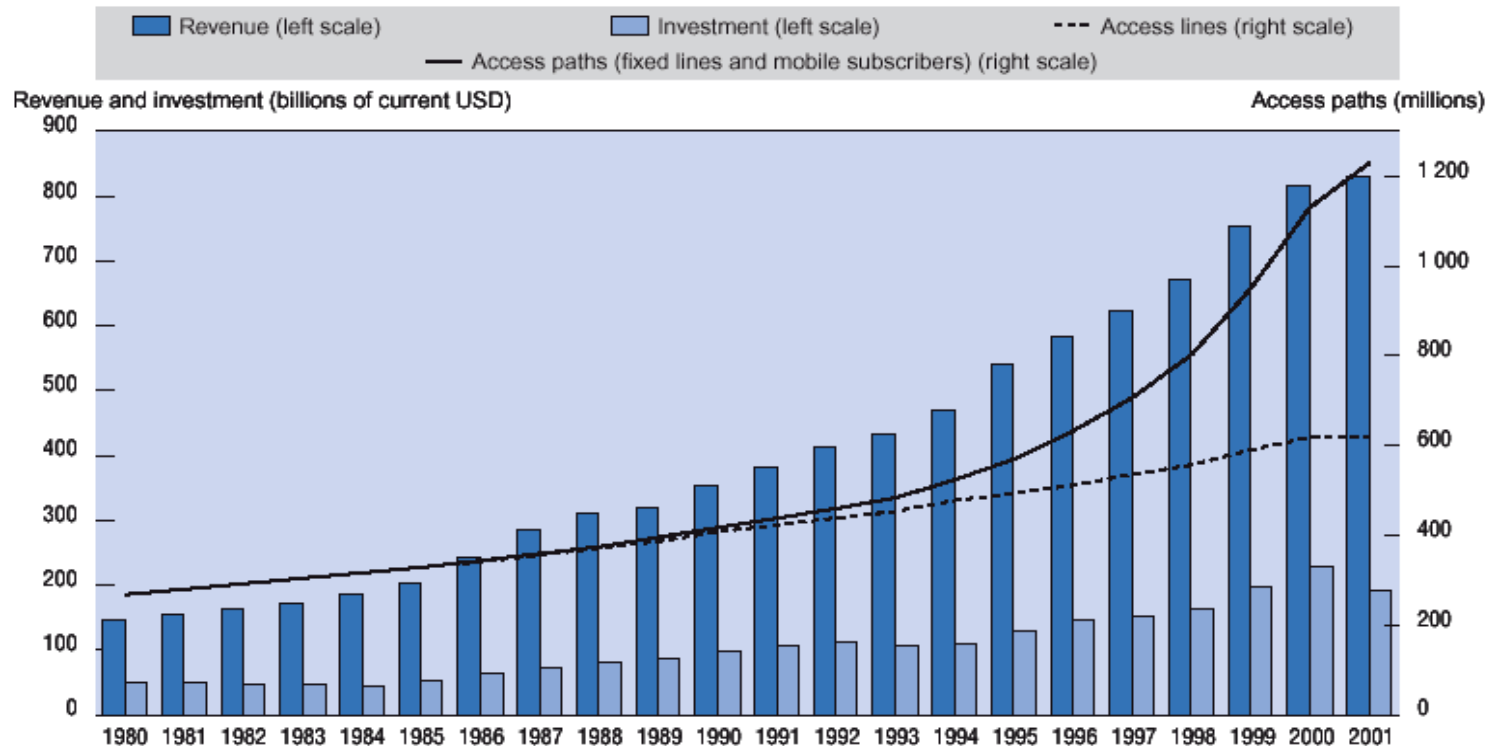


Telecommunications after the bubble - current market trends

**FES / ASPEK Seminar „Privatization of Telecommunication Sector“
3 May 2005, Jakarta**

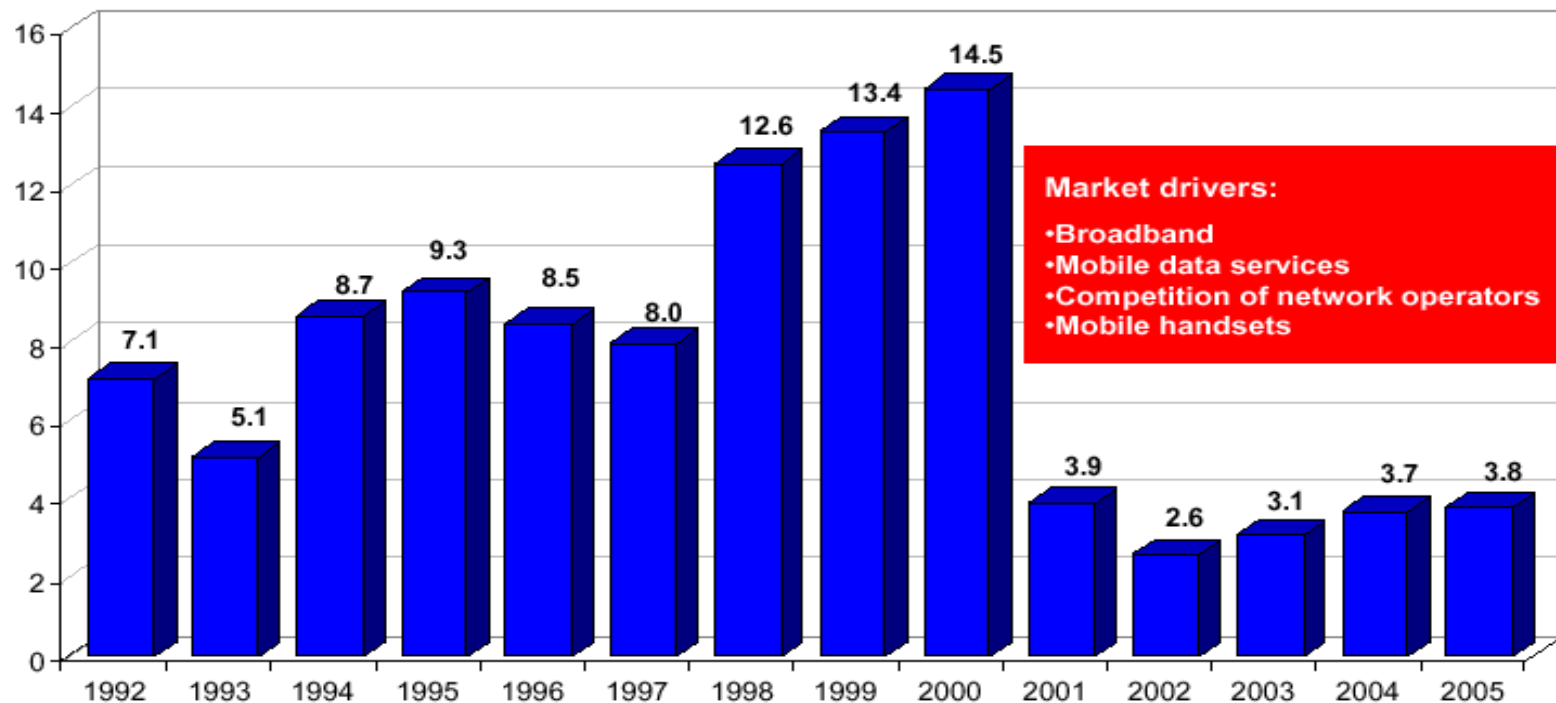
Michael Schwemmle

The TLC-Sector grew heavily until the turn of the century



Source: OECD.

