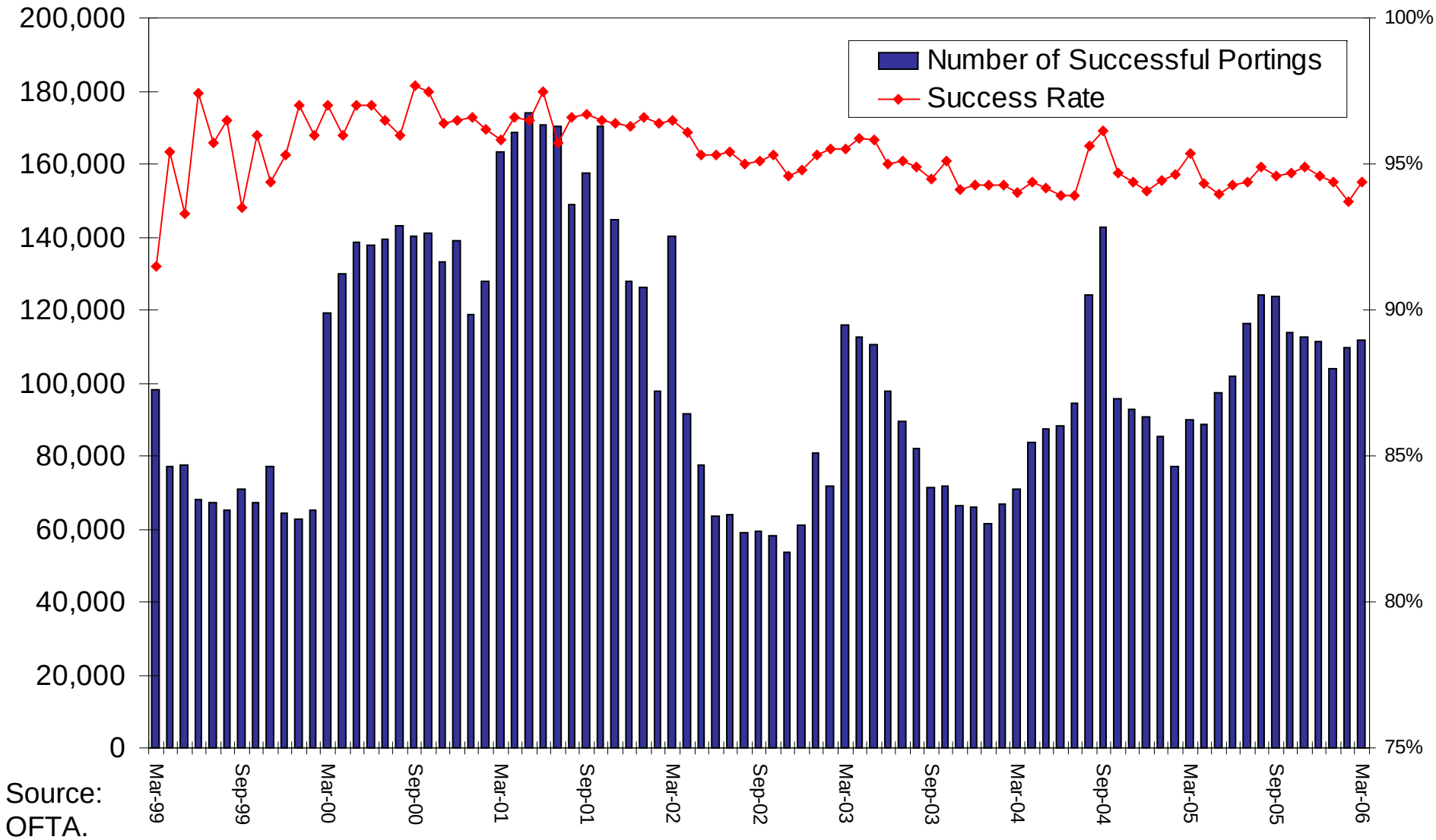
http://www.tra.org.bh/

Hong Kong SAR

- A fiercely competitive market
- Around 130 per cent mobile teledensity
- About 1.3 million portings per year, or one quarter of the population
- MNP has become an accepted part of the market

