INTUG

Change in telecoms

a global user perspective

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World Bank, DC 21-22 April 2005

www.INTUG.net

INTUG contents

- about INTUG
- competition and economic growth
- broadband
- ubiquitous network societies
- policy and regulation
- learning lessons
- conclusions
- challenges

INTUG **what is INTUG?**

- members
  - national associations
  - corporations
  - individuals
- activities
  - ITU and WTO
  - OECD
  - APEC TEL, CITEL 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 regulatory trench warfare

- prices of leased lines
- prices of local loops
- mobile termination rates
- international mobile roaming rates
- refusal to issue licences
- discrimination in interconnection

Some of these have been drawn out over 5, 10 or 20 years

ENUM – a failure

- mapping telephone numbers to Internet addresses and *vice versa*
- but no data protection, engineered to be entirely open
- the mapping is never 1-to-1
- no success (so far) on the market

conceived far away from customers and laws.

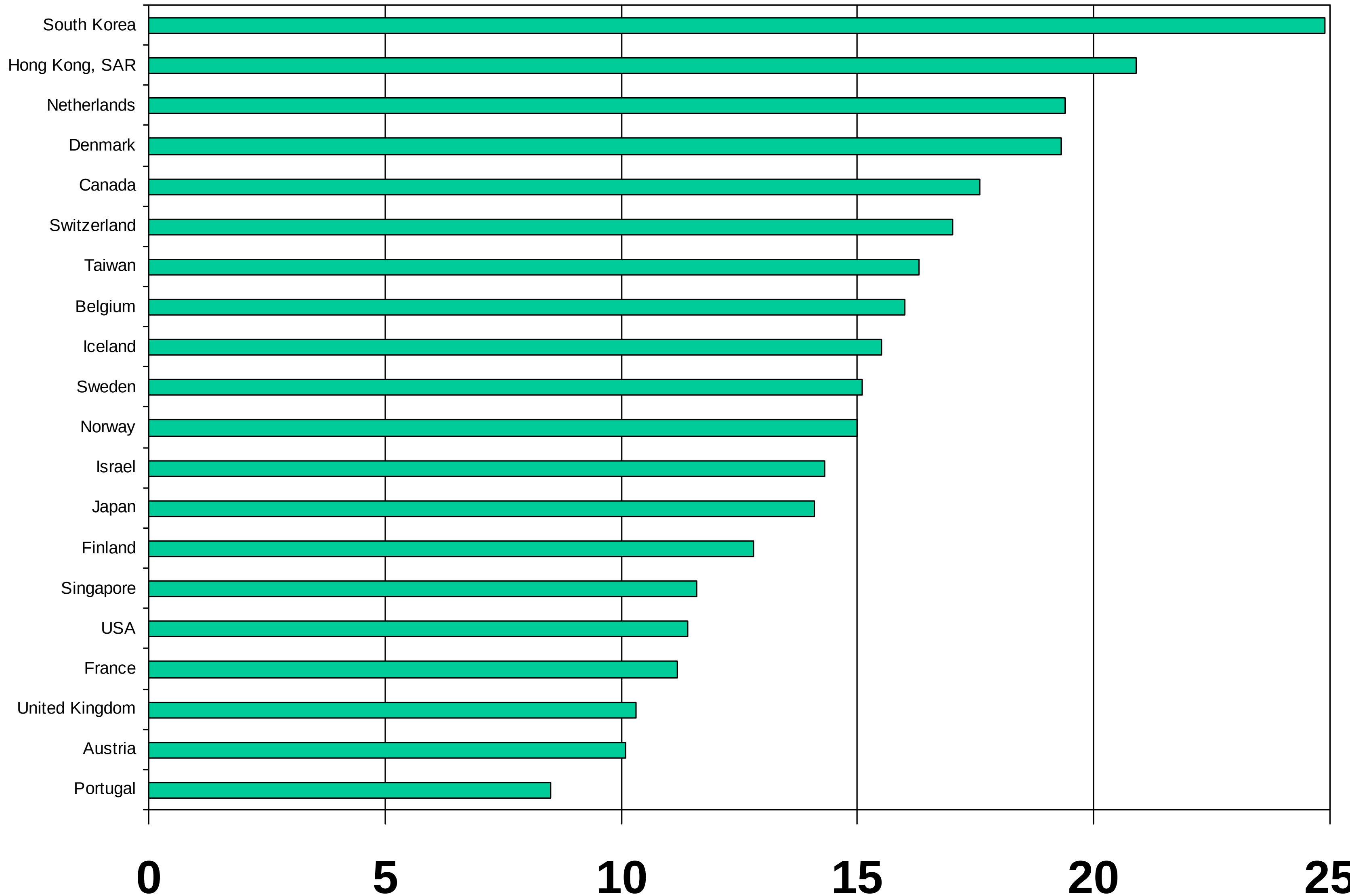
INTUG competition and growth

- competition has:
  - lowered costs
  - increased demand
  - encouraged innovation
- but is often limited or mis-directed by lobbying from vested interests
- Voice over Internet Protocol:
  - access to numbers
  - interconnection
  - regulation of access to 911, 999, 112, etc
- broadband

INTUG broadband Internet access

- a “flagship” policy area
- a significant contributor to growth and productivity
- ranges of:
  - technologies
  - applications and services
  - business models and revenues
- enormous variations in outcomes, still poorly explained
- only a limited enthusiasm for real competition
- available in North Africa much faster than previous generations of technology

