Mobile Overtakes Fixed: What Happens Next?

Seminar on Economic and Market Analysis for Central and Eastern European countries (CEEC) and Baltic States
Czech Republic, Prague

9-11 September 2003

Robert Shaw

<robert.shaw@itu.int>

ITU Internet Strategy and Policy Advisor

International Telecommunication Union

Introduction: International Telecommunication Union

- International organization where governments and private sector coordinate global telecom networks and services
- Founded in 1865, it is the oldest specialized agency of the UN system
- 189 Member States, 650 Sector Members, 75 Sector Associates
- Headquarters Geneva, 11 regional offices, 790 staff / 83 nationalities

International Telecommunication Union

ITU Mission

- Maintain and extend international cooperation in telecommunications
- Technical and policy assistance to developing countries
- To harmonize actions of Member States and promote cooperation between Member States and Sector Members

International Telecommunication Union

ITU mission

- To promote at international level, the adoption of a broader approach to issues of telecommunications in the global information economy and society
- To extend the benefits of telecoms to all the world's inhabitants
- "Helping the world communicate"

International Telecommunication Union

History

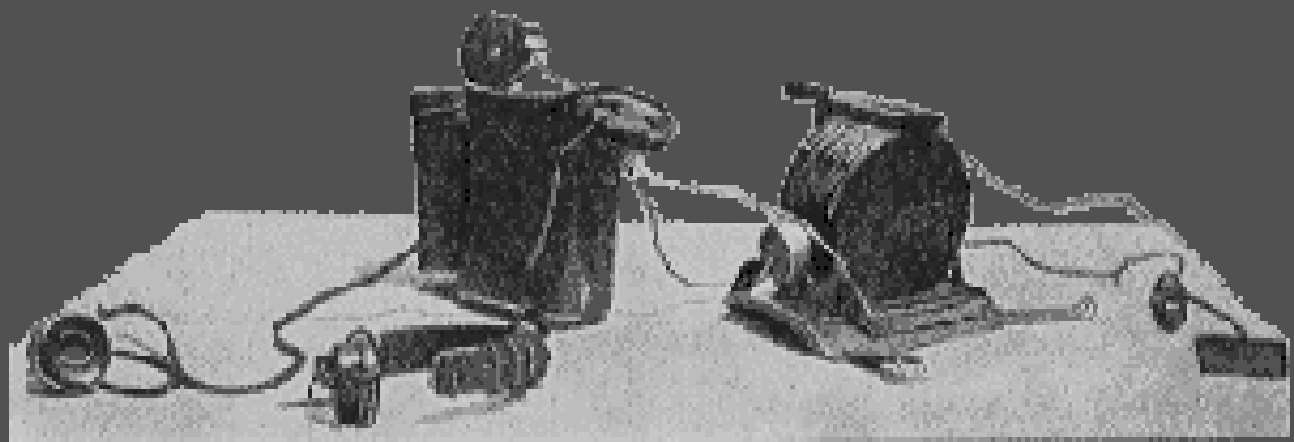
International Telecommunication Union

The First Mobile?

- 1910: Lars Magnus Ericsson and his wife Hilda regularly used the first car telephone

Or was this the First Mobile?

- 1907: "The [U.S.] cavalry announced plans to equip its scouts with a new type of mobile telephone…. Like earlier horse-phones, it had a cord. Wire stored on a 5-mile reel played out as a scout rode. The improved model let a rider make calls without having to first dismount and then drive a spike into the ground to complete the electrical connection."



