



From Hush-a-phone to investment ladder

An introduction to telecom regulation

DGTIC - Namur September 18, 2006

Philippe Defraigne

Cullen International

phil.defraigne@cullen-international.com



Cullen
INTERNATIONAL





Cullen
INTERNATIONAL

Hush-A-Phone



Models for Hand-set Phone

A Telephone Silencer – the HUSH-A-PHONE

A solution of three phone problems of subscribers

Safeguarding Privacy: So others cannot hear confidential matters

Eliminating Phone Talk Annoyance: Quieting the office for personnel efficiency

Improving Hearing in Noisy Places: By keeping surrounding noises out of the transmitter

Write for Booklet T-E.

Hush-A-Phone Corporation, 43 W. 16th St., N. Y. City



Models for
Pedestal Phone

The 1956 Hush-A-Phone case (1)

- Hush-A-Phone Corp. vs FCC (with AT&T as intervenors)
 - US Court of Appeals DC circuit.
- 1921 to 1956: 125,000 units sold
- AT&T filed tariffs with FCC showing both prices but also *“the classifications, practices, and regulations affecting such charges”*.
- AT&T tariffs
 - forbid attachment to the telephone of any device “not furnished by the telephone company”
 - in case of violation of these provisions, the company claims the right to suspend or terminate service.

The 1956 Hush-A-Phone case (2)

- AT&T has informed both vendors and users of Hush-A-Phones that the device may not be used under the tariffs
- As a result, some distributors have stopped selling it
- 1948: H-A-P petitions FCC
- 1955: FCC decision:
 - Hush-A-Phone does not physically impair any of the facilities of the telephone companies, but
 - The device is 'deleterious to the telephone system and injures the service rendered by it. So, use of a Hush-A-Phone involves 'public detriment.'

The 1956 Hush-A-Phone case (3)

- FCC reasoned that
 - No effect on the telephone system generally
 - Loss of intelligibility/clarity/volume (up to 13 db) as heard by the called party NOT outweighed by significant benefit of privacy
 - Prohibition to use H-A-P is not “unjust and unreasonable”

- AT&T had argued that users should achieve privacy by cupping his hand between the transmitter and the mouth and speaking in a low voice into the makeshift muffler.

The 1956 Hush-A-Phone case (4)

- ➔ The Court ruled that
 - ➔ To say that a telephone subscriber may produce the result in question by cupping his hand and speaking into it, but may not do so by using a device which leaves his hand free to write or do whatever else he wishes, is neither just nor reasonable...
 - ➔ AT&T tariffs are in unwarranted interference with the telephone subscriber's right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.



Cullen
INTERNATIONAL

AT&T



1921



AT&T, computers and lines of business restrictions

- The famous Bell Labs: transistor, Unix (OS) and C programming language
- 1956: settlement with DoJ in antitrust case aimed at divesting Western Electric - AT&T's agrees to confine its activities to common carrier telecommunications and license its patents to "all interested parties".
- AT&T was therefore banned from selling computers despite its key role in electronics research and development .

Judge Green and the MFJ

- Lawsuit brought by DoJ in 1974

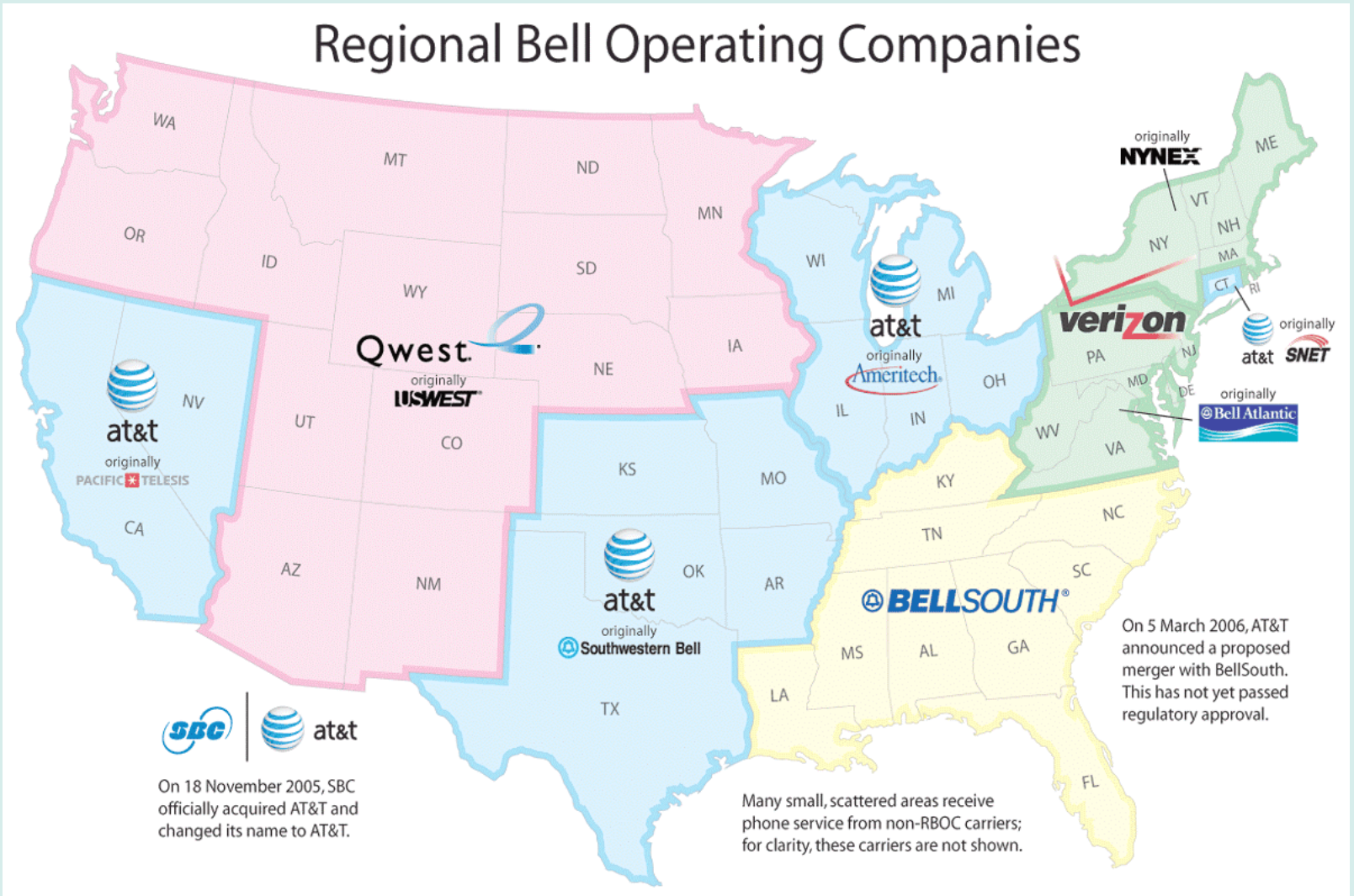
- The Modified Final Judgment
 - January 1982: AT&T (Ma Bell) agrees to divest its local exchange service operating companies
 - January 1, 1984:
 - AT&T's local operations split into seven "Baby Bells"
 - AT&T continued to run all its long distance services (in competition with MCI and Sprint)



Cullen INTERNATIONAL

The baby Bells: in 1984 and today!

Regional Bell Operating Companies



On 18 November 2005, SBC officially acquired AT&T and changed its name to AT&T.

On 5 March 2006, AT&T announced a proposed merger with BellSouth. This has not yet passed regulatory approval.

Many small, scattered areas receive phone service from non-RBOC carriers; for clarity, these carriers are not shown.

Convergence: first attempts!

- First attempt at convergence |b| computers and telecom
- 1991: AT&T bought NCR
- 1984 IBM bought Rolm (pioneer of digital PBXs)
- both colossal failures:
 - NCR was spun off in 1997 and
 - Rolm was sold to Siemens in 1990



Cullen
INTERNATIONAL

Telecom liberalisation in Europe

Cause N°1





Cullen
INTERNATIONAL

Telecom liberalisation in Europe

Cause N°2



Telecom liberalisation in Europe

Cause N°3



IBM PC model 5150 retailed in Fall 1981 for \$2880 (64 kilobytes RAM and a single-sided 160K 5.25" floppy drive3)

UK as Europe's laboratory



- ➔ 1979: Margaret Thatcher becomes Prime Minister
- ➔ 1981: Mercury Communications is licensed (Duopoly)
- ➔ 1984: British Telecom is privatised
 - ➔ 2.1m members of the public bought 2/5 of the shares
 - ➔ Telco privatisation and shareholder culture
- ➔ 1991: Duopoly Review – Full competition

The Single Market of 1992

- June 1985: Commission White Paper on the completion of the internal market approved by Council
- 286 proposed measures to remove national barriers
- Building up of a political momentum
- Jacques Delors!