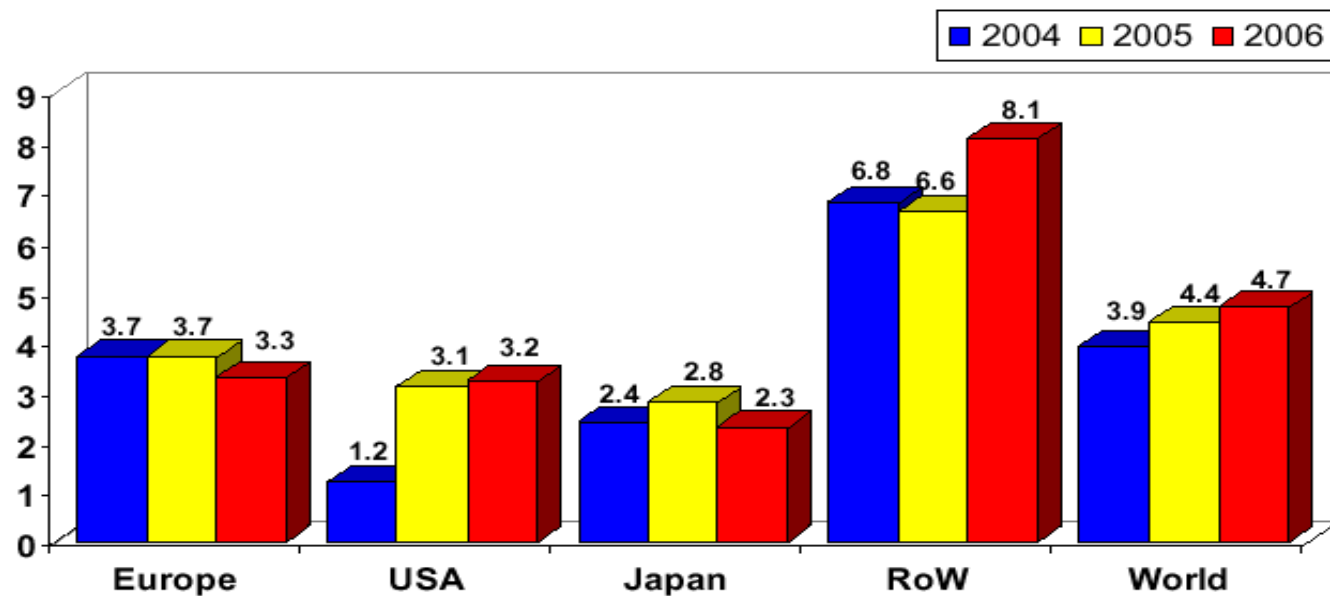
The end of the new economy slowed down the growth of the sector, but didn't stop it



Source: EITO Update 2004 in cooperation with IDC

Market value 2004: 318 billion Euro

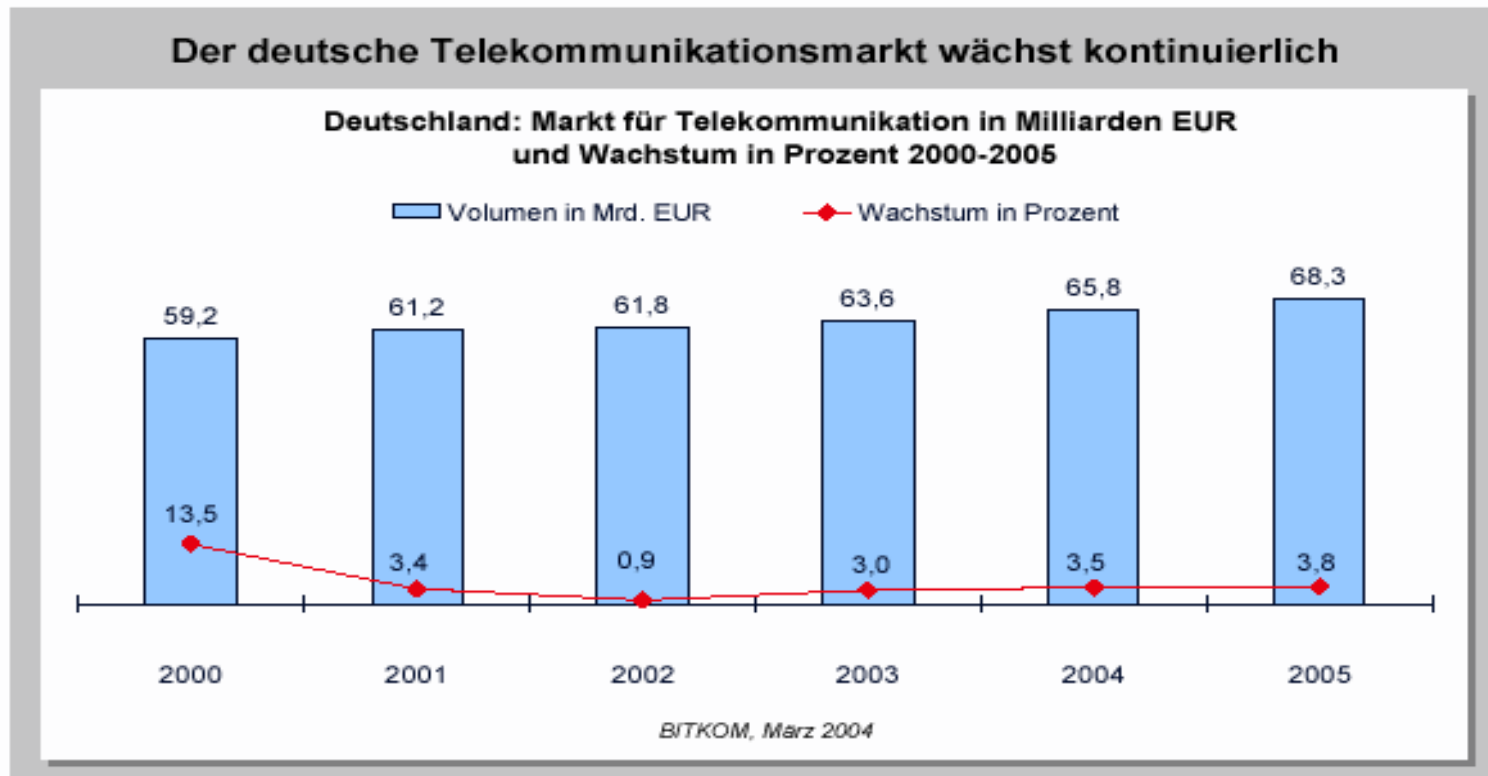
The TLC-Sector seems to be back on the track of a moderate growth - worldwide ...