INTUG ITU broadband statistics



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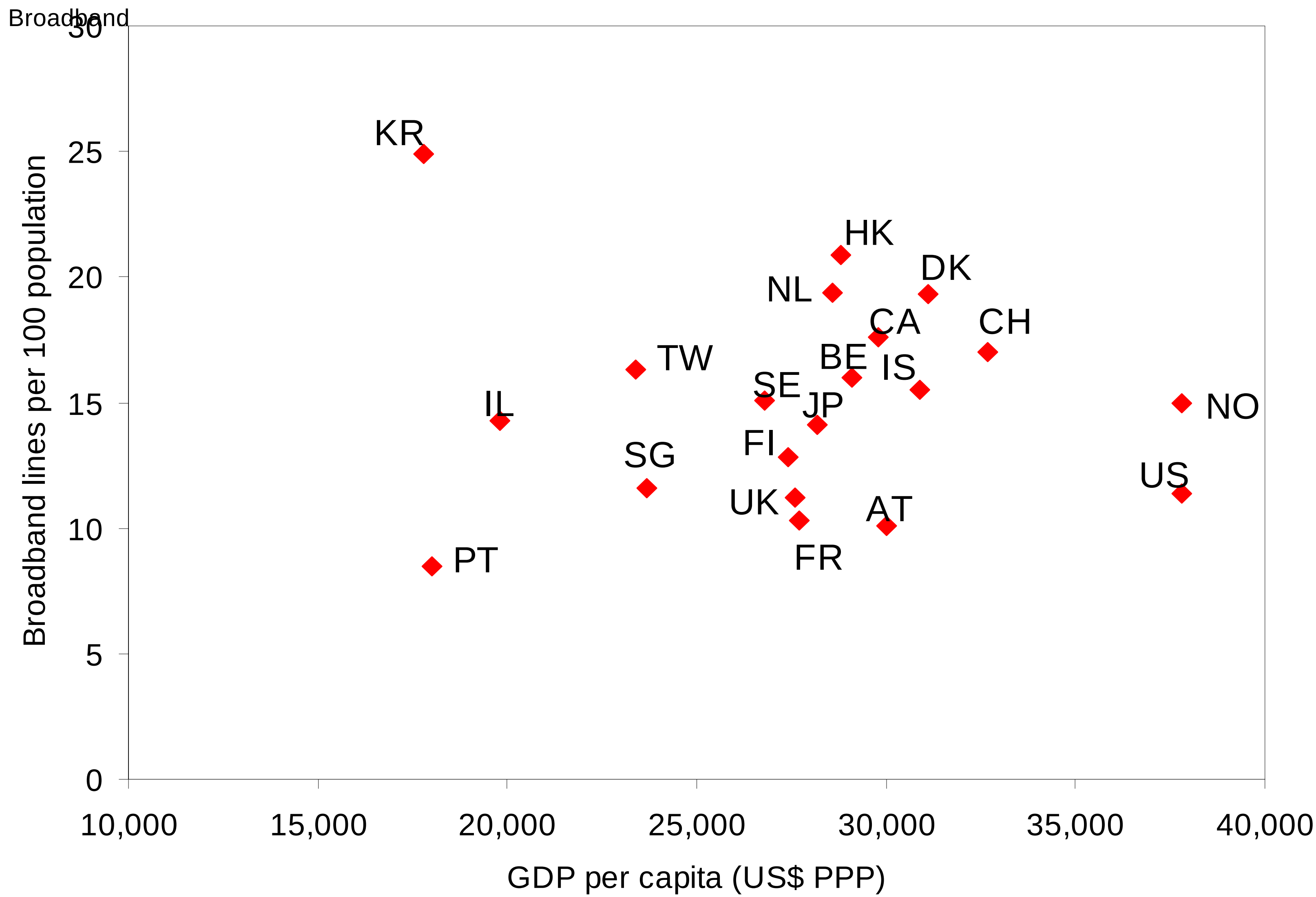
INTUG broadband and GDP



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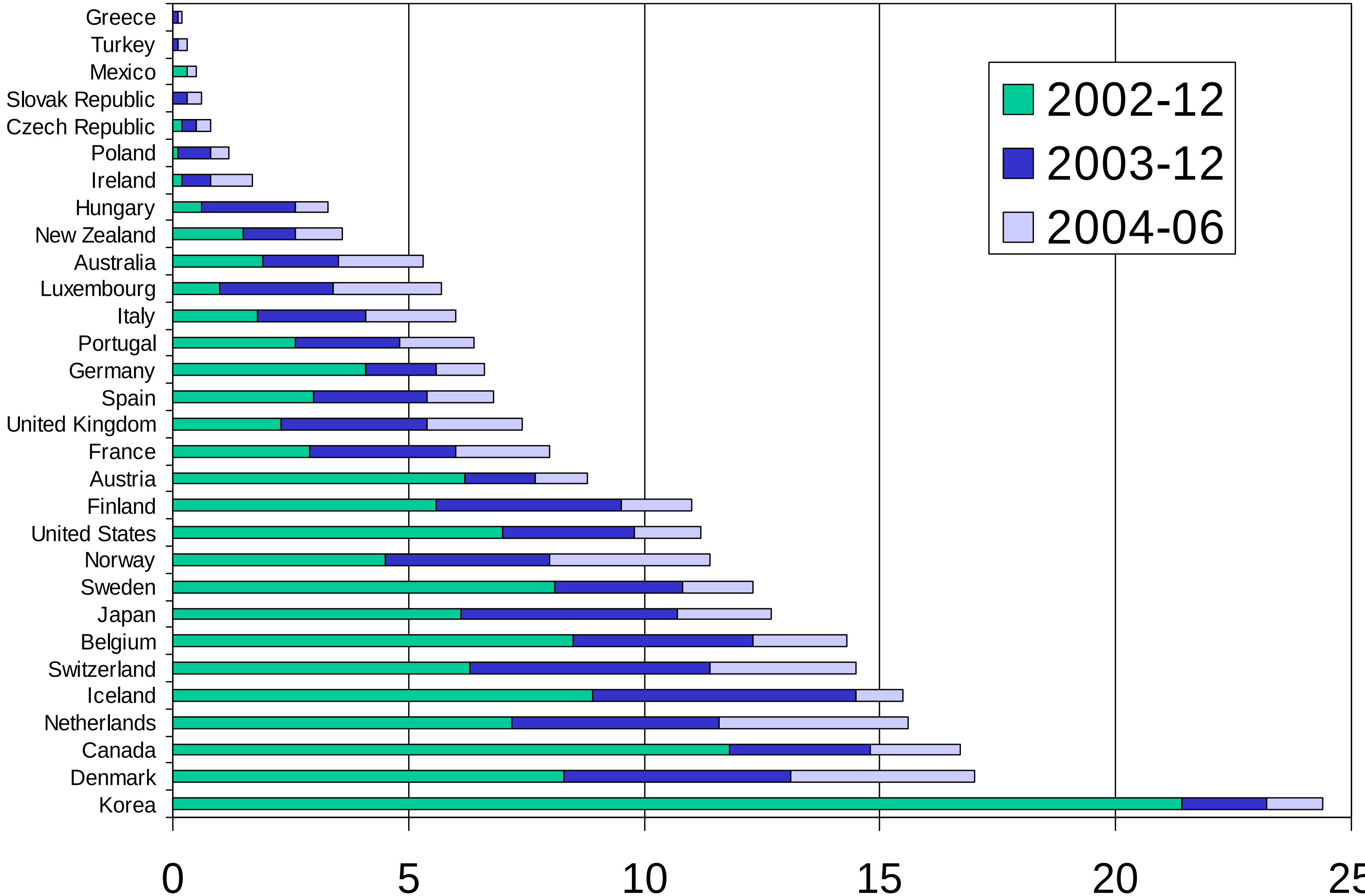
INTUG broadband in the OECD



