

mobile telecommunications global regulation

Ewan Sutherland

contents

- North America
- Africa
- Japan and Korea
- China
- India
- European Union:
 - 2006 review
 - roaming regulation
- conclusions and issues

Africa

- Continuing strong growth of mobile
- Very limited growth of fixed networks
- Pre-paid roaming is unavailable or unaffordable
- No obvious route to broadband:
 - no business model
 - no technological model
 - very little content
- Some use of 3G data service, e.g., South Africa
- MNOs banking on m-payments & m-commerce

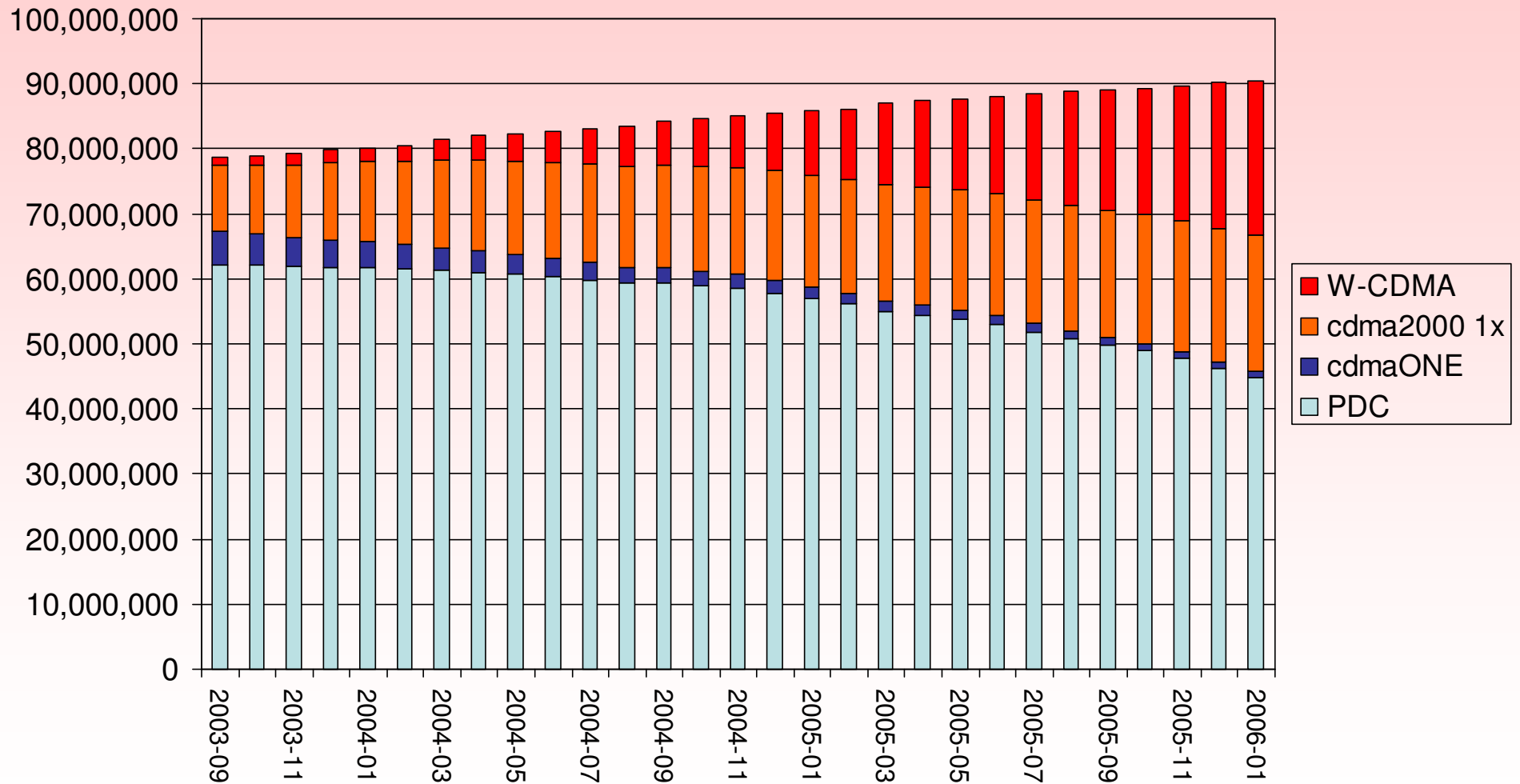
North America

- United States of America:
 - consolidation of operators
 - rapid growth of MVNOs based on content (Amp'd, Disney, ESPN, Helio, etc.)
 - flat-rate data plans
 - tripleplay and quadruple play (fixed telephony, Internet access, TV & cellular)
 - strong growth of Wireless ISPs and municipal Wi-Fi
 - 3G “beachfront” spectrum to be auctioned this year
- Canada:
 - Mobile Number Portability is coming