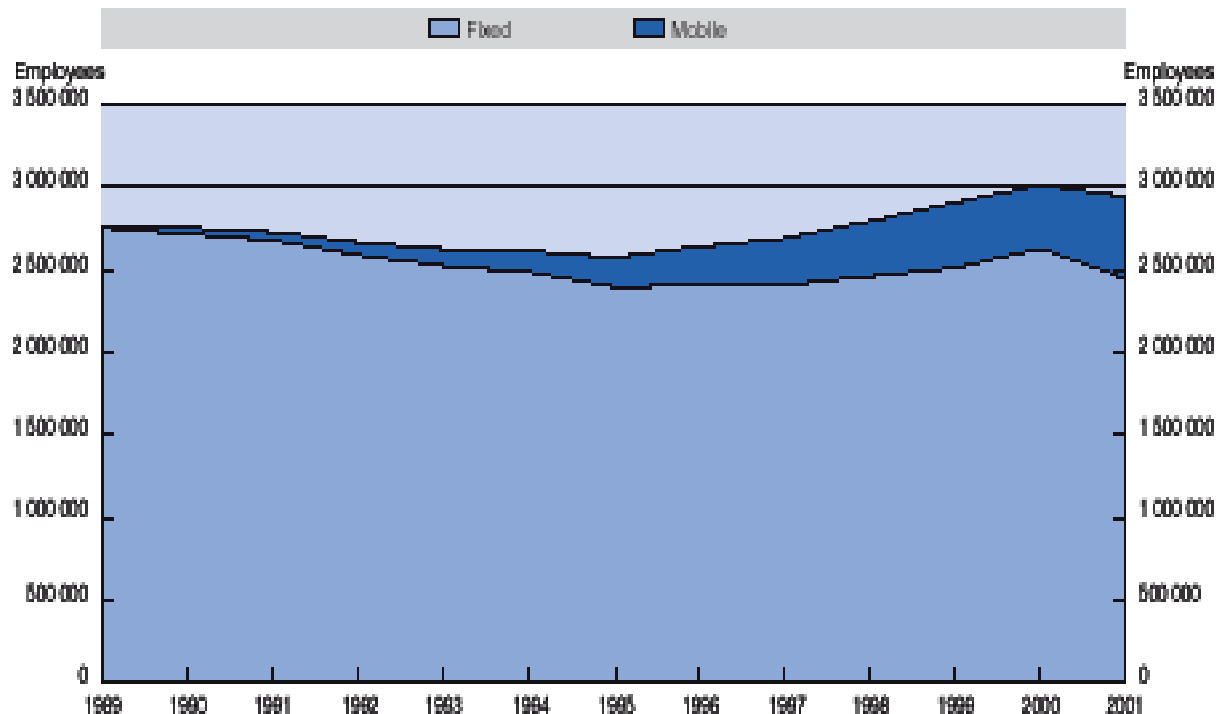
Source: EITO in cooperation with IDC

Market value 2005: 1,126 billion Euro

... and in Germany

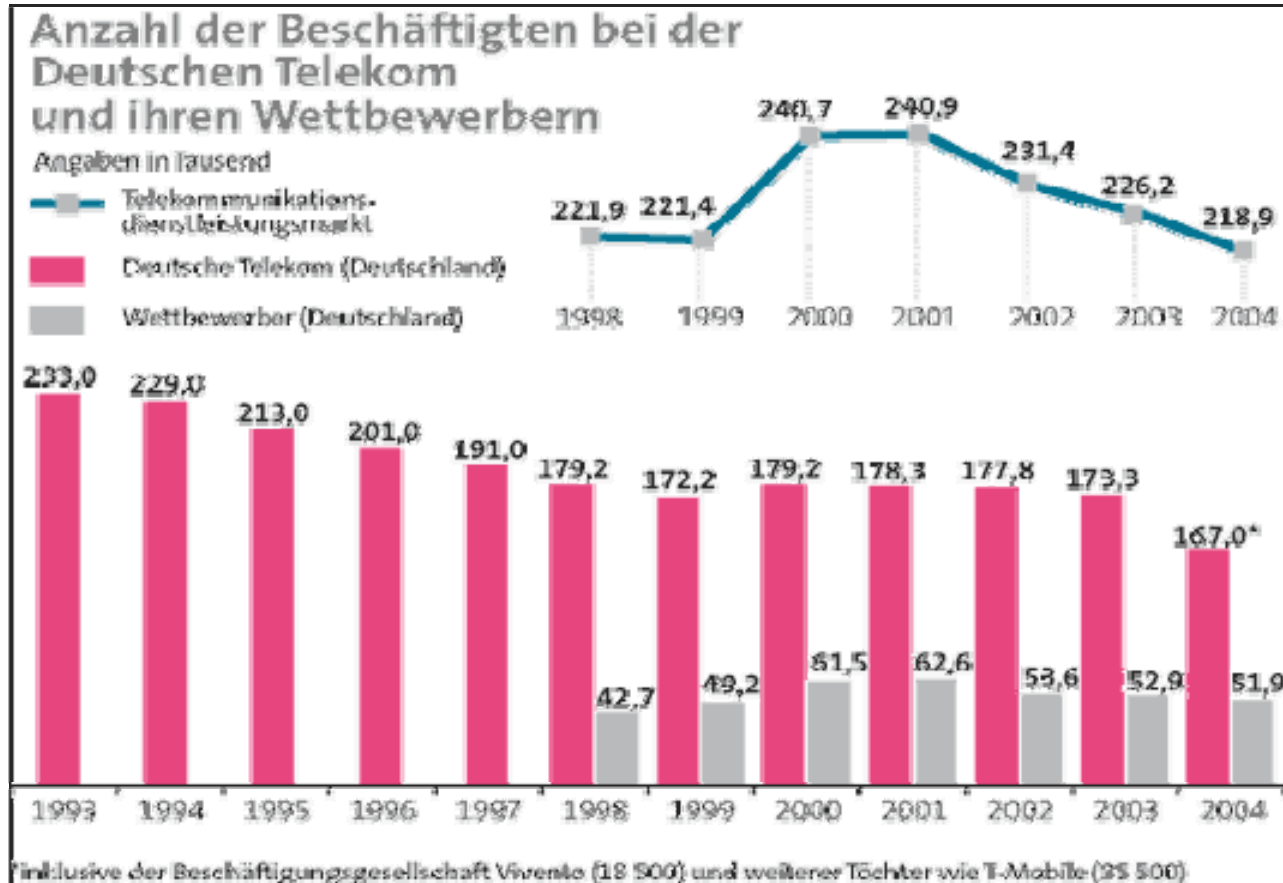


The growth of the TLC-Sector is not reflected in a comparable expansion of jobs



Source: OECD.