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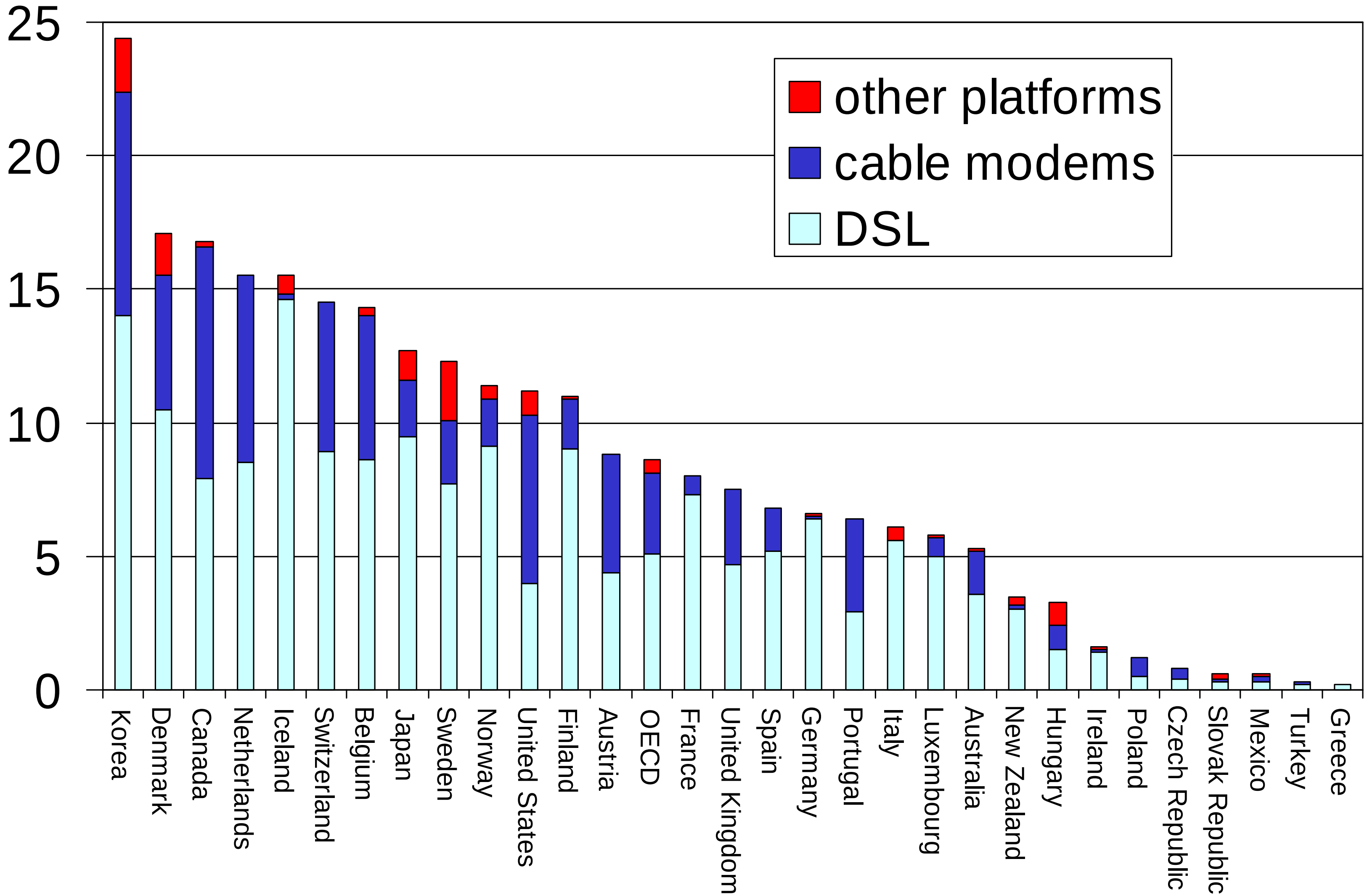
INTUG broadband in the OECD



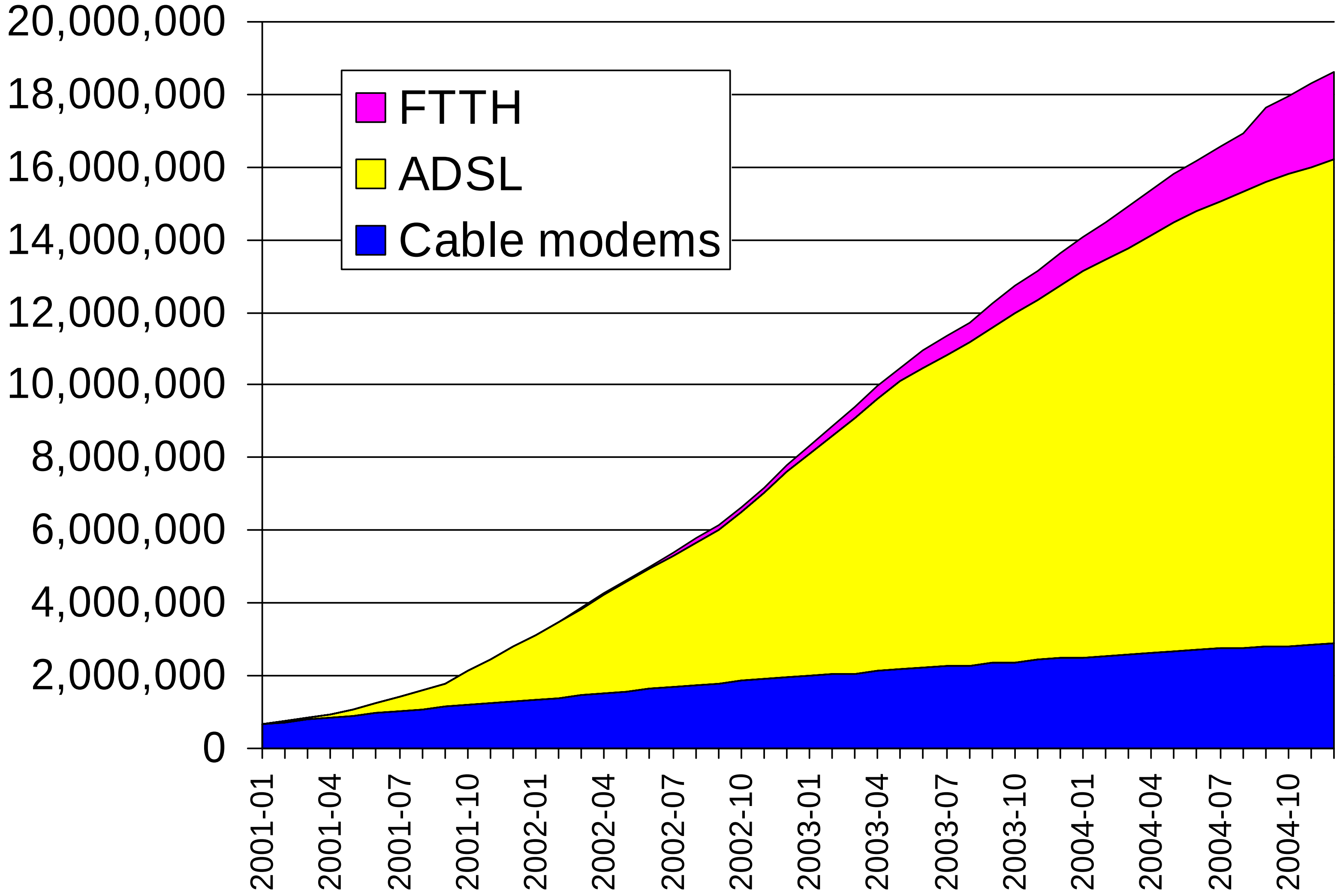
INTUG copper and alternatives

- local loop unbundling:
  - a saga of battles, victories and defeats
- cable television:
  - patchy even before broadband
  - many operators too small to enter broadband
- satellite
- Fixed Wireless Access (FWA)
  - technically sound
  - business models still emerging
- municipal activities:
  - some successes
  - some politico-regulatory blocking

