

Leased lines

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Basic building blocks

- Users for private networks
- Operators to compete with incumbent
- Mobile operators to link base stations
- ISPs, IXPs and IIC
- E-commerce

Many of the problems are now addressed through unbundling of the local loop.

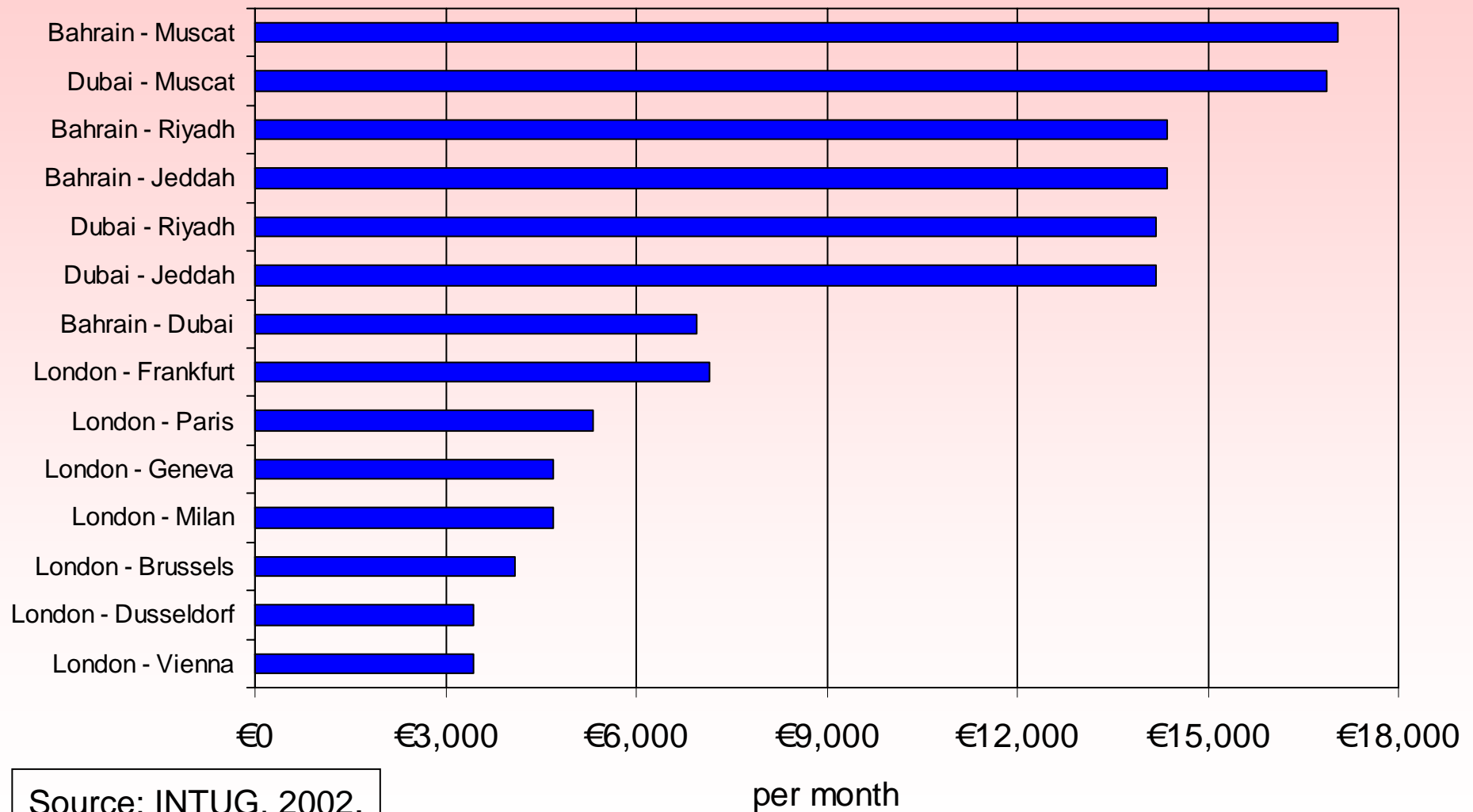
Monopoly & dominance

- Charging excessive prices, far in excess of cost
- Failing to replace older, more expensive and obsolete technologies
- Discrimination against new entrants to the advantage of the incumbent operator's own commercial operations in terms of:
 - provisioning times
 - repairs
 - quality of service
 - wholesale prices

ITU-T D.1 intr'n'l leased lines

- Article 1.3 requires member states to ensure that administrations do not “enjoy unfair advantage over other” service providers using IPLCs to provide services
- Article 6.1 charges “should generally be cost-oriented”
- Little evidence that member states have undertaken studies to determine whether or not prices are cost-oriented

International routes 2Mbit/s



OECD

- 30 developed countries
- Communications Outlook 2005 (next in '07)
- Specific studies of leased lines
- Comparisons amongst 30 member states
- *Communications Outlook 2003*, page 17:
“... liberalisation has curtailed tremendously the monopoly rents extracted from long distance services, international services and leased lines.”

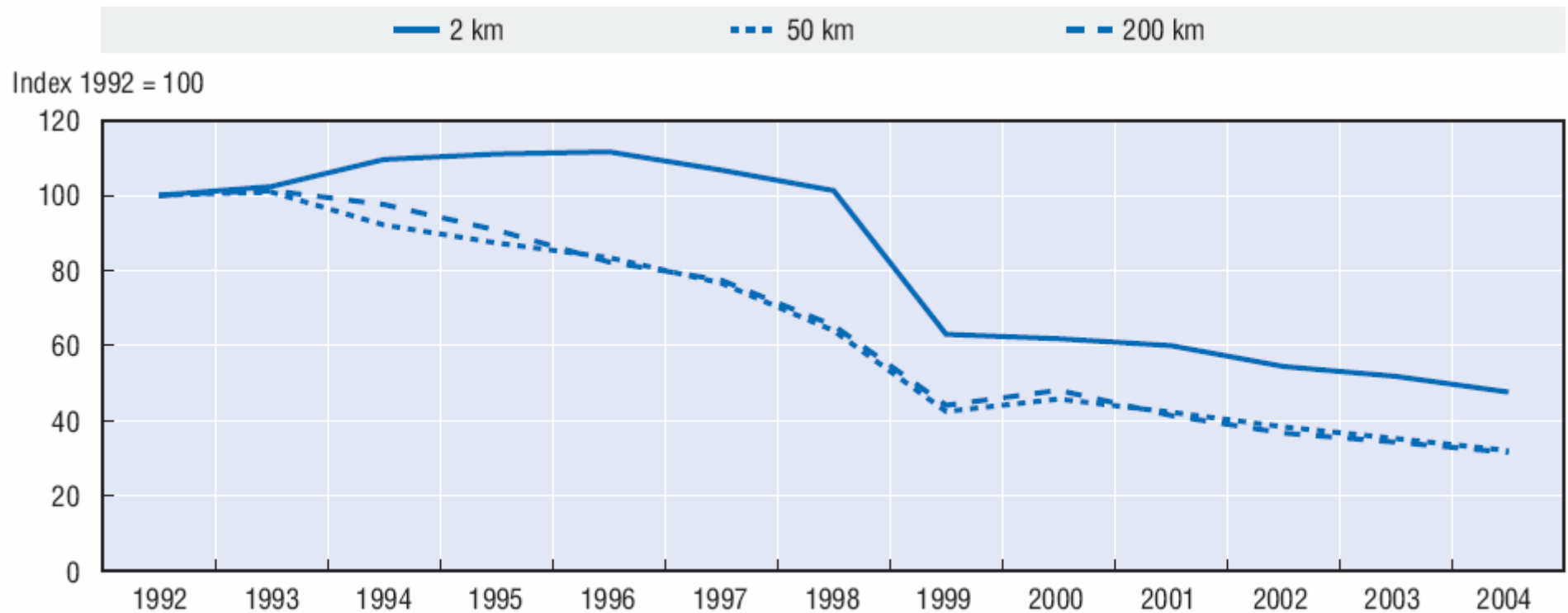
<http://www.oecd.org/sti/telecom>

Broadband access for business

- Broadband access to networks is important for economic growth and development
- In many OECD countries the level of competition is insufficient and is having a negative effect on business users
- Local leased line prices remain of concern where there is insufficient competition
- OECD governments should work together to produce comparable benchmarking data for pricing and provisioning
- The most efficient way would be for regulators to require major operators to report data on prices and performance