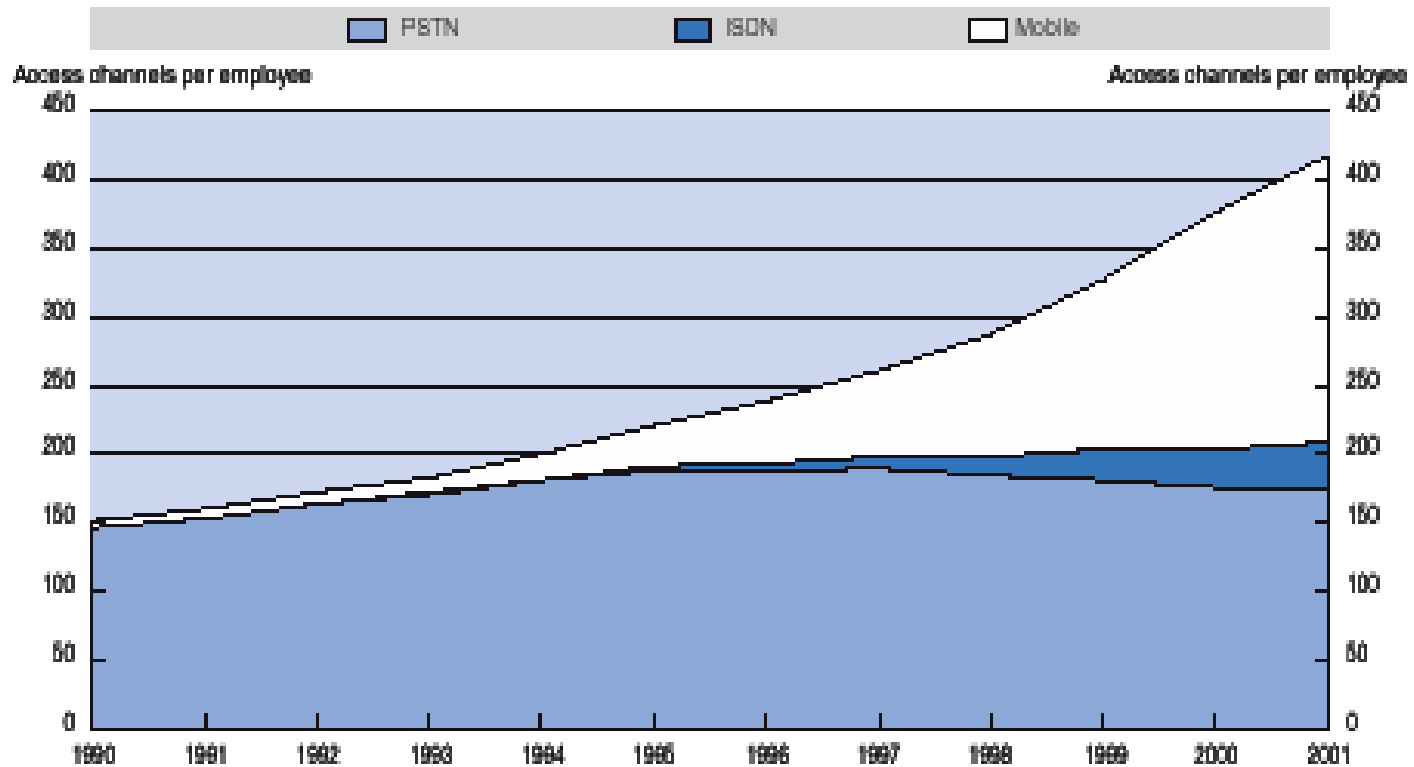
TLC-employment in Germany (Deutsche Telekom and competitors) is declining ...



... due to steady increases in productivity -
not only in Germany ...

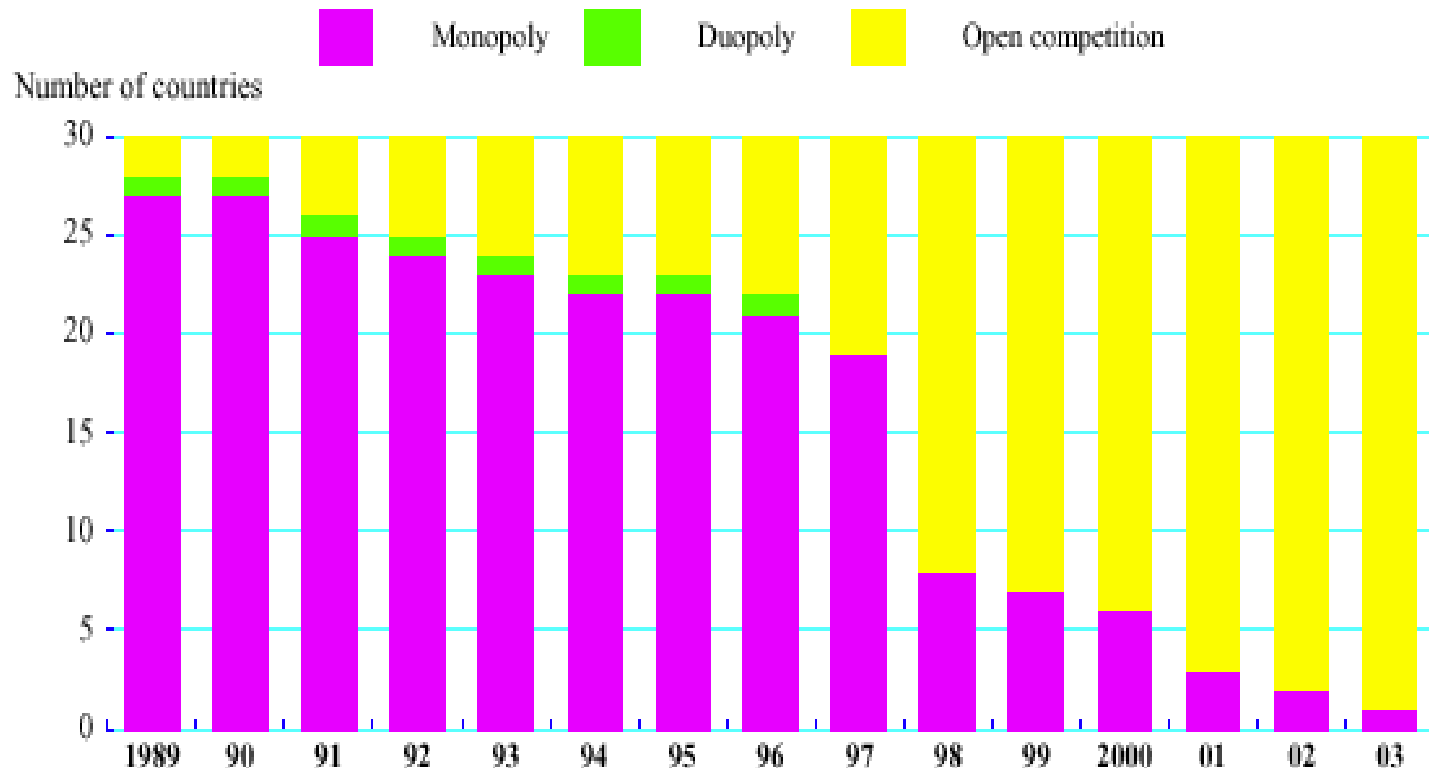
Productivity Development T-Com (national) ¹		
	2003	2004
FTEs (YE) 38h/week	95,000	83,500
Channel in million	51,1	50,4
Channel/ FTE	538	→ 604