INTUG broadband in Japan

- rushing to catch up with South Korea
- unanticipated role of Son-san
- remarkable levels of competition
- low prices JPY 4,000 to JPY 6,000
- high speeds:
  - 100/100 Mbps Hikari
  - 45/3 Mbps Yahoo! BB ADSL
  - option 802.11g Wi-Fi networks
- VoIP as a significant service

INTUG broadband in Japan



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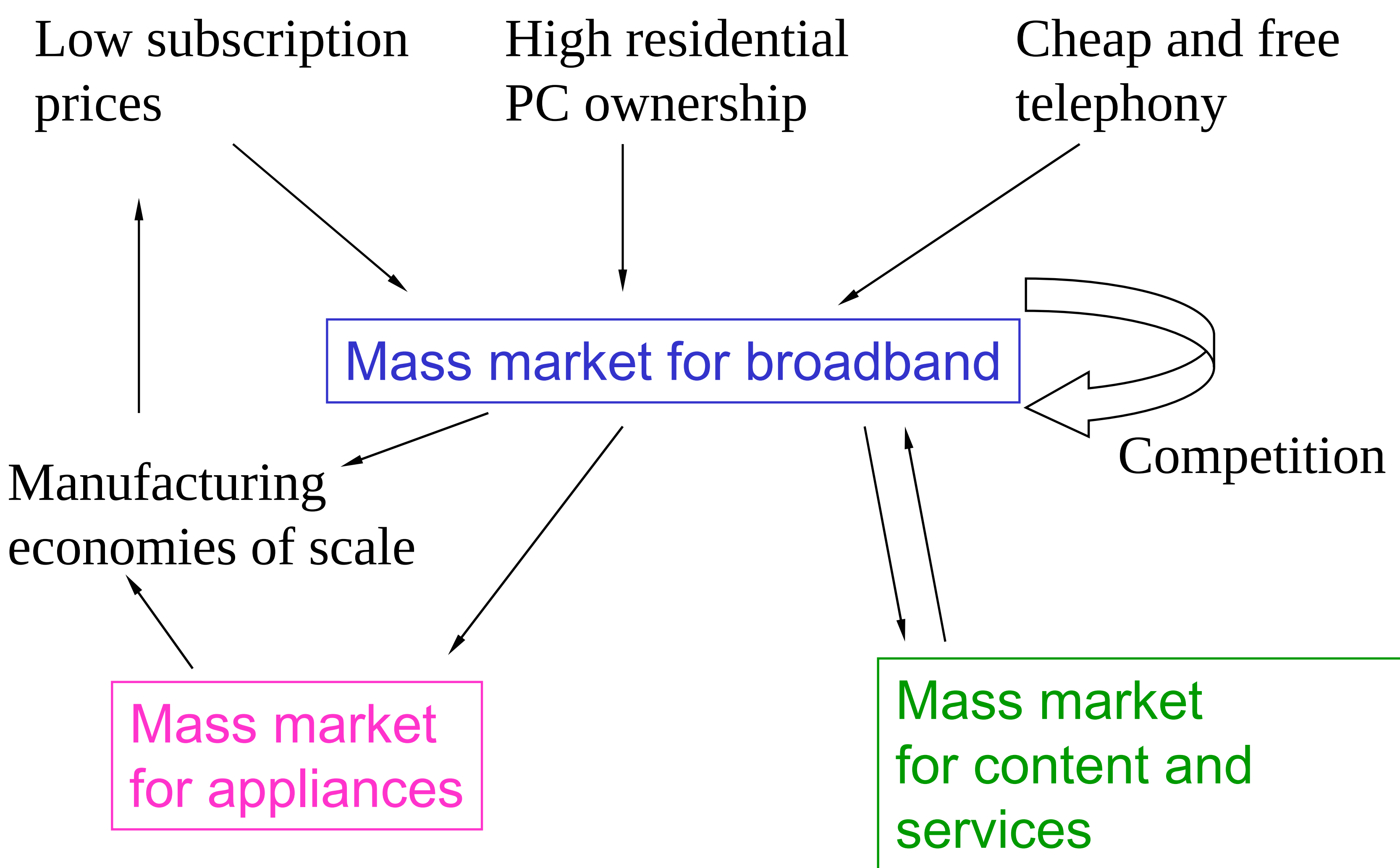
INTUG drivers



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Fibre To The Home (FTTH)

- already some FTTH deployments:
  - significant in Japan and USA
  - patchy in Sweden and Italy
- sometimes just near to the home, then copper or WiMAX
- do the access and unbundling regulations for copper networks work for fibre?
- or, do we need something different to ensure investment and competition?
- can we avoid a decade of lobbying and litigation?
- which countries will achieve mass markets for:
  - services
  - equipment