Yan Xu's case study on Hong Kong and China
http://www.itu.int/osg/spu/ni/multimobile/papers/ChinaHKMobileMultimedia.pdf

Hong Kong, SAR

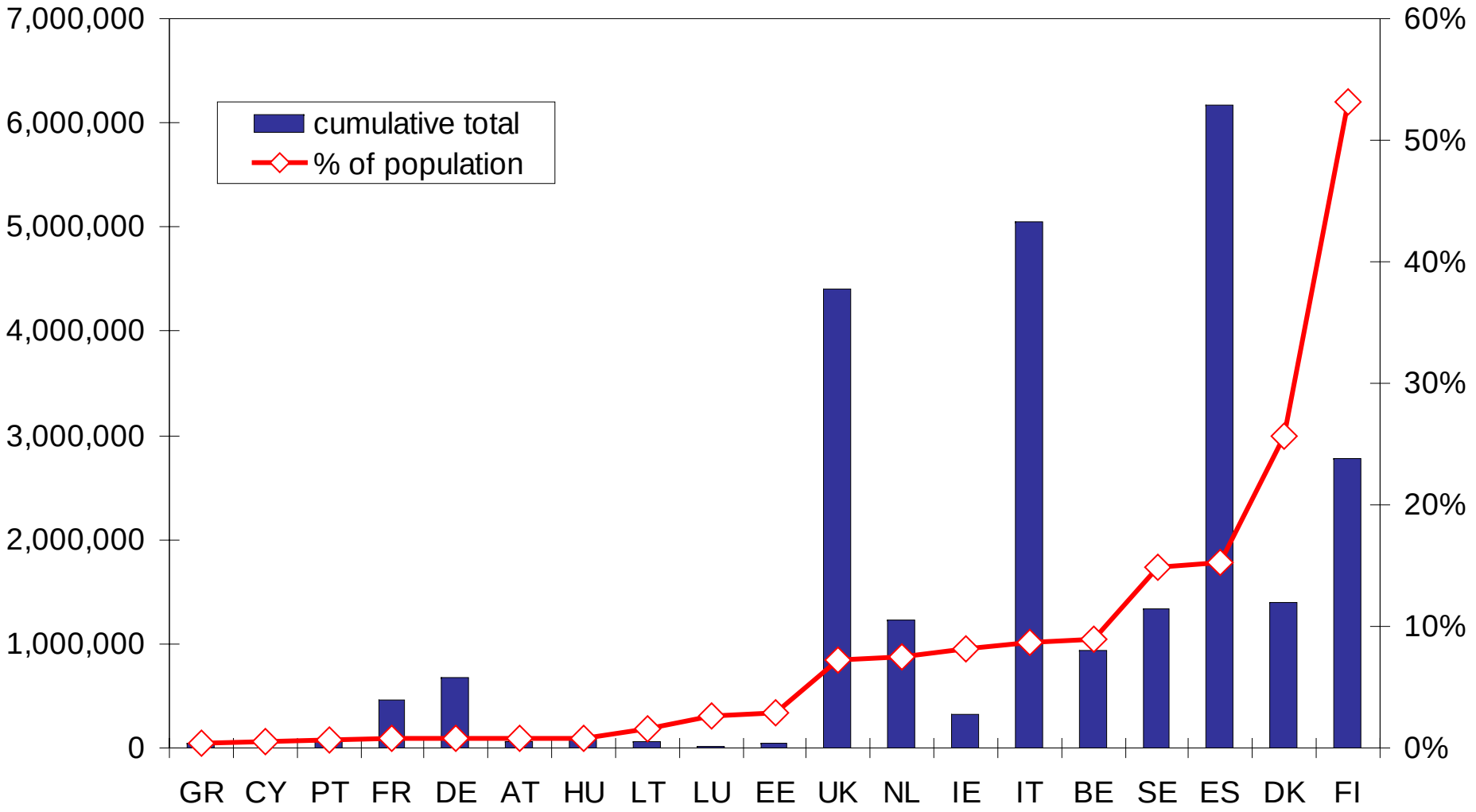


Source: OFTA.