Source: Popular Mechanics, 1907

1924: The First Mobile Radio Telephone

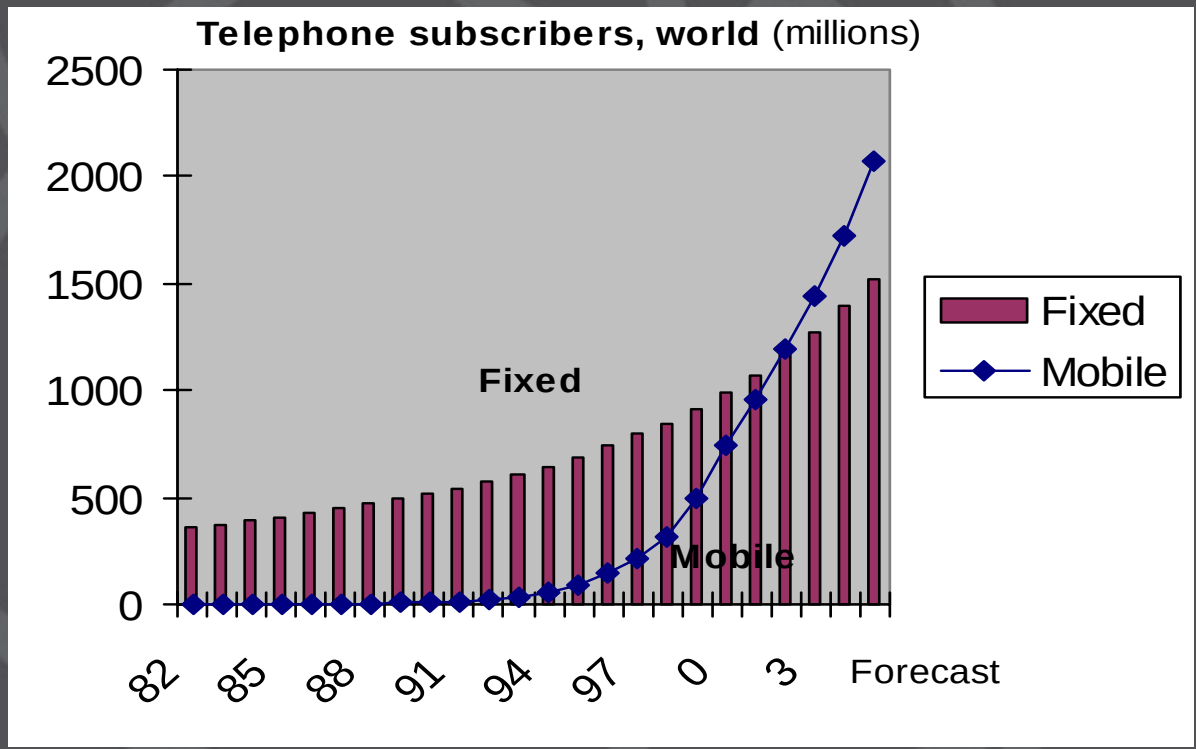
Source: http://www.bell-labs.com/technology/wireless/earlyservice.html

Fast Forward to Today

International Telecommunication Union

Mobile Overtakes Fixed

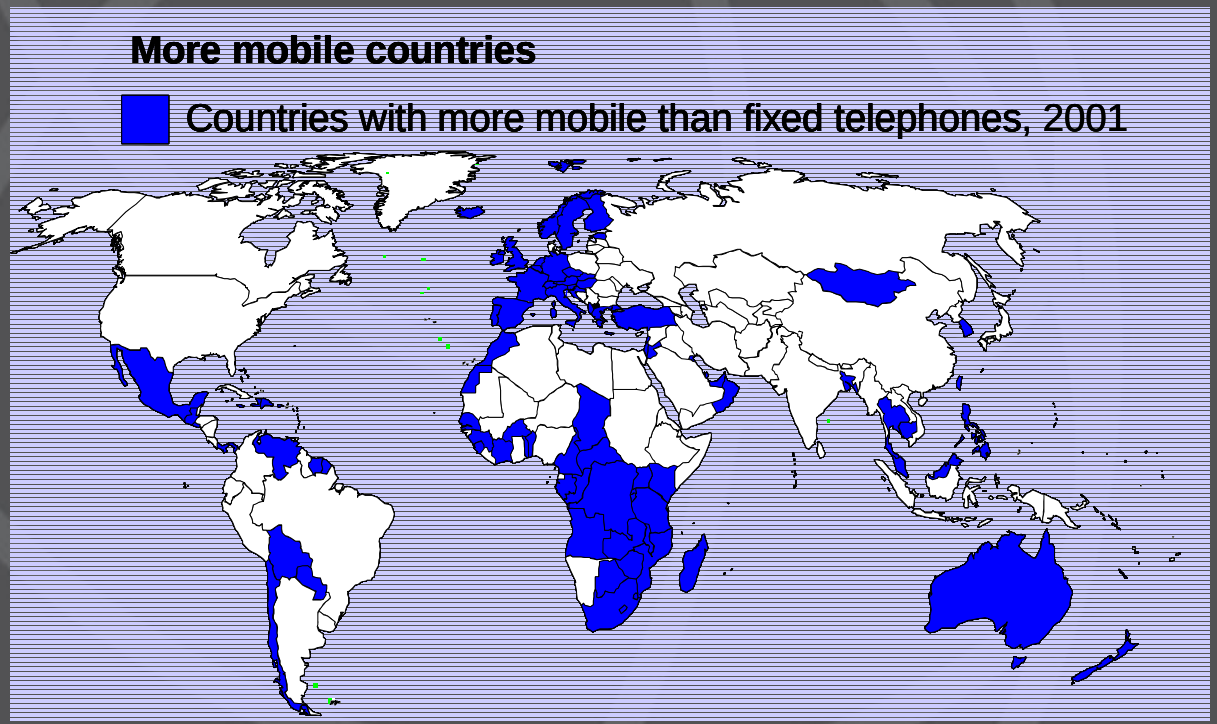
- The year 2002 marked an historic turning point in the history of telephony: the year when mobile subscribers overtook fixed-line subscribers worldwide



