

OECD REVIEWS OF REGULATORY REFORM

REGULATORY REFORM IN GERMANY

REGULATORY REFORM IN TELECOMMUNICATIONS



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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FOREWORD

Regulatory reform has emerged as an important policy area in OECD and non-OECD countries. For regulatory reforms to be beneficial, the regulatory regimes need to be transparent, coherent, and comprehensive, spanning from establishing the appropriate institutional framework to liberalising network industries, advocating and enforcing competition policy and law and opening external and internal markets to trade and investment.

This report on *Regulatory Reform in the Telecommunications Sector* analyses the institutional set-up and use of policy instruments in Germany. It also includes the country-specific policy recommendations developed by the OECD during the review process.

The report was prepared for *The OECD Review of Regulatory Reform in Germany* published in 2004. The Review is one of a series of country reports carried out under the OECD's Regulatory Reform Programme, in response to the 1997 mandate by OECD Ministers.

Since then, the OECD has assessed regulatory policies in 20 member countries as part of its Regulatory Reform programme. The Programme aims at assisting governments to improve regulatory quality — that is, to reform regulations to foster competition, innovation, economic growth and important social objectives. It assesses country's progresses relative to the principles endorsed by member countries in the 1997 *OECD Report on Regulatory Reform*.

The country reviews follow a multi-disciplinary approach and focus on the government's capacity to manage regulatory reform, on competition policy and enforcement, on market openness, specific sectors such as electricity and telecommunications, and on the domestic macroeconomic context.

This report was principally prepared by Dr. Patrick Xavier, consultant, with the participation of Dimitri Ypsilanti in the Directorate on Science, Technology, and Industry of the OECD. It benefited from extensive comments provided by colleagues throughout the OECD Secretariat, as well as close consultations with a wide range of government officials, parliamentarians, business and trade union representatives, consumer groups, and academic experts in Germany. The report was peer-reviewed by the 30 member countries of the OECD. It is published under the authority of the OECD Secretary General.

REGULATORY REFORM IN TELECOMMUNICATIONS: GERMANY

Executive Summary

The telecommunications sector in OECD countries has seen significant regulatory reform in recent years. Twenty-nine OECD countries had, in 2003, unrestricted market access to all forms of telecommunications, including voice telephony, and infrastructure investment, compared to only a handful just a few years ago. The success of the liberalisation process depends on the presence of a transparent and effective regulatory regime that enables the development of full competition, while effectively protecting other public interests.

This report examines Germany's regulatory reform effort thus far, and its impact on the performance of the nation's telecommunications markets. The report is timely since Germany's telecommunications law is currently undergoing extensive review to transpose EC directives into German national law. An identification of strengths in the current regime to be preserved, and deficiencies to be addressed is clearly valuable.

The German government has played a positive role by recognising the importance of pro-competitive reform and of encouraging new communication technologies and services for the economy. However, some weaknesses have become evident. There is some lack of clarity in the 1996 Telecommunications Law; the dominant incumbent has been able to apply "deny and delay" tactics to frustrate competition; in some important areas, regulators have also been slow to act until threatened by European Commission infringement notices. In general, Germany has not been among the leaders in terms of introducing new innovative policies but has tended to be a follower of EU initiatives. Early signs of success in pro-competitive reform are fading in the face of rising concerns over market re-monopolisation by the incumbent Deutsche Telecom (DTAG).

The telecommunications regulator, the Regulatory Authority for Telecommunications and Posts (RegTP) can be commended for making some significant pro-competitive decisions such as flat rate wholesale Internet access, local loop unbundling, leased lines provisioning times, etc. However, RegTP has been less effective in seeing its decisions *implemented* and has been reluctant to investigate important issues such as wholesale mobile termination rates. DTAG has successfully used judicial review of regulatory decisions to delay, indeed block, the enforcement of regulatory decisions.

While unbundling of the local loop was mandated back in 1997, through delays in the provision of leased lines, price-squeeze tactics, artificially low retail prices for DSL services, etc., DTAG has virtually precluded competition and retained or even recently established a dominant position such as in broadband services. It is shortsighted to allow the dominant incumbent to leverage its monopoly status into the broadband market even if the means used is seemingly attractive low ('dumping') prices that accelerates take-up. In the long run this can disadvantage competitors (including those with innovative technologies and services), constrict competition, lead to adverse higher broadband prices and slow broadband deployment and take-up.

The mobile sector is not regulated on the wholesale side because RegTP does not consider any mobile operator to be dominant. Accordingly, fixed-to-mobile termination charges are unregulated (contrary to a prevailing view among European regulators that they should be). The cable market has faced particular difficulties, including network and ownership fragmentation, and a lack of incentive for upgrading cable by DTAG. Consequently cable has not materialised its potential to be an alternative source of telecommunications, including high-speed Internet services. In the absence of an efficient cable sector, it is even more important to ensure competition in the fixed line local loop by employing tools such as unbundling and line sharing. The sale of the cable networks by DTAG should help in the development of cable as an alternate platform for competition.

Germany should not miss the opportunity for improvement presented by the current revision of the Telecommunications Law to empower the regulator to regulate independently, promptly and effectively. Regulatory recalcitrance, including the failure to meet the EC's 25 July 2003 deadline for installing new legislation by Europe's largest economy, is a bad example to other (less developed) countries. It is also detrimental to investor confidence in the German communications sector -- critically important for the economy's recovery. Such investor confidence -- necessary to boost investment in infrastructure and to promote innovation -- requires assurance of swift, vigorous, unwavering, pro-competitive regulation.

1. THE TELECOMMUNICATIONS SECTOR IN GERMANY

The telecommunications industry is a key part of the German economy and of critical strategic importance for the economy's competitiveness. Accordingly, the aim of market liberalization in Germany includes not only the benefits to consumers of improved prices, choice, quality of service and widened product range but also overall economic development. The government recognizes that investment in communications infrastructure and services, including broadband, will mainly come from the private sector. And pro-competitive regulatory reform is seen as the most effective way of stimulating such private sector investment and innovation. Germany's present economic slowdown makes these broader aims even more relevant and pressing.

An important step in pro-competitive regulatory reform in the telecommunications sector occurred in 1989 when Deutsche Bundespost was split into three public enterprises, and operational functions were separated from regulatory ones. Then in January 1995, Deutsche Bundespost Telekom, which assumed responsibility for telecommunications, was partly privatized, taking the corporate name Deutsche Telekom (DTAG). The state continues to hold 42.3% percent of the company although the government's expressed long-term aim is DTAG's complete privatization¹. The continued delays in privatization have not been helpful especially with regard to concerns about the conflict of interest between the Government's role as a shareholder and as a policy-maker and regulator seeking a competitive telecommunications environment. DTAG's present financial distress (due to its substantial debt of some EUR 64 billion) has increased worries over a potential conflict of interest.

Another important step in regulatory reform was taken in 1990 when competition was permitted in the German mobile telecommunications sector with a second provider licensed to compete with DTAG. Further mobile licenses were awarded in 1994 and 1996.

The telecommunications market was further significantly opened to competition in January 1998 to accord with European Union policy.

1.1 *The national context for telecommunication policies*

Developments in telecommunications policy in Germany should be seen against the background of European Union policy initiatives/directives to create an EU-wide competitive market for telecommunication services.

The regulatory objectives specified in the German Telecommunications Act 1996 are to:

- Safeguard the interests of users.
- Ensure equal-opportunity and workable competition, in telecommunications markets in rural as well as urban areas.
- Ensure provision throughout Germany of basic telecommunications services (universal service) at affordable prices.
- Promote telecommunications services in public institutions.
- Ensure effective, interference-free use of frequencies, due regard also being paid to broadcasting requirements.
- Protect public safety interests.

A new regulatory regime for regulation of electronic communications networks and services is required in Germany as a result of the EC Communications Directives. Revision to the German telecommunications law is in process, as required by the new Directives which came into force in April 2002 and which is dead lined to be implemented throughout the EC by 25 July 2003. Drafting of the new German telecommunications legislation is in process but it is expected that Germany will not be able to meet the European Community's 25 July 2003 deadline (since legislation is not expected until the end of 2003). The fact that market reviews required by the EC Directive have now begun to take place is helpful and will reduce legal uncertainties. Thus this OECD review of regulatory reform and effectiveness in Germany is timely because it is clearly useful to identify the strengths to be preserved but also to identify the deficiencies in the current regime that need to be addressed.

1.2 General features of the regulatory regime, telecommunications market and market participants

1.2.1 Development of telecommunications in Germany

Box 1 shows the milestones in telecommunications policy and regulation reform in Germany.

Box 1. Milestones in Germany's Telecommunications Policy and Regulation	
Year	Policy change
1989/1990	Separation of the telecommunications monopoly into transmission routes and voice telephony
1990	Liberalisation of terminal equipment
1990	Issue of the first mobile telecommunications licence to Mannesmann, licensing of satellite communications
1991	Start of trunk mobile radio licenses
1993	Corporate Networks Approval Concept, licensing of E-Plus
1994	Paging/mobile data radio licenses
1996 (August)	Entry into force of the Telecommunications Act 1996/ end of monopoly on transmission paths
1997	E-2 licence to Viag/BT
1998 (January)	Abolition of monopoly on voice telephony/ Industry Specific Regulator, RegTP, established
1999	
2000	6 UMTS licences awarded
2001	
2002	
2003	New telecommunications Act

Source: Adapted from Federal Ministry of Economics and Technology, Directorate-General VII, "The Development and Prospects of Telecommunications in Germany" Bonn, April 1999, p. 9.

1.3 Telecommunications market and participants

Table 1 indicates the structure of the German telecommunications market. The market is open and there are a large number of operators but because of market conditions and the general economic situation this number has been consistently shrinking. For example, there are only 10 WLL operators still in service and only 4 3G licensees are active. DTAG, the incumbent operator, is Germany's largest telecommunications operator and, indeed, Europe's largest. DTAG's international business activities is impressive².

Table 1. Structure of the German telecommunications market

Infrastructure provision for the following services	Number of licensed operators (2002)
Fixed PSTN (local, national and international)	184 (as of: 27/03/2002)
Network infrastructure capacity (includes only companies not licensed to provide voice services)	389 (as of: 14/05/2002)
Cellular mobile	4
Wireless local loop (fixed wireless)	10 (as of: 20/09/2003)
IMT-2000 operators (i.e. UMTS / 3 rd Generation)	6

1.3.1 Fixed line operators

As Table 2 shows, the number of competitors in Germany's fixed-line telecommunications market has grown from 21 in 1998 to 64 in 2002. 90% of the channels provided by competitors are ISDN connections with analogue lines comprising only about 10% of channels provided by competitors. Competitors provided 1.2 million analogue lines, 0.7 million basic rate ISDN lines and 20 000 primary rate ISDN lines for a market share as measured by channels of 4.4%. DTAG's main competitor in the fixed line market is, Arcor, which is 74% owned by Vodafone of the UK (which acquired the business as part of its EUR 180 billion takeover of Mannesmann in April 2000).

Table 2. Telephone Channels in Germany provided by DTAG and Competitors

	1998	1999	2000	2001	2002
Competitors					
Total (million)	0.16	0.40	0.86	1.59	2.35
Analogue	15%	21%	17%	14%	10%
ISDN	85%	79%	83%	86%	90%
Number of Providers	21	40	55	61	64
DTAG					
Total (million)	46.37	47.81	49.36	50.70	51.37
Analog	78%	72%	65%	60%	56%
ISDN	22%	28%	35%	40%	44%
Total (million)	46.53	48.21	50.22	52.28	53.72
Competitors	0.3%	0.8%	1.7%	3.0%	4.4%
DTAG	99.7%	99.2%	98.3%	97.0%	95.6%

Source: RegTP Annual Report 2002, page 19, channels as of 64 kbit/s equivalents.

The market share of new entrants in terms of switched minutes has increased steadily since 1998. In national long distance, market share increased from 10% in 1998 to 28% in 1999 and to 35% in 2000 and in 2001. A higher market share in the national long distance market was achieved by new entrants in OECD countries in 2001 only in the US (65%), Finland (63%) and Austria (55%).

In international service, market share of new entrants increased from 20% in 1998 to 48% in 1999 and 56% in 2000 but fell back to 50% in 2001 (confirming that DTAG has been winning back market share from new entrants). New entrants in Germany were able to gain market share rapidly, especially during the first three years after liberalisation, due to the highly competitive tariffs they offered. However, in recent

years tariffs of competitors and DTAG have been converging for a number of services. Decreasing margins have squeezed out some competitors with DTAG regaining market share.

In the local service market, DTAG has remained dominant with over 95% of the market. However, there are exceptions in certain areas where competitors had much higher market shares, including 12% of all phone lines in Hamburg, 21% in Cologne and 23% in Oldenburg. This indicated that regional telecommunications companies were able to attract business and residential customers³.

1.3.2 Wireless

In mobile telephony, early entrants upon market liberalization were foreign providers such as Vodafone Airtouch, Bell South Corporation and KPN who entered the market by acquiring controlling stakes in companies such as Mannesmann and E-Plus.

Table 3 indicates that as of June 2003, T-Mobile (DTAG's mobile subsidiary) and Vodafone were the two largest operators with 25 million and 23 million subscribers equivalent to a market share of 41% and 38% respectively. E-Plus and mm02 were the third and fourth operators.

Table 3. Number of cellular subscribers by PCS/PCN operators

June 2003)

Name of Operator	Number of Subscribers (June 2003)
1. T-Mobile Deutschland D1 (20 year GSM license starting July 1990)	25 050 000
2. Vodafone D2 (20 year GSM license starting July 1990)	23 050 000
3. E-Plus Mobilfunk (20 year DCS license starting May 1993)	7 500 000
4. mmO ₂ Germany (20 year DCS license starting May 1997)	4 933 400

Source: http://www.regtp.de/aktuelles/in_03-06-00-00-00_m/04/01/#2002

Figure 1 shows that mobile penetration in Germany has increased dramatically from 1.2 per 100 inhabitants in 1992 to 7.1 in 1996 and to 71.7 per 100 in 2002. Some 99% of the German population is covered by mobile networks.