European Union – MNP

- Some countries have had MNP for a long time
- EU legal obligation since 25 July 2003:
  - geographic numbers
  - non-geographic numbers
- Technology neutrality, so MNP applies to 2G and 3G
- Portability between fixed and mobile:
  - Denmark and Switzerland have legal provisions, but extensively delayed
  - one major problem is high mobile termination rates
  - will never be applied
- No specific legal obligations on portability for the Internet:
  - user identifiers
  - domain names
  - IP addresses

Mobile numbers ported in the EU



Source: EC, Eleventh Implementation Report.

Subsidiarity

- Member states were each to implement MNP
- Operators demanded “light touch” regulation
- Some countries were incredibly slow
- A few received infringement proceedings
- “incumbent” mobile operators opposed MNP
- Some administrative systems are worthy of Kafka
- Some implementations are just inept
- Subsidiarity has clearly failed!
- Light touch regulation can clearly fail!

MNP effects

- South Korea:
  - fierce competition
  - many new special offers for customers
  - about 3 (of 36) million customers ported to a rival
- United States of America:
  - bitter resistance by operators
  - then fierce competition:
    - to retain existing customers
    - to attract new customers
- Japan:
  - will be available from 1 November 2006
  - operators have announced procedures

Operator benefits of MNP

- Number portability need not be a burden
- It should be an opportunity to:
  - increase market share
  - target high-ARPU subscribers
- Number portability does not cause churn:
  - portability only frees customer
- Churn is caused by:
  - poor quality of service
  - inadequate geographical coverage
  - excessive charges
- A strong, high-quality brand will be able to resist the desire to port to other operators

A widening name space

- Range of networks:
  - GSM, CDMA, UMTS
  - WLL (CDMA and PAS), Wi-Fi, Wi-MAX
  - DAB, DVB, DMB
  - fixed broadband (with Wi-Fi)
- Range of services:
  - instant messaging, voice, video-telephony
  - streamed content
  - location based services
- Range of devices:
  - PC, PDA
  - games console
  - set-top box

A range of identities

- Telephone number(s):
  - real
  - temporary (e.g., local SIM card)
  - virtual
- Handset (IMSI)
- SIM card (IMEI)
- IP addresses (fixed, temporary or mapped)
- Personal:
  - social security, passport, identity cards
  - credit cards
  - frequent flyer

Payments

- These are often tied to numbers
- There is a long history of the inaccuracy of bills
- Premium rate “scams”
- Increasingly mobile phones can be used a banking instrument:
  - a major m-commerce initiative by the GSM Association
- Purchases can be:
  - added to monthly bill
  - deducted from stored credit
  - treated as a credit card transaction

Internet identifiers

- Many people adopt *non-portable* identifiers from their ISP and ASP
- Electronic mail addresses:
  (e.g., fred@hotmail.com or fred@ethionet.et)
- Instant messaging identifiers
  (ICQ 1077801 or skype://fred)
- Social networking software
  (fred@myspace.com)

Internet domain names

- In many countries registration of a domain name is restricted and complex
- Often the charges are high or unaffordable
- National ICT strategies should:
  - ease registration
  - create competition amongst Internet registries to lower the cost
  - encourage affordable domain name hosting services
- People and businesses should be encouraged to register their own domain names
- With your own domain name you are independent from ISPs and some ASPs
- Domain names should be portable to other ISPs, subject to applicable contract law

Conclusions

- Customers create the value associated with names and numbers
- Competition is more talked about by operators than engaged in
- Operators have often delayed legislation
- Operators have frustrated “light touch” regulation
- Operators have managed to make MNP worthless in several countries

Looking ahead

- VoIP is an increasing issue with virtual telephone numbers in distant locations
- The importance of national numbers disappears into the IP cloud
- The dialling of numbers is declining in importance as we use stored identifiers
- Increasing use of Internet identifiers requires:
  - vigilance on competitiveness
  - policies to encourage people and businesses to register their own domain names

Thank you

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