International Telecommunication Union

Mobile Overtakes Fixed

- No single causal effects: phenomenon has taken place across geographic criteria such as countries, regions, and continents and across socio-demographic criteria such as gender, income, or age and across economic criteria such as price premium for mobile or GDP per capita

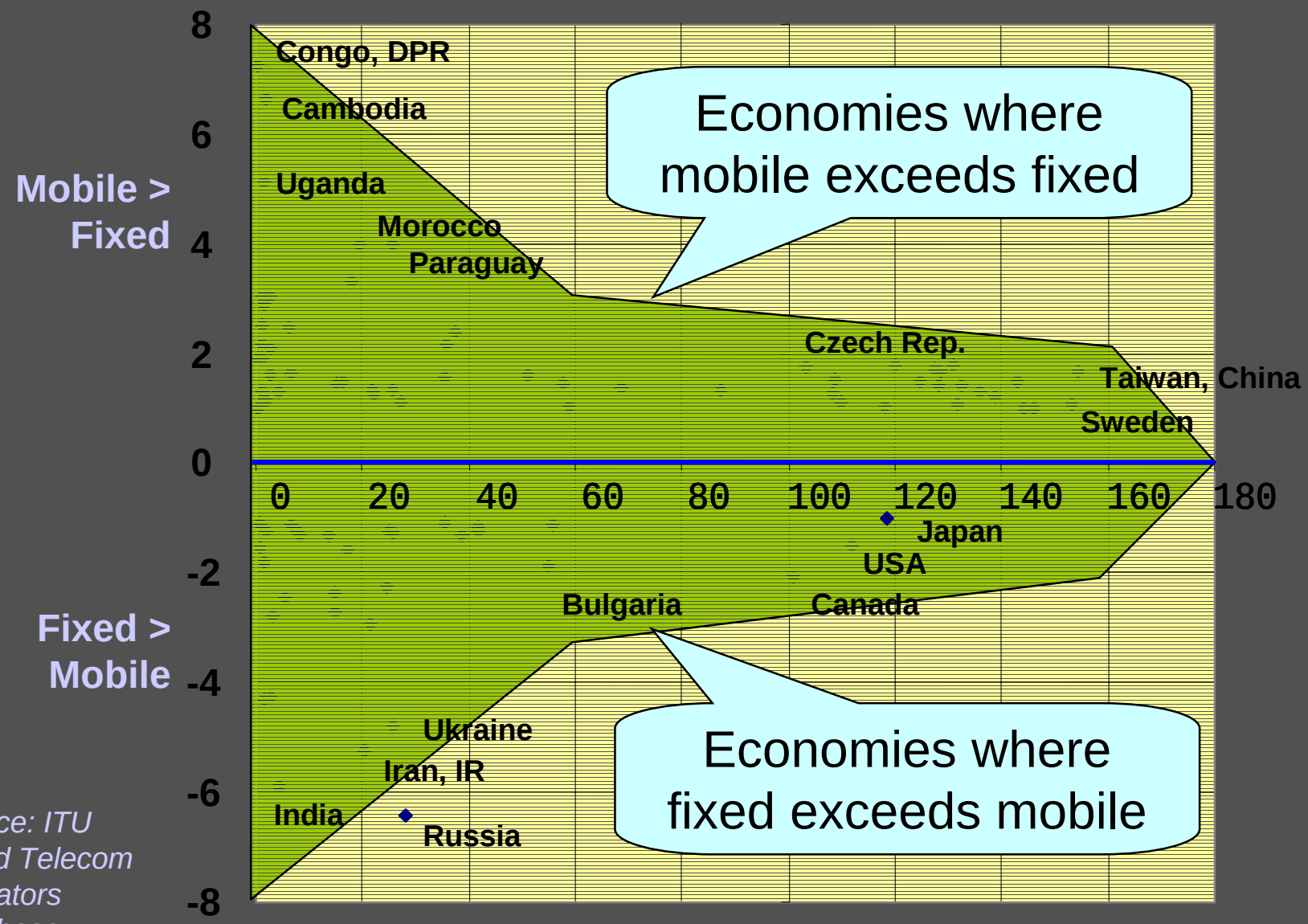


International Telecommunication Union

Mobile and Developing Countries

- Developing countries have seen the greatest impact of mobile communications on access to basic telecommunication services
- Cellular networks can be built faster than fixed-lines networks and can cover geographically challenging areas
- Mobile services have served to boost competition, and prepaid models have opened access to mobile cellular for those who would otherwise not qualify for telephone subscription plans

Mobile to fixed ratios: 2001



Source: ITU World Telecom Indicators Database

Africa and how mobile has improved basic telecommunication services

- 2001: More than 90 per cent of African countries had adopted cellular telecommunications compared to just 18 per cent in 1993
- Against the unsatisfactory background of telephone infrastructure in both fast-growing urban and rural areas, competition from mobile operators has also brought benefits for the development of fixed-line infrastructure.
- Examples: in both Côte d'Ivoire and Senegal, fixed-line penetration increased in areas where the operator faced competition from mobile providers

Reformulating our concepts of teledensity?

- Classic “teledensity”
  - Fixed-lines per 100 inhabitants
  - Reported by ITU since records began
- “Mobidensity”
  - Mobile subscribers per 100 inhabitants
  - Reported by ITU since 1980s
- “Total teledensity”
  - Fixed plus mobile subscribers per 100 inhabitants
  - Reported by ITU since 2000
- “Effective teledensity”
  - Mobile or fixed teledensity, whichever is highest, per 100 inhabitants
  - To be reported by ITU in future?