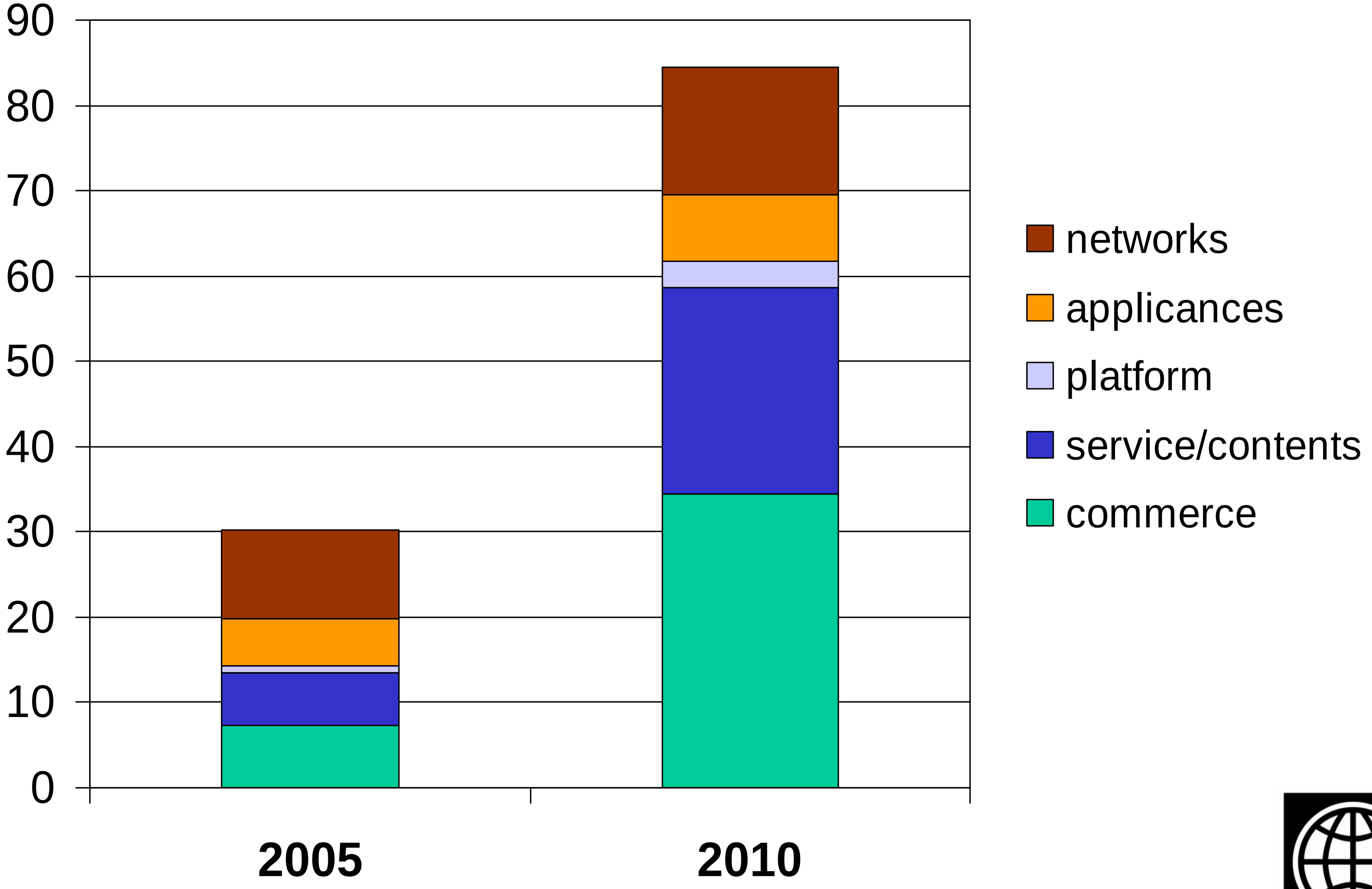
INTUG Next Generation Networks

- but which generation are we at today?
- mobile hype of:
  - 2.5G - GPRS
  - 3G - UMTS
  - 3.5G - HSDPA
- generations tend not to be used in fixed network marketing
- ITU Focus Group on NGN

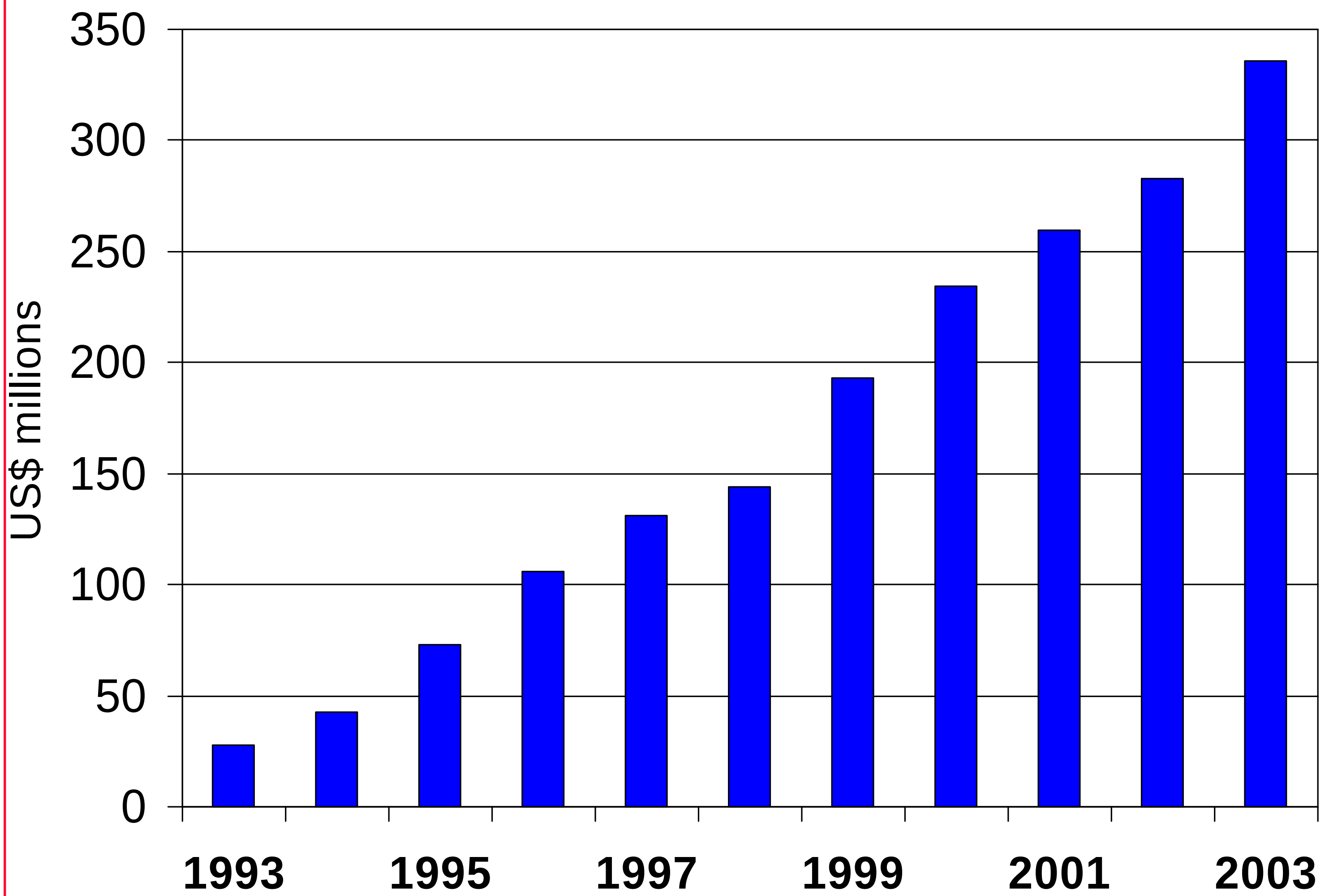
INTUG ubiquitous network societies

- a model from Japan and South Korea
- seen as a major economic driver
- avoids access and interconnection issues by full-blown competition
- will have to be much slower in other countries:
  - – operators will push their own networks
  - – negotiation of access is protracted