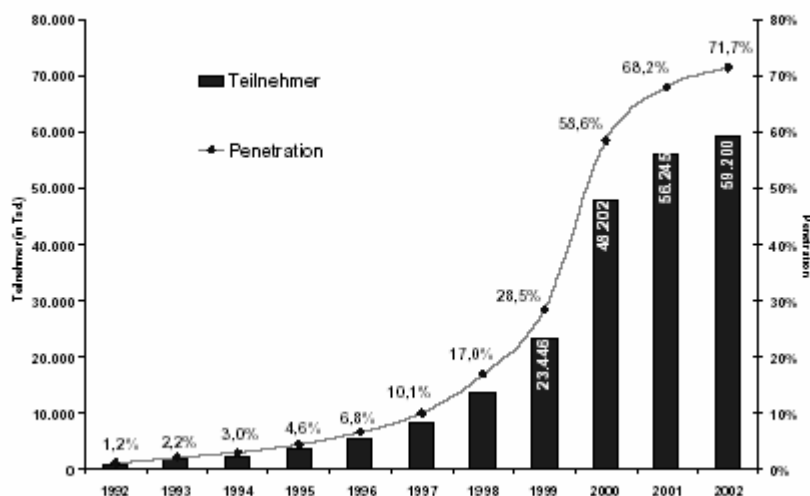
1.3.3 Third Generation Mobile (3G)/UMTS

There were six successful bidders for a Universal Mobile Telecommunication System (UMTS) licence in 2000, each paying about Euro 8.4 billion for a 20 year non-tradable licenses, to yield combined license fees of about EUR 50 billion. The licensees were bound by the requirement in the licence that by the end of 2003 at least 25% of the population would be covered and 50% by the end of 2005. As a result of the financial and economic conditions in the telecommunication sector 2 of the licensees have withdrawn from the market.

Wireless Local Area Network (WLAN). RegTP was an early mover in awarding WLAN frequencies. In July 2002, RegTP conducted a public consultation on the proposed general frequency assignment for WLAN concluding that WLANs would not pose a threat to UMTS and that the two systems would

complement each other to benefit market players. On this basis, RegTP decided to provide frequencies in the 5 GHz band for new WLAN applications in addition to those in the 2.4 GHz band. In November 2002, RegTP published a general assignment of frequencies in the bands of 5GHz (5150 MHz – 5350 MHz and 5470 MHz – 5725 MHz) for general use of WLANs without charge⁴. Germany was the first EU member state to do so⁵. In the interests of technological neutrality a specific technical standard was not prescribed thereby enabling manufacturers to place flexible and innovative solutions on the market and thus enhance prospects of achieving high consumer take-up. This ruling is consistent with the need to foster multiple broadband access platforms. In the second half of 2003 there were 30 providers operating about 1 600 hotspots in Germany.

Figure 1. Mobile Telecommunications in Germany: Number and Penetration



Source: RegTP, Annual Report 2002, February 2003.

1.3.4 New innovative services

As in most OECD countries, competition in Germany has led to the development of a wide range of innovative services, including value-added services in the e-commerce and m-commerce segments. For instance, DTAG's subsidiary, T-Mobile, has been active in provision of Wi-Fi systems not only in Germany but elsewhere.

Voice over IP. In Germany, Voice over Internet Protocol (VoIP) services are not classified as voice telephony and do not therefore require a license with RegTP only needing to be notified. Voice traffic takes up very little space on a broadband data pipe so expansion of broadband bandwidth could well lead to expansion of VoIP. At present, VoIP requires special phones and is considered of inferior quality to calls made over a normal telephone, but quality is improving steadily with technological developments.

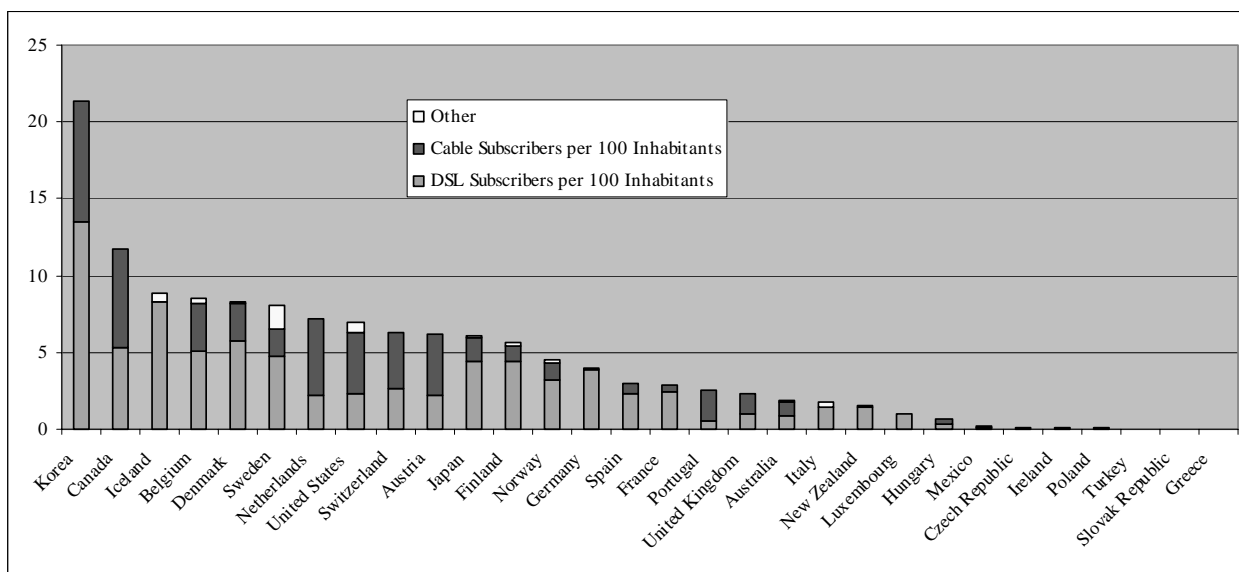
1.3.5 Broadband

Along with governments world-wide, the German Government recognizes that wide availability and take-up of broadband access is central to economic development and is endeavoring to accelerate broadband deployment, but there is virtually no competition in the broadband market. Broadband subscribership via DSL is widely available in Germany. Take up, which was about 8% of German

households at the end of 2001, is expected to rise rapidly. However, by contrast with other telecommunications carriers in the OECD, Deutsche Telekom's sales of DSL slowed dramatically in 2002 compared to 2001. In 2001, the company sold 1.6 million DSL lines but in 2002 the increase in subscribership fell to 1.2 million lines.

DTAG is the dominant provider of broadband DSL services with a market share of 94%. . By June 2003, DTAG had some 3.5 million customers using T-DSL (maximum 768/128 Kbps) or T-DSL 1500 (maximum 1504/192)⁶. OECD data presented in Figure 2 indicates that in terms of broadband subscribers, Germany ranks 14th among OECD countries with Korea, Canada and Iceland ranking highest.

Figure 2: Broadband Subscribers in the OECD area, December 2002



Source: OECD

DTAG had installed 2.5 million DSL lines (“T-DSL”) as of 1 October 2002, while new entrants provided only 19 000 DSL lines on the basis of their own infrastructure, 190 000 DSL lines via full unbundling and a mere 15 DSL lines via line sharing. They offer an estimated 45 000 broadband connections via cable modems.

In terms of market share, in June 2003, DTAG had 94% of the broadband access market, with other DSL suppliers taking only around 5%, and cable operators 1%. Thus competitors' share of the DSL market is still below the European average of around 11%. However, in certain regions competitors hold much higher market shares, for instance 15% in Oldenburg and 34% in Hamburg⁷. Their DSL connections are offered predominantly on the basis of DSL lines provided via unbundled local loops. QS Communications is the largest user of LLU for provision of both wholesale and retail SDSL and ADSL services. The company focuses on business customers, although residential services are also offered. A wide range of services are offered, including symmetric services with speeds from 144 kbit/s to 2.3 Mbit/s. In April 2002, QS Communications claimed to be offering service in more than 40 of the largest cities in Germany.

1.3.6 Alternative sources of broadband

Apart from DSL, there are a number of alternative technologies that can provide broadband Internet access, in particular:

- Co-axial cables of television distribution networks.
- Broadband satellite access.
- Broadband Fixed wireless Access (FWA) or Wireless Local Loop (WLL).
- Mobile higher bandwidth access (3G/UMTS).
- Fibre optic networks to the home (FTTH).
- Other technologies such as powerline.

Table 4 compares the availability of broadband services from various technological platforms in selected countries. Where take-up figures are available, these are also given. Table 4 indicates that broadband access via alternative technologies to DSL such as Fixed Wireless Local Loop (FWA), Fibre to the Home (FTTH), satellite (including two-way broadband satellite that could offer the potential to reach parts of Germany outside the reach of an ADSL or cable modem), or through the electricity grids (“power line”) do not play a significant role in Germany. Of considerable concern is the insignificant role played by cable in Germany. The limitation in choice because of the lack of alternate platforms makes DTAG’s dominance in the broadband market of greater concern.

Table 4. Comparison of availability and take-up of various technologies (as commercial or trial services) in Germany, France, Sweden, UK and US

	France	Germany	Sweden	UK	US
FWA (population coverage given where available)	Commercial (approx 18% of population)	Commercial	N/A	Commercial (approx 12% of population)	Commercial
FWA- take-up	Approx 1 000 business users end 2001		Approx 3 000 mid 2002	Approx 50-150 000 End 2001	
Satellite – 1 way	Commercial	Commercial	Commercial	Commercial	Commercial
Satellite – 2 way	Commercial	Commercial	Commercial	Commercial	Commercial
Satellite take up				More than 2 500 Q3 2002	Approx 50 000-150 000 end 2001
FTTH (Fibre to the Home)	N/A	N/A	Significant	N/A	Limited
3G	N/A	N/A	N/A	N/A	N/A
Other		Powerline trials (RWE trial recently wound up)		Powerline trials, free space optics	Free space optics

Notes: N/A = not available

Source: OFTEL, “International Benchmarking Study of Internet Access (Dial-up and Broadband)”, 6 December 2002. available at <http://www.oftel.gov.uk>

1.3.6 Cable

As Table 5 indicates, in Germany, cable passes 68% of households with around 60% of these receiving their TV and radio programmes via broadband cable⁸. But by mid 2002 cable modem services were available to only about 4 % of households.

Cable networks feature prominently in broadband access in the US and in some European countries such as the UK and the Netherlands. However, the situation in Germany is problematic in this regard. Notably, although more than 1 million cabled households are Internet-enabled, only about 50 000 have actually taken it up.

The German cable market has a unique feature -- a separation of licensing and ownership between so-called level 3 (cable distribution network up to the connection point) and level 4 (domestic distribution network) -- that has inhibited investment and development of the cable sector. Another problem has been that DTAG has had little incentive to develop its cable network since such improvements in cable telephony or Internet services would then 'cannibalise' revenue from DTAG's fixed line telecommunications service.

Table 5. Availability of cable modem service in Germany, France, Sweden, UK and US

Country	% of households passed	Availability of cable modem service
Germany	68	4% (by mid 2002)
France	32	25% (cable modem service became available in 1997 with 15 million households served in June 2002)
Sweden	65	40%
UK	51	45% at June 2002
US	96	71% by 2002

The situation in the telecommunications industry generally and 'bearish' financial markets (especially in regard to the technology sector) have aggravated the slowdown of investment in the German cable sector. For instance, ish, a broadband service provider serving some 4.2 million households in western Germany with annual sales of EUR 400 million, had plans for a major upgrade of the cable television network (CATV) in the North-Rhine Westfalia and Baden-Wurtemberg regions of Germany. ish's fibre optic deployments were considered critical to the evolution of the telecommunications industry in Germany. In July 2002, ish announced that it would reduce network upgrading as a result of poor returns from offerings such as high-speed Internet access and interactive television (iTV) services. Only 80,000 homes have been upgraded from the 900,000 the cable group initially planned. Soon afterwards ish announced that it had applied for insolvency proceedings. On 3 February 2003, ish announced that it had been taken over by a consortium of 38 banks (led by Deutsche Bank and Citigroup) for EUR 275million⁹.

The dominance of DTAG in the cable market has meant that cable has not emerged as a competing platform to the PSTN. Divestiture has now taken place of DTAG's regional cable systems which, if appropriate investment takes place by their new owners, should allow them to emerge as competitors to the PSTN over the next few years. The weak position of cable and other alternative technologies in Germany has eroded their ability to provide strong competition to DSL technology in the provision of broadband and makes it even more important that policies to facilitate competitive access in DTAG's local loop are successful.

2. REGULATORY STRUCTURES AND THEIR REFORM

2.1 *Regulatory institutions and processes*

The Federal Ministry of Economics and Labour

The Federal Ministry of Economics and Labour (formerly Ministry of Economics and Technology) is responsible for the telecommunications sector, including involvement with:

- Drafting and updating principles and guidelines for the federal government's telecommunications policy.
- Drafting proposals for changes to the regulatory framework for the telecommunications market.
- Economic policy issues and general legal matters relating to the German Telecommunications Act.
- European and other international tasks in the telecommunications and postal sectors (EU, WTO, OECD, etc).
- Drafting principles on frequency allocation and radio applications in Germany and the associated parameters for laws and ordinances.
- National, European and international telecommunications standardization issues.
- Telecommunication security, public interest, contingency planning.
- Formulating principles for European directives, laws and ordinances on electromagnetic compatibility and on electromagnetic radiation and the environment.
- Legal and substantive supervision in relation to the Regulatory Authority for Telecommunications and Posts (RegTP).
- Complaints and petitions on telecommunications matters.

Responsibility for spectrum planning in Germany lies with the Federal Ministry of Economics and Labour and RegTP. The Ministry deals with matters of national and international aspects of radio spectrum policy and frequency allocation. RegTP draws up the frequency usage plans and performs the tasks relating to frequency assignment, the monitoring, planning and updating of the assignments including the necessary tests, inspections and compatibility studies, and collecting charges and contributions. The Ministry and RegTP appear to have been alert to the growing importance of the radio spectrum and have been making revisions to spectrum management and use accordingly.