The Single Market in telecom

- Telespeed Services Ltd. v. United Kingdom Post Office
 - Commission Decision: 1982
 - ECJ Decision: 1983
- Telespeed objects to BT monopoly on international telex services
- European Commission and ECJ confirm application of competition rules to telecom operators

The Telespeed case

→ BT argued that:

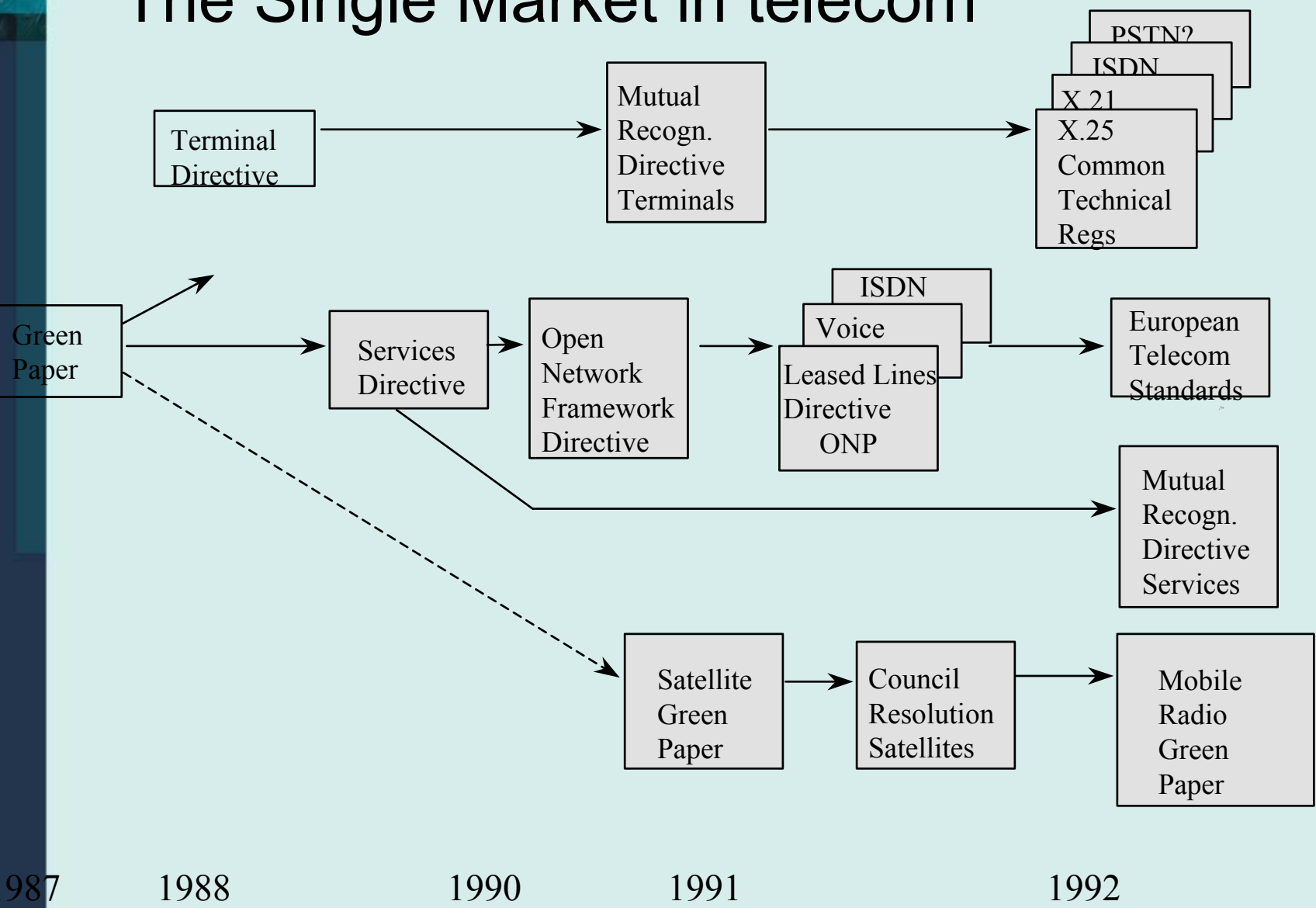
Indeed, it is because we have managed to keep our int'l telex charges so low - much lower than in other countries - that it is attractive for other countries to send their telex messages through agencies in this country. The activities of agencies which attract telex messages from other countries to transmit them from the UK to a third country, cause a serious loss of revenue to other countries and break the int'l agreements on which world cooperation in telecom is founded. They thus put at risk the arrangements we have been able to negotiate with other countries, and so endanger the low tariffs we at present charge to our own customers in the UK

The Single Market in telecom

- 1988: Liberalisation of terminal equipment
- 1990: Liberalisation VAS over leased lines
- 1994: Liberalisation of satellite communications
- 1995: Liberalisation of VAS over Cable TV networks
- 1996: Liberalisation of mobile communications
- 1998: Full liberalisation

- ...The very small steps policy

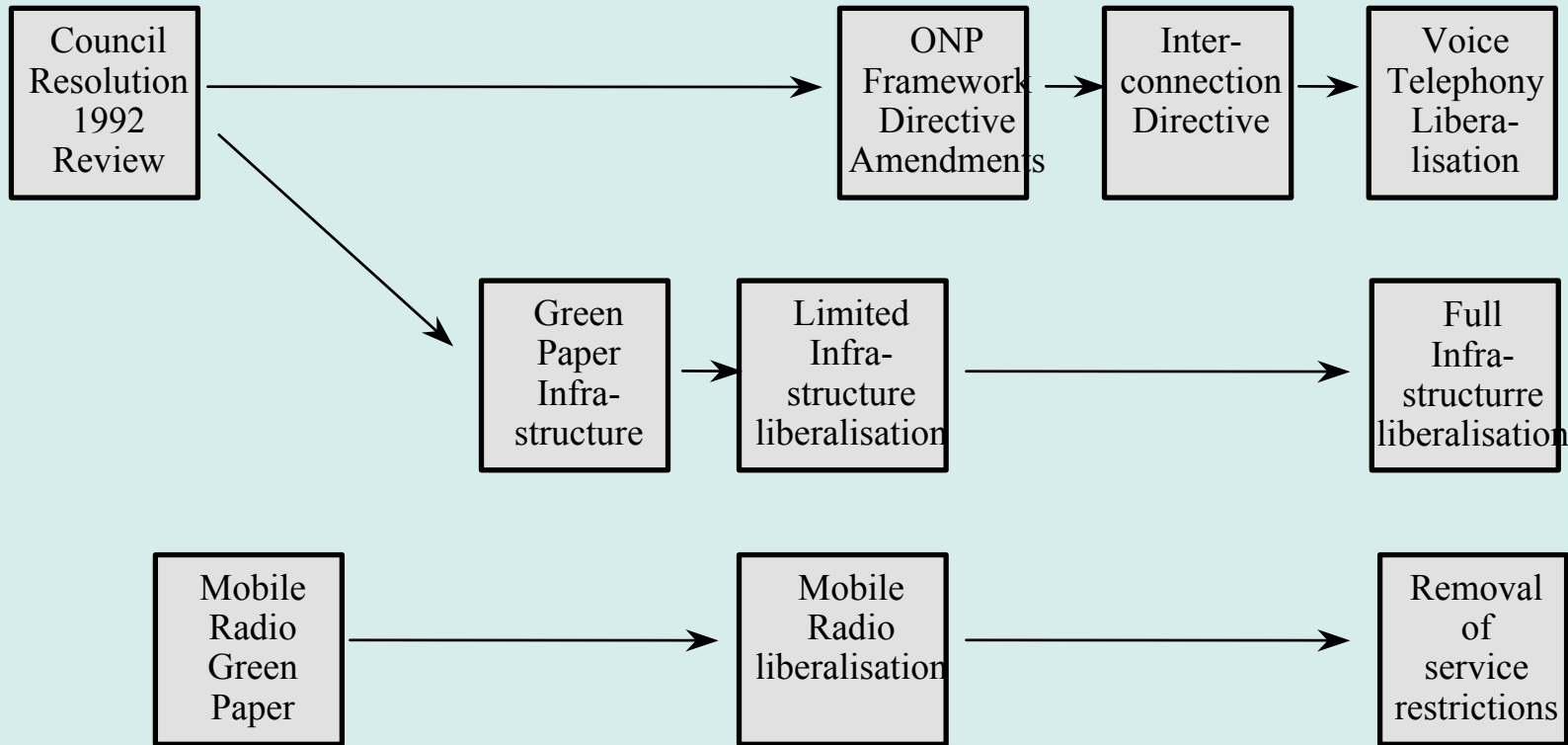
The Single Market in telecom



1
9
9
2

R
E
V
I
E
W

The Single Market in telecom



1992

1993

1994

1995

1996

1997

1998



Cullen
INTERNATIONAL

For a good football match, you need...

- A set of rules (that may change over time!)
- A good referee
- A level playing field



Independent regulators

- Prevent abuse of dominant position by incumbent ops
 - Approval of wholesale offerings
 - Prior screening of retail offerings