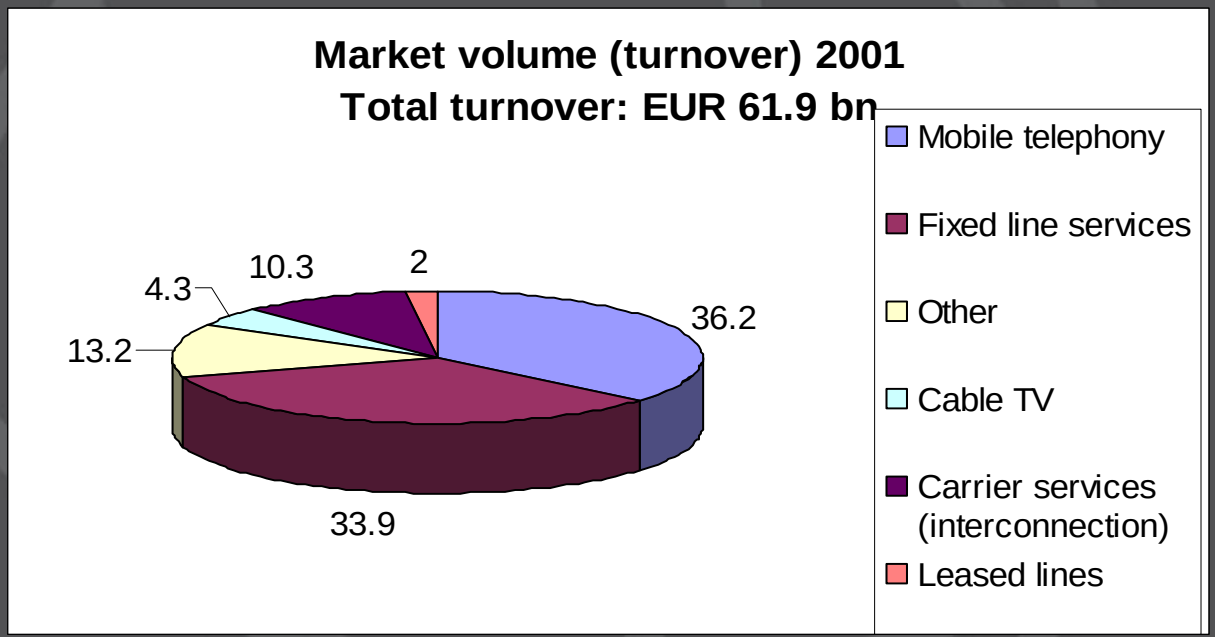
International Telecommunication Union

Some market trends

International Telecommunication Union

Mobile Revenues

- Globally mobile revenues are still lower than fixed revenues, but they are expected to overtake latter by the end of 2004