The Ministry has been responsible for drafting the new Telecommunications Act. It is notable that there has been wide consultation with industry and interested parties in regard to revisions to the telecommunications law. However, it needs to be noted that the German government still owns 42.3% of DTAG stock. A number of new entrants have expressed concern that the Draft Law, which appears to favour DTAG and excludes mobile network operators from ex ante regulation in violation of EU regulations. Industry players are concerned that a number of substantial amendments that were proposed were not taken into account by the Ministry in the Draft Law.

RegTP: The sector-specific regulator

The *Regulierungsbehörde für Post und Telekommunikation* (Regulatory Authority for Telecommunications and Posts, henceforth referred to as RegTP) was set up as a sector specific telecommunications regulator subordinate to the Federal Ministry of Economics and Labour (as provided for by the 1996 Telecommunications Act). RegTP commenced operations in January 1998 with four main areas of responsibility: licensing and frequency regulation; universal service; price regulation; and network access and interconnection. It has a total staff of about 2,260, some 200 to 220 of whom deal with telecommunications regulation. RegTP's functions include:¹⁰:

- Promoting competition.
- Licensing, frequency management and assignment, numbering.
- Control of anti-competitive practices.
- Price regulation of carriers with significant market power.
- Order interconnection/network access.
- Market observation.
- Monitoring universal service obligations.

RegTP's powers to enforce regulatory aims include information and investigative rights as well as a set of sanctions. Under the 1996 Telecommunications Act, RegTP can inspect and audit the business records of telecommunications companies. RegTP's determinations cannot be overruled by the supervisory authority (the Ministry of Economics and Labour) or by the Minister. Actions against RegTP's determinations may be brought directly before the administrative courts, but do not automatically have suspensory effect although the courts have the authority to suspend RegTP decisions (and have suspended several key decisions at DTAG's request).

RegTP has a sizeable number of staff but the expertise and size of its telecommunications staff warrant (re)-examination in view of the changing requirements for regulating the telecommunications market. While appropriate legislation and regulatory rules are essential, also necessary is enough staff with the skills to apply the rules effectively. As demonstrated by experience in OECD countries, as competition intensifies, so, too, will the demand for staff to attend to anti-competitive issues and some re-profiling of RegTP staff may be required to help ensure that regulatory decisions are applied effectively.

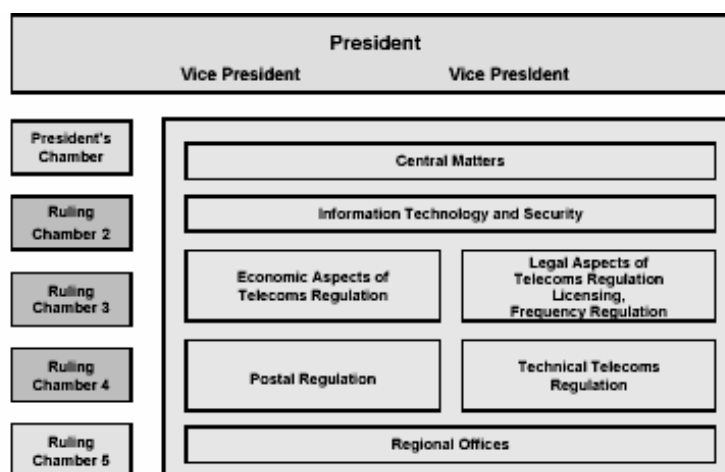
Level of consultation and transparency. RegTP has conducted a number of public consultations and the Telecommunications Act requires that regulatory decisions made by RegTP be published in the Official Gazette. In the interests of transparency, RegTP decisions should also be published on RegTP's web site. To date such decisions are still only available in paper form. Decisions published in the Gazette should also include the reasons why decisions were taken. The policy rationale for some decisions are sometimes reported in RegTP's annual reports but this is published well after the decisions are taken and often comes too late to be useful to market participants.

RegTP's structure. As required by EC directives RegTP was set up on 1 January 1998 as a structurally separate and independent authority. It is described as a "higher federal authority within the scope of business of the Federal Economics and Labour Ministry," with its head office in Bonn. RegTP's organizational structure is shown diagrammatically in Figure 3. It is headed by a president and two vice-

presidents nominated by the German Federal Government upon the proposal of the Advisory Council (see below) and appointed by the President of the Federal Republic of Germany. RegTP operates on the basis of 5 Ruling Chambers:

- Ruling Chamber 1 is concerned with Telecommunications and Postal Licensing and Universal Services.
- Ruling Chamber 2 is concerned with price regulation.
- Ruling Chamber 3 with controls of anti-competitive practices in the telecommunications market.
- Ruling Chamber 4 with special network access including interconnection.
- Ruling Chamber 5 is concerned with postal rates regulation and special control of anti-competitive practices in the postal market.

Figure 3. RegTP's organizational structure



Independence of RegTP. As an independent authority, any general directives given by the Minister of Economics and Labour to RegTP must be transparent and published in the Federal Gazette¹¹. Nevertheless, there have been concerns expressed about the independence of the regulator. The government still owns 42.3 % of DTAG giving rise to concerns about a conflict of its interests as shareholder and regulator/policy maker. There are concerns that DTAG's present debt problems and falling share price have increased pressure for a tolerant regulatory attitude¹² towards the anti-competitive conduct of a government-owned 'national champion'. Furthermore, the workers unions have traditionally held a strong voice on behalf of the employees of DTAG, who number over 200 000, representing the largest work force in a German company. Such concerns can lead to investor uncertainty that will only be definitively dispelled if the regulator's decisions are truly independent of the government and the Ministry of Economics and Labour. The full privatization of DTAG, which should take place under transparent and non-discriminatory conditions, should help in dispelling questions of independence. In the context of such concerns, there has been skepticism expressed about the extent to which RegTP has been truly independent of the government and the Ministry of Economics and Labour or the Ministry of Finance (which controls most of the DTAG shares on behalf of the German government). One issue supporting such skepticism is RegTP's continued support for the Ministry's position that there is no need to regulate fixed-to-mobile termination charges, contrary to widening and compelling regulatory and economic conclusions internationally that such regulation is in fact necessary to address anti-competitive effects in the market. Another issue is that RegTP's income is determined in the federal government's budget. However, some recent pro-competitive

decisions made by RegTP (such as the decision of RegTP's Ruling Chamber 3 to impose firm delivery times, SLAs, penalties, and reporting obligations on DTAG for discriminatory behaviour through delays in leased line provisioning¹³ that only Ireland's regulator had previously made) are suggestive of a growing understanding in some of the important ruling chambers in RegTP of the need for regulation to foster a competitive environment in Germany. The new telecommunications act should ensure RegTP is able to consolidate this independence. Moreover, the Draft Law would undermine the regulator in that it proposes to require only important orders from the Ministry to be published, which results in an absolute lack of transparency. Considering that some of the most important decisions are being taken outside of actual ruling chamber proceedings, it is especially critical to ensure transparency of decisions.

Advisory Council (Beirat). RegTP is supported by an Advisory Council (Beirat) consisting of nine representatives drawn from each of the two houses of the German Parliament. But the matters with respect to which the Advisory Council must be consulted are limited. The Advisory Council is involved in, among other things, decisions concerning license auctions involving scarce frequencies and decisions obligating a licensee to provide universal service. The Advisory Council need not, however, be consulted with regard to tariff decisions.

The Beirat is regularly informed about RegTP's activities and decisions but has no right to intervene or influence these decisions although it is able to express an opinion. Nevertheless, the formal presence of politicians (in the Beirat) in the RegTP structure could give rise to concerns about regulatory independence from political influence. Parliament is already able to monitor RegTP's performance because RegTP is obliged to report to Parliament (via the Ministry of Economics and Labour) every two years on the extent to which its regulatory activities have resulted in an increase in competition. In this context, there should be vigilance that provisions in the draft law, for example, do not allow for less transparency in the publication of the Ministry's orders to RegTP than is the case under the current law.

It is not evident that such an advisory body is necessary to an independent regulator. One that is constituted of politicians can raise concerns about the real independence of the regulator as does the fact that the advisory body, as noted above, nominates the President and Vice-Presidents of the regulatory body. If an advisory body were necessary for some reason, it would be much better if it were more widely constituted and representative, especially of consumers' interests. A review of the Beirat and its role would be appropriate in the present process of change in the legal framework.

The Bundeskartellamt (The German Federal Cartel Office)

The Bundeskartellamt is responsible for executing the 1958 Act against Restraints of Competition (ARC) which is primarily concerned with merger control, cartel prohibition and abuse of dominance. In the telecommunications sector, abuse of dominance cases are dealt with primarily by RegTP under the German Telecommunications Act. The role of the Bundeskartellamt and instruments available to it for deterring anti-competitive behavior are discussed in detail in a separate chapter (chapter 3) of this document.

In merger cases and cases of legalizing horizontal agreements (but not in abuse of dominance cases), the Minister of Economics and Labour can overrule a decision made by the Bundeskartellamt if the restraint of competition is outweighed by advantages to the economy as a whole or if the concentration is "justified by an overriding public interest." For example, in the gas sector, in 2002 the Bundeskartellamt rejected the combination of the largest pipeline operator, Ruhrgas, and a combined gas-electric firm, E.ON, but the Ministry overruled the Bundeskartellamt and approved the merger. The Ministry concluded that creating a national champion, with increased market power in Germany, could improve supply security. This rationale, which ran counter to the positions taken by the Bundeskartellamt, the Monopolies Commission, competitors, and consumers, undermines the credibility of pro-competition government

policies and generates uncertainty. The Ministry's rationale about creation of a national champion is of particular interest and raises a question about the extent to which this explains the tolerant regulatory attitude towards some of DTAG's anti-competitive activities.

As competition develops there will be increasing demands on the resources of the Bundeskartellamt. The EC's new regulatory framework which moves towards an application of competition policy principles is likely to require the Bundeskartellamt to be involved in the telecommunications sector. There should be a review of the resources required to ensure that the Bundeskartellamt has adequate staff with appropriate skills to operate effectively in a competitive environment.

Monopolies Commission

The German Monopolies Commission was set up in 1973 as an independent "think-tank" to provide the federal government with advice relating to competition policy. It has 5 members, appointed for a 4 year term by the President of the Federal Republic upon the nomination of the federal government. The membership often includes prominent economics and law academics as well as lawyers and business people.

The Monopolies Commission has become an important source of analysis and advocacy concerning regulation and competition. Its main biennial report assesses conditions and likely trends in industry concentration, appraises the application of merger control, and offers analytic comments on other economic issues. The Federal Government responds to the report and the Monopolies Commission's proposals in a statement submitted to Parliament. The Monopolies Commission can also issue special reports on particular topics or problems, at the request of the Federal Government or on its own initiative. It issues regular reports about the state of competition in two regulated sectors, telecommunications and postal services.

Relationship between RegTP, the Bundeskartellamt and the Monopolies Commission

There are both substantive and procedural links between sector-specific regulation and the ARC. The provisions of the Telecommunications Act in regard to financial transparency, ex ante price regulation, regulation of retail prices, interconnection charges, and access depend on a finding of dominance that is related to the ARC. RegTP can only define markets and establish dominance in the telecommunications sector in agreement with the Bundeskartellamt.

There is close cooperation between RegTP and the Bundeskartellamt as is required by the Telecommunications Act in order to develop uniform assessment criteria for sector-specific regulation based on the Telecommunications Act and the general supervision of competition based on the Law against Restraints of Competition (ARC). RegTP is responsible for applying rules from the Telecommunications Act about anti-competitive practices, and to some extent the provisions of the Telecommunications Act have displaced the ARC provisions. The Bundeskartellamt can apply the corresponding provisions of the ARC only to a service by a dominant firm that is not to be used for public offering of telecommunications services. Annual publication of the product and geographic markets in which dominance has been established, as required by the Telecommunications Act, provides documentation for the public on the joint assessment.

RegTP determinations on price regulation, interconnection, etc., can only be made after the Bundeskartellamt has had the opportunity to comment. However, the Bundeskartellamt is not obliged to submit a comment and nor is RegTP bound by the Bundeskartellamt's comments. The Bundeskartellamt provides RegTP with non-binding opinions on matters affecting competitive conditions of the market but

with regard to significant market power (SMP) designation, where the opinion of the Bundeskartellamt must be in agreement with RegTP's view. An indication of the extensive co-ordination required between the two regulatory agencies is that the Bundeskartellamt was involved in about 100 matters under the jurisdiction of RegTP in 1999-2000. The greater focus on the assessment of effective competition demanded by the new EC regulatory framework means that cooperation between RegTP and the Bundeskartellamt will become increasingly important in the future and needs to be reflected in the Draft Law.

The Monopolies Commission has a statutory responsibility to report every two years on competitive conditions in the telecommunications and postal sectors, how regulation has affected competition, and the extent to which price regulation continues to be necessary. The findings of the Monopolies Commission are only advisory and it is RegTP that decides on the necessity for price regulation.

The European Commission

As a Member State of the EU, Germany is required to take EU legislation into account in its domestic law¹⁴. In February 2002, the EC adopted legislative measures consisting of a general Framework Directive (Directive 2002/21/EC) on a common regulatory framework for electronic communication networks and services. Responding to the need to recognise developments in 'convergence', the new framework covers all electronic communications networks and services. The framework directive requires the definition of markets in accordance with the principles of competition law and aims to reduce *ex-ante* sector-specific regulation progressively as competition develops. EU member states are obliged to implement the Framework Directive¹⁵ into domestic law within 15 months, that is by July 2003.

The EC's Relevant Markets Recommendation released in February 2003, identifies product and service markets in which *ex ante* regulation may be warranted.¹⁶ Regulators must analyze each market in the list to establish whether fixed or mobile players have dominance in that market, and if so, what regulatory obligations they are therefore to be subject to. Notably, the markets defined include¹⁷:

- Wholesale unbundled access (plus shared access) to metallic loops and sub-loops.
- Wholesale broadband access (including 'bit-stream' access).
- Wholesale terminating segments of leased lines (up to and including 2Mb/sec as referenced in the Universal Service Directive¹⁸).
- Voice call termination on individual mobile networks.