Source: OECD/DSTI/ICCP/TISP(2002)3/FINAL

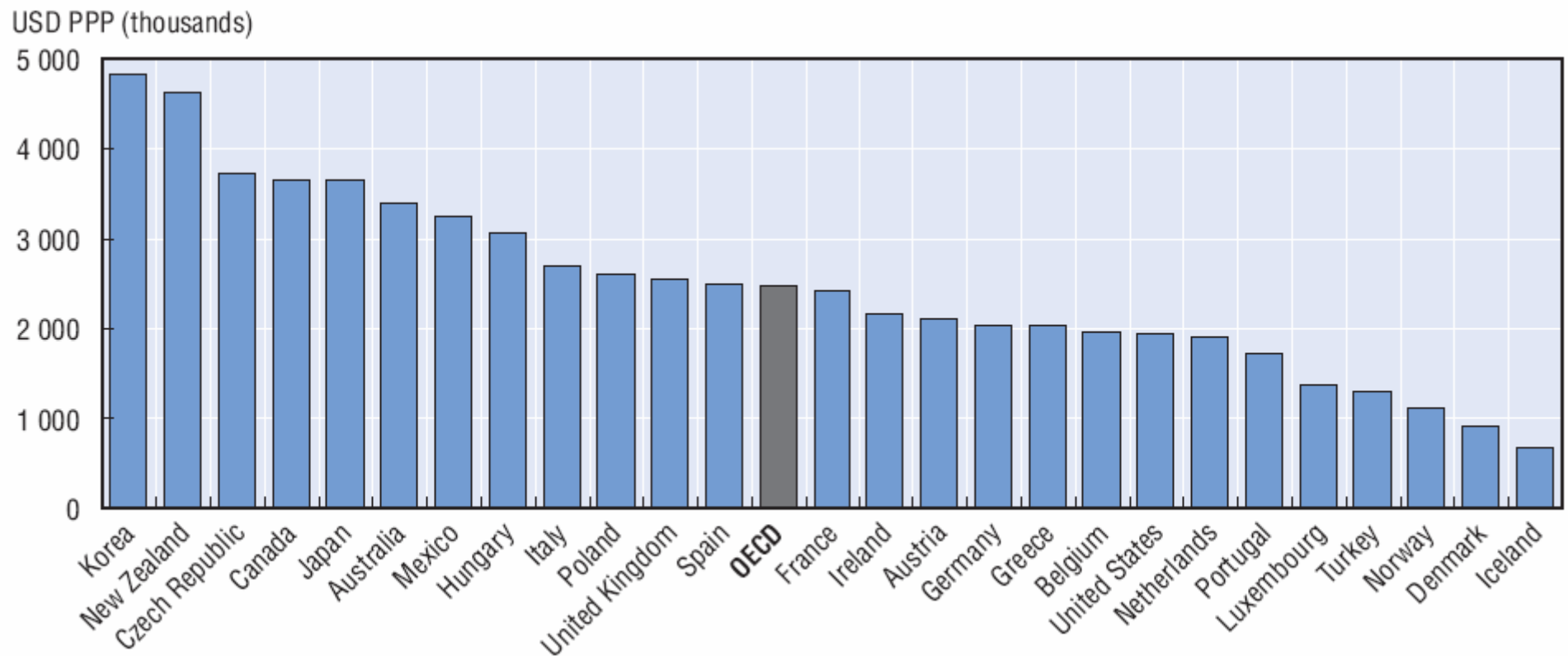
OECD price trends



Source: OECD.

<http://dx.doi.org/10.1787/646172562005>

National 2Mbps leased lines 2004



Source: OECD

<http://dx.doi.org/10.1787/488541086553>

European Union

- Concern about leased lines from the early 1980s
- Cross-border prices varied strangely:
 - Brussels to Milan and Marseilles
 - similar distances, but one was twice the price
- PTTs supplying leased lines restricted:
 - use of multiplexers
 - interconnection with PSTN
- Concern about the viability of PTTs in the face of competition

1990 legislation

- Directive required member states to ensure provision to all operators and users
- Application of non-discriminatory supply:
 - pricing
 - provisioning
 - quality of service
 - fair distribution of capacity (if scarce)

1992 legislation

- Non-discriminatory supply
- Provision of information to users and operators
- Provision of a “minimum set” of leased lines throughout each member state:
 - voice bandwidth
 - 64 kbits/s
 - 2 Mbits/s
- NRAs were required to collect and to report data to EC for comparisons

Continuing complaints

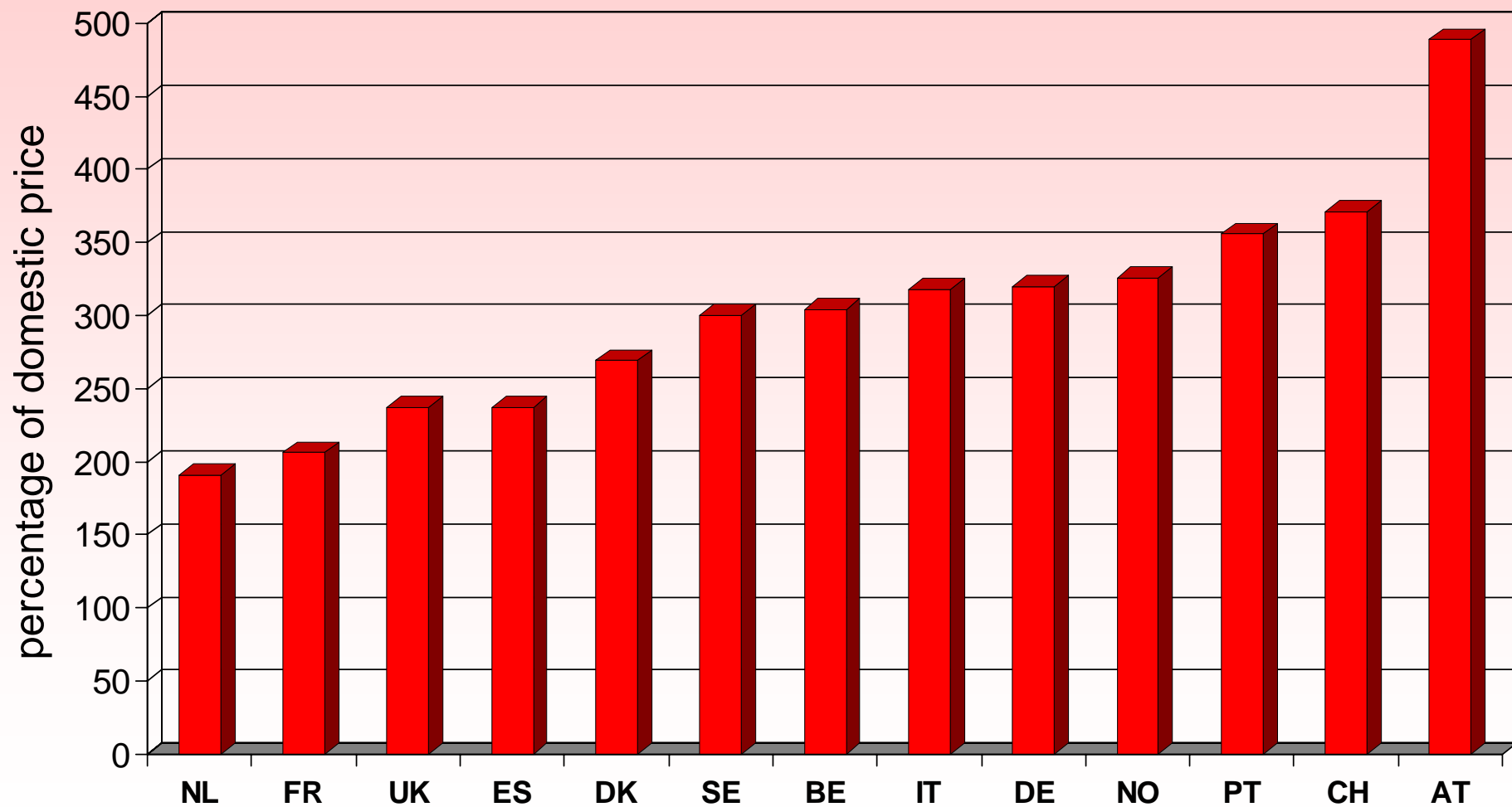
- Lack of high capacity leased lines
- Disparity:
 - USA 700,000 private networks
 - EU 14,000 private networks
- Bangemann report called for urgent adjustments in prices

