mobile telecommunications present and future

Ewan Sutherland

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- competition and market failures
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- MVNOs
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- value of mobility, nomadicity & ubiquity
- conclusions and issues

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Disruptions

- New spectrum bands
- New wireless services
- New tariff plans
- Bundling of services
- Changes in fashion

Geography

- Manufacturing moves to China
- Design moves to China
- Largest and fastest growing market
- India is still quite small in comparison
- Europe is churn and replacement
- 3G is growing, but only strong in Japan & Korea
- Largest markets for content and services is in Japan-Korea and USA

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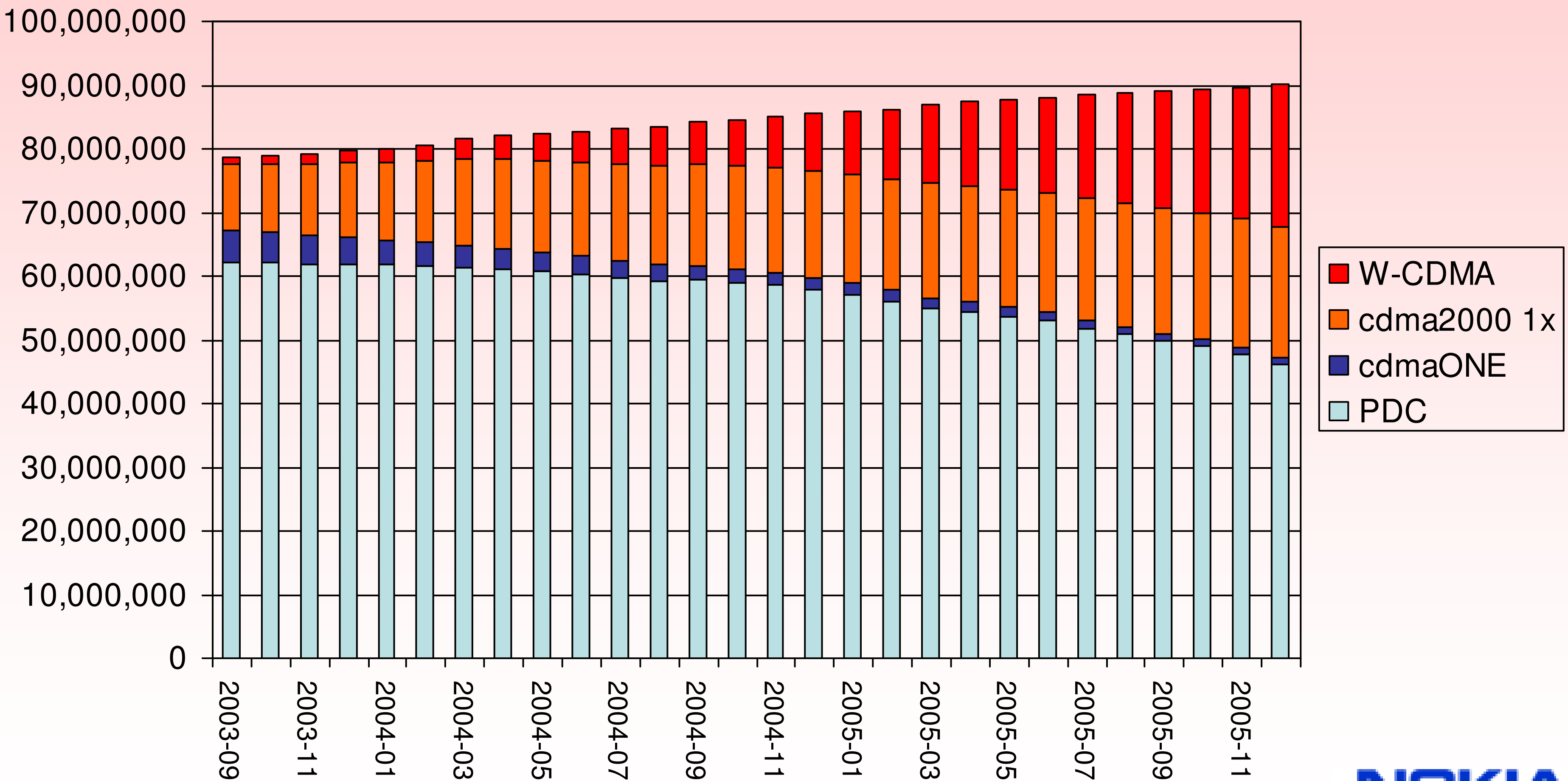
Japan goes 3G