2.3 *Telecommunications regulation and related policy instruments*

2.3.1 *Regulation of market entry and licensing*

With the implementation of the new EU regulatory framework package, licensing procedures and conditions will be significantly streamlined. Licensing issues examined here were selected in the context of this development.

License fees. The level of licence fees in Germany has been a contentious issue¹⁹. The former regulation on licence fees provided for a EUR 1.52 million fee for a national licence for voice telephony and a EUR 5.39 million fee for operating transmission lines. The EC opened an infringement proceeding in 1999 and decided on 18 July 2001 to appeal to the European Court of Justice. On 19 September 2001, the

German Supreme Court annulled the regulation on licence fees and the EC suspended execution of its decision pending the adoption of a new regulation on licence fees. This new regulation on licence fees entered into force on 9 September 2002. The EC is examining whether the new regulation removes the grievances of the above mentioned infringement case.

2.3.2 *Wireless licences*

The first steps to liberalise entry into the German telecommunications market were taken in the late 1980s in mobile communications with three national licenses (DTAG's D1, Vodafone's D2 and E-Plus) awarded for mobile services (e.g., GSM).

'Use it or lose it' policy for spectrum. To prevent wastage or hoarding, the 1996 Telecommunications Act provides that a license can be revoked if use for the intended purpose is not begun within one year of the assignment. Further policy is set out in the Frequency Assignment Ordinance, which stipulates revocation if the holder of the assignment repeatedly violates or, in spite of repeated requests, fails to meet an obligation arising from the assignment.

Spectrum trading. Spectrum trading would allow operators awarded radio frequencies the freedom to resell portions of spectrum to other companies²⁰. In Germany, the draft of the new Telecommunications Act²¹ (section F12) states that RegTP may open up certain frequency bands to trading and frame the conditions and the procedure for trading, provided that:

1. Greater efficiency of spectrum use is anticipated.
2. There is interest in trading the spectrum concerned.
3. The original award proceedings do not preclude the assignment of frequencies after spectrum trading.
4. Compliance with other legal framework conditions, in particular usage conditions and international agreements on spectrum usage, is ensured.

2.3.3 *Foreign ownership restrictions*

There are no foreign ownership restrictions in Germany. Neither German law nor the Memorandum and Articles of Association (*Satzung*) of DTAG restricts the right of non-resident or foreigners to hold shares of public telecommunication operators or wireless licensees.

2.4 *Regulation of pricing*

Under the 1996 Telecommunications Act, end user tariffs of dominant providers are subject to *ex ante* regulation. In December 2001, RegTP determined that price cap regulation be limited to standard tariffs. The regulation of optional tariffs takes place through an actual price approval. In addition, tariffs for universal services must be set at an "affordable price". All other tariffs may be put into effect without prior approval. However, in markets in which a provider is considered to have a dominant position, tariffs are subject to *ex post* retrospective review if there are indications that the tariffs are inconsistent with the Telecommunications Act.

2.4.1 Prior Approval of Tariffs.

The Telecommunications Act 1996 provides for two basic approaches to ex ante tariff approval: a price-cap approach and an approach involving individual approvals based on the costs of efficient provision of a service. This “cost-oriented approach” is based on long-run incremental costs, with an additional amount in respect of overhead costs (including an appropriate return on capital employed). In effect, two separate systems are in place. Wholesale access prices are established on an “efficiency cost” basis²² while retail prices are regulated using a price-cap system. The Tariff Regulation Ordinance provides that priority be given to the price-cap approach.

Price Cap Approach. From January 2002 to 31 April 2004 a price cap regime with four different baskets, as indicated below in Box 4, has been in operation.

Box 4. Price Cap Regime in Germany January 2002—April 2004

Basket A -- access services: $X = -1\%$ resulting in a formula for this basket being $CPI + 1\%$

Basket B -- local calls: $X = 5\%$ so formula for this basket is $CPI - 5\%$

Basket C -- long distance calls: $X = 2\%$ so formula for this basket is $CPI - 2\%$

Basket D -- international calls: $X = 1\%$ so formula for this basket is $CPI - 1\%$

Note: The inflation rate for the first period (2002): $RPI = 3.1\%$

Source: RegTP at www.regtp.de

Price rebalancing. Constraints on a country’s ability to achieve full price re-balancing imposed by a price cap scheme is an important issue since re-balancing is essential for competition in the local telecommunications market. Moreover, re-balancing is required by EC directives. For instance, in April 2000, the EC alleged that Germany’s tariff approval procedures did not sufficiently ensure cost-based tariffs. In particular, the EC notice alleged inadequate implementation of re-balancing provisions. RegTP considers that tariffs have not yet been fully rebalanced. Indeed, in May 2002, the EC sent a statement of objections to DTAG in this regard.

In this context it is of concern that re-balancing is restricted in Germany by a price cap scheme that places access lines in a basket of their own restricting price increases to $CPI + 1\%$. At the same time, the other three sub-baskets require real price reductions. Notably the sub-basket for local calls has to satisfy a price-cap formula of $CPI - 5\%$ (hence requiring falls in prices of 5% in real inflation-adjusted terms). The sub-caps on access lines and local calls constrict scope for price rebalancing. RegTP has reviewed the price cap regime to stimulate further rebalancing increasing the monthly rental for an analogue line to EUR 0.50 (net) up to EUR 13.5. This fully eliminates the access deficit RegTP had previously identified. This was made possible by adjusting the x factor for Basket A (lines). In connection with the general criticism of basket formation it should be noted that German telecommunications legislation (Section 1(2) of the Telecommunications Rates Regulation Ordinance, or TEntgV) states that services may only be grouped in one and the same basket when the level of competition for these services is not expected to differ significantly.

Greater flexibility for price re-balancing would be permitted by abandoning the price caps for international and long distance calls where there is little evidence that they remain necessary. Germany claims that completely abolishing ex ante rates regulation for national and international calls is not currently possible on legal grounds, given the dominant position of the former monopoly operator. However, a number of European regulators no longer have ex ante regulation for these calls despite the fact that they consider their incumbent has a dominant position in other markets. For local calls, if caps are maintained, they should be limited to calls for residential customers. As is done in some other countries,

RegTP could determine a price at which fixed charges and local calls are considered rebalanced and implement an appropriate schedule to achieve this goal. In place of prices caps a system of monitoring could be introduced -- as was done in the UK -- to help ensure that the 'average' customer does not pay more over time. If not abandoned, the price cap regime should be simplified by abandoning the four sub-cap baskets in favour of a single basket that would allow rebalancing to occur more quickly while reducing the overall average level of prices faced by consumers.

Broadband pricing. DTAG now holds about 94% of the access line market (which in effect also means the broadband access market since access to the latter market is through the access lines). DTAG's ISP subsidiary T-Online offers highly competitive DSL retail prices. DTAG also offers several rate packages to its customers, which has increased the price-squeeze between interconnection charges payable by competitors on a per-minute basis (because of the fact that DTAG successfully challenged in court RegTP's requirement to implement FRIACO) and DTAG's flat rate end user charges. This has made it very difficult for DTAG's competitors to compete profitably.

In its decision of 30 March 2001, RegTP considered that some variants of DTAG's DSL offer were below cost. However, RegTP did not reject the pricing scheme since in its view a predatory effect had not been proven. At the end of 2001, however, complaints led RegTP to announce that it would continue investigations into the matter. In January 2002, the investigations of the alleged price dumping regarding the T-DSL Internet access were abandoned. The main reason for this decision was DTAG's announcement that it would raise its DSL prices (by about 22% for new customers). However, the European Commission has expressed concern that RegTP closed the procedure without determining whether the increase had removed the concern on pricing below costs so that there were insufficient safeguards as to the absence of predatory pricing.²³

The circumstances relating to DTAG's pricing strategy seem suggestive of classic "predatory pricing" -- where a temporary price cut is used to drive out or keep out competitors followed later, after the success of the predation, by a price increase to recoup any losses incurred during the price cut.

RegTP explains that it encouraged broadband roll-out (network upgrade) by allowing DTAG to charge low retail prices as a penetration strategy to open the mass market while at the same time trying to stimulate competition by linking regulatory decisions to obligations on DTAG to offer equal access (line sharing, collocation space, leased lines) and other wholesale products (resale). As RegTP put it: "Balance has to be found between on the one hand the promotion of competition (preventing leverage and re-monopolisation) and on the other hand promoting a fast roll-out of and investment in broadband networks. The only way to reconcile the two goals is a regulatory mix aimed at technology-neutral facilities-based competition with a long run perspective."²⁴

RegTP's advocacy of a long run perspective may be sound, but its actions provide another example of the regulator pursuing industry policy considerations rather than competition to develop the market. The outcome has been that Germany has fallen behind in broadband development, customers have suffered welfare losses and competition has suffered. But in the context of its approach to allegations about DTAG's predatory pricing, it must be said that it would be shortsighted (and contrary to a long run perspective) to allow the dominant incumbent to adopt policies that allow it to acquire monopoly status in the broadband market even if the means used by the incumbent is ostensibly attractive low allegedly 'dumping' (or predatory) prices that accelerates take-up, since in the longer term the monopoly position acquired by an incumbent could constrict broadband development. The recent slowdown in new DSL connections appears to confirm that DTAG's predatory pricing accelerated the initial take-up but resulted in a more monopolized market that may not encourage further expansion of broadband.

In regard to the “balancing” obligations placed on DTAG to offer equal access, these should have been done anyway as articulated by Germany’s telecommunications policy and as required by EU directives.

Bundling of services. In various decisions under tariff authorization procedures, RegTP authorized DTAG’s bundled tariffs based on a price scheme called “AktivPlus”, which offers the customer various services for an additional fee on top of the subscription fee, such as reductions on local calls as well as on all national calls and fixed to mobile calls. They also offer a variant of this price scheme called “AktivPlus XXL” offering customers free national calls on Sundays and public holidays for a flat rate fee.

Competitors say this bundled tariff presents a prohibitive barrier to market entry for long-distance network operators. DTAG responded by arguing that the AktivPlus price schemes were not bundled offers as every component could be obtained separately. The EC points out, however, that in the case of separate purchase, the retail tariffs would be different from those under the bundled offer²⁵.

In the course of the tariff regulation procedure, RegTP examined the alleged foreclosure effects but concluded that RegTP authorized DTAG’s tariff schemes subject to revision if market data showed an adverse competitive effect. In this context it is notable that between March 2001 and March 2002, the number of subscriptions to DTAG’s AktivPlus service increased from 5.8 million to 9.2 million customers. But despite DTAG’s consolidating dominance of the market, the regulator did not take action.

Business users. New entrants also face difficulties in the business market where DTAG offers business users large rebates under its tariff schemes “TDN (Telecom Designed Network)” and “T-VPN (Telekom Virtual Private Network) Best Price”. In its decision of 15 October 2001, RegTP stated that all tariffs in TDN or T-VPN contracts which should have been made subject to ex ante tariff authorisation, but which DTAG had not submitted for authorisation (and therefore had not been authorised by RegTP), were to be replaced by the authorised tariffs. In its decision of 13 December 2001, the Cologne Administrative Court suspended the obligation to implement the decision, a ruling endorsed by the Munster Higher Administrative Court on 13 March 2002. On 28. November 2002 the Cologne Administrative Court gave judgement on the main issue, confirming its preliminary injunction that no ex ante tariff authorisation is required for TDN and T-VPN contracts. The delay of one year left business users with legal uncertainty about their contract terms. The example also shows the limitations in RegTPs powers with respect to price regulation.

Ex ante review of prices. There are doubts over whether competitive circumstances in Germany are appropriate for abolishment of RegTP’s ex ante control of DTAG’s rates. The EC has argued that abandoning RegTP’s ex ante price regulation mechanism will make it even more difficult for RegTP to keep DTAG in check²⁶. Ex post (“after-the-fact”) regulation of DTAG’s rates occurs too late since ex post proceedings by RegTP can take nine months and longer before a decision is reached²⁷. DTAG’s pricing strategy demonstrates that it is very difficult to “recall” a dumping price once it is out in the market. T-DSL is not the only example since DTAG has been accused of using price dumping in other market sectors as well. Indeed, in two decisions in December 2002, RegTP found DTAG guilty of price dumping while offering Virtual Private Networks to large customers and municipalities below costs and required DTAG to modify its offer by April 2003. It remains to be seen whether this decision will have a practical impact since it is likely that DTAG will challenge these new RegTP decisions in court. Wholesale market power abuse harms retail competition, so that the proposed Article 26(3) included in the draft telecommunications law which would preclude ex ante wholesale price regulation if a related retail market is deemed competitive is disturbing. Ex ante review of prices is a critical regulatory tool in the absence of effective market forces.

Cost-oriented approach to price regulation In recent years, in determining tariffs under the cost-oriented approach, RegTP exerted its discretion to decline to take into account costs that DTAG believed were properly attributed to the service in question (for example, in regard to the costs of line sharing). In its administrative rules of 14 March 2002 (Communication No 120/2001, Official Journal 5/2001, p. 647-648), RegTP stated that it is bound to authorize tariffs on the basis of cost accounting data submitted, and that, in principle, it will not base its decisions on the prices prevailing in comparable markets²⁸.

RegTP has voiced its dissatisfaction with DTAG's cost accounting system. In a statement published on 6 March 2002, RegTP notes that there has been a series of improvements but concluded that DTAG's cost accounting system still had some shortcomings²⁹. In a notice in RegTP's Official Journal 12/2001 of 14 March 2001, RegTP published "Administrative rules in the area of cost accounting" and announced that it would publish an annual report on compliance with cost accounting obligations.

A provision in the draft of Germany's new Telecommunications Law would make a further contribution to resolving this issue. The draft contains a provision that RegTP can oblige the dominant operator to make a description of the cost accounting method publicly available showing at least the main categories under which costs are grouped and the rules used for the allocation of costs, or the regulatory authority itself may publish this in its Official Gazette or on its web site. Compliance with the cost accounting method would be verified by RegTP, which may also engage an independent body to perform the verification. A statement concerning the application of the prescribed cost accounting method would be published once a year.