... but worldwide ...



Source: OECD.

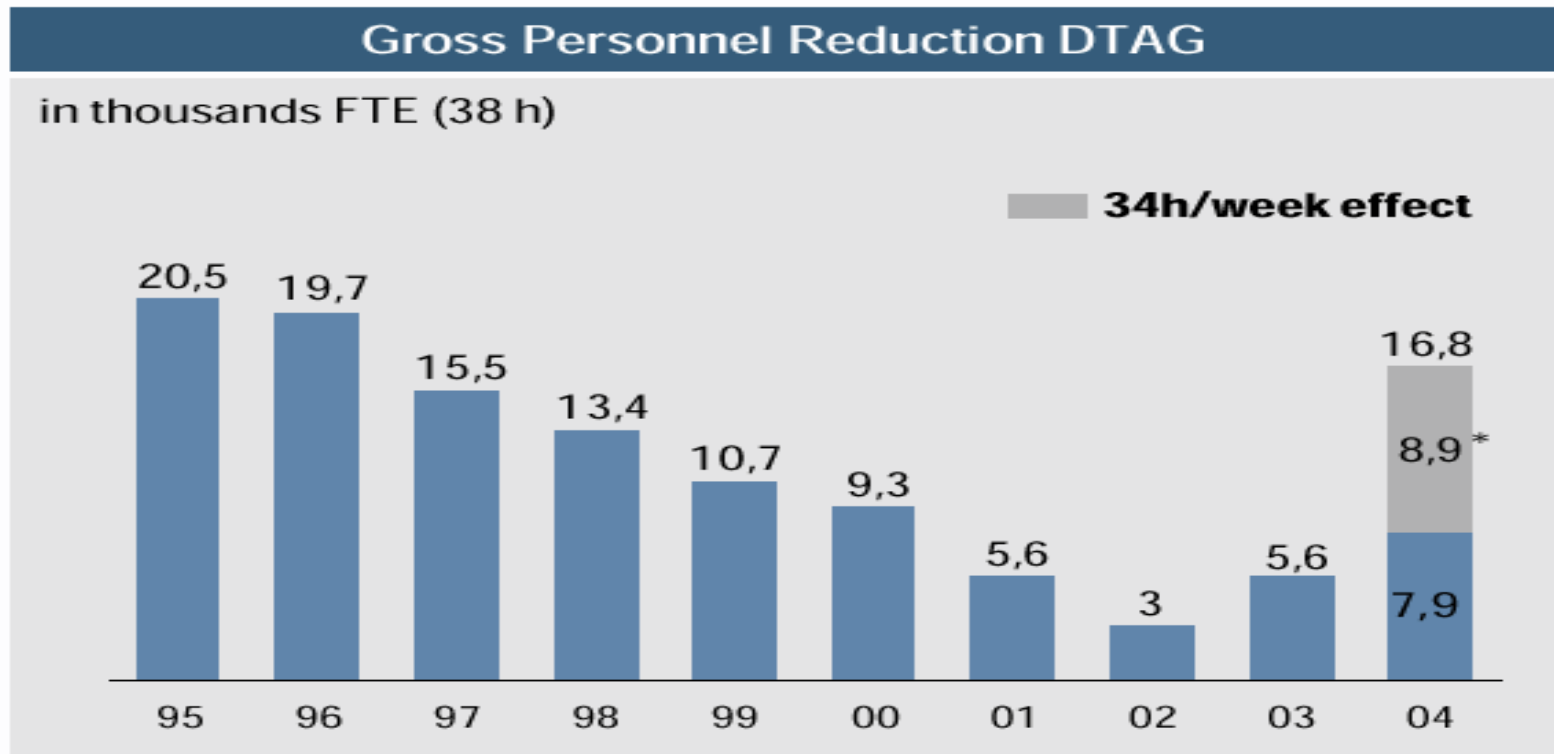
... and due to a growing pressure by competition ...



Source: OECD (2003a), Communications Outlook.