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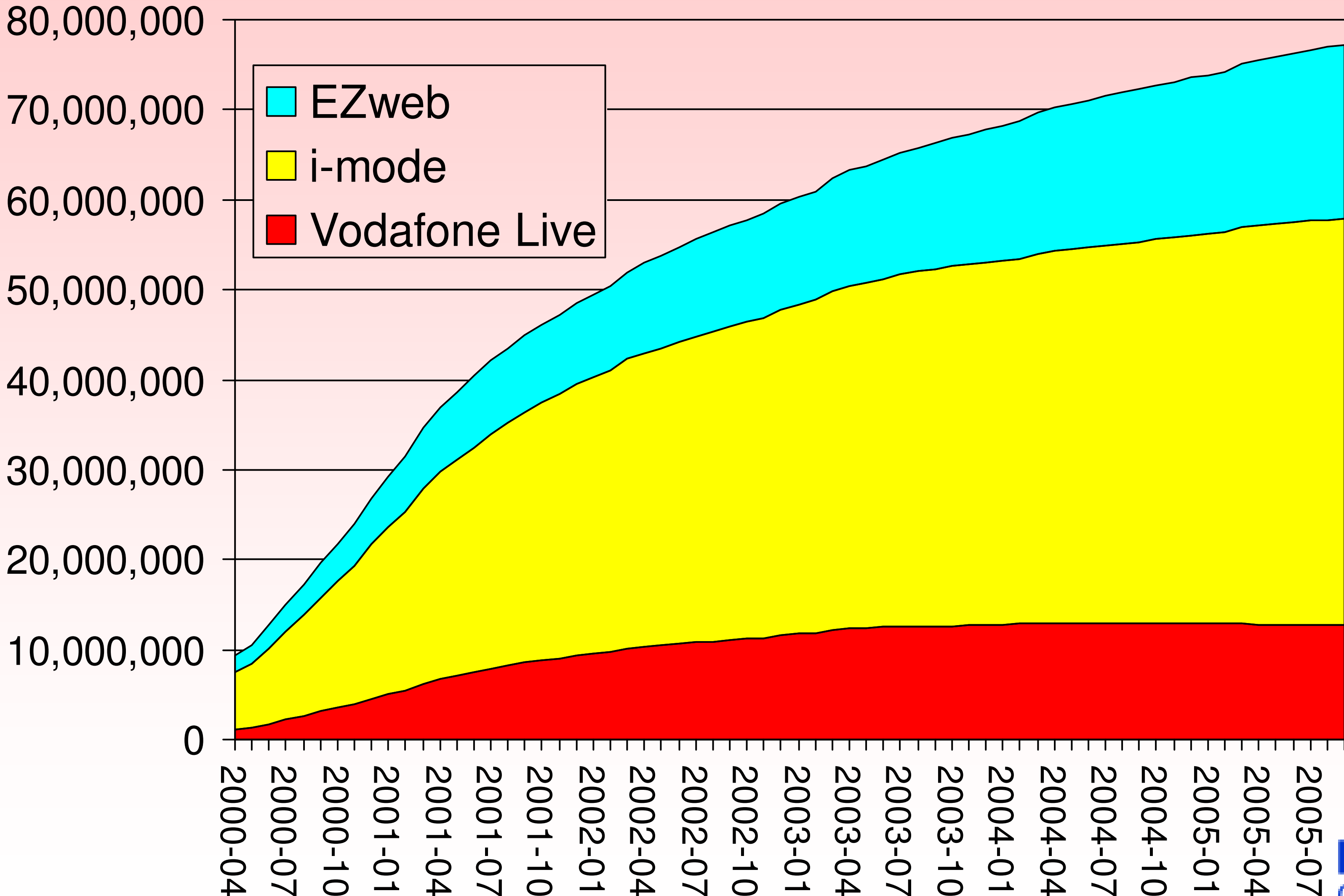
mobile Internet in Japan