- Management of scarce resources: frequencies & numbers

- Disputes resolution: interconnection and access

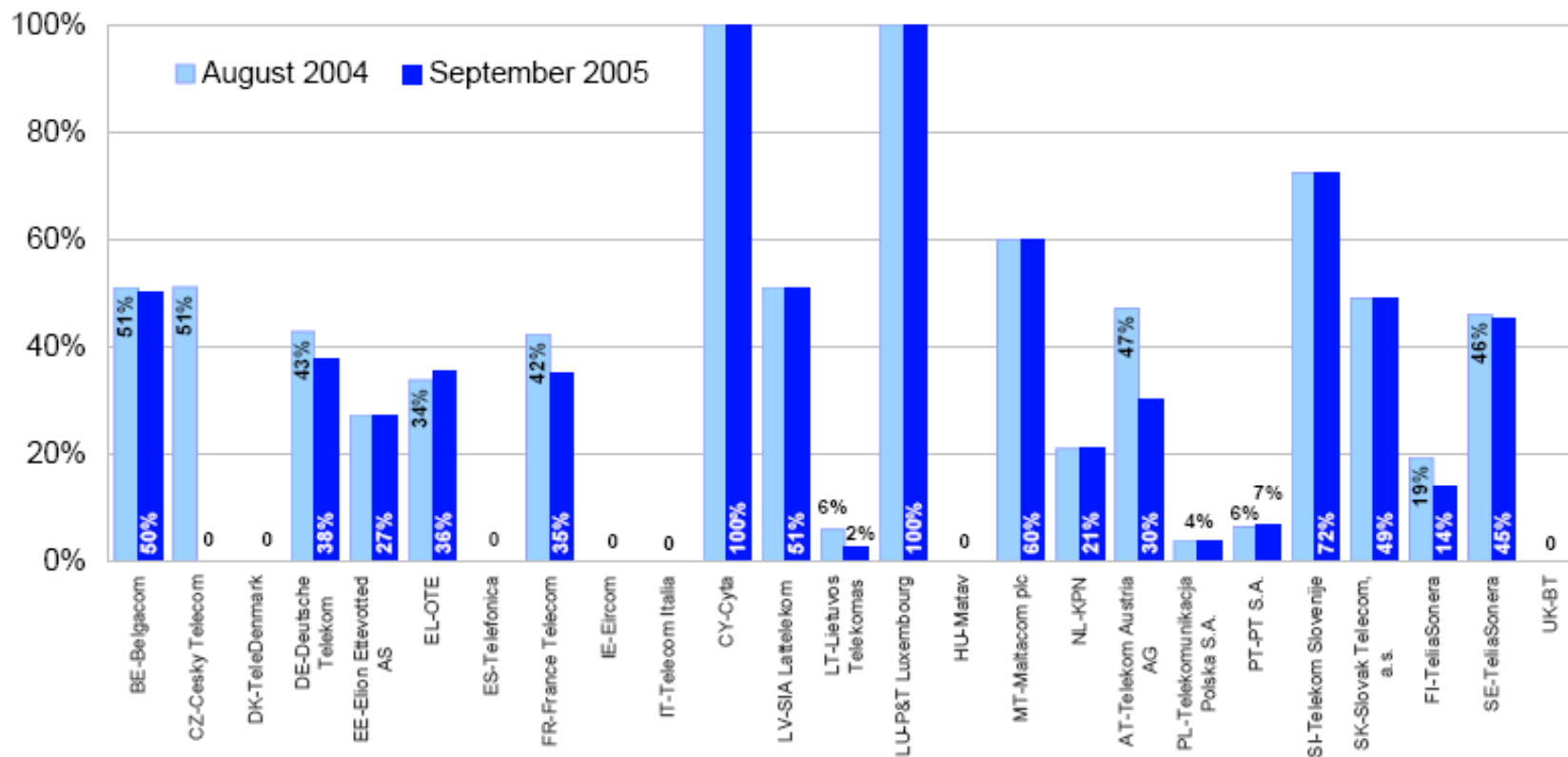
Independent regulators

- Independent from whom?
 - From operators
 - From politicians
- Government should set the legal framework - including the objectives to be pursued. Then regulators should be left alone (with proper appeal procedures)



Privatisation of the incumbent operators

State ownership in the incumbent operators, August 2004 - September 2005

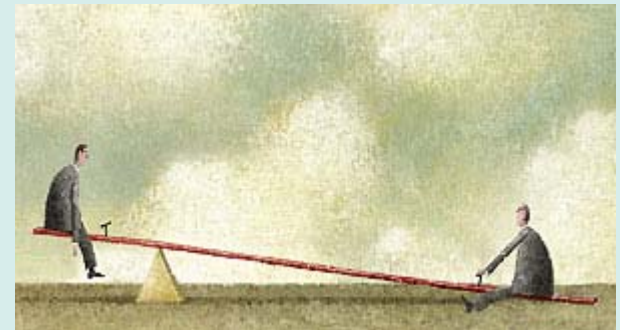


EU Telecom regulation - Principles

EU regulatory regime is based on the following principles:

→ Asymmetry (Incumbent operators > new entrants)

→ Technological neutrality



EU Telecom regulation - principles

Incumbent operators' offerings have to comply with the following principles

- Non-discrimination
- Transparency
- Cost-oriented prices

Why telecom regulation is needed?

Examples of sectors with few major players:

- manufacturers of large civil aircrafts: Boeing & Airbus
- software for the desktop: Microsoft
- financial audit services: the big 4

Why Competition law

The pros

- Telecom is not a world a part
- Few political considerations (application of the Treaty)
- Broad principles which can englobe new problems

The cons

- Less detailed than sector specific regulation
- Mainly ex post
- Competition authority has little knowledge of telecoms

Sector specific regulation

The pros

- Very detailed
- Ex ante regulation
- Regulators specialised in telecoms

The cons

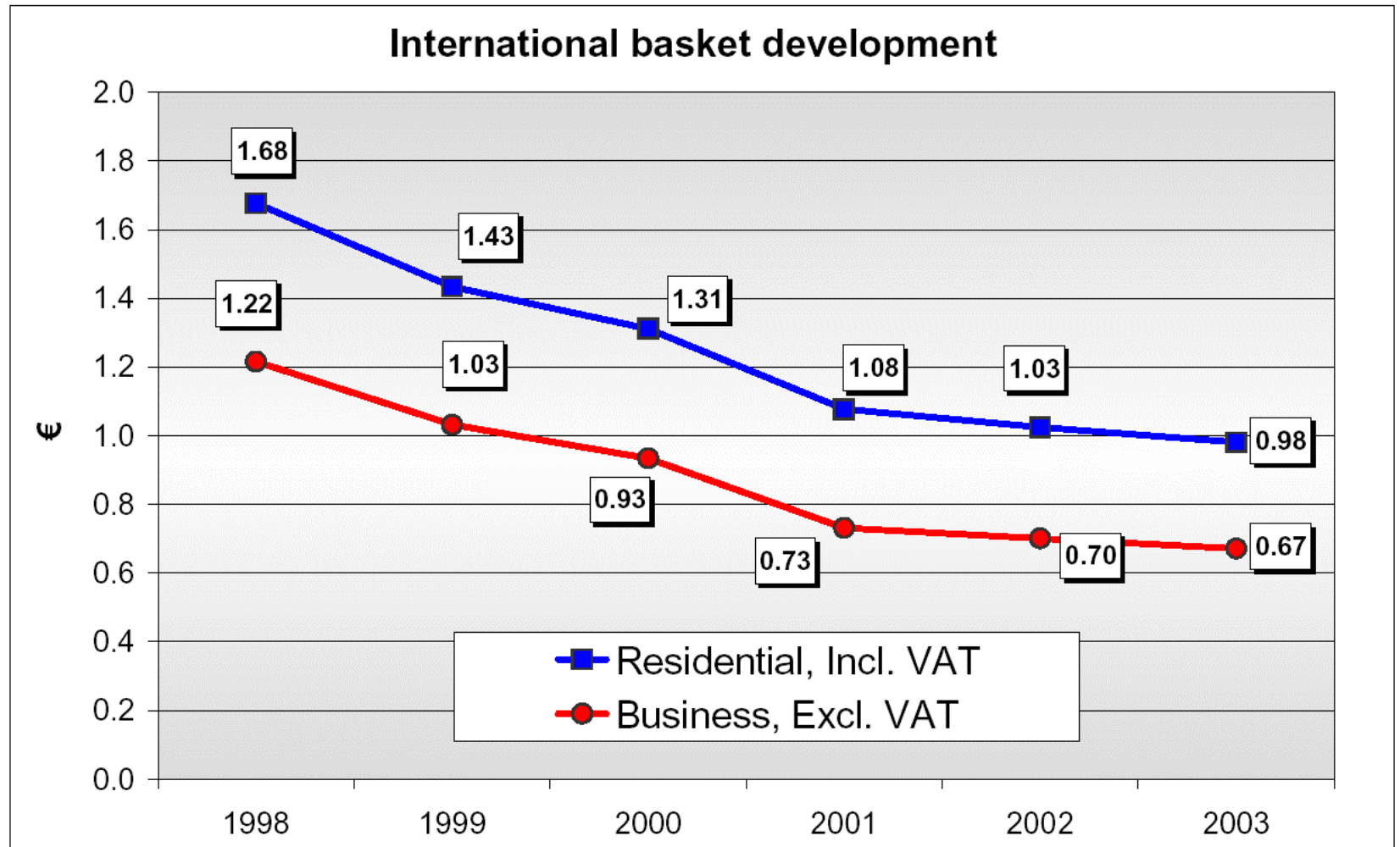
- Inconsistency with regulation of rest of the economy
- Danger of bureaucracy (e.g. type approval, public procurement)
- Political considerations

Why do we need telecom regulation?