- Some countries already making cross-over: in Germany in 2001, mobile turnover already surpassed fixed line services



Source: RegTP 2002

International Telecommunication Union

But mobile market still has tremendous grow potential

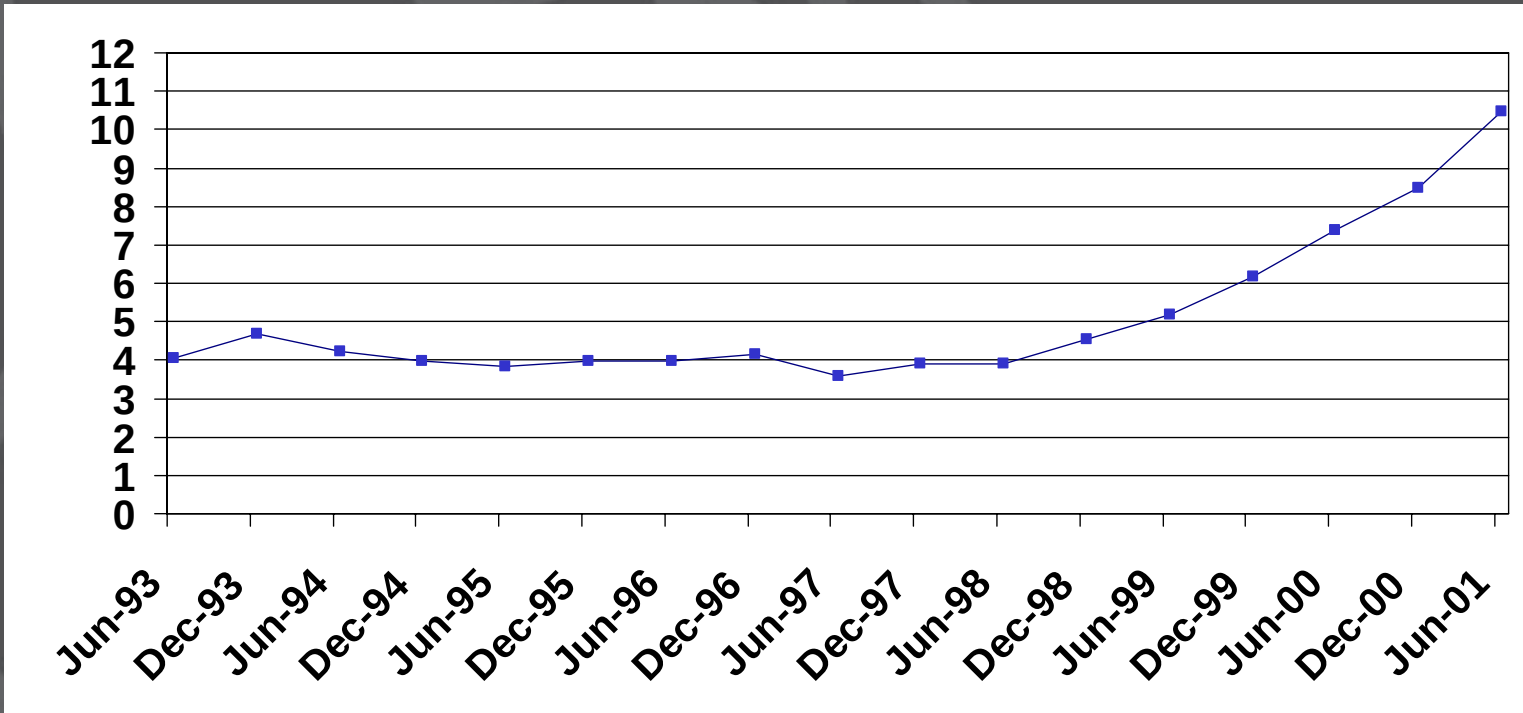
- Usage far lower for mobile than fixed
- UK statistics on minutes usage: 1999-2001