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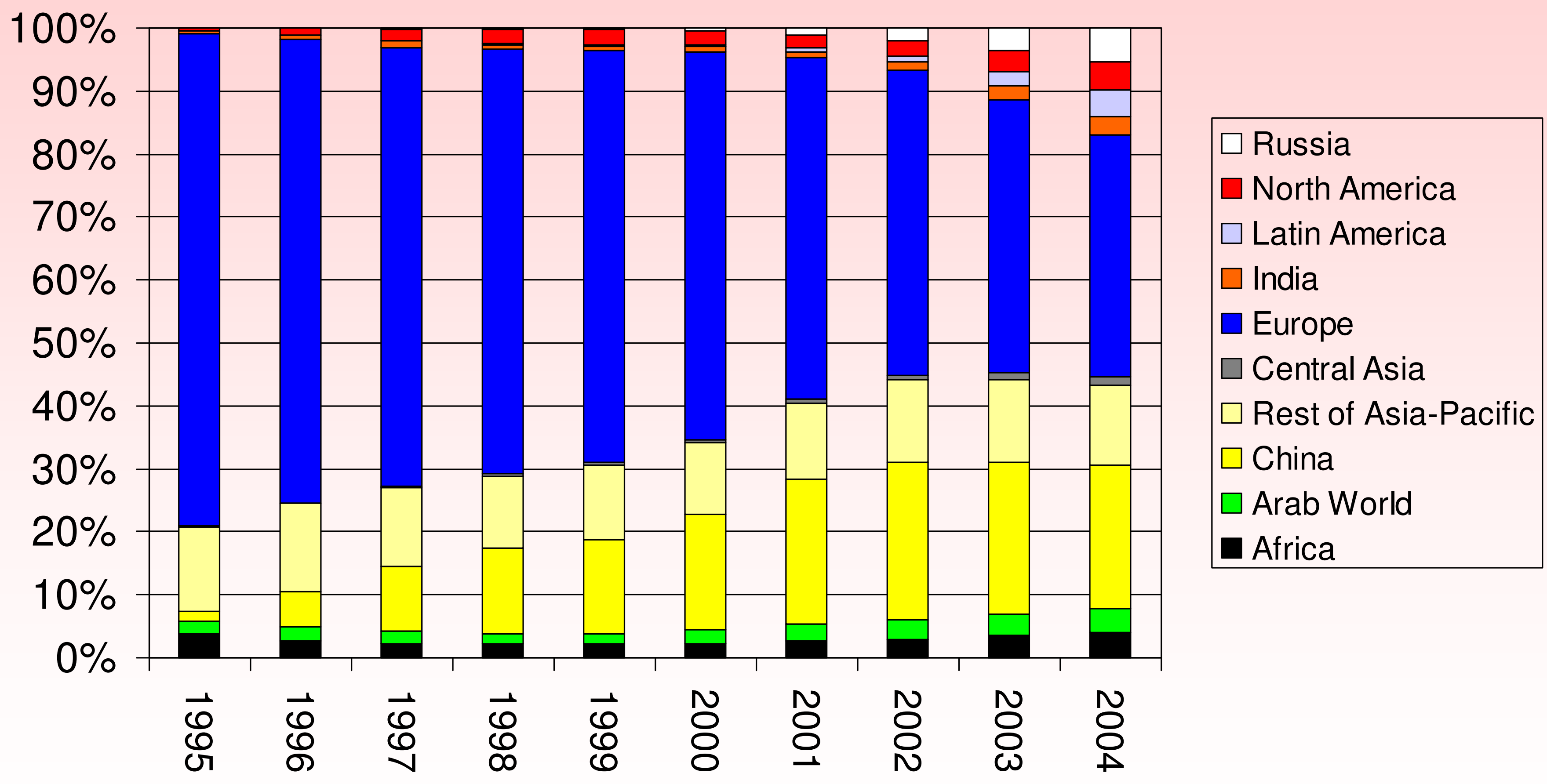
GSM geography moves



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Competition

- Not one but several markets
- Problems in:
  - call origination
  - call termination
  - international mobile roaming
  - text messaging
  - mobile Internet access
- Dominance by one or two players