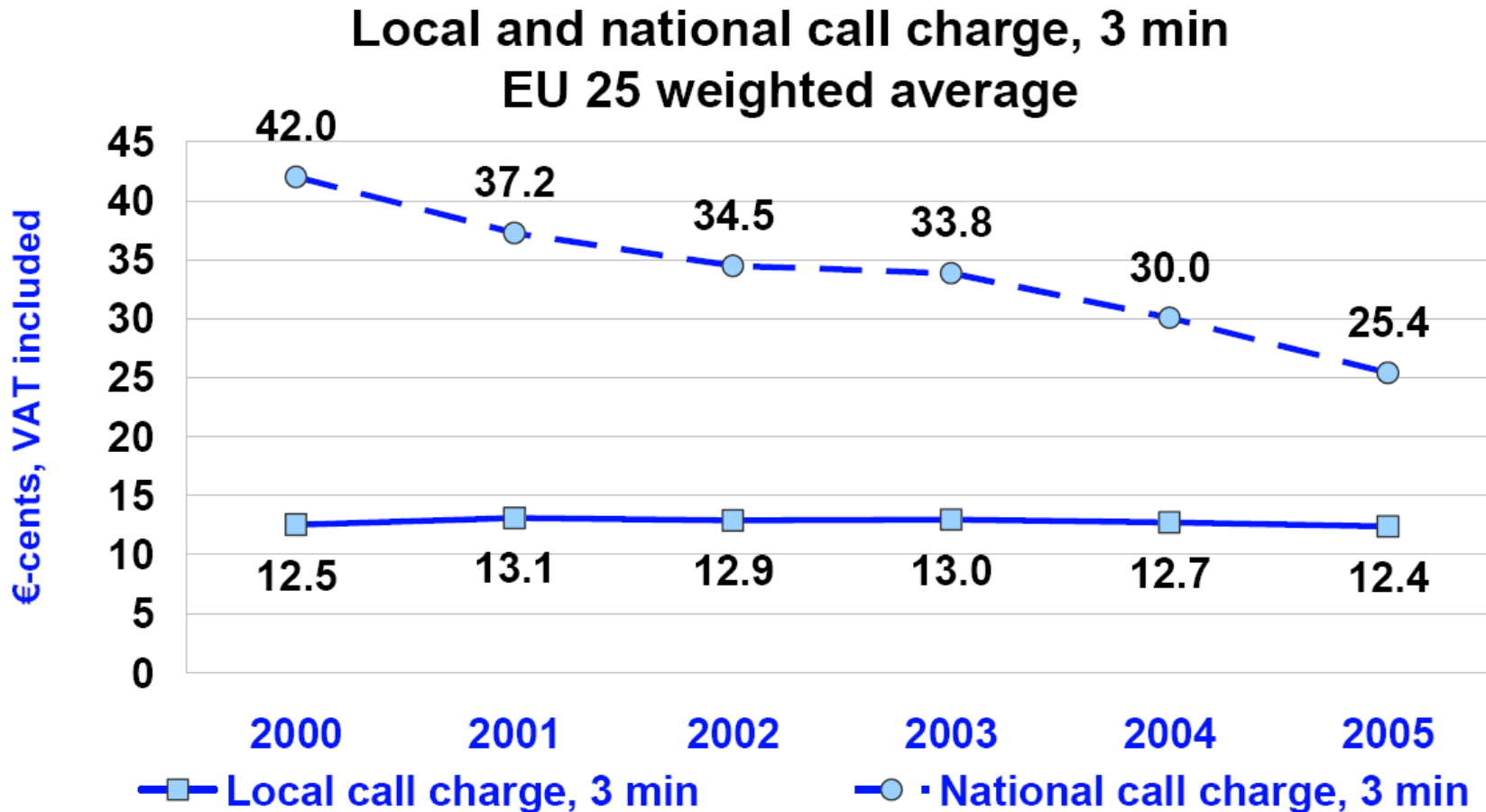
Three major issues:

- Competition bring benefits to consumers and to the industry itself
- Competition law is useful today and should be the ultimate tool
- In the meantime, we need telecom regulation!

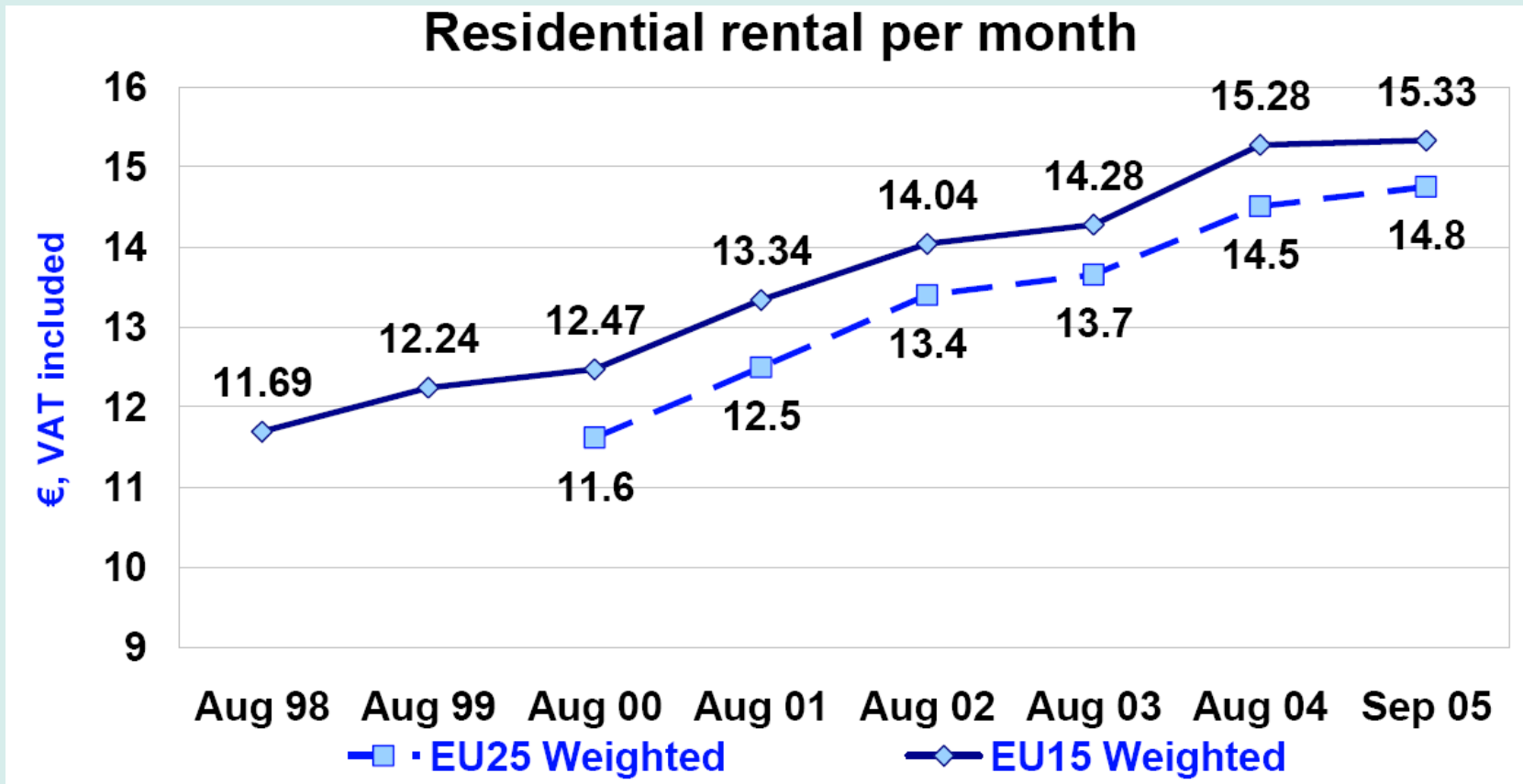
Retail prices are coming down



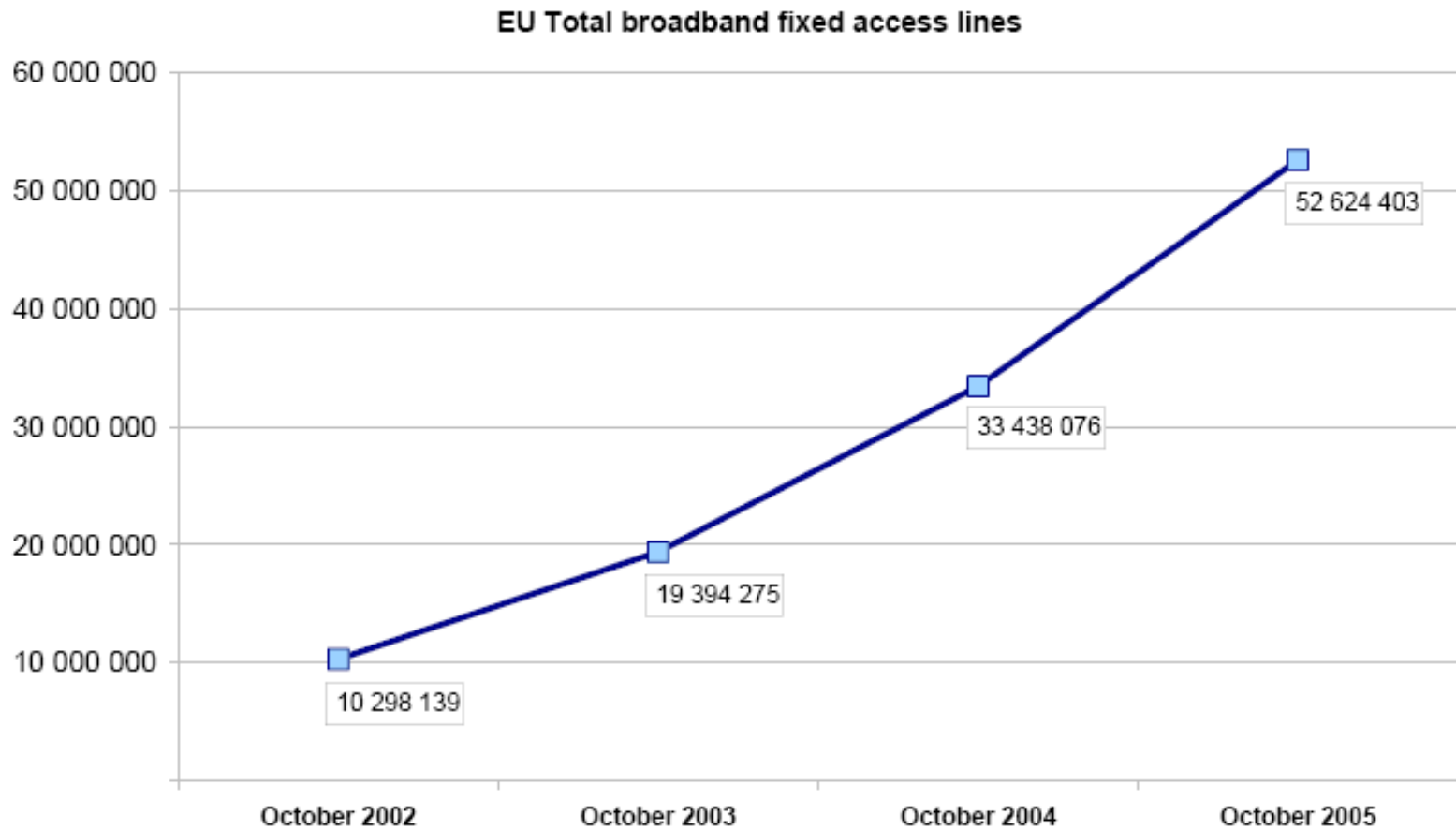
Retail prices are coming down



And yes the monthly rental has gone up!