Source: OECD Communications Outlook 2003;
Competition in fixed network (OECD area)

... resulting in personnel reduction programs

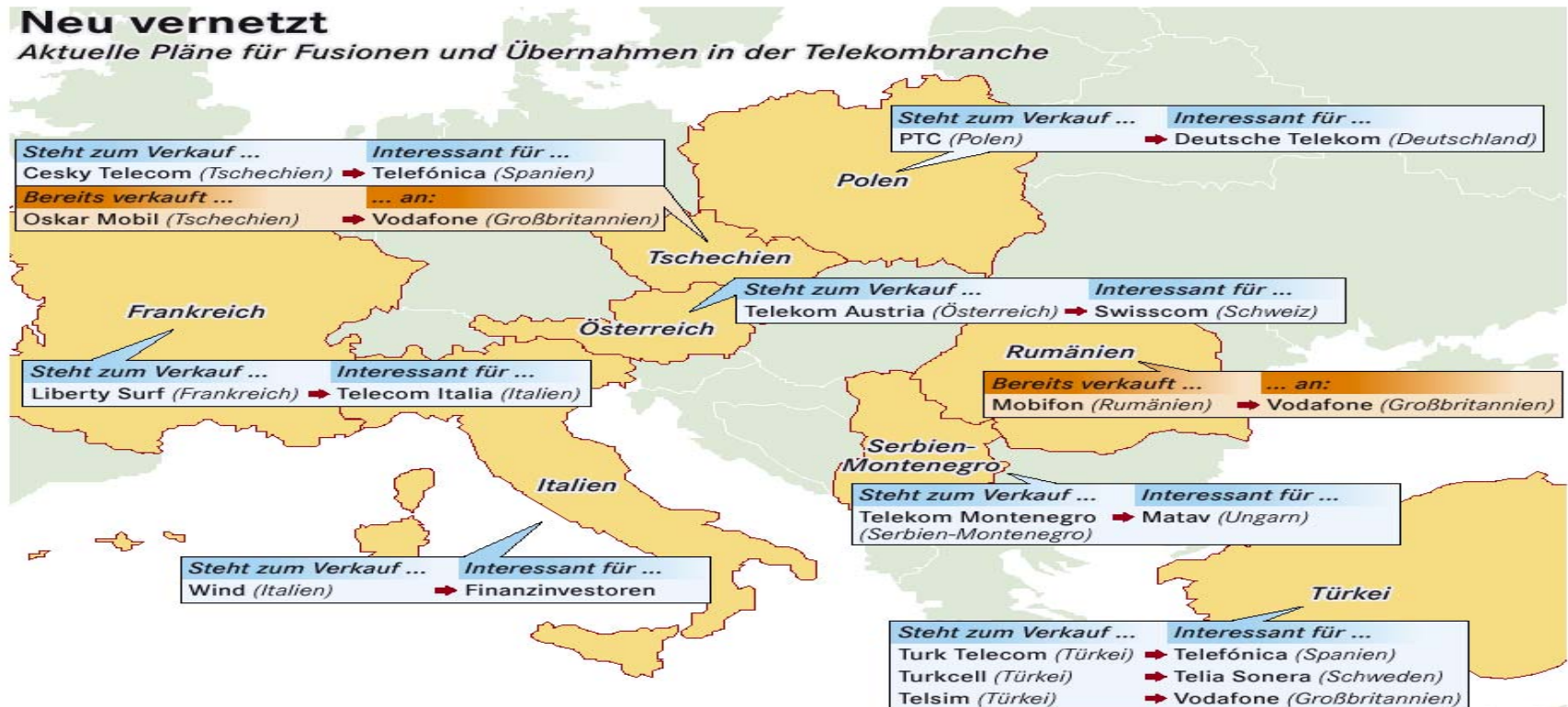


Note: DTAG = GHS, Vivento, T-Com w/o subsidiaries but including sales channel TPG
* = ca. 9,800 FTE on a basis of 34 h

After a short break, internationalization in the TLC-Sector is gaining speed again ...