User data

- INTUG survey in late 1990s
- Compared national and international leased lines:
 - international half-circuit
 - both of the same length
 - 200% to 500% more expensive!
 - helped the EC to act on prices

The logo for INTUG, featuring the word "INTUG" in a bold, black, sans-serif font. The letters are partially enclosed by thin red lines: a vertical line to the left of the "I", a horizontal line above the "I", and a horizontal line below the "G".

2Mbit/s international/national in 1999



Yet more legislation

- 1997 Directive obliged SMP operators to provide interconnection at cost-oriented prices
- 1998 Recommendation set price ceilings
- 1999 Review
- 2002 Directives

1999 Recommendation

- Price ceilings for leased lines part circuits
- Benchmarking EU-15
- Taking third cheapest prices
- 64 kbit/s up to 5 km, is €80 per month
- 2 Mbit/s up to 5 km, is € 350 per month
- 34 Mbit/s
 - up to 2 km, is €1,800 per month
 - up to 5 km, is € 2,600 per month

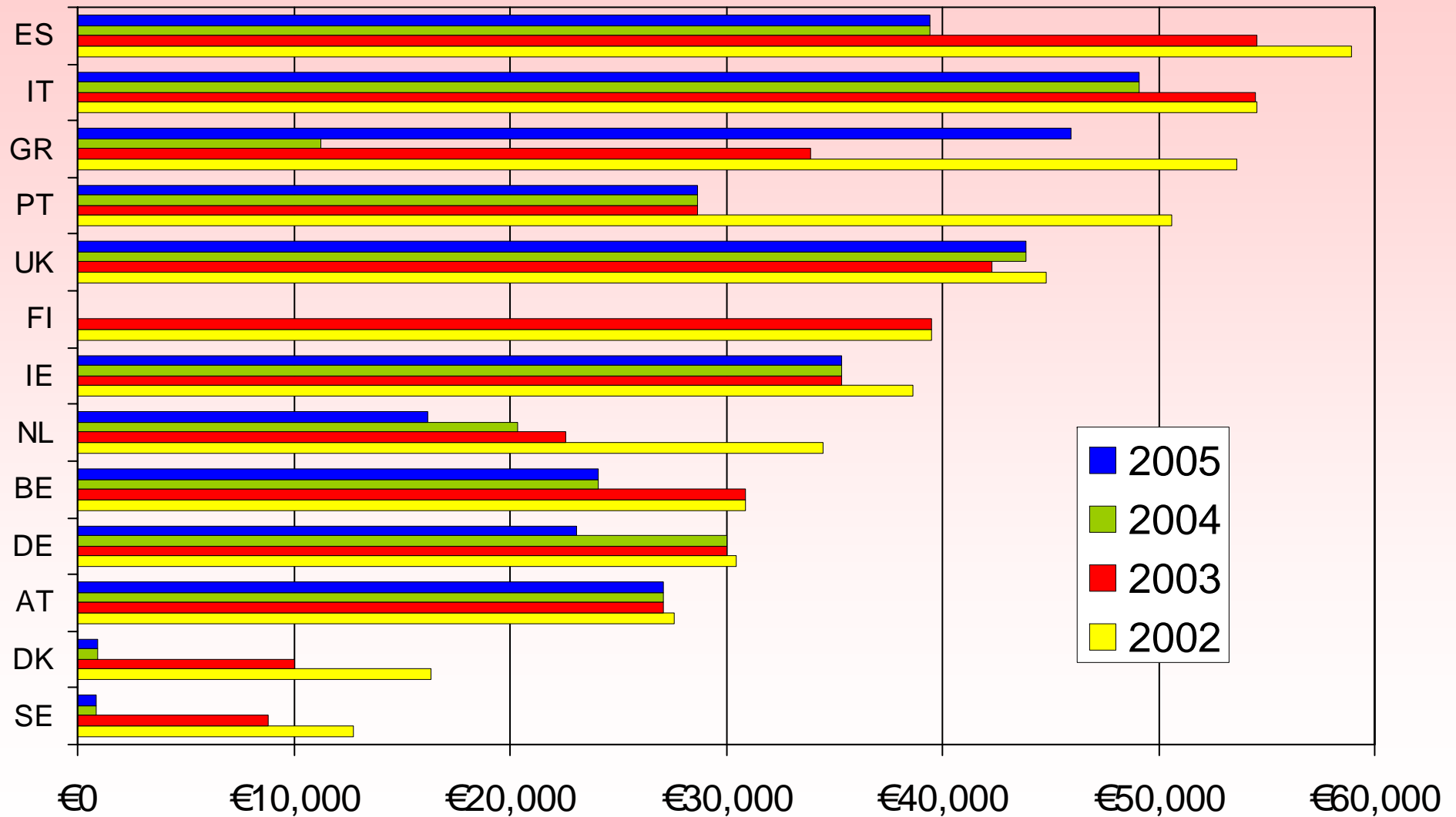
2005 delivery ceilings

- 64 kbit/s 18 calendar days
- 2 Mbit/s
 - unstructured 30 calendar days
 - structured 33 calendar days
- 34 Mbit/s leased lines 52 calendar days