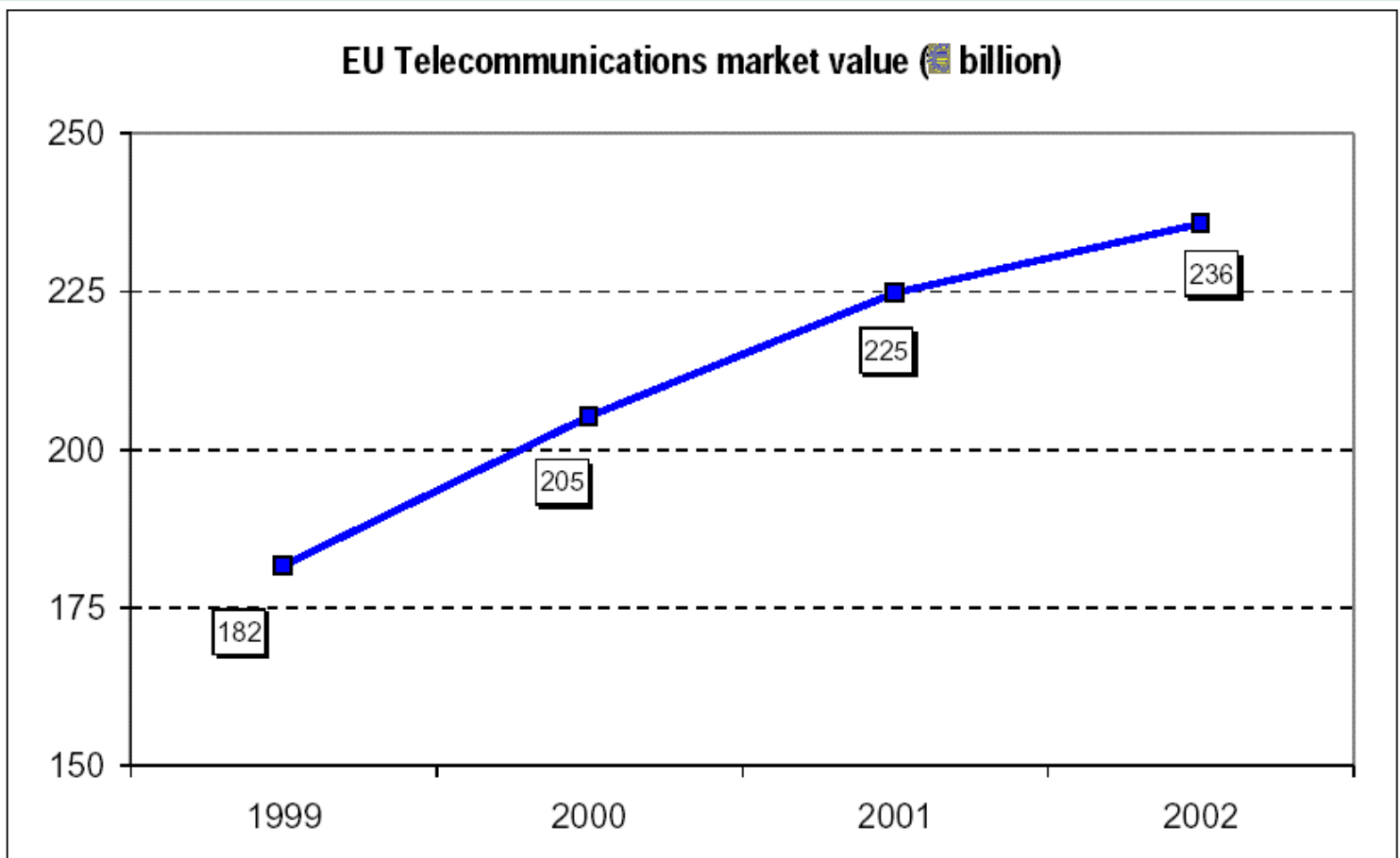


Broadband growth

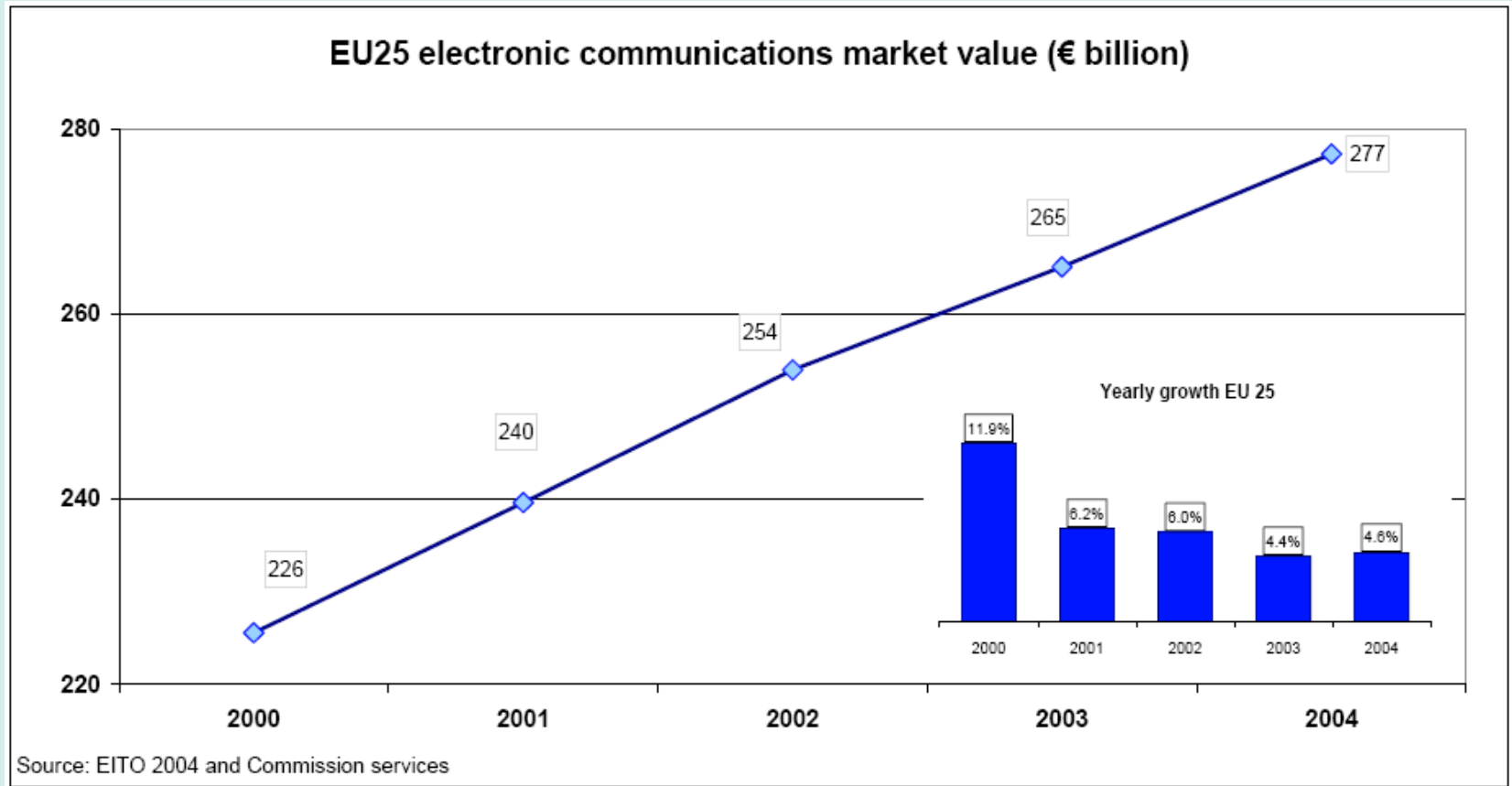


Source: Commission services based on COCOM data

Growth of the telecom market

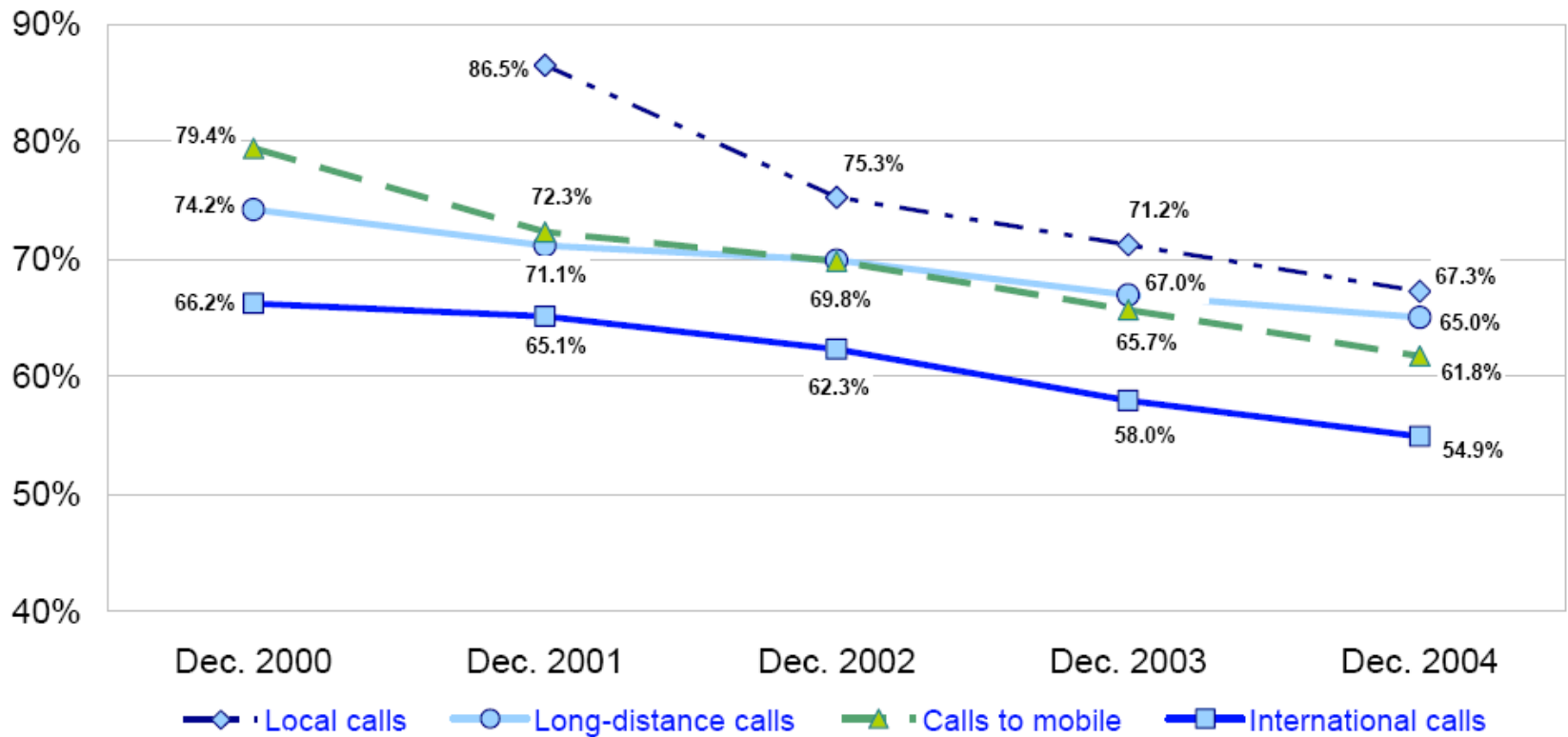


Growth of the telecom market



Incumbent's fixed telephony market share