2.4.2 *Access to and use of leased circuits*

Prices in Germany for leased line local circuits are relatively low compared to other EU countries. Only two leased line products are rate regulated (standard fixed connections and carrier fixed connections), and these products must be offered at a cost oriented rate. All other leased line products which competitive operators need to lease from DTAG are offered only on a retail basis. However, provisioning times for local access lines had been among the longest in Europe until 2002. For instance, in relation to 64 Kbit/s lines, Germany had the longest period for delivery, 90 days. At the other end of the spectrum, it was 21 days in France, and indeed in 2001, the French authorities introduced a new regime requiring delivery within 14 days. In May 2002, the EC announced that it had sent DTAG a statement of objections alleging that DTAG is abusing a dominant position through unfair pricing regarding the provision of local access to its fixed telecommunications network. In response to complaints, in May 2002 RegTP made a ruling to apply the following requirements on DTAG:

1. DTAG is subject to binding provisioning intervals for access leased lines (of 12, 15 and 30 working days, depending on bandwidth).
2. DTAG must offer an option for express delivery (1 to 5 working days).
3. DTAG must comply with a monthly reporting obligation to allow RegTP to monitor potential discrimination.
4. DTAG must provide order confirmation with binding delivery times for each order (within 5 working days).
5. DTAG is subject to uncapped penalties per day in delaying delivery of order confirmation, circuit installation or monthly reports.

DTAG appealed to the Cologne Administrative Court, in particular against the imposition of penalties. The court's decision of 12 November 2002 suspended the obligation to implement RegTP's decision on the grounds that DTAG is obliged to offer competitors only those conditions which it offers

itself internally and that RegTP had the burden of proof with regard to the existence and content of internally offered conditions. RegTP appealed to the Munster Higher Administrative Court but the court confirmed the Cologne court's decision. Only the reporting obligation towards RegTP remains in effect

As a result of the courts' decisions, the RegTP ruling is not being implemented and there is currently no applicable rule on delivery times, SLA or on penalties for delays in provisioning of leased lines – a situation that continues to frustrate new entrants.³⁰ For standard fixed connections delivery times were fixed by decision BK3c-00/040 of 9 October 2001. DTAG took legal action against this decision (court proceedings are still pending) but did not institute summary proceedings, *i.e.* the decision has been implemented for the time being. In March 2003, MCI (formerly WorldCom) filed a complaint with the EC alleging that the terms under which DTAG offers access to leased line tails discriminate against competitors. MCI/WorldCom wants the EC to impose service level agreements (SLAs) like those imposed in some other European countries to prevent such discrimination. The Commission has forwarded MCI's complaint and asked DTAG for comments on the allegations. DTAG's comments were sent to the Commission in May 2003. The official proceedings starts when the Commission sends a "letter of objection", which has not yet been done.

RegTP should persevere with its efforts to introduce penalties for delays in provisioning of leased lines and require DTAG to provide a reference SLA agreement to competitors. Although RegTP obtains data from DTAG on leased line prices and performance, it would help in improving transparency if these data were also reported publicly. This would include reporting data in a manner that indicate performance differences between the delivery of services to their own retail operation and in meeting the orders of new entrants.

2.4.3 *Accounting separation*

Under the provisions of the Telecommunications Act, DTAG (as a dominant operator) is required to practice accounting separation. But this requirement is not being adequately enforced and DTAG is required only to apply Germany's standard accounting rules³¹. While it is well known that accounting separation is subject to various deficiencies, the system can be enhanced so that the information generated by accounting separation can go some way towards limiting price discrimination and cross-subsidisation. Indeed, there is a provision in the draft of Germany's new Telecommunications Law that would enhance transparency of the cost accounting system used by DTAG (referred to earlier) and would therefore make a contribution towards resolving this issue. In Germany, electricity and gas companies must have audited accounts available publicly. DTAG should be required to do likewise. The OfTel approach to accounting separation can be instructive for improvements in some respects. In this context, it is notable that in Australia, to improve accounting separation, Telstra is to be required to prepare current cost as well as historical cost accounts in regard to some core services³². However, disclosure of some accounting information has been known to be a particular problem in Germany because of the very strict corporate laws in relation to the release of any information that may be deemed to be confidential. German laws in relation to this question are more rigid than in some other countries.

2.5 *Regulation to promote competition*

As in many other countries, abuse of dominant position is prohibited in Germany and dominant providers of telecommunications services are subject to special rules and obligations. In Germany, only DTAG has been designated to have market dominance and is subject to these special obligations which include:

1. The prior (*ex ante*) approval or retrospective (*ex post*) review of tariffs and related business terms and conditions by RegTP.
2. The obligation to offer competitors, on the basis of unbundling, special network access (including interconnection) as well as access to essential services and facilities used by the dominant provider internally on a non-discriminatory basis.
3. Potentially, the obligation to provide universal services in a market.
4. The possible inclusion of restrictive conditions in licenses, such as, in the case of scarce frequencies, a condition not to combine with another provider in the same market.

The draft of the new Telecommunications Act³³ discloses that the government's considers abuse of a dominant position to occur "where:

- The rate for the respective service does not cover its long-term average incremental costs.
- The margin between the rate which the dominant operator charges to competitors for access services, and the respective end user rate is not sufficient to enable an efficient provider to yield a reasonable return on the capital employed in the end user market (price-cost squeeze).
- The range of products of an undertaking is bundled in such a way that competition is considerably fettered and not just temporarily. To find out whether this is the case, the Regulatory Authority shall examine whether competitors of the dominant undertaking have the possibility of offering the bundled product at comparable conditions." (p.22)

2.5.1 Interconnection

RegTP will publish as a basic offer certain tariffs imposed on DTAG as their interconnection offering. All SMP operators are also required to charge cost-oriented tariffs for interconnection and access, supported by transparent cost-accounting systems, and must comply with the principles of transparency and non-discrimination. There are no operators designated as having SMP in mobile market so that they are not subject to transparency and non-discrimination obligations, nor must they comply with the cost orientation principle.

Fixed-Fixed Interconnection. After considerable delay, basic offer under the EBC tariffing system (see below) exists in Germany with the current tariffs valid from 1 January 2002 until November 2003. In November 2002, RegTP approved revised charges for a number of interconnection services.³⁴

After an unsuccessful earlier attempt, element-based interconnection charges³⁵ (EBC) were introduced in January 2002 (replacing the primarily distance-based tariff structure) and resulted in DTAG being required to lower its interconnection rates by an average of approximately 14%. DTAG appealed against EBC to the administrative courts arguing that it was disproportionate to install a rate system based not on DTAG's existing network's cost structure but on the costs of an assumed 'efficient' network. To avoid such disputes in the future, the new Telecommunications Act should make clear that long-run incremental costs are appropriately determined on the basis of an efficient rather than the historic network.

The two-step approach to interconnection pricing. A problem with the regulation of interconnection in Germany is that RegTP sets tariffs e.g. for interconnection and local loop unbundling in a two-step procedure: the technical and other contractual conditions are determined in the first step, and tariffs are then set in the light of the decision taken as the second step. This two-step approach (usually taken within

20 weeks of proceedings) results in an lengthy procedure to set interconnection conditions, including tariffs, and leads to delays in completion of interconnection and unbundling conditions. Shortening the procedure would help new entrants.

Fixed to mobile termination charge. Under the 1996 Telecommunications Act, mobile termination rates could be subject to ex-ante regulation if a mobile network operator is determined to have significant market power (SMP) or if termination to the mobile network has been ordered in an interconnection decision. So far both cases have not occurred. This is because despite the fact that the two largest mobile providers, T-Mobile and Vodafone, have a combined market share of about 80 per cent, with roughly 40% of the market each, RegTP concluded that there was no single designated provider with substantial market power or that joint dominance existed. The absence of strong price competition led a long time market observer to make the following pointed comment: “It is in particular remarkable that both market leaders in Germany – T-Mobil and Vodafone – exhibit hardly any price differences with regard to the residential customer segment.”³⁶

Neither DTAG’s T-Mobile (D1) nor Vodafone’s D2 has been designated dominant by RegTP or as having SMP and, accordingly, with a legal obligation to provide cost-oriented, carrier grade interconnection (fixed-to-mobile termination) to fixed operators. Accordingly, RegTP does not regulate the mobile telecommunications sector, including ex-ante price regulation over retail or wholesale prices. RegTP considers that there is sufficient countervailing power on the part of end users.³⁷

RegTP reiterated on 12 February 2003 that it saw no need to impose price cuts for fixed-to-mobile termination despite pressure from the European Union through the EU Recommendation and the actions regarding reduction of mobile termination rates from other national regulators. RegTP argues that German fixed-to-mobile termination charges - are among the lowest in Europe – and sees no market domination in the market for call termination. RegTP argued that fixed-to-mobile termination charges in Germany (shown in Table 6) when benchmarked against the data for a range of selected countries³⁸ indicate that even though Germany is not regulating mobile termination rates: “...the German rates are still falling in the lower third of all rates, including the regulated ones.”³⁹ Pointing out that even after the price cuts in fixed-to-mobile Oftel proposes for the UK, termination fees are still lower in Germany, RegTP concludes that this shows that Germany is better off without regulation. New entrants argue that the data in the chart do not reflect the indirect termination rates to be paid by the majority of fixed operators (only few large carriers have interconnection agreements with mobile network operators) which are higher than the direct interconnection rates demanded by mobile network operators.

Table 6. Fixed-to-Mobile Termination Charges in Germany

PEAK	OFF-PEAK	
T-Mobile, Vodafone	T-Mobile, Vodafone	
14.3	14.3	No peak/off-peak differentiation
E-Plus	E-Plus	
17.9	17.9	No peak/off-peak differentiation
02	02	
17.9	17.9	No peak/off-peak differentiation

Source: Cullen International Western Europe Regulatory Support Services, “Telecommunications Western Europe: The Cross-Country Analysis”, 31 December 2002.

RegTP has not published data that would show that over time termination rates in Germany have been falling. Although benchmarking is important, the relative level of rates in Germany is not sufficient to show that there is competition in termination of fixed to mobile calls. If there were competition in this market the mobile operators would use relative differences in termination rates to attract customers. This has not been the case. It is interesting to note that the UK regulator, OFTEL, in a recent survey found that only 15% of mobile users “...said they had found out how much it would cost others to call them on their

mobile before making their choice [of network provider], and 9% said this cost had been a significant factor in their choice of one network over another. There has been little change in these levels since February 2001, indicating that for the majority of mobile customers, cost of calls to mobiles is not a significant factor in their choice of network.”⁴⁰

RegTP’s reluctance to investigate excessive wholesale mobile termination rates results in further harm to competition by also preventing the regulator from investigating price squeeze scenarios executed by vertically integrated operators who offer their own bundled products to customers of fixed network operators. For example, it is believed by new entrants that business users of mobile phones (*e.g.* companies with a certain number of their sales forces using mobile phones) are offered preferential fixed-to-mobile retail rates that are considerably below the wholesale rates charged to fixed line competitors. They have however offered no evidence to substantiate these allegations.

It is also important to note when considering arguments that present Germany’s termination charges compare relatively well with other OECD European countries, that the prices prevailing in the countries Germany’s fixed-to-mobile termination charges are being benchmarked against were also set by dominant operators sometimes in the absence of regulation and that any price regulation being applied is a recent development (France for example only started in 2002 to impose regulation in this market). So the fact that prices in Germany were at the lower range of these prices does not necessarily mean that mobile markets in Germany are competitive (and certainly does not mean that mobile markets, and, in particular, fixed-to-mobile termination rates, need not be regulated). Moreover, according to the data in Table 6 (data evidently accepted by RegTP), the termination rates for the two biggest German mobile operators T-Mobile and Vodafone (about 40% of market share each) are the same and this is not suggestive of competitive circumstances.

RegTP considers that competition in the end customer market is a countervailing influence on prices. End-users would react to price increases by shortening their call duration and, in addition, take account of the prices from fixed-to-mobile networks when considering a possible subscription to a mobile operator.⁴¹ As noted above, no evidence has been put forward to show that these arguments hold. Notably, the sensitivity of end users to the pricing of mobile termination and their ability to influence prices in the manner suggested by RegTP has not been subject to empirical analysis, nor has it been a factor that mobile companies have used when competing for customers.

RegTP’s position is in sharp contrast with findings by a growing number of regulatory agencies (including regulators in the UK, France and Italy with Belgium, the Netherlands, Portugal, and Spain likely to follow suit) concluding that fixed-to-mobile termination charges have been excessive (well above costs) and are planning to cut termination charges in 2003. The EU too has proposed price regulation of fixed-to-mobile termination charges. In fact, within the EU, it appears that Germany appears to be one of the few EU countries opposed to the regulation of fixed-to-mobile termination rates. At present Finland and Denmark do not regulate fixed-to-mobile termination charges.

In the UK, an investigation by the UK Monopolies Commission concluded that each mobile network operator has a monopoly of call termination on its own network. This is because there are currently no practical technological means of terminating a call other than on the network of the mobile operator to which the called party subscribes and none that seems likely to become commercially viable in the future. There are also no ready substitutes for calling a mobile phone at the retail level, such as calling a fixed line instead.

The UK Monopolies Commission considered a number of possible remedies to address the adverse effects, and concluded that control over charges by way of a price cap was the only remedy likely to address them effectively. The Commission concluded that the price cap can be expressed as an RPI – X formula applied to the weighted average termination charge of the mobile operators and recommended that the price control take the form of a 15% reduction in termination charges over the period from 1 April to 25 July 2003 and then a progressive reduction to the fair charge by 31 March 2006.

RegTP's reasons for not regulating the mobile market are unconvincing. There are some market analysts who suggest that RegTP's reluctance to take action against mobile operators is based on the concern at the Ministry and at the political level that a reduction of fixed to mobile termination charges will impact adversely on the profitability of the mobile operators. This concern has arisen because of the high prices German mobile operators paid for 3G licences. If this were the case, market efficiency and consumer welfare are being sacrificed for industry policy considerations. RegTP should at least be carefully monitoring competition in the mobile sector and publishing the results of its work.