Quarter	Fixed	Wireless
1999 q2	15.7	3.49
1999 q3	16.0	3.51
1999 q4	16.5	3.58
2000 q1	17.3	3.37
2000 q2	17.2	3.19
2000 q3	19.7	2.98
2000 q4	21.7	3.11
2001 q1	23.2	2.91
2001 q2	22.9	2.78
2001 q3	23.8	2.85
2001 q4	24.6	2.94

Source: Andrew Odylzko, OFTEL

Priming the Market: consumers like predictable pricing plans

The effect of imaginative pricing plans in U.S., starting with AT&T Digital One Rate - April 1998



North American cell phone usage (minutes of incoming and outgoing calls per day)

Source: Andrew Odylzko

International Telecommunication Union

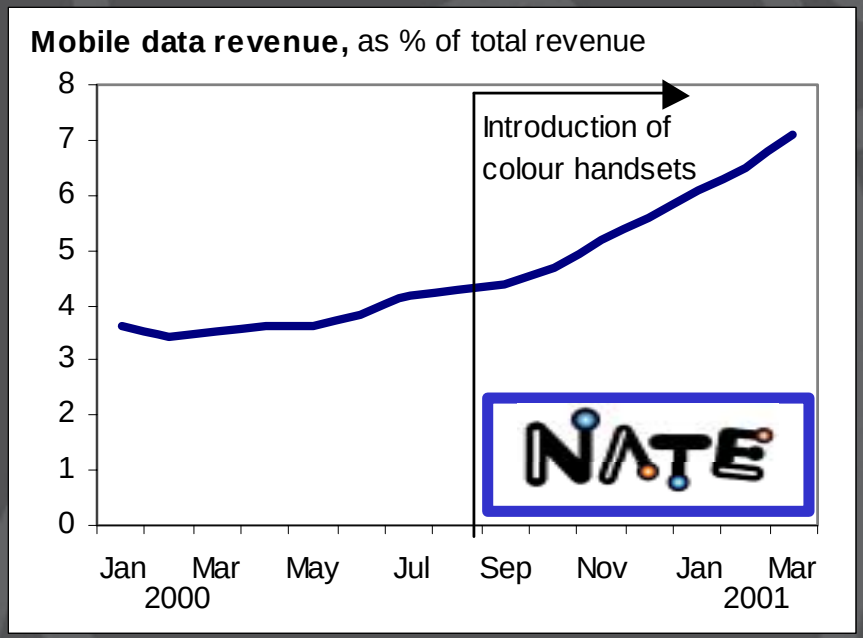
SMS Traffic Growing

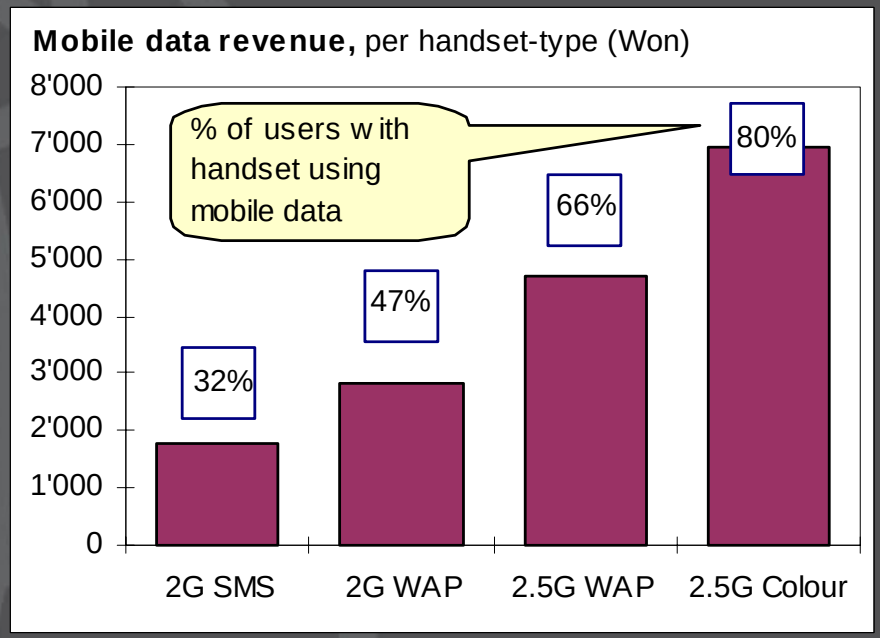
- United Kingdom: in 2002, total number of chargeable person-to-person text [SMS] messages sent across four UK GSM networks totalled 16.8 billion (43 million a day)
- For 2003, the Mobile Data Association (MDA) forecasts text messaging expected to reach 20 billion, equating to 55 million messages sent per day
- MDA post the numbers each month with reconsidered forecasts at www.text.it.