Japan and Republic of Korea

- Ubiquitous Network Society (UNS):
 - joint industry-government vision
 - NGN plus RFID + sensor networks
- 3G is deployed and widely adopted
- Lots of services on 2.5G and 3G
- Japan:
 - Vodafone is failing
 - three new operators launching 3G in 2006
- Wireless broadband is also being deployed
- South Korea is pushing DMB (home and export)

Japan switches to 3G



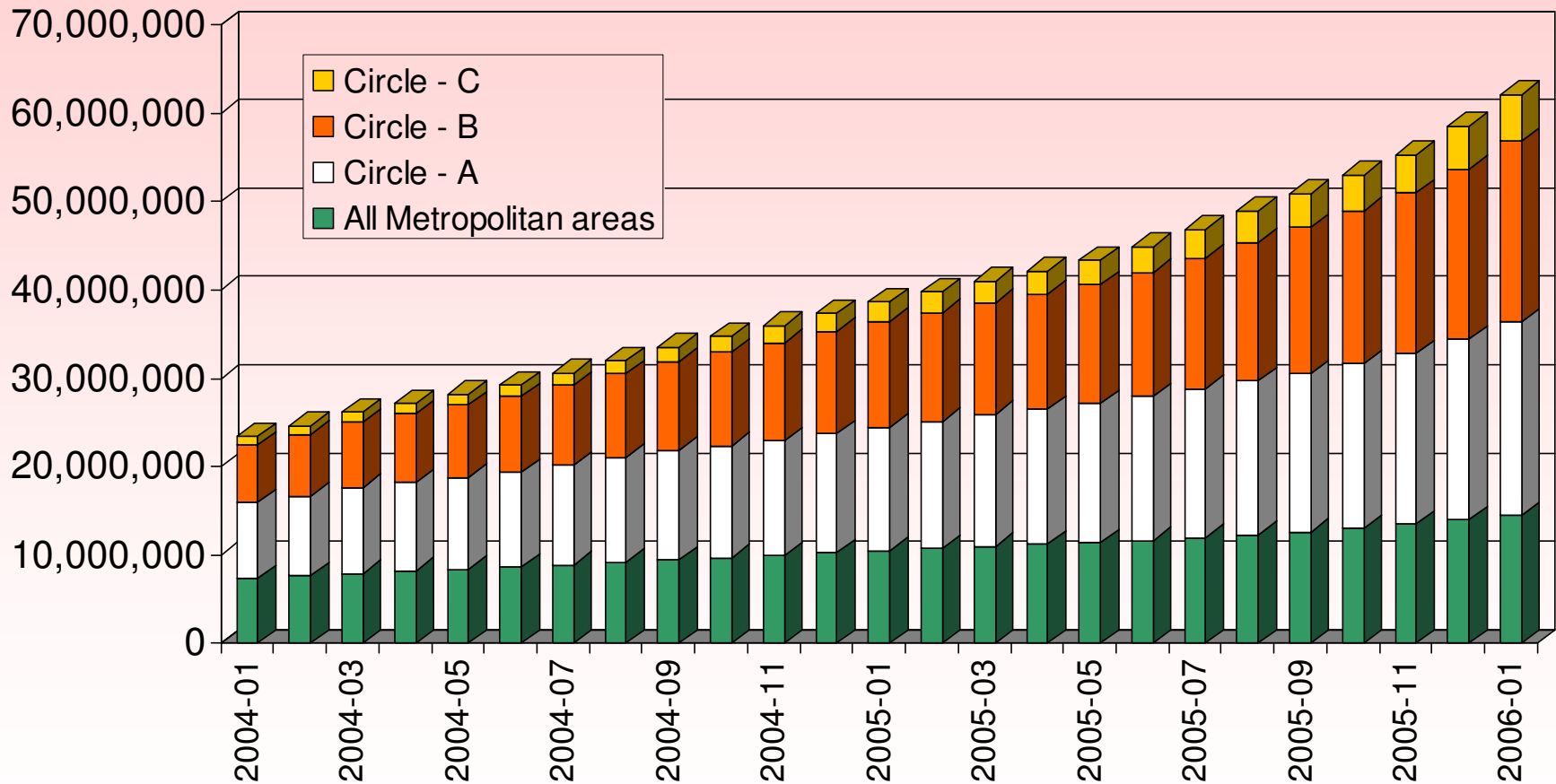
China

- Only 400 million mobile customers:
 - 900 million potential customers
 - adding 5 million each month
 - also 35 million broadband lines
- Big push in 2006 for 3G:
 - TD-SCDMA
 - showcase at Beijing Olympics (08/08/08)
- signed with Korea to work on DMB

India

- Growth of mobile market has accelerated
- Continuing disputes over:
 - prices
 - interconnection
 - spectrum
 - quality of service
- Still far behind China:
 - continuing Indian population growth
 - broadband market has stalled, suggesting serious problems in the market structure and the regulatory framework