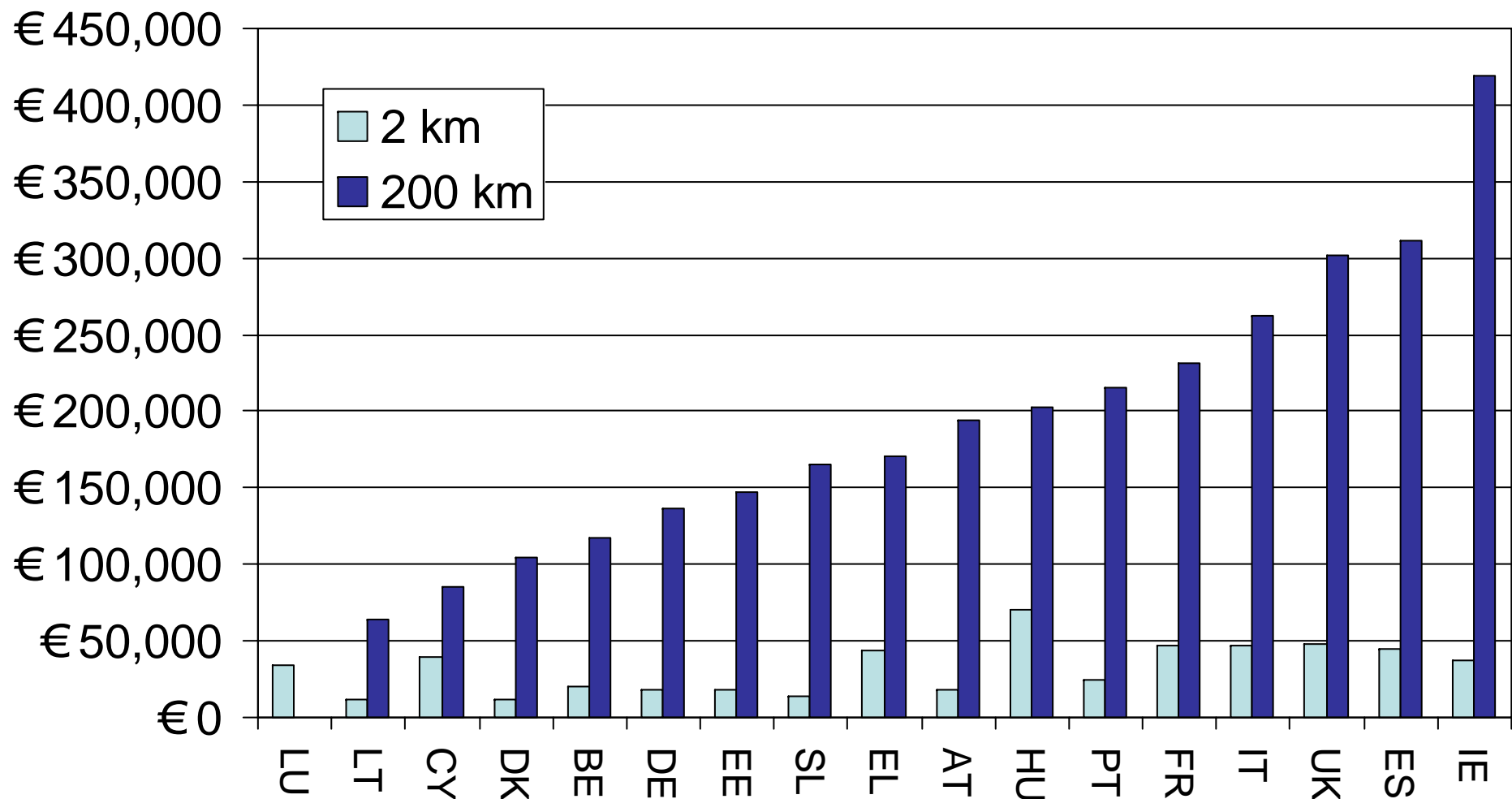
2005 price ceilings

	2 km	5 km	15 km	50 km	One-off
64k	€61	€78	€82	€99	€542
2 M	€186	€248	€333	€539	€1112
34 M	€892	€963	€1597	€2539	€2831
155 M	€1206	€1332	€1991	€4144	€3144