Source: Mobile Data Association (MDA) at http://www.mda-mobiledata.org

Like other types of mobile data…

SK Telecom's revenue from mobile data, as a percentage of total data (Jan 2001 – March 2002) and by type of handset, March 2002 (in Korean Won)



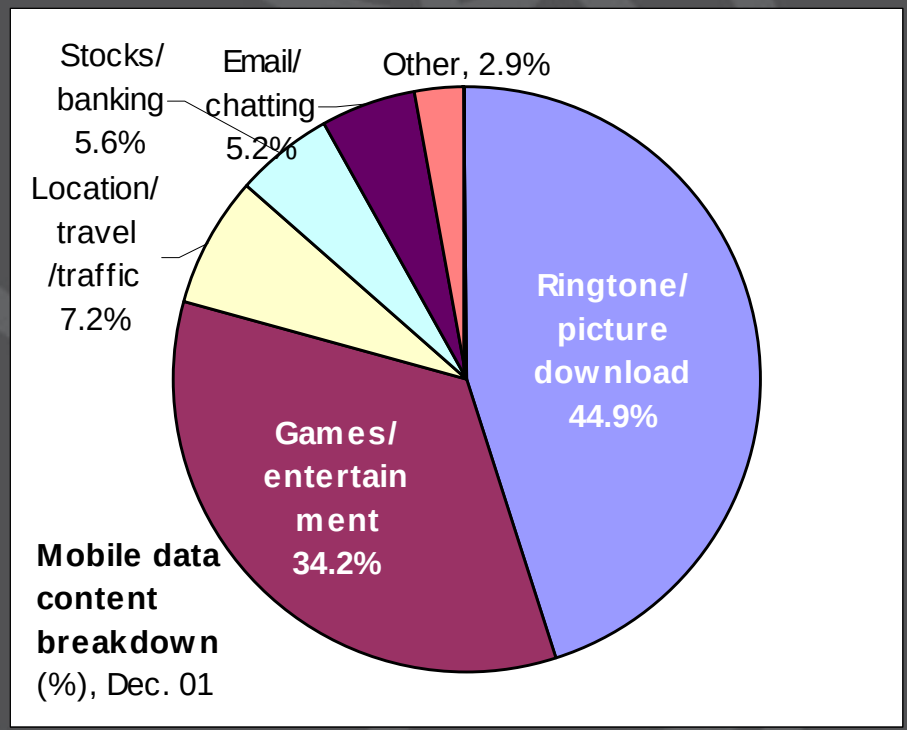


Source: ITU Korea Case Study, 2002; SK Telecom

International Telecommunication Union

But mobile data applications remain decidedly “low tech”

- Data from Korea’s SK Telecom on preferred content



International Telecommunication Union

International Traffic to and From Mobile Phones

- International traffic contributes considerably to the average revenue per user (ARPU)
- The more international traffic is terminated to mobile handsets, the greater payments international carriers must make to mobile operators
- From 2000 to 2001, volume of international traffic originating on mobile phones grew from 19.2 to 22.6 billion minutes. Mobile-terminated traffic grew from 25.6 to 34.2 billion minutes
- Europe accounts for the largest volume of any region with almost 14 billion minutes of international long-distance traffic originating on mobile handsets as well as receiving the bulk of mobile-terminated traffic with a 56% share of the world's total