India - GSM growth



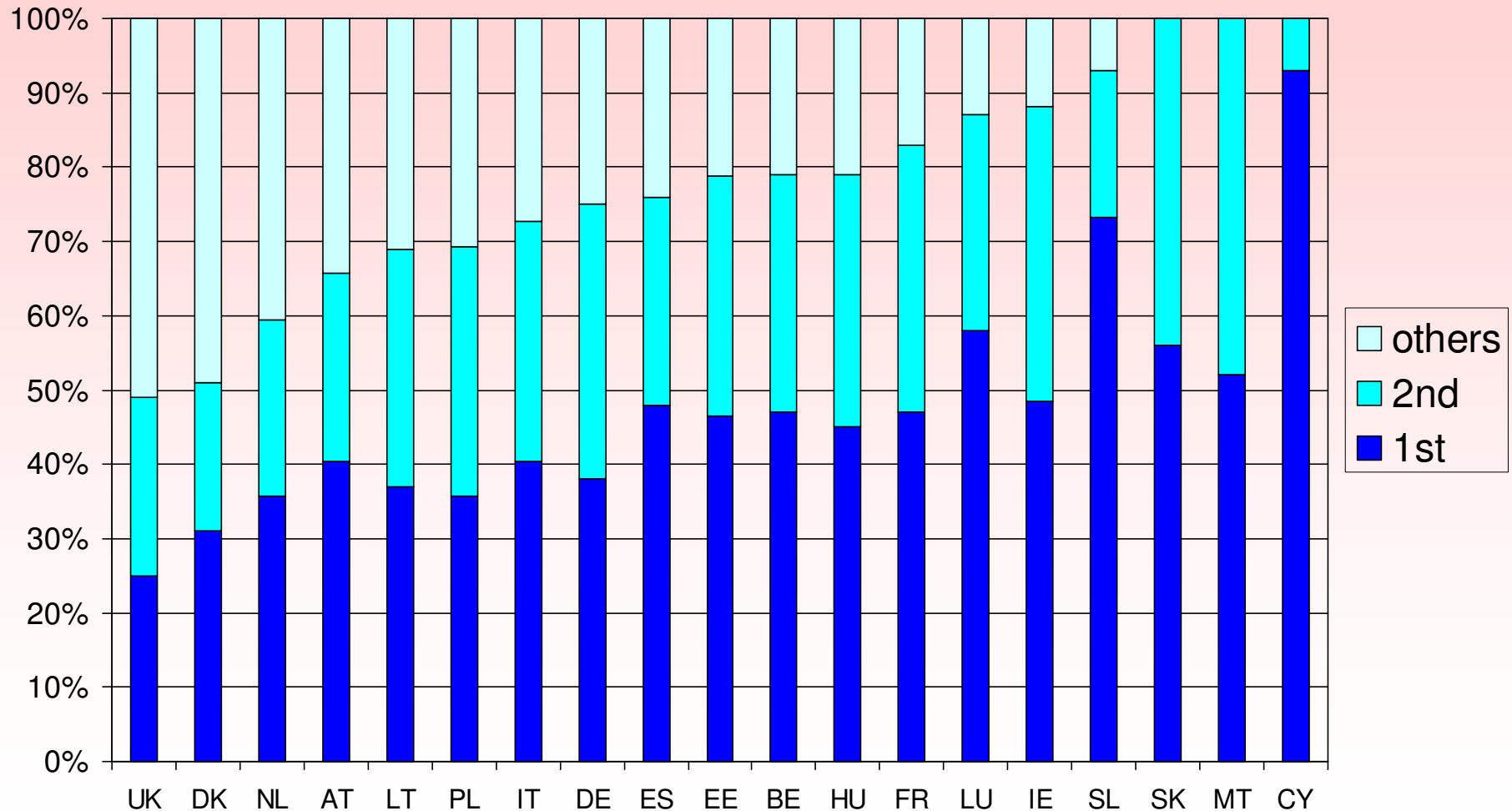
European Union

- The mobile market is replacement, churn and ring-tones
- Many member states still far behind schedule on transposition and implementation of 2002 directives
- 2006 Review of the telecommunications legislation
- EC presently preparing proposals:
 - no drama, shock or awe
 - streamlining and tinkering
 - formal legislative proposals by late 2006
 - to be implemented in member states by 2010
- Review of the list of markets that NRAs must analyse:
 - mobile termination will remain
 - operators want mobile call origination and access removed
 - roaming is a bigger problem
 - new definitions should take effect in 2007