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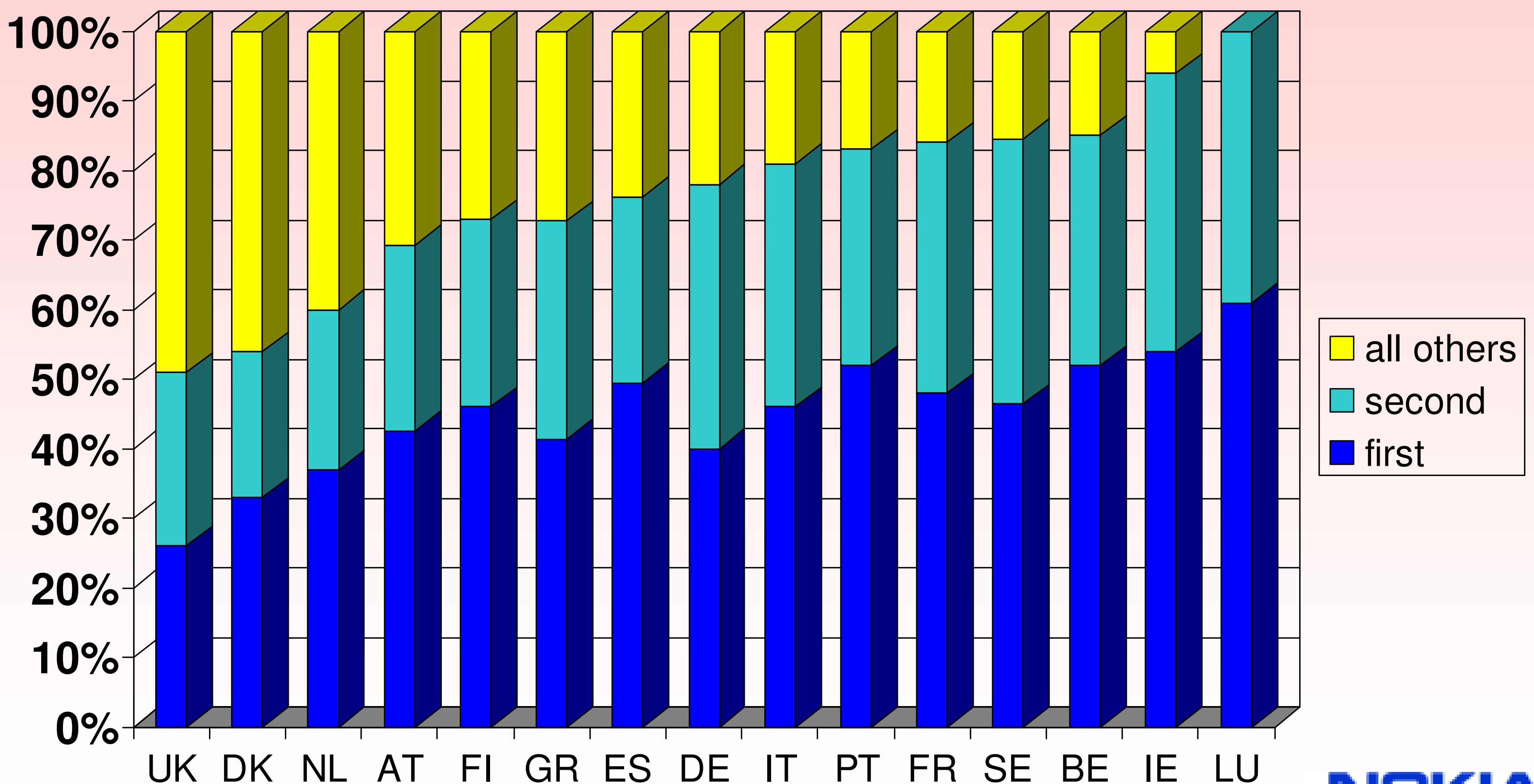