Source: Telegeography 2003

International Traffice to and From Mobile Phones: Consequences

- Increasing amount of mobile terminated traffic has made mobile termination costs concern for international carriers, consumers and NRAs
- High termination costs result in a significant differential between retail and wholesale prices for calls to mobile phones compared to fixed networks
- Growth in mobile traffic contributing disproportionately to the global cost of termination
- Example: in Europe, although mobile calls account for only 30% of all incoming international traffic, it represents 67% of total cost for terminating international traffic

Source: Telegeography 2003

The Changing Roles of Mobile and Fixed-Line Communications

- Mobile has overtaken fixed in terms of subscribers and may soon overtake in terms of traffic and revenue as well…
- Bargaining power of industry players in a competitive landscape will shift towards mobile operators
- Large implications for fixed-line operators, who are now having to face competition from new entrants in local, national and international long-distance telecommunications and Internet markets, as well as substitution from their mobile counterparts

Some Implications for Policy and Regulatory Objectives

International Telecommunication Union

Implications for Policy and Regulatory Objectives

- Liberalization, privatization, establishment of regulatory authorities and international agreements on basic services (as established in WTO Reference Paper) have significantly altered the telecommunications paradigm in past two decades
- With further developments of the fixed-mobile cross-over, telecommunications paradigm shifting again
- Policy makers and regulatory authorities are now confronted with addressing these changes; revising telecommunications policies; and assessing the need for regulatory intervention

Some examples

Case Study: Korea and Handset Subsidies

- Prior 1996: Only incumbent Korea Mobile Telecom (renamed SK Telecom in 1997)
- 1996: Shinsegi Telecom enters market
- October 1997: three new competitors enter market: KT Freetel, LG Telecom and Hansol PCS (later renamed KTM)
- With five competitors in market, competition for subscribers aggressive with generous handset subsidies offered
- End 1998: total value of handset subsidies totals US$ 1.9 billion

Case Study: Korea and Handset Subsidies

- February 1999: “Korean National Parliamentary Hearing on the Economic Crisis” debates policy of allowing 5 mobile service providers to compete in confined domestic market & excessive handset subsidies
- April 1999: the Korean MIC intervenes and restricts handset subsidies to US$ 125 per subscriber and bans obligatory subscription periods, largely in the aim of securing profitability and improving management among mobile service providers
- June 2002 ban date: Growth in mobile subscriptions fall for the two consecutive quarters. Series of mergers and acquisitions during this period reduces number of mobile service providers from five to three

Source: ITU Competition Policy in Telecommunications Workshop Background Paper, 2002

Case Study: Hong Kong and Mobile Number Portability

- In Hong Kong, over 90% of the population has a mobile and it probably has the most competitive mobile market in the world with 6 providers for slightly less than 7 million people.
- March 1999, the regulator OFTA introduced mobile number portability (MNP). A key reason that no mobile provider has yet been able to dominate the market is due to the high subscriber churn facilitated by MNP.
- Before implementing MNP, OFTA commissioned a feasibility study and cost benefit analysis which concluded "A wide range of consumers will benefit from the MNP in Hong Kong. Mobile subscribers will be able to switch operators and avoid the costs and inconvenience associated with a number change. Competition in the industry will be heightened as a barrier to switching is removed, further benefiting residential and business users."

Case Study: UK and Mobile Termination Rates

- Following a study by the UK Competition Commission requested by UK regulator, OFTEL, it confirmed that it would require the UK's four mobile operators to reduce their mobile termination charges for calls to their mobile networks
- ITU Strategy and Policy Unit hosted a workshop on this topic in September 2000 – see www.itu.int/osg/spu/ni/fmi/

Source: http://www.oftel.gov.uk/press/releases/2003/pr01_03.htm

Case Study: Industry Self-Regulation

- In response to growing consumer demand for greater transparency in international roaming prices, the GSM Association published a Code of Conduct in July 2001
- In order to monitor compliance of European operators with the Code of Conduct, an independent consultancy, Ovum, monitored compliance by operators
- The first year of monitoring shows that the monitoring process itself has played a significant part in increasing compliance from 38 per cent to almost 100 per cent

Some ITU Resources

- SPU Research Project: Mobile Overtakes Fixed background paper available at http://www.itu.int/osg/spu/
- http://www.itu.int/osg/spu/ni/futuremobile/
- ITU SPU Newschannel on Mobile http://www.itu.int/osg/spu/newslog/categories/mobile/

International Telecommunication Union

Thank you

International Telecommunication Union

Helping the world communicate

International Telecommunication Union