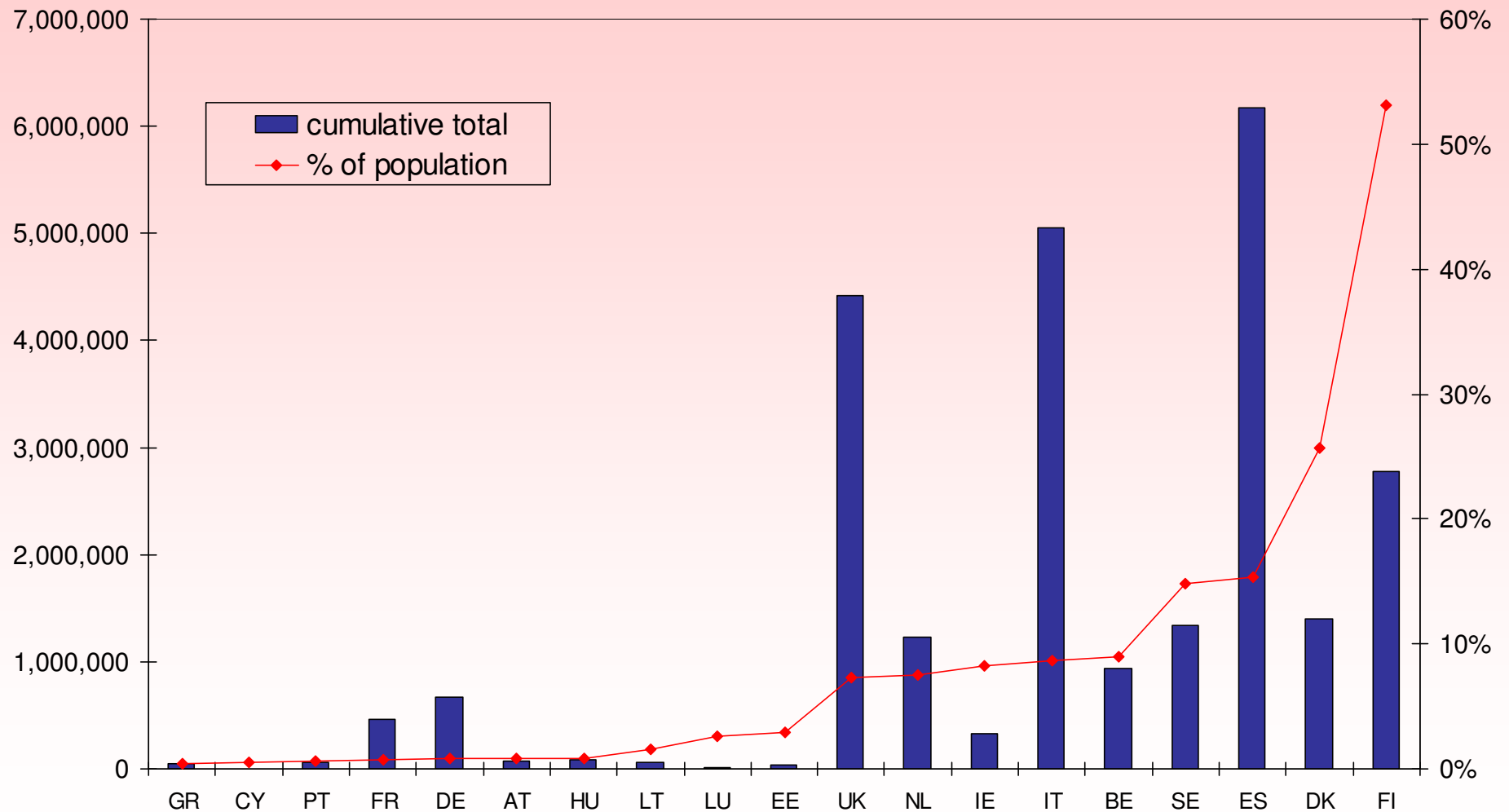
11th Implementation Report

- Mobile phone penetration levels grew at a faster rate than 2004:
 - 426 million people now have mobile phones representing 92.8% of the population of the EU 25.
 - penetration exceeded 100% in eight Member States
 - growth in the EU-15 was slower, not unexpected for a maturing market
- Revenues continued to increase, at a slower pace as the market matures
- Competition, aided by regulatory tools, such as mobile number portability, is leading to significant consumer benefits.
- More operators and more MVNOs.
- Operators are offering more value added services to increase ARPU
- 3G became a commercial reality in 2005 although voice seems to be the main driver, close to 15 million customers
- First signs of network consolidation, e.g., Denmark, Austria and the Netherlands. No significant consolidation among service providers has yet taken place.
- Further downward pressure on mobile termination rates through regulatory intervention

Mobile market shares



Mobile numbers ported



EC review of NRA decisions

- Unlike fixed markets, the markets for mobile networks and services have proven to be generally more competitive and regulation is as such much more limited. There is no regulation at retail level, and wholesale regulation has on the whole been restricted to wholesale termination