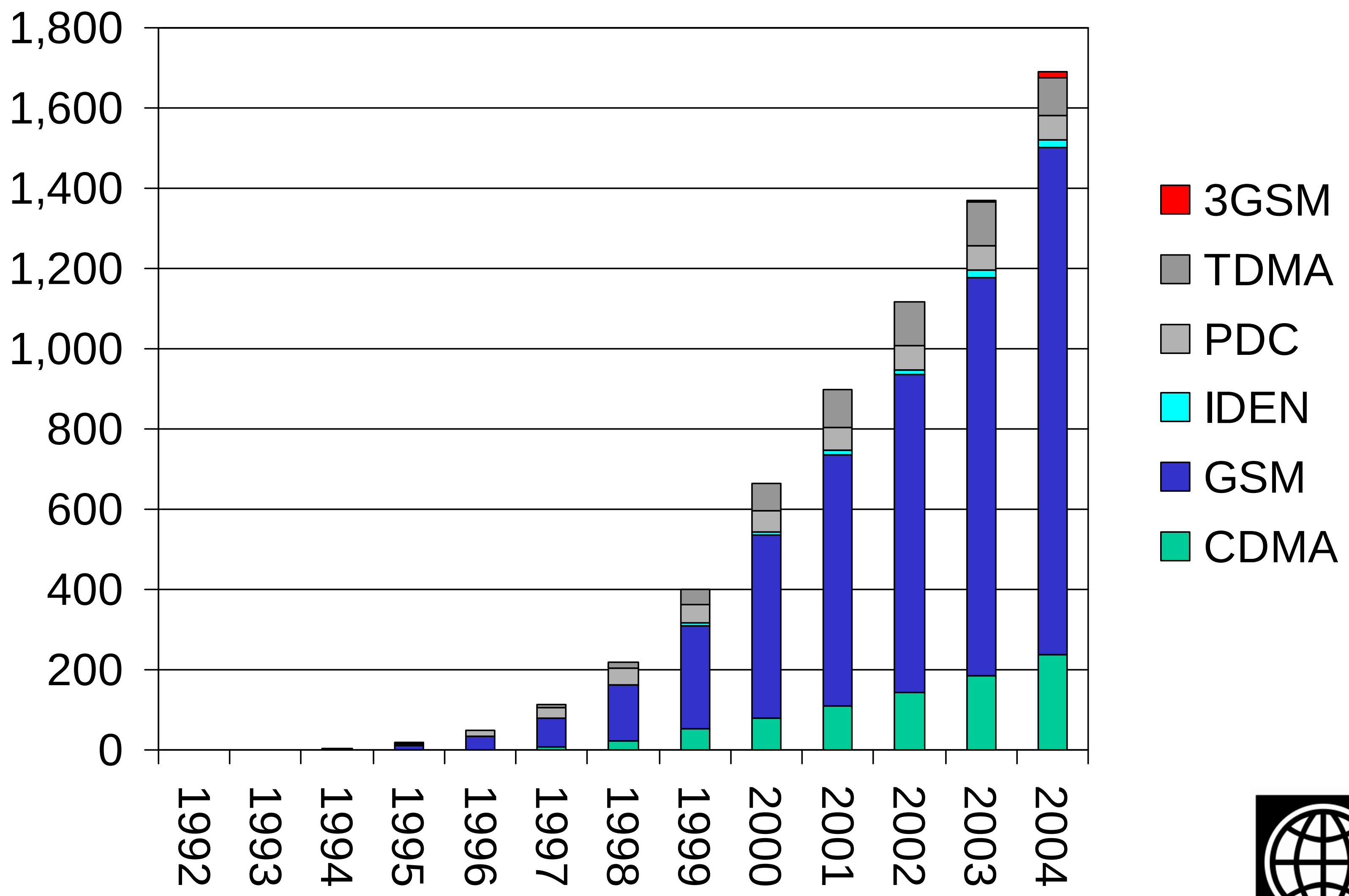
INTUG growth forecast (¥ Trillion)



INTUG total mobile revenues in OECD



INTUG cellular users (millions)



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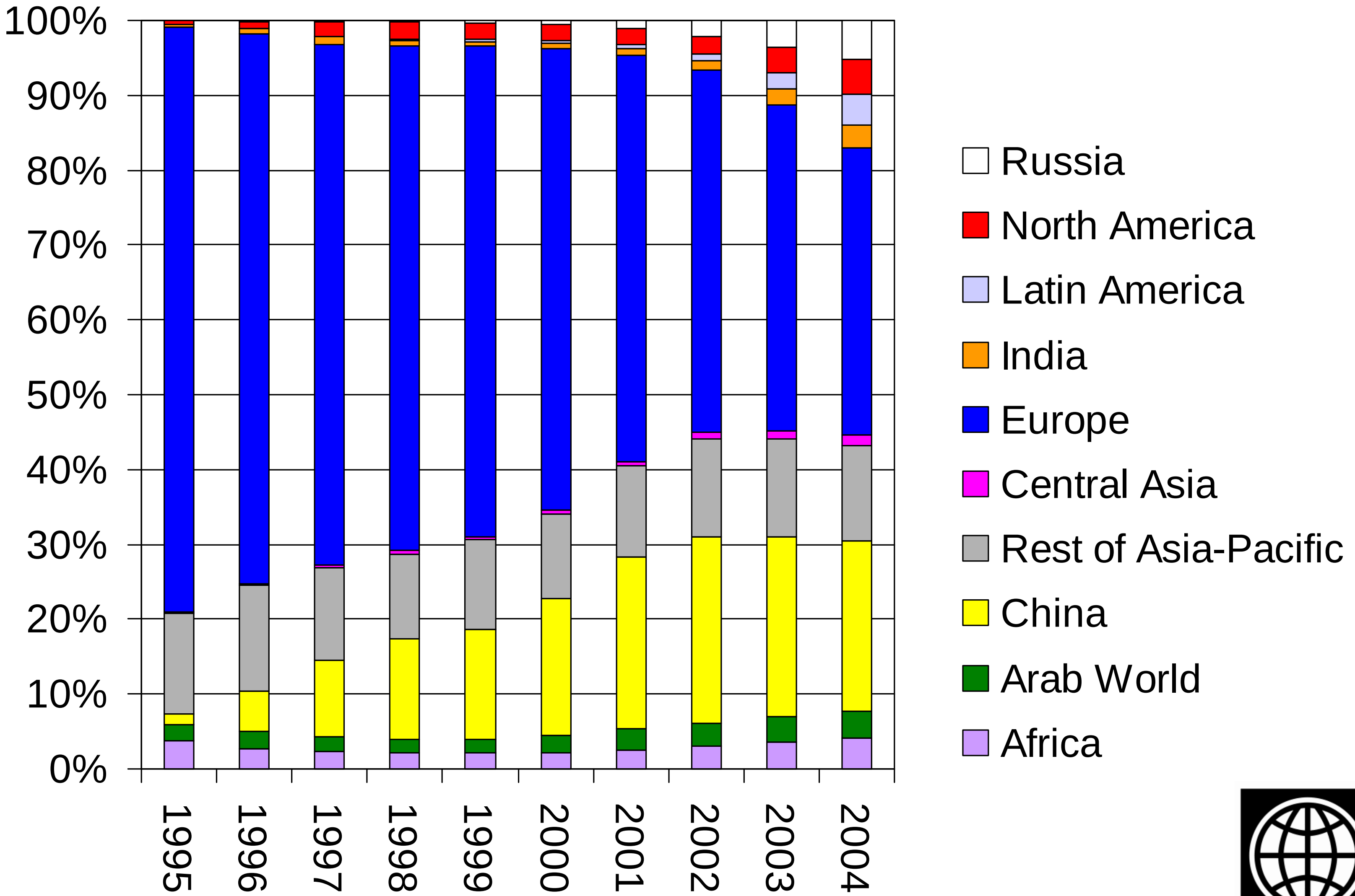
INTUG changing cellular geography