RegTP should rapidly conduct a review of the mobile market as required by the EC's recent Relevant Markets Recommendation without undue delay and as required by the Framework Directive, RegTP should immediately apply regulatory controls to mobile operators found to be dominant -- including jointly dominant -- in termination markets. Measures could include formally ascribing joint market dominance to the two largest mobile service providers (T-mobile and Vodafone which together have some 80% of the market) and applying direct price regulation to bring down prices for voice telephony between fixed-line networks and mobile networks.

In regard to roaming charges, the anticipated regulatory delay in addressing the problem could be bridged by introducing temporary regulation, for example, by requiring domestic mobile service providers to inform their customers abroad about foreign providers' roaming charges, through Short Messaging Service (SMS) text messages.

Mobile to fixed interconnection. Mobile to fixed termination rates are commercially negotiated between operators and are not published (because they are not subject to regulation at present). The average per minute price for calling from a mobile network to fixed-line network varies from EUR 0.07 to EUR 0.08 per minute on weekends to nearly seven times more for peak time calls. Such a large price differential is unlikely to reflect cost differences and further reason to warrant careful regulatory scrutiny of the sector. However, E-Plus recently announced a mobile-to-fixed retail tariff of EUR 0.03 to customers, while charging over EUR 0.18 for wholesale termination for fixed-to-mobile termination. A RegTP investigation into the dynamics of this pricing could further clarify the problem, in particular because mobile operators claim their high network costs as reason for charging excessive fixed-to-mobile termination rates.

2.5.2 *Unbundling*

Germany was the first European country to require a form of local loop unbundling (LLU) back in 1998 through provisions of the 1996 Telecommunications Act and the Network Access Ordinance. But Germany did not maintain a lead in regard to LLU in particular as regards access by ISPs to the different forms of unbundling, although from the EU perspective Germany still has the largest number of unbundled network access links. As of June 2003 there were 1,143,646 fully unbundled lines in Germany but only 15 shared access lines with no incumbent bitstream access offered. Moreover, the majority of unbundled loops are used to provide voice services with only approximately 200,000 used to provide DSL services⁴². Indeed, in December 2001, the EC decided to open an infringement proceeding against Germany for alleged failure to transpose into national law the provisions of the EU regulation on LLU (with line

sharing) introduced in December 2000. The EC proceeding was based, in particular, on the absence in Germany of an adequately published formal reference offer for access to the unbundled local loop and shared lines. A reference offer for access to the unbundled local loop and shared lines was published by Deutsche Telekom in February 2002 and the proceeding by the European Commission was closed during 2002.

Price squeeze. Prices for access to unbundled local loops have led competitors to argue that DTAG has been subjecting them to a price-squeeze as indicated in the data below.

Access price payable to DTAG by new entrant: EUR 12.48

Subscriber line rental DTAG charges customers: EUR 11.

The negative margin between the EUR 12.48 the new entrant competitors have to pay DTAG to rent the analogue line and the EUR 11.82 they can charge customers (since, to have any chance of winning the customer, the new entrant cannot charge more than the EUR 11.82 that DTAG charges end user customers), results in obvious difficulties for competitors. The access price payable to DTAG was reduced to EUR 11.80 on 1 May 2003 as a result of a RegTP decision of 29 April 2003, and the subscriber line rental DTAG charges customers was € 13.50. This addressed the price squeeze problem.

RegTP explains that with access to the raw copper, the line can be upgraded and new entrant carriers are able to offer ISDN lines that they can charge more for and therefore a profit margin can exist. But this explanation apparently did not satisfy the EC. On 8 May 2002, the European Commission sent DTAG a statement of objections charging that DTAG had, by maintaining a price-squeeze, abused its dominant position through unfair pricing for provision of local access to its fixed network (local loop).

In regard to the price squeeze issue, it is arguable that since the wholesale service price for competitors is regulated by the regulatory authority for telecommunications and posts (RegTP) on the basis of cost orientation, the wholesale service price does not lie within DTAG's sphere of influence. Therefore anti-competitive conduct on DTAG's part could only have the form of too low end-customer rates, in which case the relevant test would actually be a predation or price dumping test.

In Germany, as required under the 1996 Telecommunications Act, the basis of pricing for unbundled local loops is long run average incremental cost (LRAIC) of efficient service provision⁴³. Since retail prices are regulated by a price cap regime, DTAG's response to critics could be that it is only charging wholesale and retail rates that RegTP has approved.

A thorough investigation of the price squeeze issue is being conducted by the EC. But a few observations are worth making here. It is well known that an incumbent, like DTAG, can significantly influence cost-oriented wholesale prices because of "creative accounting" and "information asymmetry" (RegTP is dependent on information on costs from DTAG). This suggests that the wholesale prices arrived at should be benchmarked ('reality checked') against prices prevailing in other (best-practice) countries. If prices are relatively high, one option is to reduce them through applying a price cap regime that is being practiced in several OECD countries, including the UK.

Are prices of unbundled local loops relatively high in Germany? On the basis of the information presented in Table 7, it appears that the price charged by DTAG for unbundled local loops compares reasonably well against other EU countries. As Table 7 indicates, the monthly rental of EUR 12.5 for an unbundled local loop⁴⁴ was at about the EU average of EUR 12.8 and the connection fee of EUR 70.6 was much lower than the EU average of EUR 103.6.

Table 7. Prices for full unbundling

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU ave
Monthly rental	13.3	8.3	12.5	11.5	12.6	10.5	16.8	11.1	15.8	13.5	10.9	13.5	14.7	11.3	16.2	12.8
Connection	19.9	45.4	70.6	123.4	20.0	78.7	121.5	91.4	185.6	79.0	54.5	82.9	216.0	165.2	140.3	103.6

Source: Eighth Report from the European Commission on the Implementation of the Telecommunications Regulatory Package, SEC(2002) 1329.

The source of the price squeeze must be investigated from the other end. Is the price being charged to consumers (which is subject to price cap regulation) too low to provide a reasonable profit margin?

Price squeeze and the price cap. In May 2002, the subscriber line rental for the analogue line was raised by 5% from EUR 10.94 to EUR 11.49 (excluding VAT). On 31 October 2002, DTAG asked RegTP to authorize a further increase in the monthly subscription fee by EUR 0.99. However, RegTP authorised only a EUR 0.33 increase in the analogue phone line fee from February 2003 rather than the EUR 0.99 increase DTAG sought. RegTP said it could not approve a rise of EUR 0.99 in the monthly line rental since this was outside the price-cap regime. By agreeing to such an increase, RegTP would have “impaired the delicate balance between the individual baskets in which any price increase in the line basket has to be compensated by corresponding cuts in the other baskets.”⁴⁵ As noted earlier, abandoning the price cap scheme would allow much more scope for necessary price rebalancing.

In the context of the price cap scheme currently in use, RegTP makes a curious declaration that it “...takes the view that the price cap regime offers for price increases must be fully utilized to narrow the cost/price gap between the monthly line rental and the monthly lease for subscriber lines which some market players expect. Accordingly, the proposed increase in line rentals has been approved to the extent possible under the current price cap conditions, whereas approval of the proposed rise of EUR 13.40 in the one-off charge for taking over analogue and ISDN has been denied.”⁴⁶

A price cap regime is meant to provide increased flexibility in pricing by permitting an operator more freedom to modify prices so long as it does not transgress price cap floors or ceilings. The maximum increase in the case of ceilings permitted by the price cap regime is the *maximum* allowed. This maximum increase should not be expected to be the obligatory level of increase (which is what RegTP seems to be saying).

In its ruling of 28 July 2003 RegTP approved Deutsche Telekom AG’s increase in the monthly rental for an analogue line to EUR 13.5). This fully eliminated the access deficit RegTP had previously identified. This was made possible by adjusting the x factor for Basket A (lines). RegTP claims that after this adjustment there is no price-cost squeeze. As a result of lowering the charge for unbundled local loop access to EUR 11.8 on 1 May 2003, the monthly retail price for an analogue line is now EUR 1.70 more. For the local market to support sustainable competitive entry, the price of local calls or line rental must not be held artificially low so these changes a late but positive. .

Access at the Main Distribution Frame (MDF). Access at the MDF level is important to new entrants in order to allow them to make full use of their own network (or alternative network offerings) and to control the technical characteristics of the connection to the end-user. Table 8 shows that Germany has a higher availability of DSL services over LLU (measured in terms of MDFs with competitors’ equipment installed) than France, Sweden or the UK.

Table 8. Availability of DSL services over LLU, measured in terms of MDFs with competitors equipment installed

Country	Number of MDFs	Number Availability of DSL services over LLU, measured in terms of MDFs with Competitors equipment installed of MDFs with competitors' equipment installed	% of MDFs with competitors' equipment installed
Germany	7 900	2 000	25
France	12 000	125	1
Sweden	7 000	162	2
UK	5 600	144	3

Source: ECTA. Figures as at October 2001 for Germany; June 2002 for France; May 2002 for Sweden; June 2002 for the UK

Sub-loop unbundling. The EU introduced regulations requiring sub-loop unbundling⁴⁷ in 2001 but RegTP was slow to respond. In March 2002, the Commission announced the commencement of an infringement proceeding against Germany for alleged failure to implement the EU regulation on sub-loop unbundling.

Line sharing. Line sharing⁴⁸ became a requirement through an EU directive of January 2001. On 30 March 2001, RegTP fixed the conditions for line sharing obliging DTAG to offer line sharing within a period of two months, on a non-discriminatory basis. DTAG claimed it was unable to meet this deadline because it could not provide the splitters to separate the frequencies and the digital subscriber line access multiplexers (DSLAMs) to control and route the DSL traffic separately. It also cited the lack of Europe-wide standards on individual aspects. But RegTP concluded that neither of these reasons stood in the way of rapid implementation since splitters and DSLAMs were already available in separate units and the lack of harmonised standards was not a convincing reason for delay. Since then DTAG has published an offer for access to the sub-loop that has been approved by RegTP. In December 2003 the Commission closed the proceeding.

DTAG challenged RegTP's decision in court, but was twice unsuccessful. It then made an offer to QS Communications that was finalised in December 2001, and submitted to RegTP for approval. On 15 March 2002, RegTP set the line sharing charges. The monthly rental applicable until 30 June 2003 for access to the higher frequency portion of the line was set at EUR 4.77 (one-third of the EUR 14.65 DTAG proposed). RegTP set the one-off charge for connection, excluding any extra work at the customer's premises, at EUR 85.61 further lowering this charge on 8 July 2002 to EUR 74.91. The charge DTAG proposed was EUR 153.44 (about twice as much). The disconnection charge was set at EUR 72.18 as compared to DTAG's proposed EUR 117.73. RegTP believes that these charges place Germany among the cheapest third of the countries benchmarked⁴⁹ and will help spur competition in the market for high-speed Internet access.

But while line sharing has finally become obligatory in Germany, with prices determined by the regulator, the number of lines that have actually been shared is very low. Evidently DTAG is still negotiating with a number of competitive carriers to provide this service but there are allegations that DTAG has been engaging in delaying tactics and is not complying with all its obligations.

DSL Bitstream (or wholesale) Access. Bitstream access enables a new entrant to provide unique feature functionality to its customers, to control quality of service and therefore differentiate its services from those of the incumbent. RegTP has not yet acted to mandate bitstream so that Germany is one of the few EU countries that has not mandated its incumbent to offer bitstream access despite the fact that the German DSL market is dominated by the incumbent. RegTP can only issue an order for a bitstream product if required to take action by a new entrant requesting access. To date this has not happened.

2.5.3 Collocation

DTAG must make collocation available either as physical collocation in a separate room in DTAG's MDF building or outdoor in a cabin or box on the MDF site. Since February 2002, distant collocation also has to be offered by DTAG. Collocation has started to occur (in about 33% out of the 8000 sites). However, new entrants in Germany are still experiencing problems in the practical implementation of collocation.⁵⁰ And on 12 November 2002, DTAG obtained an injunction from the Administrative Court in Cologne stopping the implementation of a RegTP decision of 1 July 2002 prescribing time schedules for provisioning of local loops and collocation.

Co-mingling. Where 'co-mingling' is obligated instead of only separate collocation, a new entrant is able to obtain only a relatively small surface area rather than separate collocation (which would be much more expensive). In the EC, co-mingling is currently available in Belgium, Denmark, France, Spain and the United Kingdom. The financially difficult circumstances new entrants are facing and the recent drop in demand for collocation space is leading to greater pressure for co-mingling elsewhere. In the UK, for example, the regulator concluded that the incumbent BT should meet any request for co-mingling unless there were objective criteria on the grounds of technical feasibility or the need to maintain network security. The rationale behind this decision is that co-mingling could encourage a broader deployment of LLU-derived services because it could provide significant reduction in start-up costs.

In Germany co-mingling is available in the local loop, but has not been requested by DTAG's competitors to date since competitors have been more interested in a separate room or space. But, as noted above, changing circumstances could lead to increased interest in this facility and RegTP should ensure that DTAG meets requests for co-mingling facilities made by competitors.

2.5.4 Wireless services

Regulatory decisions can impact significantly on the nature and extent of competition in the wireless sector.

Tradeable licences. In 2002, Mobilcom declared its intention to withdraw from the German UMTS market citing cost concerns. Mm02 Germany and E-Plus (the German unit of KPN) have expressed interest in Mobilcom's network. But RegTP has made it clear that existing mobile operators will not be permitted to merge or trade frequencies. UMTS operators planning to merge will only be able to hold one licence. That is, if two licence holders merge, one of the licences will have to be returned to RegTP with all associated frequencies⁵¹. RegTP will decide what is to happen to spectrum handed back in a ruling preceded by a public consultation.

Infrastructure sharing. The costs of deploying UMTS infrastructure has become an issue of growing concern particularly in the changed stock market sentiment towards the telecommunications sector. This has led to mounting pressure for cost saving initiatives including infrastructure sharing. In June 2001, RegTP ruled that infrastructure sharing of wireless sites, masts, antennas, cables, combiners and cabinets was permissible – provided that full legal control of the networks and competitive independence remains intact. There is expectation that this will allow UMTS license holders (particularly new market entrants) to achieve meaningful economies in the build-out of their UMTS networks. Infrastructure sharing could also lead to an extension of 3G coverage, particularly outside urban areas⁵².