- a limited number of NRAs have nevertheless considered regulation necessary, where one mobile operator was found to have single dominance or two or more together found to be “collectively” dominant
- As regards wholesale international roaming, no NRA had as yet notified this market on 30 September 2005

	A T	B E	C Y	C Z	DK	EE	E S	FI	FR	DE	EL	HU	IRL	IT	LT	L U	LV	MT	N L	PL	PT	SE	SI	S K	UK	
1	Blue				Blue			Blue	Blue			Blue	Blue									Blue				
2	Blue				Blue			Blue	Blue			Blue	Blue									Blue				
3	Blue							Orange	Blue			Blue	Blue									Blue	Green			
4	Green							Green	Blue			Blue	Blue									Blue	Green			Orange
5	Blue				Green			Orange	Blue			Blue	Blue									Blue	Green			Blue
6	Blue				Green			Green	Blue			Blue	Blue									Blue	Green			Orange
7	Blue				Blue			Blue				Blue	Blue									Blue	Blue			Blue
8	Blue				Blue			Blue	Blue	Blue		Blue	Blue									Blue	Blue		Blue	Blue
9	Blue				Blue			Blue	Blue	Blue		Blue	Blue									Blue	Blue		Blue	Blue
10								Blue	Blue	Orange		Green	Blue									Green	Blue			Blue
11	Blue				Blue			Blue	Blue	Blue		Blue	Blue									Blue	Blue	Blue	Blue	Blue
12					Blue			Blue	Blue			Blue	Blue									Blue	Blue			Blue
13	Blue							Blue				Blue	Blue									Blue	Blue			Orange
14	Green							Green				Green	Blue									Blue				Blue
15	Green							Green				Green	Blue										Green	Blue		Green
16	Blue				Blue			Blue	Blue		Blue	Blue	Blue		Blue				Blue	Blue		Blue	Blue		Blue	Blue
17																										
18								Orange					Orange										Orange			Orange