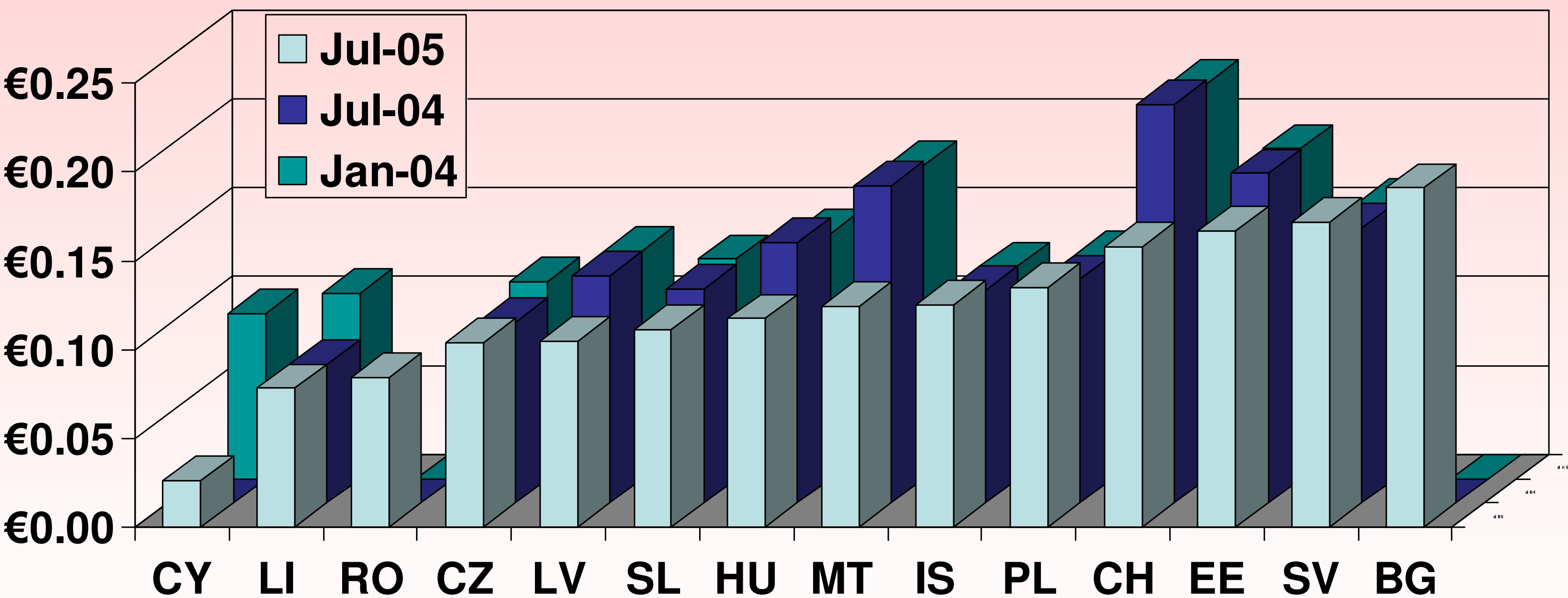
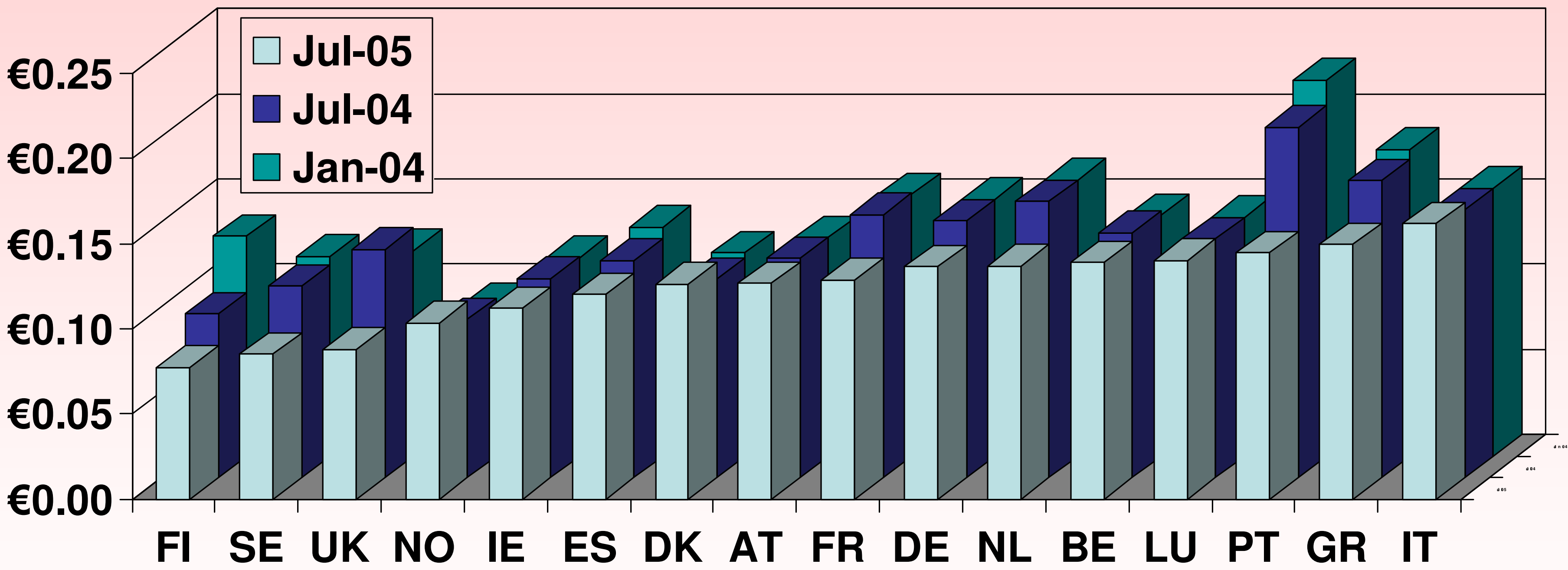
Market shares in EU-15 (2004)