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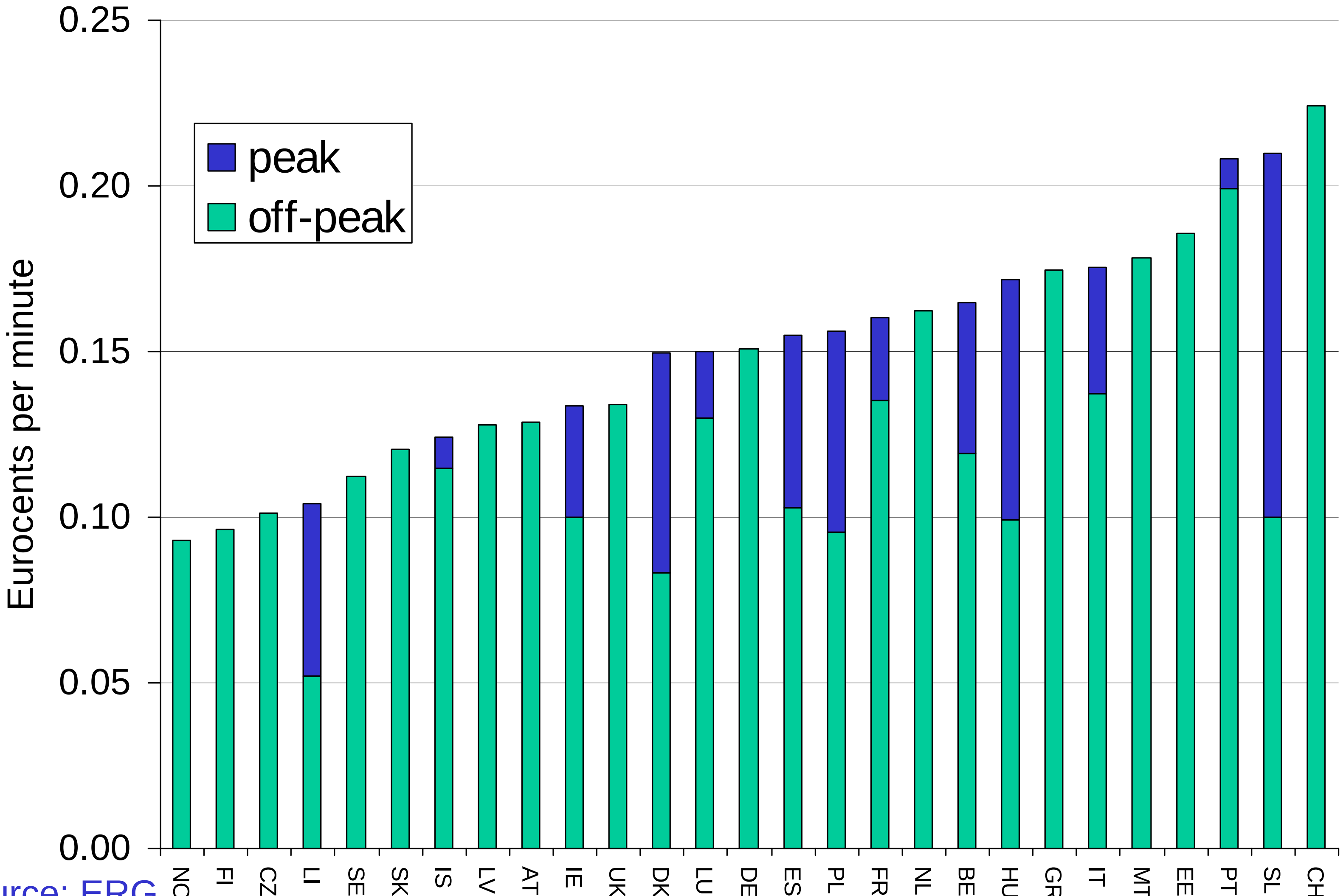
INTUG mobile termination rates



Source: ERG.

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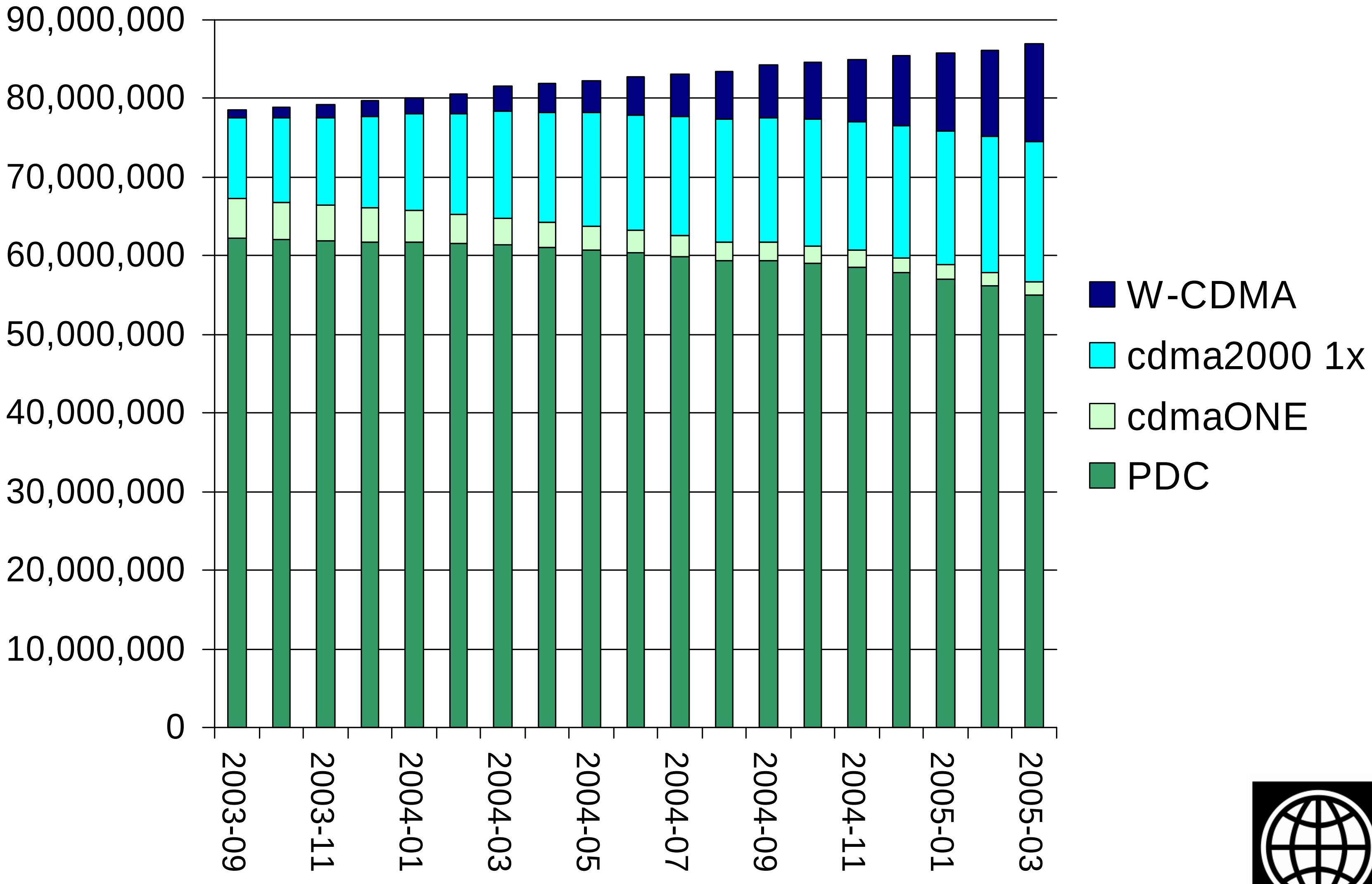
INTUG beyond 2G