Neu vernetzt

Aktuelle Pläne für Fusionen und Übernahmen in der Telekombranche



Quelle: Handelsblatt-Recherche
 ©Handelsblatt 064/05
 04. April 2005

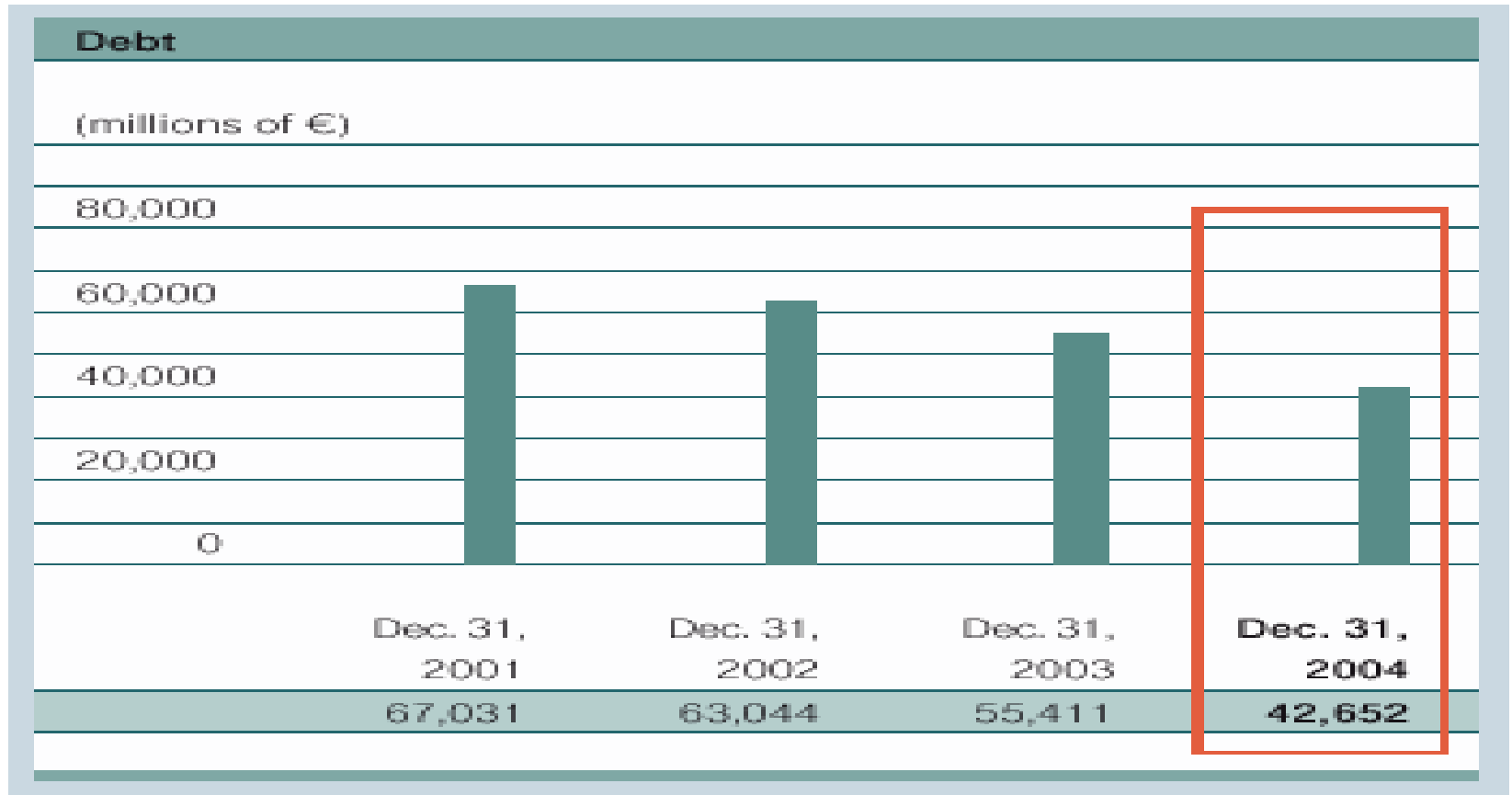
HANDELSBLATT-GRAFIK

... but with a tendency to focus on the „own continent“ - the case of DTAG

Deutsche Telekom Group Headquarters		
1 Bonn		
Selected international subsidiaries and associated companies		
Europe	Stake (directly/indirectly) held by Deutsche Telekom	Stake (directly/indirectly) held by Deutsche Telekom
2 Austria	- T-Mobile Austria 100 % - T-Online.at 100 % of shares held by T-Online International - T-Systems Austria GesmbH 100 %	16 Spain - Ya.com 100 % of shares held by T-Online International - T-Systems ITC Services Espana, S.A. 100 %
3 Belgium	- T-Systems Belgium NV 100 %	17 Switzerland - T-Online.ch 100 % of shares held by T-Online International - T-Systems Schweiz AG 100 %
4 Croatia	- T-Hrvatski Telekom 51 % - T-Mobile Croatia 100 % of shares held by T-HT	18 Turkey - T-Systems Bilisim Teknolojileri Anonim Sirketi 100 %
5 Czech Republic	- T-Mobile Czech Republic 60.77 % - T-Systems PragoNet, a.s. 100 % - T-Systems Czech s.r.o. 100 %	19 United Kingdom - T-Mobile UK 100 % - T-Systems Ltd. 100 %
6 Denmark	- T-Systems 100 %	
7 France	- T-Online France 100 % of shares held by T-Online International - T-Systems France SAS 100 %	America
8 Hungary	- MATAV 59.49 % - T-Mobile Hungary 100 % of shares held by MATAV - T-Systems Hungary Kft. 51 % T-Systems, 49 % MATAV	20 USA - T-Mobile USA 100 % - T-Systems North America, Inc. 100 %
9 Italy	- T-Systems Italia S.p.A. 100 %	21 Canada - T-Systems Canada, Inc. 100 %
10 Macedonia	- Maktel 51 % of shares held by MATAV	South America
11 Netherlands	- T-Mobile Netherlands 100 % - T-Systems Nederland B.V. 100 %	22 Brazil - T-Systems do Brasil Ltda. 100 %
12 Poland	- PTC 49 % - T-Systems Polska Sp. z o.o. 100 %	Asia
13 Portugal	- Terravista 100 % of shares held by T-Online International	23 Hong Kong - T-Systems China Limited 100 % 24 India - T-Systems India Private Limited 100 % 25 Japan - T-Systems Japan K.K. 100 % 26 Singapore - T-Systems Singapore Pte. Ltd. 100 %
14 Russia	- MTS 10 % - T-Systems CIS 100 %	Middle East
15 Slovakia	- Slovak Telecom 51 % - EuroTel Bratislava 100 % of shares held by ST	27 Israel - Barak I.T.C 10.52 % - VocalTec 19.97 %
		Africa
		28 South Africa - T-Systems South Africa (Pty) Limited 74.90 %

As of February 2005

Having reduced their debt burden substantially (the case of DTAG again) ...

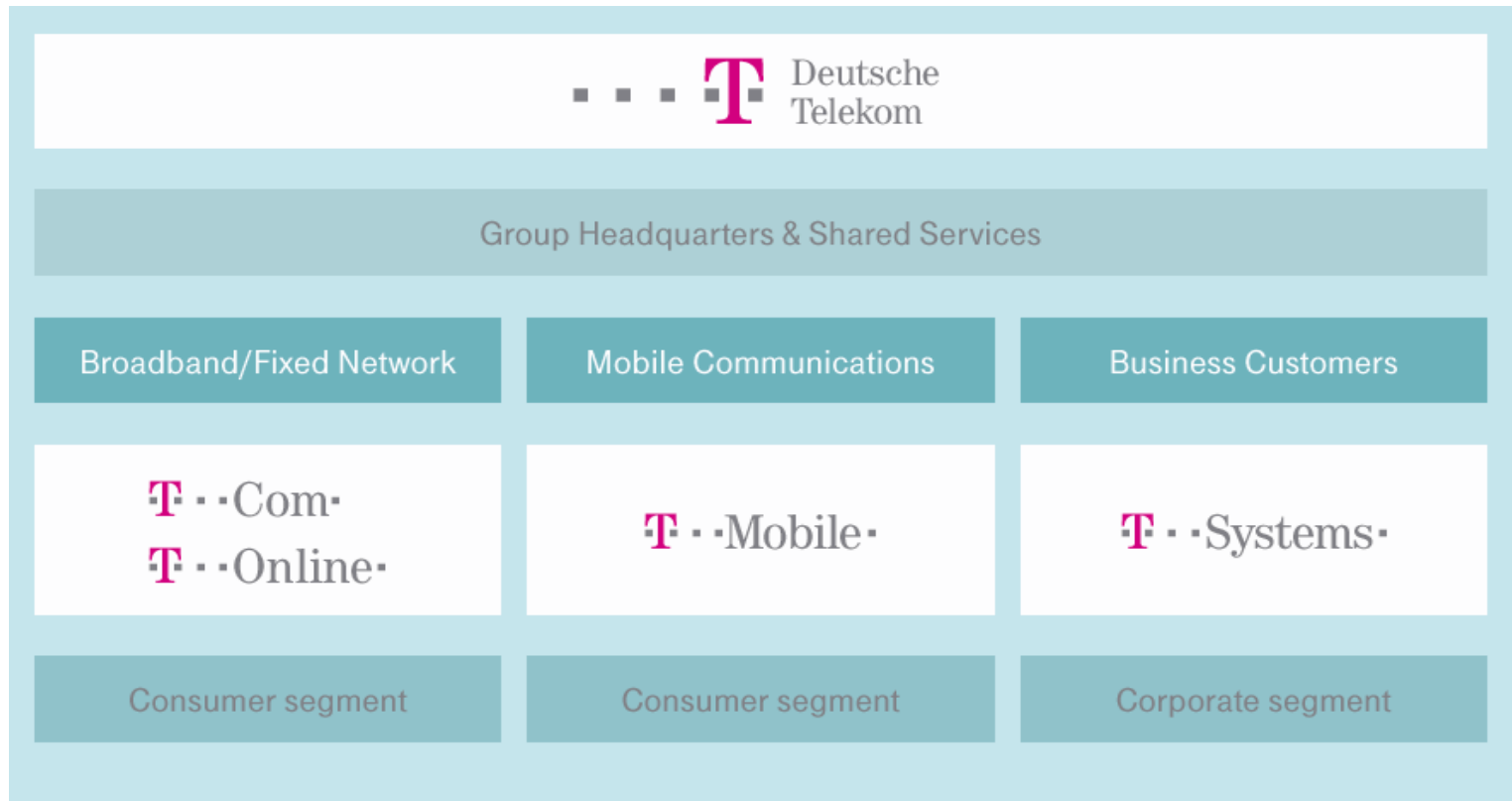


the big players re-accelerate concentration and re-integrate former subsidiaries ...