Mobile termination rates



Mobile termination rates



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Mobile number portability

- Most developed countries now have portability as a legal obligation
- Operators fought and still fight this in every country with the same arguments
- Some implementing: Japan, Canada & India
- Administrative procedures from Kafka
- Vast array of different technical solutions

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Operators

- Containing competition
- World class lobbying
- Delaying regulatory interventions
- Contesting all decisions
- Excluding rival business models

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Fixed-mobile substitution

- The view from the USA
- But:
  - what about broadband Internet access?
  - what about flat rate prices
  - what about quadruple play?
- Will younger users give up on high speed, always-on Internet access?
- What about residential 802.11 gateways?

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Whatever happened to 2.5G?

- GPRS was to be the stepping stone to mobile Internet
- Instead it sank like a stone
- Mis-sold as a technology
- Mis-priced like water in the desert
- Operators had no idea what they were doing
- A few are still trying and failing to import i-mode
- Are there any lessons for 3G?
- cdma upgrade path was very much smoother

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Wireless VoIP

- Depends on assignment of spectrum for new services
- Cellular operators:
  - do not anticipate wVoIP for years
  - cannot afford to move to flat-rate calling plans
- No incentive to introduce wVoIP
- They are looking for high value services

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Digital broadcasting

- Competing standards:
  - Digital Audio Broadcast (DAB)
  - Digital Multimedia Broadcast (DMB)
  - Digital Video Broadcast (DVB)
- Satellite and terrestrial
- Can carry vast amounts of entertainment and other services
- What distinguishes it from cellular?