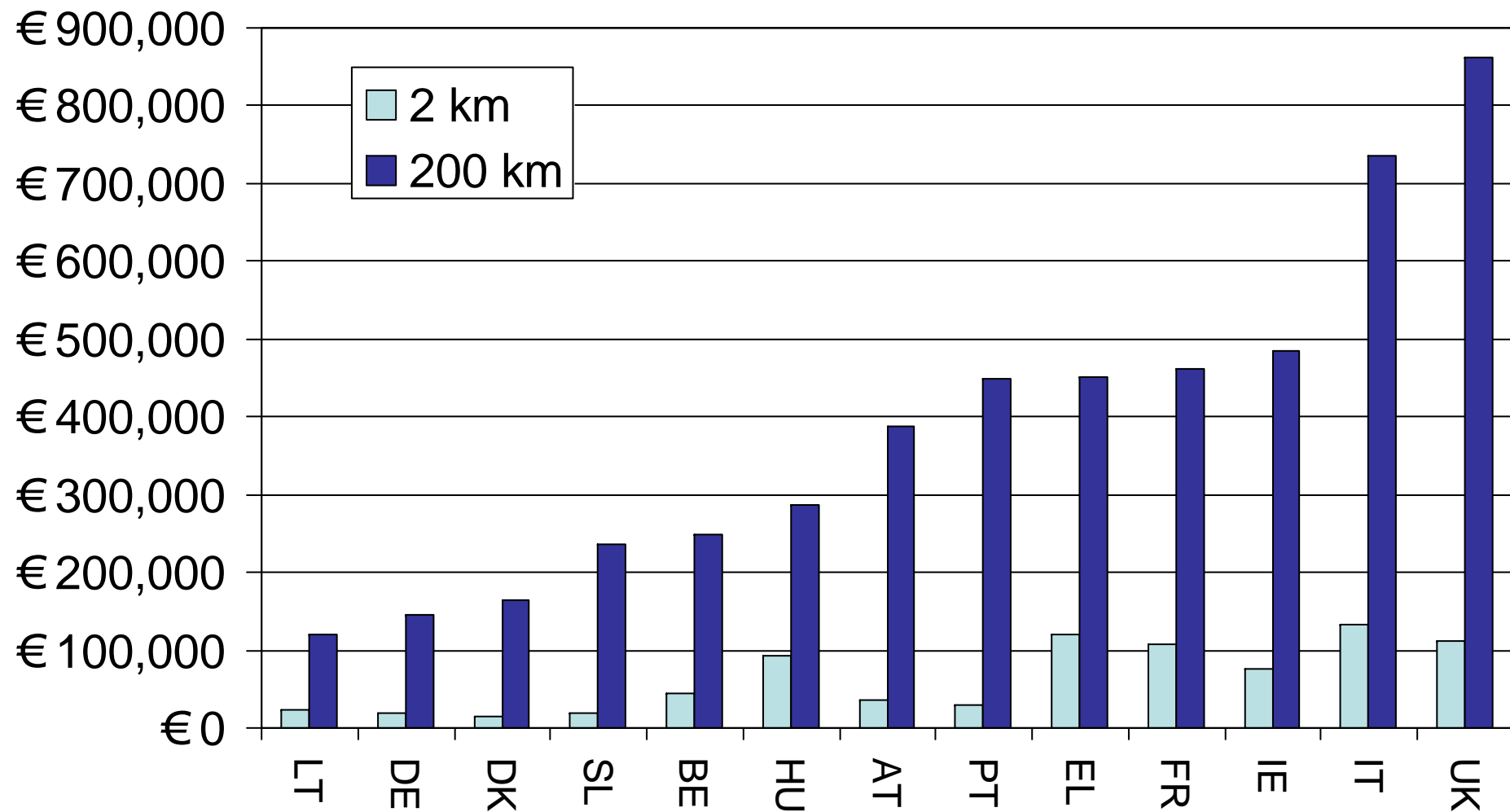
Annual cost for 2Mbits/s 200 km



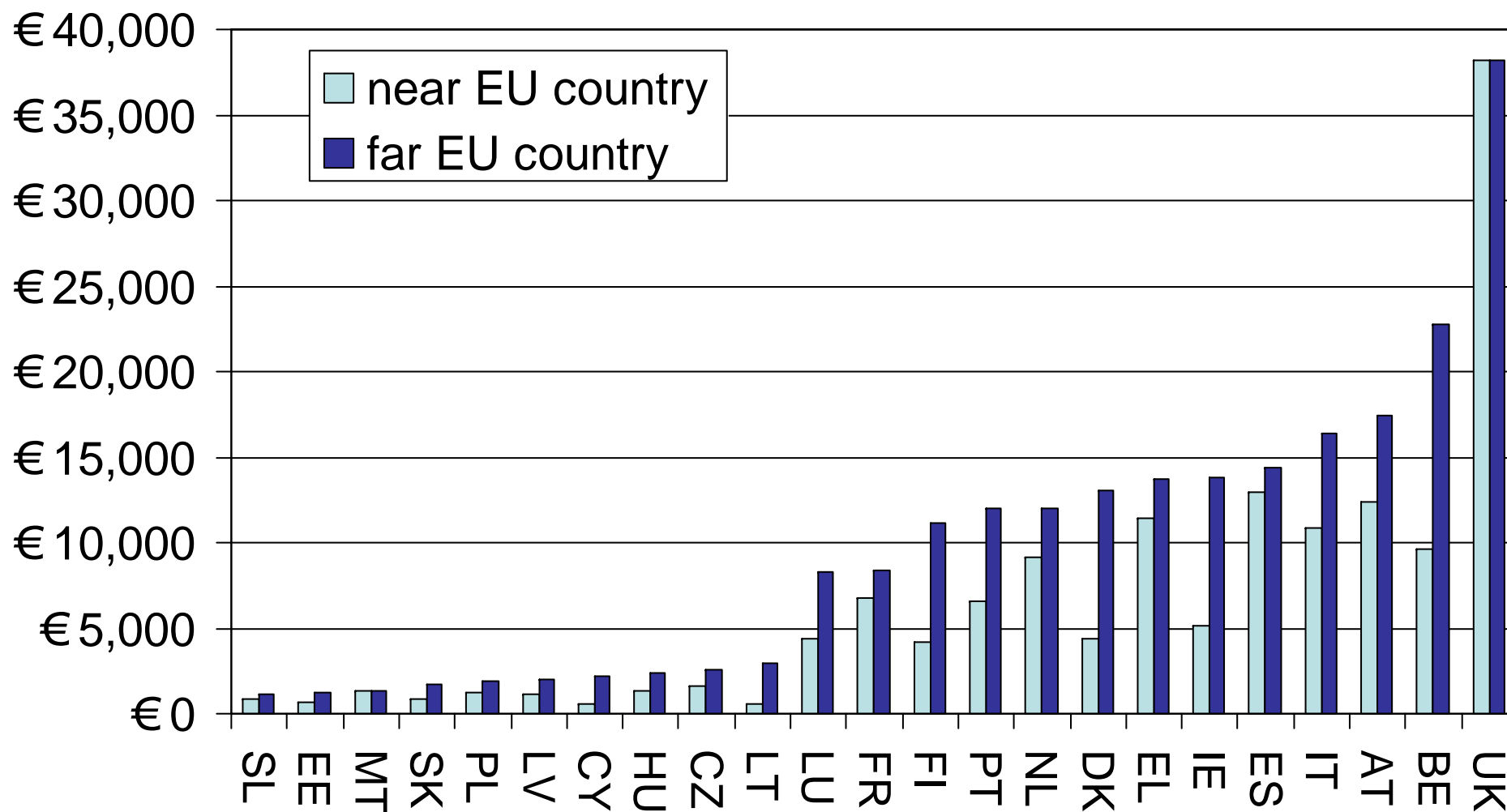
34 Mbps per year, excl VAT



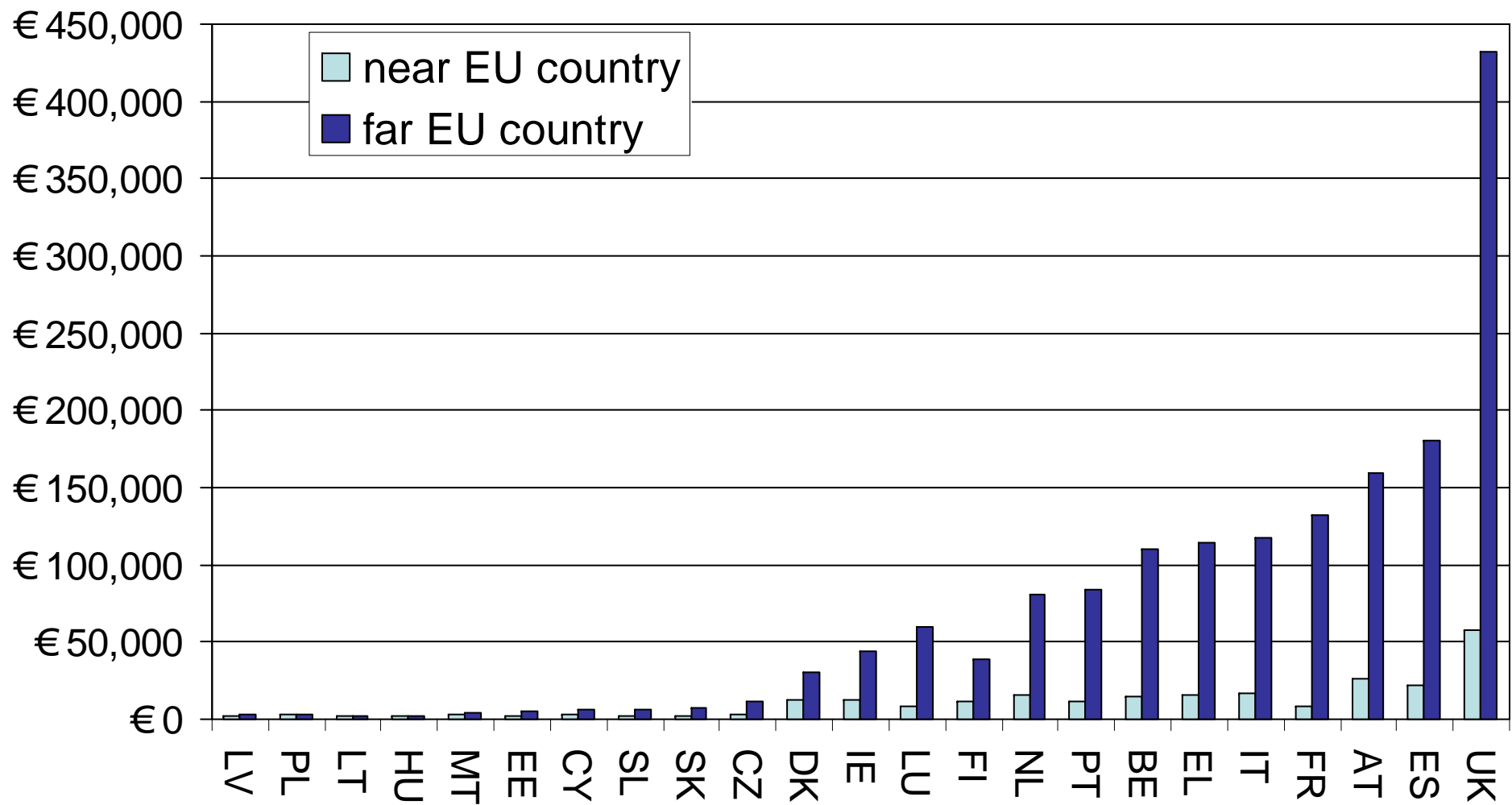
155 Mbps per year, excl VAT