- Recent mergers and acquisitions in the TLC-Sector:
 - SBC - AT&T
 - Verizon (Quest?) - MCI
 - Sprint - Nextel
 - Cingular - AT&T Wireless
 - ...

- Reintegration of former subsidiaries:
 - Deutsche Telekom - T-Online
 - France Telecom - Orange, Wanadoo, Equant
 - Telecom Italia - Telecom Italia Mobile
 - Telefónica - Terra Lycos
 - ...

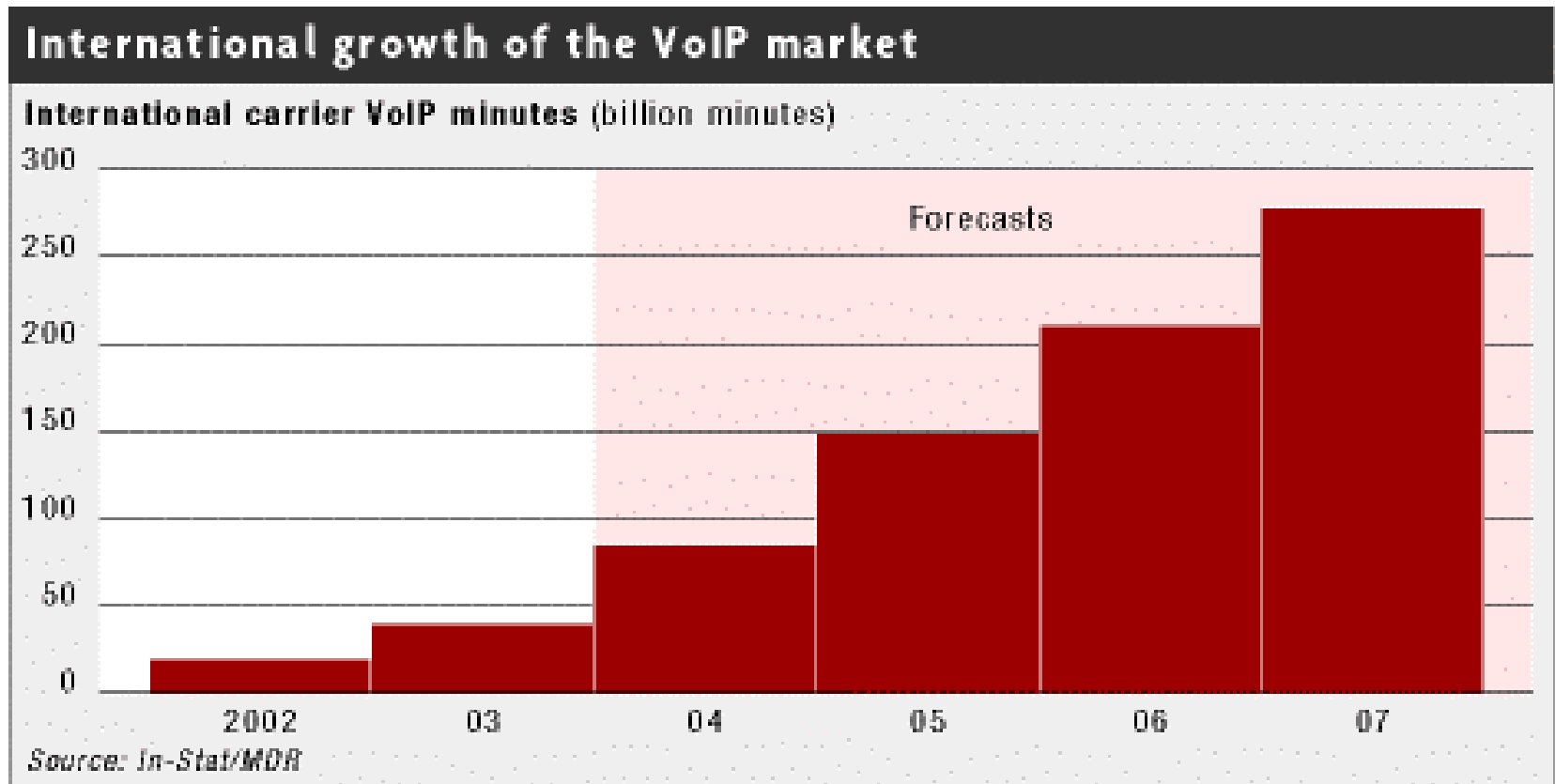
... the last point leading to new company structures (here: Deutsche Telekom)



Technical and market trends to come - and probably here to stay - in the TLC-Sector

- From narrow band to broadband ...
- From single play to „triple play“ ...
 - voice, TV and fast internet via telephone line
- From fixed to mobile ...
 - revenue Deutsche Telekom 2004
 - 22.4 bn. Euro in fixed-line networks
 - 25.5 bn. Euro in mobile networks
 - take-off of broadband mobile technology?
- From traditional public switched telephone networks to IP-based networks (Next Generation Networks) ...

VoIP (Voice over Internet Protocol) - the next big thing in the TLC-Sector ?



VoIP - a threat to the jobs in the TLC-Sector



- **VoIP - more precisely: Next Generation Networks (NGN), based on IP - will increase productivity, reduce costs and squeeze revenues of fixed-line operators.**
- **Verizon (USA) expects to close 4 out of every 5 central offices! The central offices that remain will be filled with computers, servers, and routers.**
- **A similar consolidation is possible for every telco as VoIP will likely be dominant over next 3-5 years.**

Summary and conclusion

- The present telecommunications market is characterized by
 - moderate, but steady growth,
 - stagnant or even declining employment,
 - geographically focused internationalization,
 - concentration and re-integration.
- The roll-out of IP-based networks and the advance of VoIP will lead to a sharp increase in productivity and can result in massive job-cuts.
- The main challenge for trade unions in the TLC-sector in the years to come will be the protection of jobs.