Effective competition - no *ex ante* regulation

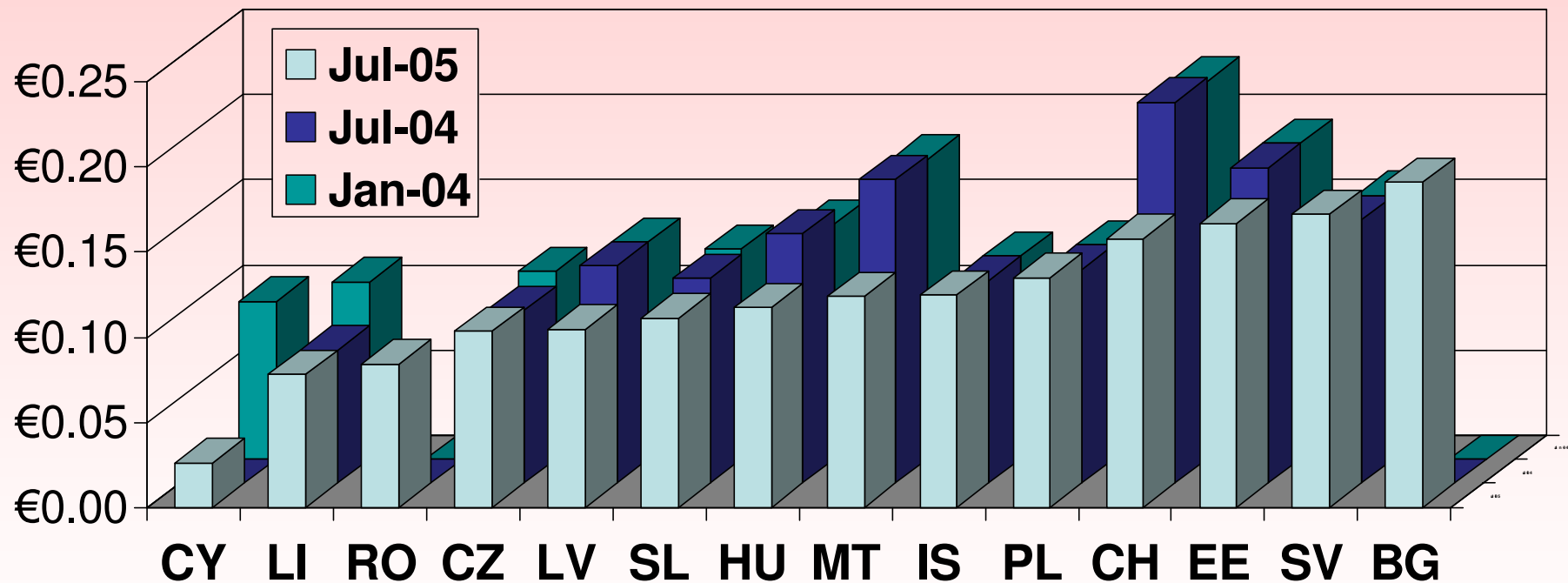


Partial competition - partial *ex ante* regulation

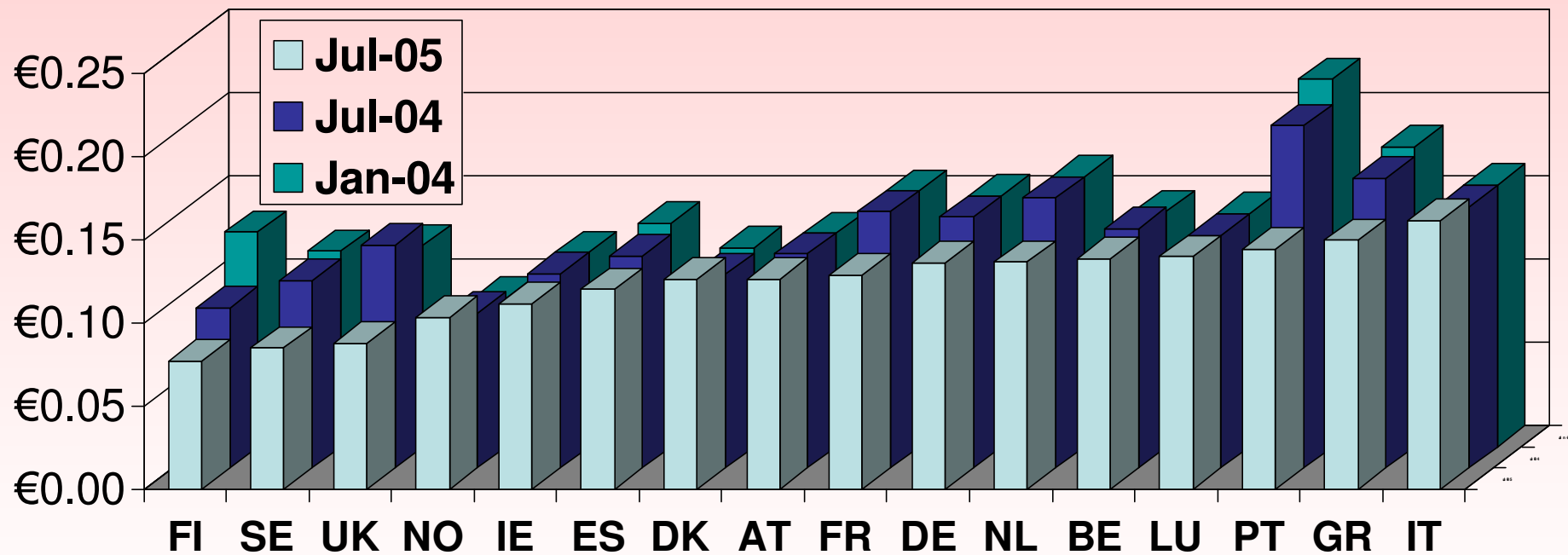


No effective competition - *ex ante* regulation

Mobile termination rates



Mobile termination rates



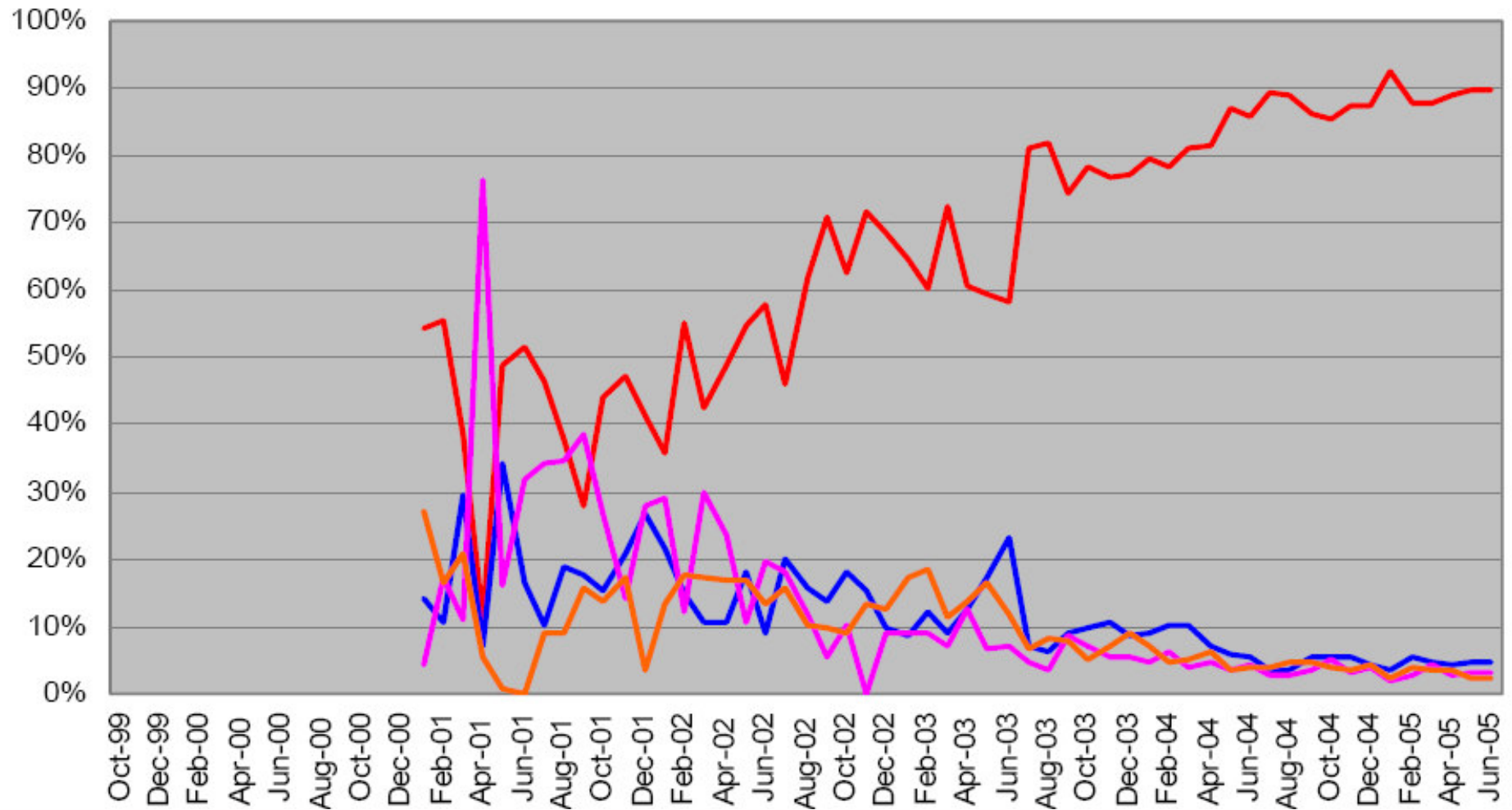
Mobile termination rates

- Continuing very high rates
- LRIC pricing models are extremely complex
- Wide variations in prices that do not reflect real underlying differences
- Regulatory action is proving far too slow
- Operators opposing and appealing every action
- High MTRs are a massive obstacle to:
 - “cutting the cord”
 - flat rate calling plans

International mobile roaming

- A problem of mind-numbing complexity
- DG Competition cases are still open
- Finnish and French regulators found they could not impose remedies
- The market definition is clearly wrong
 - it can be changed, but only slowly
- UK and Ireland found some “All Ireland” spectrum
- Pressure is on the EC to act

Wholesale traffic direction



Mrs Reding's regulation

- European Commissioner has promised a regulation
 - no need for transposition
- First it has to be drafted
- Then it has to pass the Commission, the Parliament and, hardest of all, the Council
- It goes directly against the conclusion that the regulatory framework is satisfactory