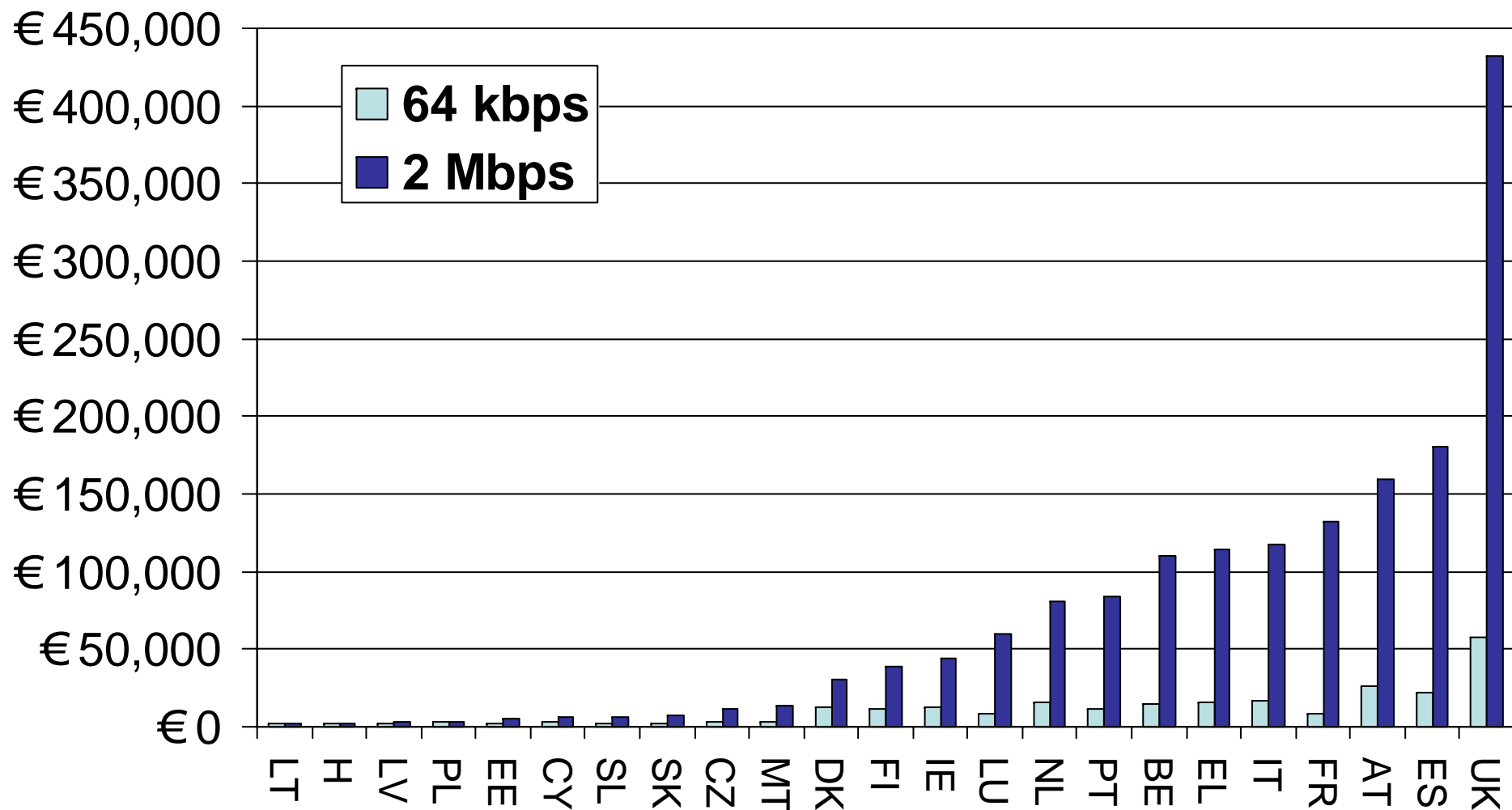
64 kbps half-circuit



2 Mbps half-circuit



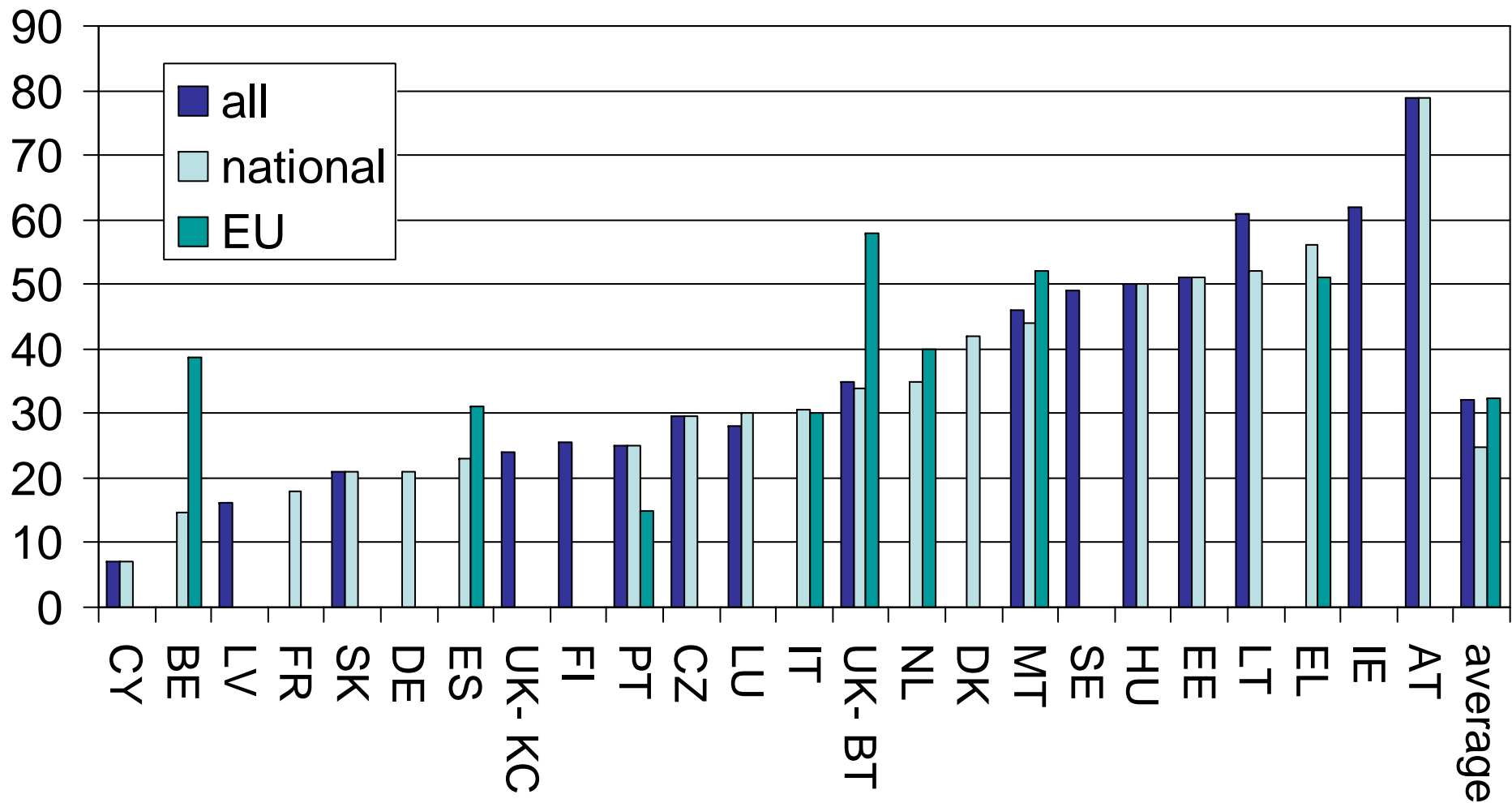
Half circuits to the USA



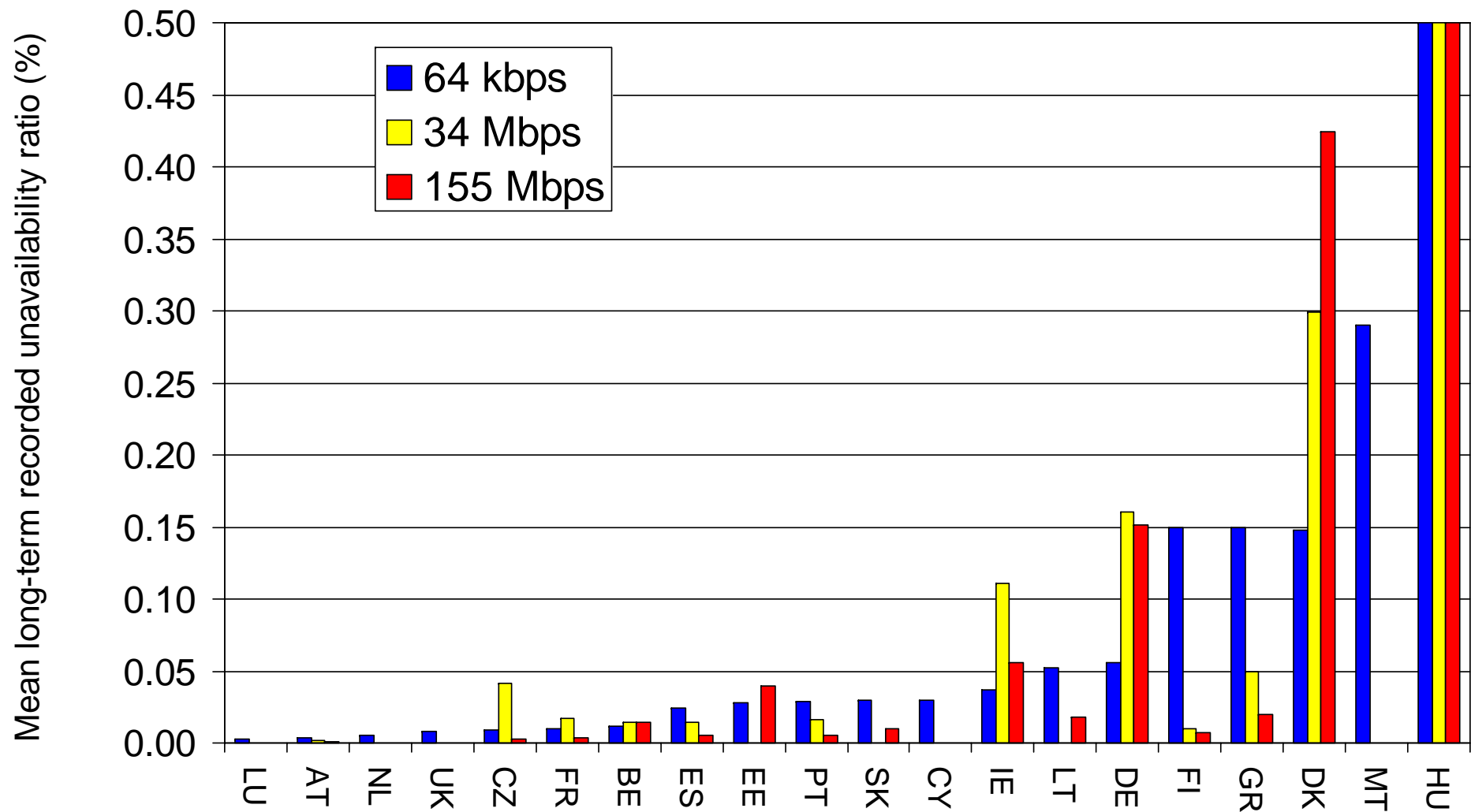
European Commission

- annual leased lines report:
 - delivery period
 - service availability
 - repairs
- data gathered by national regulatory authorities
- compiled by EC

Delivery period 64kbps (days)