In September 2001, T-Mobile and mm02 concluded an agreement concerning UMTS infrastructure sharing arrangements for their respective operations in Germany and the United Kingdom. Under the new agreement T-Mobile International and mm02 would collaborate in the roll out of their networks in both the UK and Germany with O2 customers being able to use the T-Mobile network. O2 would pay T-Mobile

an amount of EUR 210 million for 2003⁵³. The European Commission has concluded that sharing infrastructure networks, such as antennae sites, for 3G is acceptable. Another proposed UMTS infrastructure sharing agreement was between E-Plus and Quam (a joint venture between Spanish incumbent Telefonica (57.2%) and Finnish incumbent Sonera). Quam estimated that as a result of this agreement the company would save 40% of the original foreseen investment. However, Quam has since announced that it is withdrawing from the German market.

Mobile Virtual Network Operators (MVNOs). The essence of an MVNO's operations is that it uses other operators' frequencies, without actually owning or operating these frequencies. Thus, MVNOs can enhance competition by introducing the prospect of additional players into a market where access is restricted because of scarce frequency resources. However, in Germany, under the 1996 Telecommunications Act, the obligation to provide special network access applies only to network operators with a dominant position in the relevant market. Since RegTP has not determined any of the mobile operators as having a dominant position, MVNOs wishing to enter the market must rely on mobile operators being willing to conclude an agreement with them⁵⁴. However, in Germany 10 service providers with no networks of their own (with a market share of 27% at the retail level) compete with network operators at the retail level.

2.5.5 Cable

Germany has high cable penetration. Until recently cable networks were largely owned by DTAG.

In June 1999, the European Commission adopted a directive (the "Cable Directive") amending Directive 90/388/EEC (the "Services Directive") dealing with the regulation of broadband cable networks. The amendment requires that the telecommunications activities and broadband cable activities of dominant operators be structurally separated. DTAG came under pressure to sell its cable networks. In 2000, DTAG sold its cable networks in three regions (in Hesse to the operator *iesy*; in North-Rhine/Westphalia and Baden-Württemberg to another operator *ish*). In 2002, a sale of DTAG's six remaining cable TV companies to Liberty Media for EUR 5.5 billion was blocked by the Bundeskartellamt because Liberty was not prepared to accept certain conditions of the sale relating to content access and the upgrading of cable so it could provide broadband services. It was not until February 2003 that, as part of the company's restructuring plan for its EUR 64 billion debt, DTAG negotiated the sale to a consortium (comprising Apax Partners, Goldman Sachs and Providence Equity Partners) for EUR 1.725 billion in cash. The restructuring has been severely delayed, but the sale means that an important barrier to the upgrading of the cable network has been removed. However, problems relating to the division between Levels 3 and 4 cable operators in Germany must be addressed and steps taken to speed up the consolidation of the fragmented cable market which is in the process of taking place. Presently one-third of the Level 3 operators have direct access to customers.

DTAG evidently continues to own a 40% interest in the regional cable company that provides services to the German state of Baden-Wuerttemberg. It should be required to sell this shareholding.

The government's expressed objective is to establish cable as an alternative telecommunications infrastructure, including high speed Internet access. The German government has commissioned a review of the cable sector⁵⁵ to identify ways of addressing barriers to the development of cable as an alternative source of telecommunications, including high speed Internet service. But so far, no strategies in this regard have been announced. In this context it is notable that the French industry specific regulator (Autorite de Regulation des Telecommunications) has conducted such an inquiry into the potential for cable networks to provide telecommunications.⁵⁶

2.5.4 Numbering and number portability

Under the 1996 Telecommunications Act, RegTP is responsible for numbering functions. Fixed number portability was introduced on 1 January 1998 for geographic numbers and numbers of value-added services - such as Freephone services ((0)800 numbers), shared cost services ((0)180 numbers) and premium rate services ((0)190 numbers). The porting of fixed numbers is currently free of charge to the customer. In future DTAG may introduce a fee that is subject to ex-ante regulation. (According to the German Telecommunications Act, the customer can be charged only the costs that are directly attributable to the change.)

Introduction of mobile number portability (MNP) was mandated by RegTP from 1 November 2002. All the operators have introduced MNP to schedule. Seeking to attract the customers of other operators, some focus on the possibility of customers being able to keep their number if they switch. By mid-April 2003 around 110,000 numbers had been ported.

Current regulations do not mandate portability between second and third generation networks (GSM and UMTS).

Roaming. In 1999, the Bundeskartellamt opened investigations into the national roaming agreement signed by VIAG Interkom and T-Mobile. The agreement provides for VIAG Interkom to buy a certain quota of minutes and to use T-Mobile's D1 network in return, enabling it to offer its customers more or less seamless coverage. Despite concerns about competition being inhibited, the Bundeskartellamt decided not to object to the agreement until the end of 2003 because there was concern that without the agreement, VIAG Interkom would probably have had to exit the market, and this would have considerably worsened the situation in the highly concentrated mobile market (four operators). Thus the decisive consideration was that the agreement promised to help the competitive situation. RegTP also looked into the general permissibility of national roaming and has issued an exemption, that is to say a comfort letter, for the agreement.

On 11 July 2001, the European Commission confirmed that officials from national competition authorities had carried out simultaneous inspections at the premises of nine European mobile telephony operators located in the United Kingdom and Germany. T-Mobile Deutschland and T-Mobile UK were among the companies inspected. The Commission asserted that a European Union-wide sector inquiry into mobile roaming had established serious competition concerns regarding pricing practices that warranted further investigations, particularly in the United Kingdom and Germany. The Commission statement indicated that the inspections in Germany (and the United Kingdom) were to ascertain whether there was consumer price fixing by mobile operators, whether German operators have illegally fixed the wholesale prices they charge to other operators, and whether these prices are excessive or discriminatory. If the Commission were to establish that illegal price-setting activity has occurred, it could impose fines of up to 10% of the group's global sales during the previous year on each company participating in the violation.

As a consequence of EU directives relating to the new regulatory framework, national authorities are required to assess in a market analysis whether wholesale roaming markets are competitive and, if not, introduce regulation in this area. , RegTP has begun the process of market assessment. . It is important that RegTP's give priority to the market assessment in the mobile sector to reduce uncertainty raised by differences of opinions relating to the degree of competition in this market especially with respect to the wholesale termination market.

2.6 Carrier selection and pre-selection

In Germany, carrier pre-selection in the fixed network was introduced on 1 January 1998. Carrier selection (call by call) and carrier pre-selection were made available also for long-distance calls, for international calls and for calls to mobile networks. Calls to non-geographic numbers were available until July 2000, but then were discontinued on the basis of a multilateral agreement between operators (DTAG and new entrants) because they were considered to be network inefficient.

Although under EU requirements carrier selection (call by call) and carrier pre-selection should have been available no later than 1 January 2000, they were not in fact made available in Germany until several years later. Here, too, Germany has been exceptionally slow. Indeed the EU's 8th Implementation Report states that: "Carrier selection and carrier pre-selection are available for all calls to geographic numbers from fixed telephones, with the exception of Germany for local calls. Legislation has not been adopted; an infringement proceeding is still pending." (p.35)

In April 2002, the German Government passed a bill to introduce carrier selection in local networks starting from December 1, 2002. On 27 September 2002, the *Bundesrat* (Upper House) adopted an amendment to the German Telecommunications Act obliging DTAG to offer carrier selection (call by call and pre-selection) to its competitors at the local level. The First Amendment to the Telecommunications Act of 21 October 2002 required DTAG to provide call by call and pre-selection facility for local calls from 1 December 2002. At the end of November 2002, however, RegTP deferred the introduction of local carrier selection to the end of February 2003, following DTAG's argument that the technical implementation of local carrier selection would be impractical within the brief timeframe given. RegTP declared that it had concluded as a result of its enquiries, including public hearings, that call by call could not be introduced before 25 April 2003 at the earliest, and pre-selection not before 9 July 2003 at the earliest in light of the technical and operational processes required for implementation.⁵⁷ Carrier selection and carrier preselection in the local call market was introduced on 25 April 2003 (call by call) and preselection on 9 July 2003. Delays initially built up after 9 July 2003 as a result of the large number of applications. The backlog has now been cleared, however, as DTAG, also at RegTP's behest, deployed staff from its special service agencies between 9 July 2003 and 31 August 2003 to switch over some 1 million lines. RegTP now has no more complaints to hand from the competitors.

The law adopted in 2002 also includes a provision that would allow DTAG to seek approval of a per-minute surcharge to cover its "infrastructure investments" for call by call. In response, RegTP issued a ruling granting DTAG the right to demand from its competitors a surcharge of 0.4 Eurocents per minute for origination services for local calls. In a preliminary proceeding against the RegTP ruling, the Administrative Court of 1st Instance has now suspended the RegTP ruling, confirming competitive operators' arguments that the surcharge is illegal. However, following the price cap adjustment and the increase by €0.5 in the rental for analogue lines which took effect on 1 September 2003 there was no longer a justification to charge an access deficit charge of €0.4 which is why the surcharge was withdrawn.

Restraint on win-back campaigns. The implementation of carrier pre-selection has been a problem in some member states with strong win-back campaigns from incumbents. In this context, it is notable that in Spain, the sector specific telecommunications regulator has made a ruling preventing operators who have lost a customer to another pre-selected operator from taking steps to recover that customer for a period of four months.

To date RegTP has not received any formal complaints on winback. RegTP should ensure that procedures for implementing local carrier selection are transparent and simple for users. It should also make a ruling restraining DTAG from engaging in win-back campaigns to recover a customer for a period of four months.

2.7 *Rights of way*

The German Federal Government grants the rights of way needed for transmission path licenses free of charge. However, the Telecommunications Act requires that operators of transmission lines obtain the consent of the authority responsible for the maintenance of the relevant public ways before laying new transmission lines or modifying existing transmission lines. DTAG claims it has agreed on “a cost-saving and delay-avoiding procedure with federal associations of municipal authorities to simplify the process of obtaining the required consent”.⁵⁸

The Telecommunications Act sets out principles for facility sharing and access to private land. Under the Act, if the establishment of new transmission lines by an operator through the use of public rights of way is not feasible or technically possible or if the cost is disproportionately high, an operator of an existing transmission line using those public rights of way may be obligated to grant to the operator of those new transmission lines the joint use of its installations, such as ducts, for adequate compensation, provided no major construction work is required and such joint use is economically feasible.

2.8 *Universal service*

According to the German Constitution, the Federal Government must ensure that there is a sufficient and appropriate nation-wide provision of telecommunications services. The 1996 Telecommunications Act describes universal services as being a minimum set of affordable telecommunications services for the public in respect of which quality levels have been defined and to which every user must have access, irrespective of his place of residence or work. The services themselves are detailed in an associated Universal Service Ordinance (which entered into force in February 1997), and comprise:

- Voice telephony provided on the basis of a digital switched network and subscriber lines with a bandwidth of 3.1 kHz, specifically with – as far as technically feasible – the ISDN supplementary services, call waiting, call forwarding, itemised call statement, advice of charge and call hold/broker's call.
- The provision of information at any time on the numbers and area codes of subscribers in the licensed area and of telephone service subscribers in other countries.
- The publication of directories.
- The nationwide provision of public telephones in places that are accessible to the general public at all times, in accordance with all reasonable demand.
- The provision of transmission lines in accordance with Council Directive 92/44/EEC.

If the universal service can only be provided at a loss, RegTP can invite tenders for provision making it possible to ascertain the minimum compensation required. All operators with a market share of at least 4% of the relevant segment of the market must contribute towards the necessary compensation. If no company says it is prepared to provide the universal service, the RegTP can oblige the regionally dominant license holder to provide the universal service.

The German government's position is that the supply situation at present is satisfactory, and hence no operator is currently expressly required to provide universal service. However, DTAG is the de facto universal service provider and the 1996 Telecommunications Act does stipulate that, should DTAG wish to cease offering universal service, it has to report this to the Regulatory Authority one year in advance. The government considers that: "Basically, it seems likely that these services will continue to be provided on a market basis in future and the measures provided by the Act in case there is a gap in provision – in terms of the universal services stipulated in the ordinance – will probably not be needed."⁵⁹

EC directives require an examination of whether the provision of universal service imposes a competitive burden and if so whether a universal service fund is warranted. This has not been done in Germany. With the introduction of the new EU regulatory framework (of which universal service is one of four major strands), it is particularly timely for RegTP to review and report on universal service targets and achievements in Germany.

Broadband access in less favoured regions. A related issue is the delivery of broadband services to regional, rural and remote areas in Germany. This is likely to continue to present difficulties since the distinctive features of these areas, such as a low population and revenue base are a significant disadvantage for a service supply industry based on economies of scale. Invariably the cost per customer of supplying broadband services in these areas will remain significantly higher than in more densely populated areas. Not surprisingly, securing market share in metropolitan and regional centres will be of higher commercial priority to operators. Demand is even more likely to fall short of economic provisioning in areas that are very sparsely settled, or that are facing structural decline. In such areas, demand prospects will not justify the competing investment needed to generate effective competition.

By contrast with a growing number of OECD countries, there does not appear to have been systematic evaluation of the existence and policy implications of the so-called "broadband digital divide" in Germany. The German government is sensibly placing primary reliance on market provision. But as the EC recognises, there may be some market deficiencies that may need to be addressed by government and this needs to be done in a coherent, consistent and cost-effective manner⁶⁰. To do so requires a great deal of systematic consideration⁶¹. Indeed, a systematic decision-making procedure for considering the need for broadband deployment support programmes should contain, as a starting point, the key dimensions set out below in the Box 5 below.