EU15 incumbents' average market share on the voice telephony market (based on market shares of revenues)



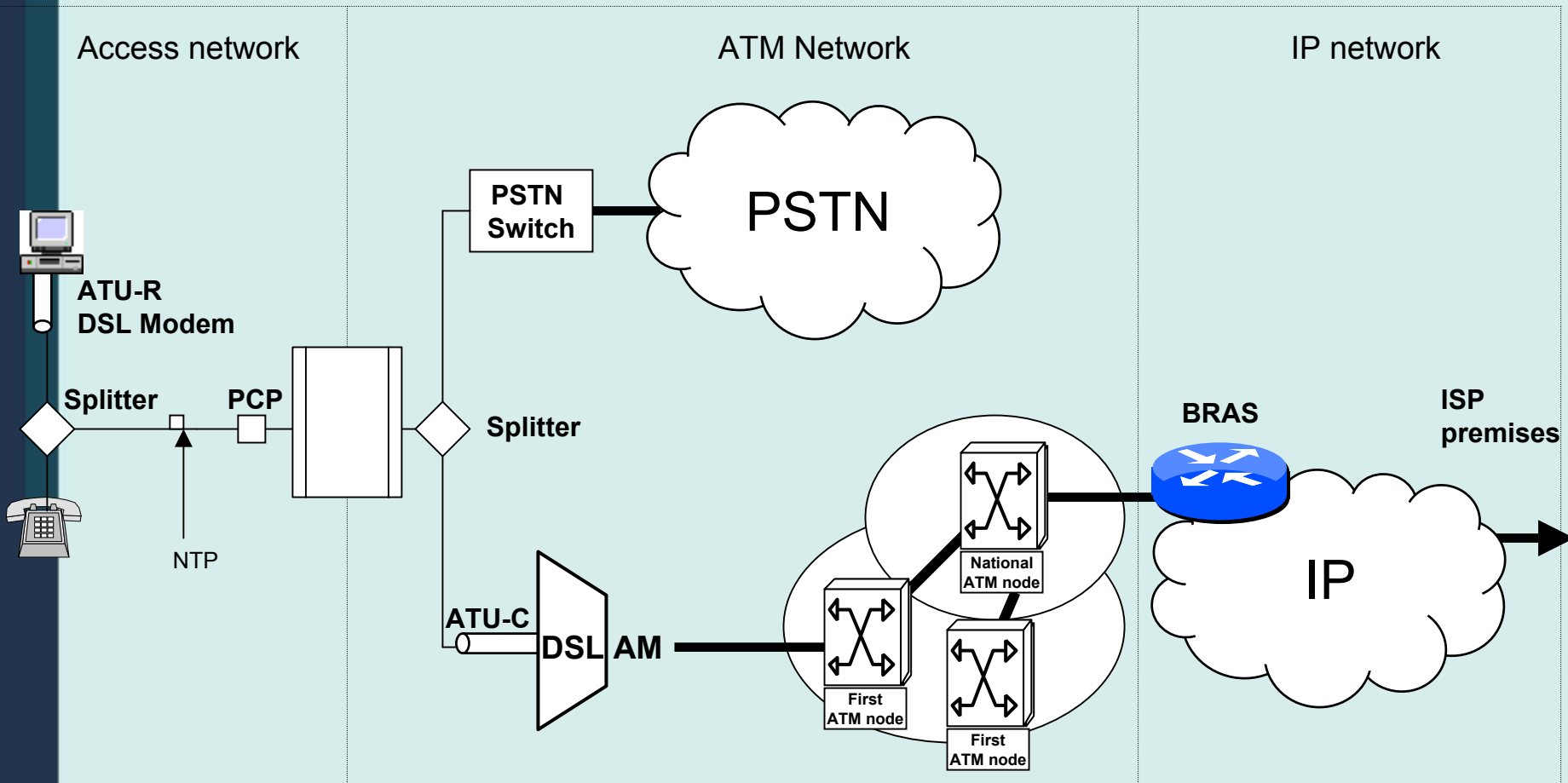


Cullen
INTERNATIONAL

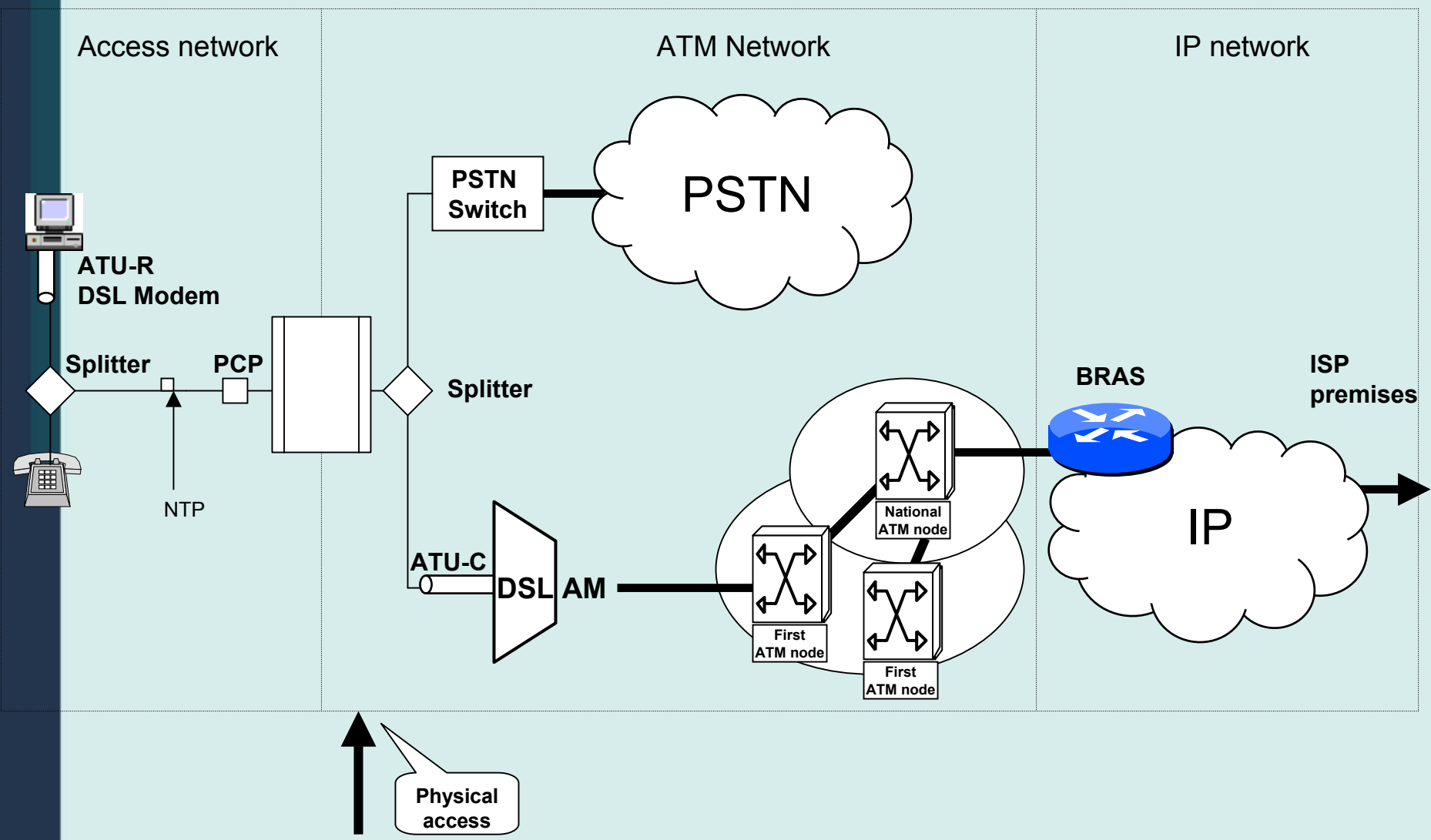
The regulator as D.J. of the telecom market