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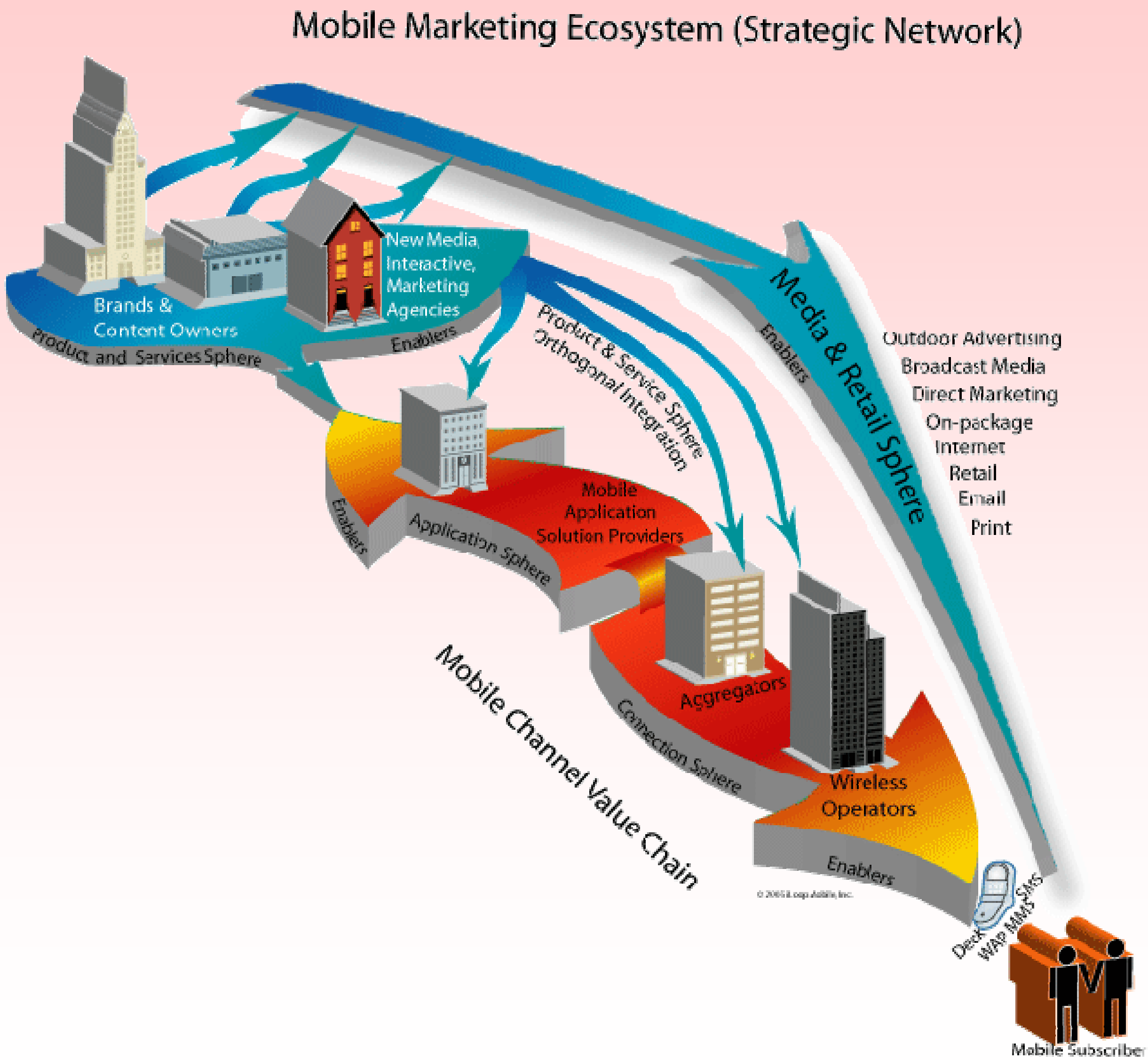
Mobile value chain



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Technology neutrality spectrum

- 450 MHz - being re-assigned
- 900 MHz - GSM (and UMTS?)
- 1800 MHz - GSM (and UMTS?)
- 2000 MHz - Satellite mobile
- 2300 MHz - UMTS
- 2600 MHz - WAPECS (or WiMAX)

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UNS

- Ubiquitous Network Society
- A view from Japan and Korea
- Industry and government
- Focus on economic development
- A big push for manufacturing and services
- Multiple networks
- NGN plus RFID plus USN
- A challenge to the European view

What is the value of mobility?

- People expect “mobility” for text and voice
- Mobile data:
  - need?
  - want?
  - value?
  - is nomadicity enough?
  - will people pay more for ubiquity?
- What are the operators selling?

Conclusions

- Disruptions are growing
- Convergence is not the same:
  - Divergence between continents (n.b. difference caused by high F2M rates)
  - Divergence between groups of customers
- Regulation trails developments
- 3G is colliding with:
  - WiBro/WiMAX
  - digital broadcasting (DxB)
- Increasingly a consumer market

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Issues

- When will the disruptions occur?
- How can we tell how serious each will be?
- Will the financial markets change who they support?
- Will 3GSM just absorb WiMAX and DxB?
- Will content suppliers find other routes to market?
- Will operators descend to being bit pipes?

thank you

Ewan Sutherland

http://www.3wan.net/

3wan [@] 3wan.net

+44 141 416 0666

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