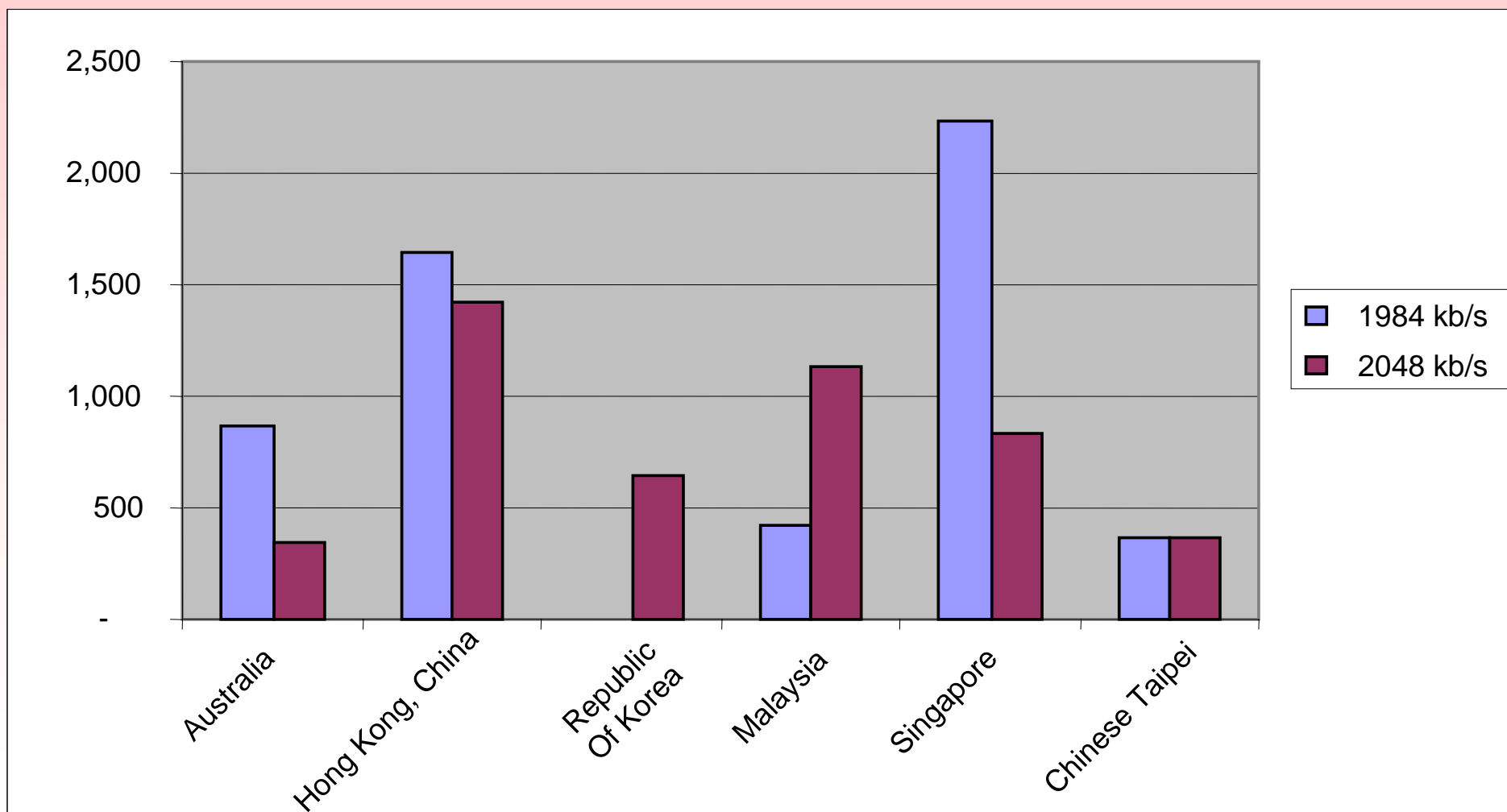


Service availability

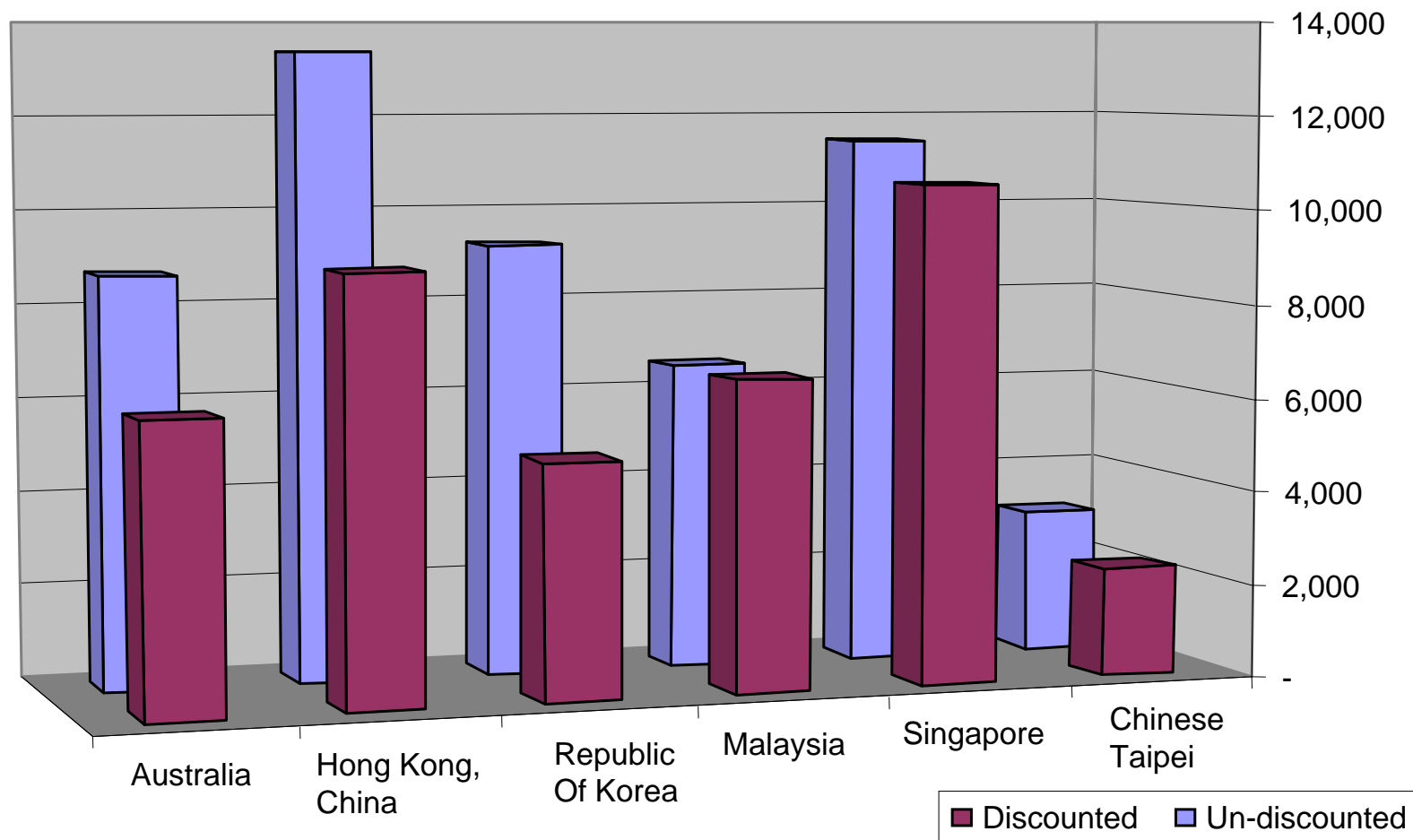


Asia-Pacific

- Some policy work in APECTEL
- No secretariat
- Quite limited data gathering
- Some very wide price discrepancies
- Especially when compared with price reductions in undersea cables



Monthly rental 155Mb/s access circuit



Asia vs. Europe and the U.S.A



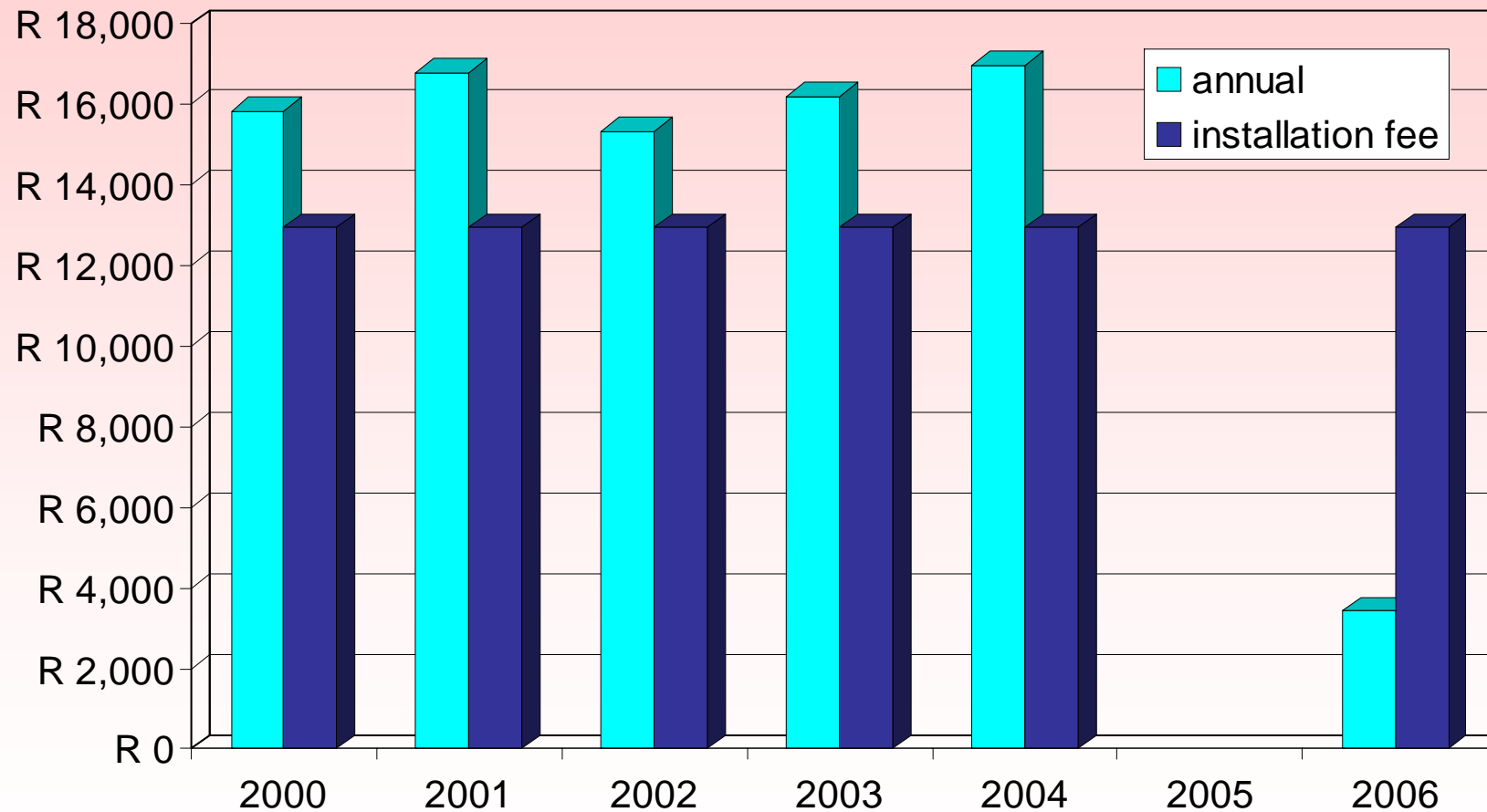
India

- Pressure from ISPs
- Pressure from outsourcing and call centre operators
- Analysis of the prices
- Comparisons with other countries
- Drastic cuts imposed on international and long distance leased lines

South Africa

- Very slow to liberalise the provision of infrastructure
- Users and competitors reliant on access to national and international leased lines from Telkom SA
- Neotel will, in time, bring a duopoly, if not competition
- High ADSL prices help to protect leased line revenues

South Africa – 2Mbits/s



Source: Telkom.

Conclusions

- An essential input for competition
- A long hard struggle
- Difficult to determine the real costs, requires sophisticated cost accounting
- Operators had to rebalance their tariffs
- Requires international benchmarking
- In competitive markets it is being overtaken by other policy tools

Thank you

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