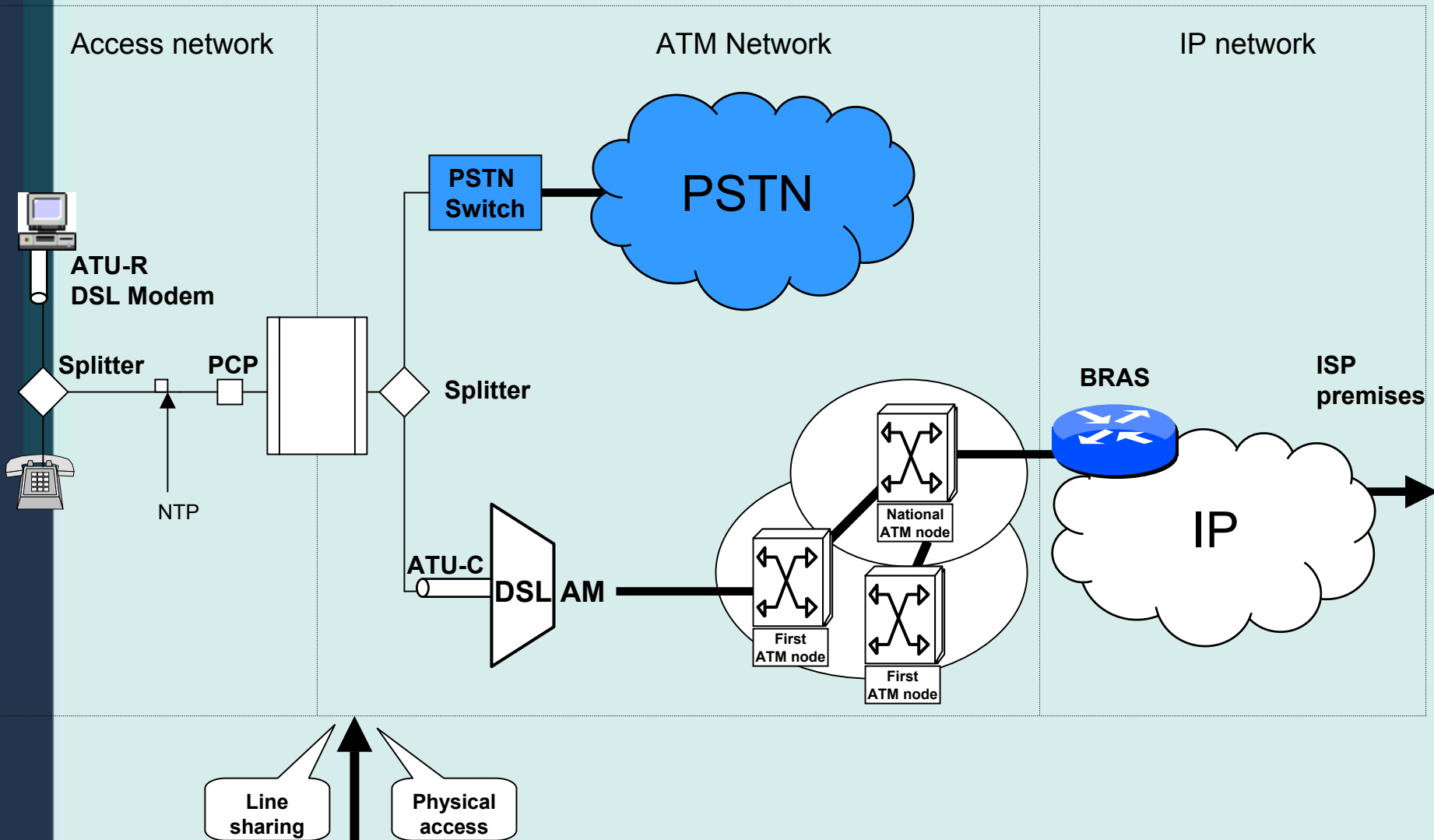
Bitstream access – network architecture



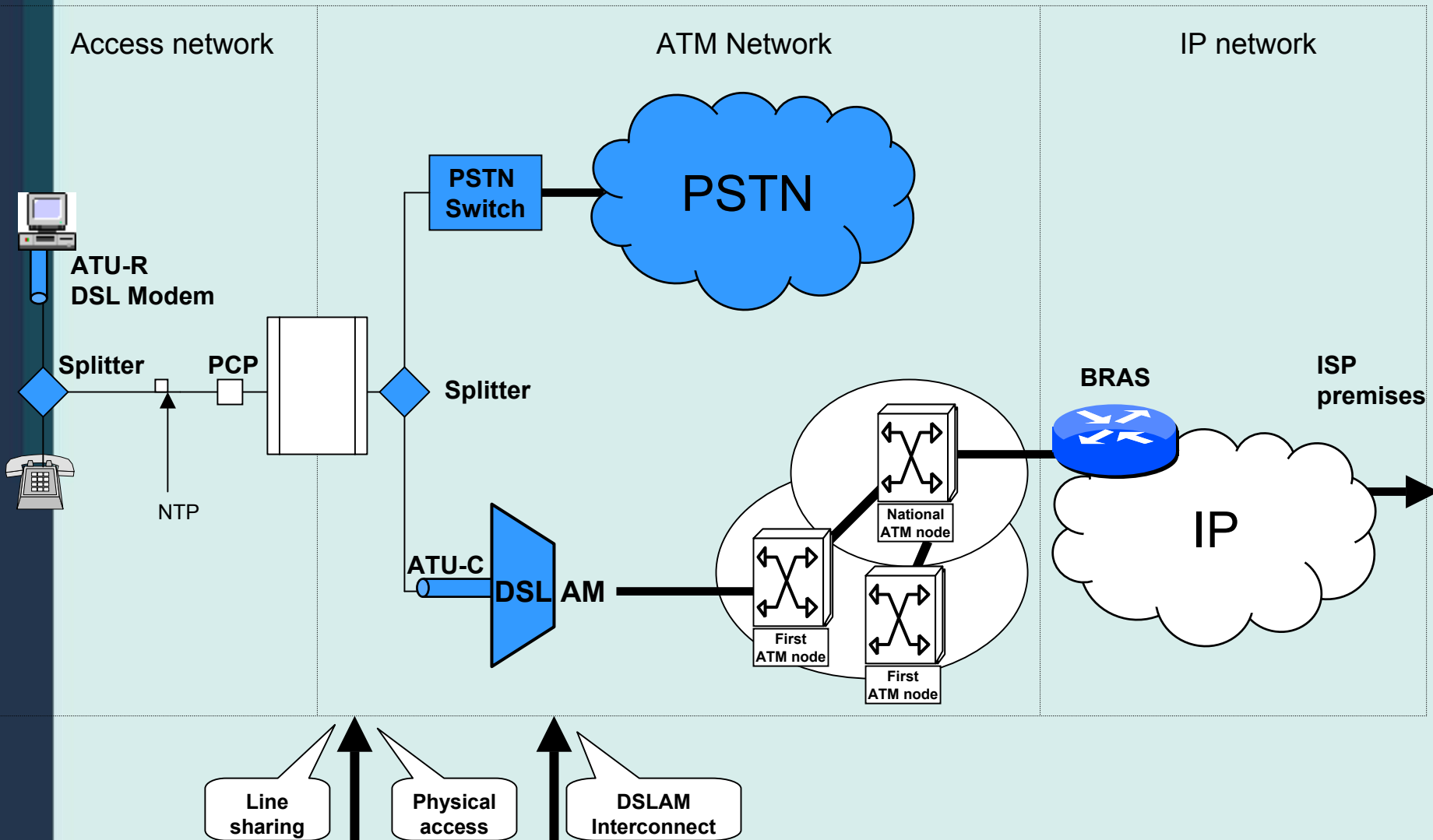
Bitstream access – network architecture



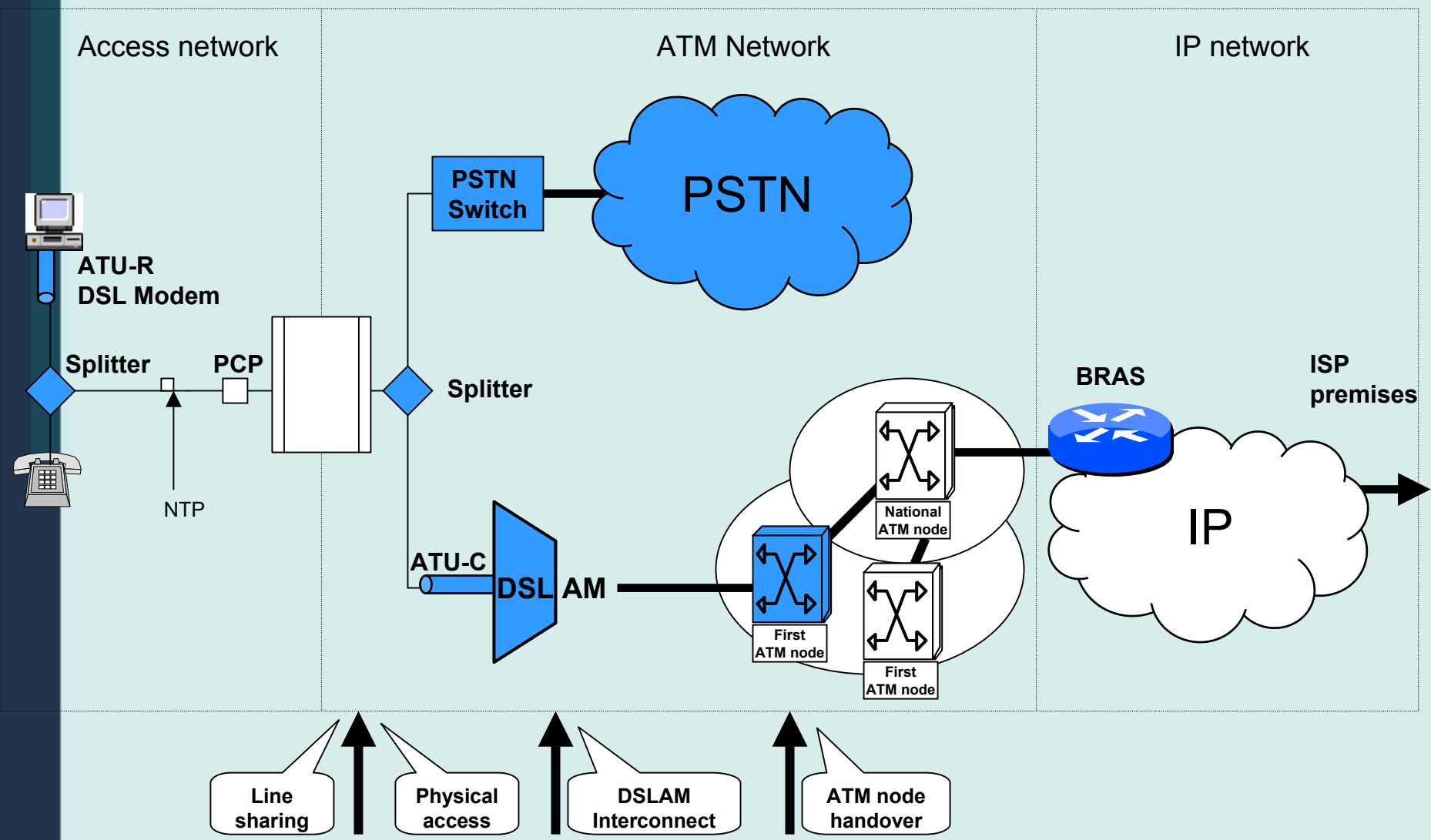
Bitstream access – network architecture



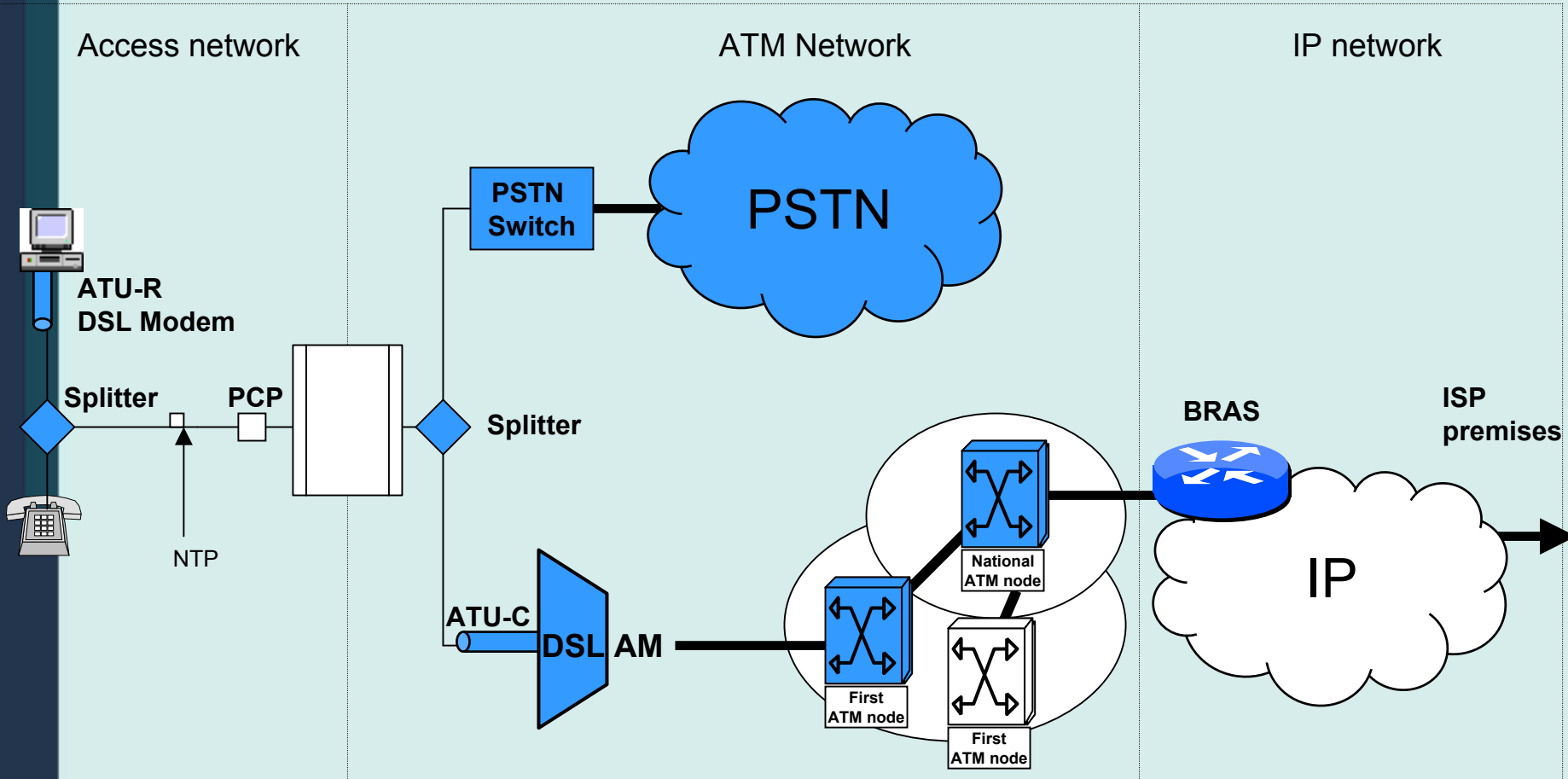
Bitstream access – network architecture



Bitstream access – network architecture

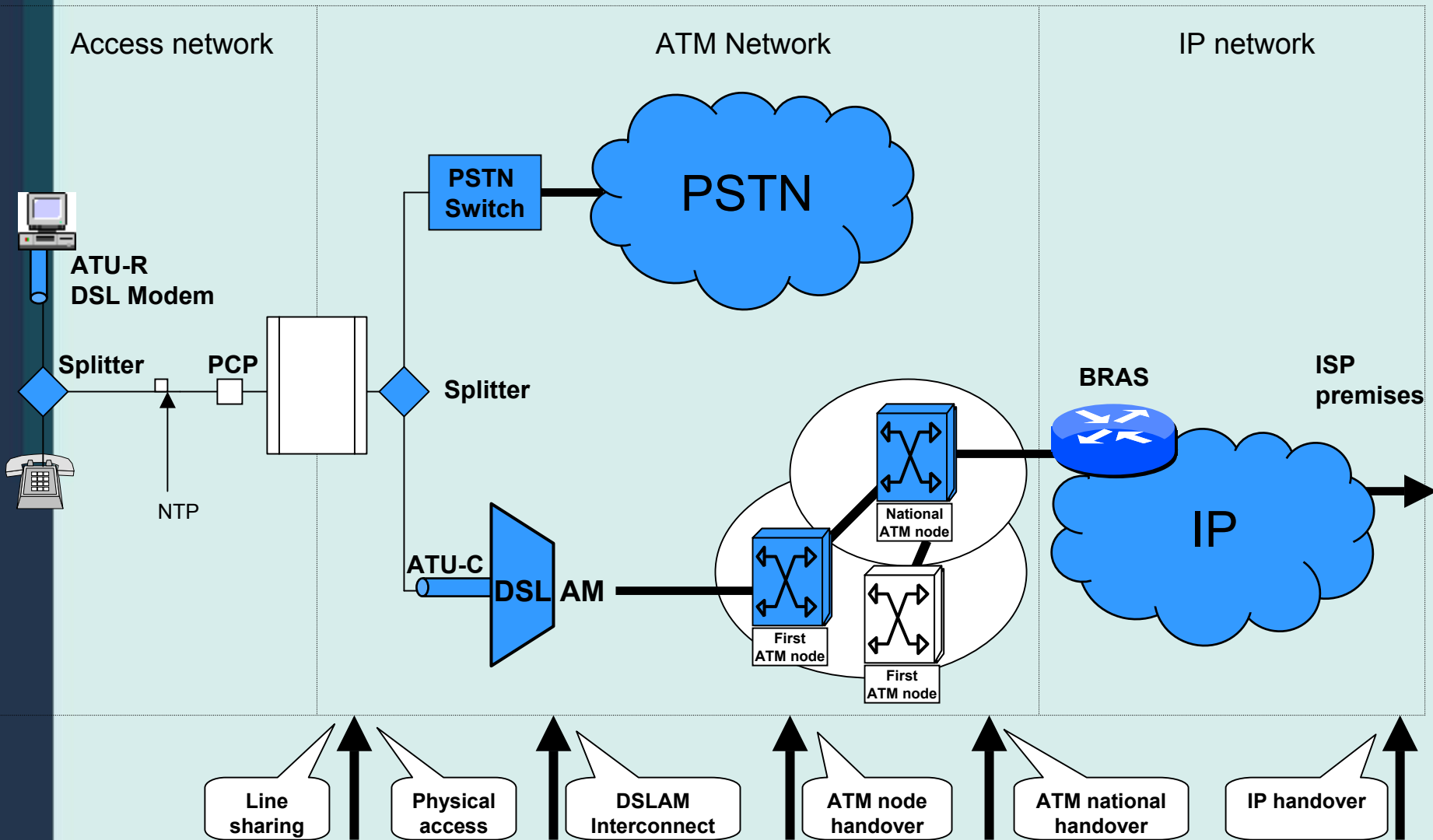


Bitstream access – network architecture



- Line sharing
- Physical access
- DSLAM Interconnect
- ATM node handover
- ATM national handover

Bitstream access – network architecture



Price squeeze

→ 'equally-efficient-operator' test

VERSUS

→ reasonably efficient entrant test



Cullen
INTERNATIONAL

Rem Koolhaas' Seattle public library





Cullen
INTERNATIONAL

Dutch architect Rem Koolhaas's idea for a European flag