- 2 billion “voice and SMS” only users:
  – need access to multi-Megabit broadband
- serial failures by GSM operators:
  – WAP and MMS
  – GPRS and EDGE
  – expertise limited to finance and voice
- CDMA networks have moved easily to 3G
- threat from other wireless technologies
  – WiMAX, WiBro, etc
  – DAB, DMB, DVB, etc

INTUG Japanese 3G

- dash for growth
- DoCoMo overtaken by KDDI Au
- flat rate data prices
- migration from 2G to 3G:
  – customers
  – service providers
  – networks
- now pushing for WiBro and WiMAX

INTUG 3G in Japan



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INTUG mobile Internet in Japan

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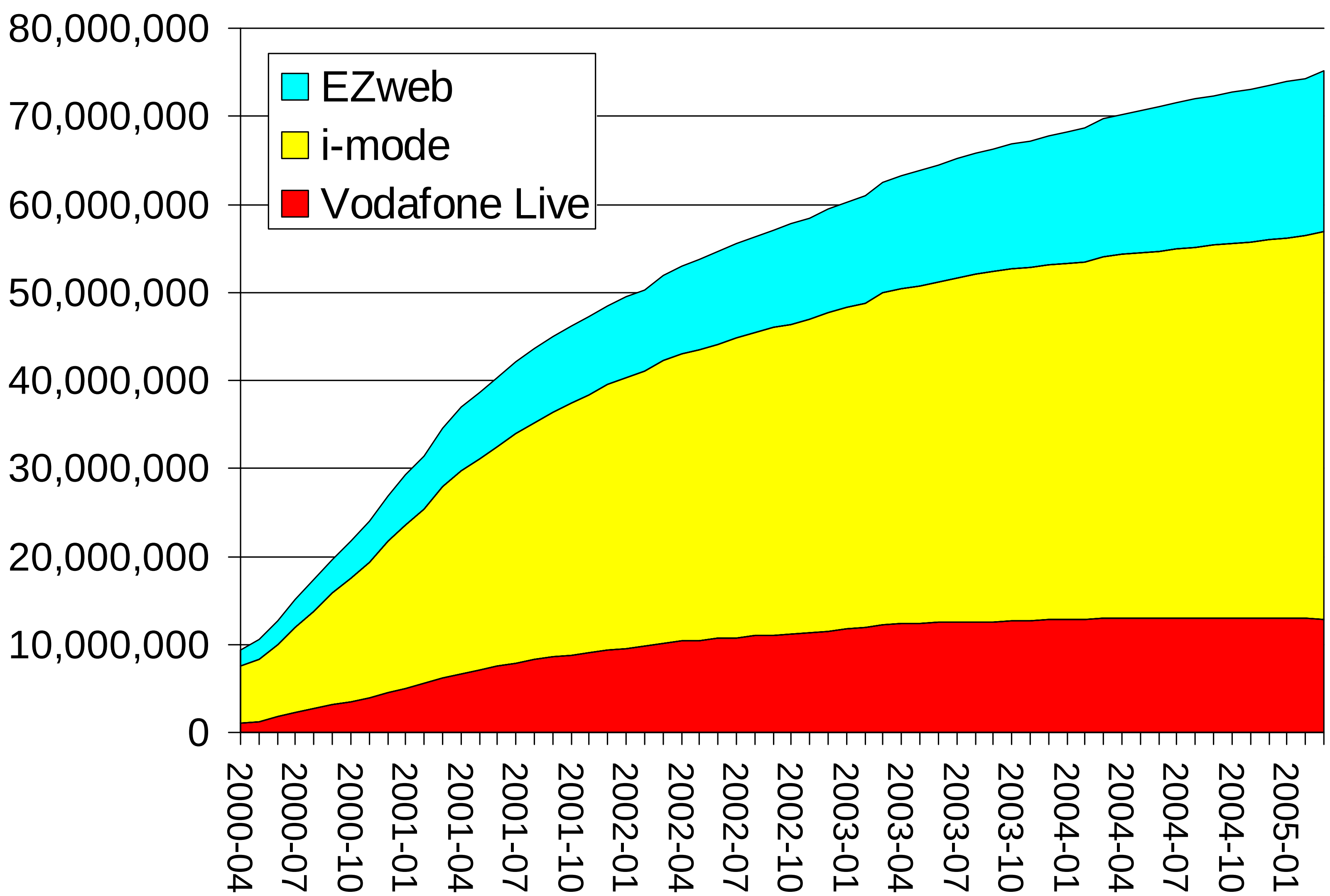

INTUG policy and regulation

- Japan/Korea view:
  - ensure competition in infrastructure
  - operators must get lots of customers
  - fast growers allowed to acquire the slow
- European view:
  - legislation on 5-10 year cycle
  - incremental learning
  - harmonisation
  - loss of leadership, limited political will
- USA view:
  - lobbying, legislation, litigation

INTUG IP-VPNs

- the preferred network of multi-national corporations
- few countries have clear regulations
  – e.g., connection to PSTN
- leased lines:
  – often expensive
  – often mediocre quality
- Service Level Agreements (SLAs):
  – vital to business users
  – often absent or worthless in many markets with operators seemingly unaware of their importance

INTUG outsourcing

- shift of work to low-cost locations:
  - India
  - Eastern Europe
- built on resilient networks:
  - leased lines
  - IP platforms

INTUG conclusions

- too many countries are stuck in regulatory gamesmanship
- yet they may be seen by other countries as being the leaders
- some good examples are very opaque
- increasing availability
- increasing spending per capita

INTUG challenges

- to maximise competition
- to learn lessons from different parts of the world
- to realise that national incrementalism is too slow, needs to draw on all experiences
- to ensure we have sufficient options to give future policy-makers a fair chance

INTUG thank you

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