- It is unlikely to take effect in 2006
- Not at all certain it will have the desired effect
- There are fallback positions in:
 - Article 81 (3) of the EC Treaty
 - defining a broader wholesale mobile access market

Spectrum

- Some spectrum is being recycled:
 - 450 MHz for CDMA and FLASH-OFDM
- Potentially available in the 2.0 and 2.6GHz bands
- 3GSM operators vehemently opposed to technological neutrality, want to delay or deny market entry
- A compromise would be to allow them to change 900 and 1800 MHz to technology neutral, thus UMTS
- Should then allow WiMAX in higher bands
- Some countries are pushing for spectrum trading
 - there maybe buyers
 - but are there sellers?

WiMAX and DxB

- Slow release of additional spectrum:
 - WiMAX
 - Digital Broadcasting
- Digital broadcasting is severely fragmented, with national markets and competing technologies
- How many market entrants?
- Who will they be?
- How much potential revenue?
- How soon?

Wireless VoIP

- Cellular operators:
 - have no incentive to introduce wVoIP
 - do not anticipate wVoIP for several years
 - cannot afford to move to flat-rate calling plans
 - can block VoIP on GPRS, EDGE and UMTS
- They are looking for high value services:
 - streaming audio
 - streaming video
- But, Hutchison and E-Plus are doing deals with Skype

Disruptive wVoIP

- More handsets with IEEE 802.11
- SIP or Skype over WLAN:
 - still complicated to set up and use
 - authentication and payment needed on WLANs
- WiMAX may be a factor, depends on:
 - assignment of spectrum
 - cheap handsets
- Financial analysts still consider mobile voice has revenue potential (why?)

Conclusions

- a consumer focused market
- Growth in mobile has changed:
 - 2G in China, India, Brasil, Russia and Africa
 - 3G in Japan and Korea (soon China)
- Regulation is trailing developments:
 - operators playing “hardball” in appeals and lobbying
 - NRA level of understanding is still not deep enough
- 3GSM operators seem intent on blocking WiMAX and DxB, rather than cooperating
- The mobile networks seem:
 - designed to allow too much control to operators
 - grossly under-invested to deliver data throughput
- The business user seems to be on the margins, though paying a lot of money

Issues

- How can mobile operators escape from their dependency on termination revenues?
- What is the business model for a content-led mobile service when voice is free?
- Do mobile operators have the managerial expertise to survive in a content-led world?
- How can we ensure disruptive players get onto the market?
- Can regulators finally sort out roaming and if not what does that tell us?
- Can someone resell global mobile access to MNCs?

thank you

Ewan Sutherland

<http://www.3wan.net/>

3wan [at] 3wan.net

+44 141 416 0666