Box 5. Towards a policy process for developing necessary broadband policy initiatives

A logical and sequential process for developing policy for widening access to broadband should include the following steps:

1. Identification and specification of objectives and desired outcomes clearly and specifically.
2. Consideration of the extent to which market demand and delivery will meet specified objectives.
3. Identification of barriers to achievement of broadband deployment objectives through market forces.
4. Identification of alternative policies for cost-effectively addressing these barriers.
5. Specification of criteria for selecting the best (mix) of these policies.
6. Identification of appropriate implementation mechanisms.
7. Estimation of the costs of such programmes.
8. Consideration of the extent to which these costs are reasonable when considered against the benefits involved.
9. Consideration of the extent to which these costs are sustainable.

- | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none">10. Consideration of the extent to which programmes may need to be modified in view of the estimated costs and benefits.11. Evaluation of the relative merits of alternative mechanisms for funding broadband programme costs.12. Decision on appropriate implementation procedure and the timing of such implementation.13. Determination of a procedure for regularly monitoring and reviewing progress in achieving objectives. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The government should initiate a study to identify barriers to broadband deployment and take-up, especially in marginal less favoured areas and the policy options for addressing these barriers.

2.9 *Quality of service*

Quality of service (QoS) activities to be undertaken by RegTP are specified in the Telecommunications Customer Protection Ordinance and the Telecommunications Universal Service Ordinance. Nine different quality parameters are set out solely for voice telephony.

No specified targets. There are no targets or minimum requirements for the established QoS parameters, the assumption being that sufficiently high QoS levels will be achieved by the free play of market forces. Accordingly, no sanctions for not meeting targets are specified. The government appears to recognise that these quality of service provisions do not really represent service quality regulation in the sense of actively influencing the attainment of specified quality of service levels.⁶² Moreover, services other than mobile voice telephony are not covered by the QoS parameters.

In several countries with competitive markets quality of service targets are set to assist performance assessment. In Germany an operator of a public fixed telephone network is obliged to present an independent audit in fulfillment of this obligation to RegTP. To ensure that the results of such an audit are credible, it should not be DTAG that conducts the audit but an independent auditor selected by RegTP. Moreover, the results should be published. Publication of quality of service information is important because such information will assist consumers in choosing effectively between operators. After all, a major benefit of competition is the expanded choice it provides consumers. Improved information enhances effective consumer choice that increases their welfare. The publication of quality of service information will also expose operators to “benchmark competition”. That is, as part of its competitive effort, a company will be under pressure to evidence its superior quality of service ranking against its competitors on the basis of the published quality of service benchmarks. It is also important to begin developing QoS data for wholesale markets and set targets for the incumbent to meet any required obligations it has to competitors in these markets. Although RegTP has published a report based on the yearly reports submitted by operators it was viewed as being too complex for consumers to obtain an objective overview of quality of service from each operator.

Quicker publication. The quality of service results are simply published in RegTP's Official Gazette. Even in this regard there are concerns. The results for 2000 were published in Communication 332/2002 (OJ 13/2002 of 10 July 2002) two years later. The publication of quality of service needs to be prompt and published periodically and the results should also be published on RegTP's web site to facilitate immediate consultation by interested parties.

2.10 *Consumer issues*

In Germany, the Telecommunications Customer Protection Ordinance (“Customer Protection Ordinance”) covers the special rights and obligations between providers of telecommunications services and their customers. But conflict resolution is not a designated task for RegTP, although it does provide a

conciliation service (without authority to make decisions). There is no difference in the handling of industry complaints and consumer complaints. Nor is there any predefined procedure for handling quality of service complaints. The government believes that, in principle, every conflict should be resolved bilaterally between the consumer and the carrier. If this fails, the consumer must resort to the courts.

The main issues of complaints received by RegTP in 2002 were: unsolicited direct marketing (especially by fax, touting for customers) 30.4%; bills (difficulty in understanding bills, bills not arriving) 26.2%; contracts, 9.3%; numbering (porting numbers, allocating numbers, barring options) 6.5%; and fees and charges, 5.4%⁶³.

Billing. The quality of billing is an important aspect of quality of service. Customers can request a free itemised statement of their calls, that must be detailed enough to allow them to check and monitor the accuracy of their bills. Where a customer has not made arrangements with another provider, the customer will receive a combined bill from his local carrier. In such cases, the charges for all calls which the customer has made via other providers must be listed separately. From 1 January 2001, telecommunications service providers must ensure that a customer who has set a ceiling for his calling charges does not exceed it.

A remedy for dealing with slamming and other billing issues is the provision of clear and timely information to subscribers. Three important principles can be identified. First, telephone bills should be clearly organised and should highlight any new charges or changes to services provided. Second, telephone bills should provide clear descriptions of all charges and of the service provider responsible for each charge. Third, telephone bills should contain clear and conspicuous disclosure of information necessary to make inquiries about charges.

Industry code of conduct. The government and RegTP should ensure that consumers do benefit from increased competition, including by inexpensive switching from one service provider to another, and from encouraging the issue of “charters” of customer rights (as available *e.g.* in Britain, Australia, and other OECD countries), improved performance of operators, a formal and clearer mechanism to handle consumer complaints, etc. RegTP should strengthen its focus towards enhancement of consumer interests (as required by its statute and the 1996 Telecommunications Law). Concrete procedures with a standard time frame for handling consumer complaints should be established. The procedure should be speedy, simple, and inexpensive for ordinary consumers. It should also ensure under relevant legal provisions to come into place that telecommunications operators implement and make public an appropriate code of practice for consumers. It is preferable that an industry wide code is available to ensure consistency in the market. Operators should be required to provide a published report on their handling of the complaints.

The government should consider requiring the establishment of an industry *Code of Conduct* backed up by a *Customer Service Guarantee* scheme to help maintain standards by prescribing financial compensation for customers when operators fail to meet minimum service levels, including billing accuracy. The industry code of conduct should not be difficult to achieve since there are already early signs of industry co-operation and progress towards self-regulation.

Consumer representation. Somewhat surprisingly, there appears to be an absence of user groups to provide effective representation for the interests of residential and small business telecommunication consumers. RegTP could follow the example of regulators in other OECD countries and actively encourage, indeed actively assist the formation of a telecommunications user group to represent these customers.

Information. By comparison with regulators in a number of countries such as OFTEL in the UK, the Australian Telecommunications Authority, and FCC in the US, RegTP does not publish much market information and analysis. Regulators in the above mentioned countries periodically publish very detailed market information on their web sites, including detailed information on quality of service, and information allowing assessment of the development of effective competition. Consumers – residential and business – need adequate information in order to make informed choices among the increasing range of products and operators in a competitive telecommunications market. After all, a major benefit promised by competition is that consumers will be empowered with more choice. Regulators can help enhance the efficiency of this choice by ensuring that information made available to customers is meaningful, relevant, accurate, timely, and unbiased.

RegTP reiterates in its annual report for 2002 that: “RegTP sees itself as a champion of the consumer.”⁶⁴ The regulator should determine – after broad consultation with consumers – information to be made publicly available that will enable consumers to make comparisons (such as of quality of service) delivered by operators. More broadly, the regulator should define performance indicators that enable evaluation of the effectiveness of competition and should ensure requisite data is available on a timely and regular basis. It is important that information to enable the performance of regulatory reform to be monitored and assessed is available. In time, the additional information generated will allow a trend to be established and monitored thus allowing a more thorough assessment to be made. Improved information is also crucial for assessing the nature and scope of any problems associated with efficient development of, and equitable access to, the developing information economy and for designing well-targeted and cost-effective strategies for overcoming them.

2.11 Streamlining regulation

New EU directives require Germany to amend its 1996 Telecommunications Act by 25 July 2003. The entire Telecommunications Act is to be examined. But the government has foreshadowed that there will not be changes in the general pro-competitive orientation of German telecommunications policy. The Government has declared that in making revisions to the 1996 Telecommunications Act, its primary aim remains the creation of competitive structures and revisions to the legislation would seek:

- To improve the current framework, for instance to improve the provision of wholesale products and enhance the effectiveness of regulatory procedures.
- To withdraw superfluous regulation, for instance, in price level controls for voice telephony.
- To avoid extending sector-specific regulation to market segments not currently subject to telecommunication regulation (for example, rates for data services should not require approval and the preventive regulation of prices for terminating calls should remain limited to dominant companies).

The Ministry of Economics and Labour has made public its intention to minimise regulation and to move from *ex ante* to *ex post* regulation. This would be in alignment with moving sector specific regulation towards the application of standard competition principles. Service quality regulation will focus on preventing dominant companies from inhibiting competitors. Regulation of retail prices will feature less prominently and be limited mostly to the control of anti-competitive practices. The focus of regulation will be on wholesale services and prices. But so that the move is not premature, the nature and extent of the move will need to recognise the continuing dominance of the incumbent. There is need for strong asymmetric regulation in favour of new entrants until it is demonstrable that effective competition has developed. This is especially true in the case of the local fixed line market in Germany where the incumbent still dominates the market.

The EC's Relevant Markets Recommendation will help to identify those product and service markets in which ex ante regulation may be warranted. As discussed earlier, the EC recommends that regulators must analyze each market in the list to establish whether fixed or mobile players have dominance in that market, and if so, what regulatory obligations they are therefore to be subject to.

In line with the aims of the EC's new regulatory framework for communications, Germany aims to achieve a greater alignment in the medium term of its sector-specific telecommunications law with general competition law.

Reducing delays in making and implementing regulatory decisions

One of the most significant problems in the German regulatory environment is the length of time it is taking to implement important regulatory decisions. Although the law dictates that rulings by the RegTP are effective immediately despite appeals, DTAG can and has successfully applied to the administrative courts for suspension of the obligation to comply with RegTP's rulings. Many (including some of the most recent) rulings have been contested over many months or even years by DTAG⁶⁵, including:

- Introduction of a wholesale flat rate.
- Element-based charging (EBC), i.e. cost-oriented pricing for DTAG inputs.
- Line sharing.
- Resale obligations.
- Leased lines provisioning.

DTAG's ability to use the lengthy appeals process to delay and block competition is frustrating regulatory effectiveness. When DTAG appeals against a decision made by RegTP, the case is first heard by a lower administrative court, which takes several months to reach a judgment. If the court finds in favour or against the incumbent, the case is moved on to a higher administrative court. At every stage, the court can take some years to reach a decision. Currently there are about 210 court cases pending, where DTAG challenged RegTP's decisions. Normally, RegTP decisions remain executable during the legal proceedings. In fast track proceedings, which have only two stages, the court can suspend the obligation to comply with RegTP's ruling. RegTP points out that although it has lost some fast track court decisions lately, it has nonetheless been successful in winning approximately 75% of all fast track proceedings

But the court decisions going against RegTP decisions have been in important areas, including the service level agreement decisions for leased lines and unbundled local loops, as well as the FRIACO decision. And in addition there have been the lengthy delays and the uncertainty generated. Three examples of this are the leased line case, wholesale-flat rate case and the line-sharing case.

Line sharing. The lengthy process (over two years) to finalise a RegTP decision concerning line sharing is set out in Box 6.

Box 6. Process to enforce the line-sharing decision in Germany

October 2000: Application of QS Communications to RegTP

January 2001: EU obligation that line-sharing be offered in Germany

March 2001: RegTP instructs DTAG to offer line-sharing within 2 months. DTAG challenged the decision in the Courts but was rejected twice (by the Cologne Court in 22 June 2001; by the Munster Court on 23 August 2001)

May 2001: RegTP obliges DTAG to offer line-sharing, refusal of DTAG

July 2001: Summary proceeding at regional administrative court in Cologne; court obliges DTAG to offer line-sharing, appeal by DTAG

August 2001: The higher administrative court in Munster obliges DTAG to offer line sharing

March 2002: RegTP approves the line-sharing prices.

Resale. In March 2001, RegTP issued an order requiring DTAG to present an operator, Debitel, with an offer for resale of DTAG's subscriber network services (i.e., subscriber lines, local calls and city calls). DTAG challenged this order before the Cologne Administrative Court and sought a preliminary injunction against the implementation of this order. The Court denied the request for a preliminary injunction and in October 2001 the Munster Higher Administrative Court upheld this decision. In February 2002, the Appellate Administrative Court in Munster rejected an appeal by DTAG obligating the company to make a resale offer to two companies, riodata and Tele2, and other companies upon request. However, in November 2002, Debitel announced it had decided to abandon the negotiations with DTAG saying that the company's positions were too far apart. RegTP discloses that it had left it to Debitel and DTAG to "reach agreement themselves as far as possible and had eschewed setting any pricing or other targets in order to give the parties maximum scope"⁶⁶. "An ex post rates regulation case was opened on 21 May 2003 on the prices for lines and certain further telecommunications services. Specifically, it covered both voice telephone services (analogue and ISDN lines in their different forms) and broadband Internet access (T-DSL connections). Local calls and calls to particular value added services were also investigated. Even the method of pricing was contested. Whereas the Regulatory Authority makes a bottom-up calculation for the other wholesale services DTAG makes available (e.g. transmission paths, interconnect services, local loops) to establish the underlying costs, the principle of retail minus, commonly used by regulators, is used for resale. A particular reason for looking critically at Deutsche Telekom AG's offer was that in some cases, the prices for the resale services, particularly for telephone and DSL connections, were higher than the corresponding retail prices. DTAG's offer, moreover, contained various provisions that were not in line with the retail minus principle. DTAG also asked resellers to pay a high "investment cost". However, during the proceedings, Deutsche Telekom AG changed its resale offer to so-called closed resale, reducing the investment cost contribution. The ex post rates regulation case was closed since Deutsche Telekom AG, in a parallel case addressing anti-competitive practices according to Section 33 of the TKG, was called upon to amend its current resale. In parallel to the ex post rates regulation case was a case addressing anti-competitive practices according to Section 33 of the TKG, investigating some terms in Deutsche Telekom AG's resale offer not addressed in the rates regulation case. Important provisions investigated in the proceedings were the unspecified period for implementing resale in DTAG's network, and arrangements under which resellers were to commit to orders three months in advance. DTAG's resale offer was deemed anti-competitive in respect of the bundling of products, the ordering procedure, the provision of securities required and the lack of implementation deadlines. To remedy the abuse, DTAG was given a period of two months by the Determination of 18 July 2003 to revise its offer in line with the requirements. Before the deadline expired, DTAG told the Regulatory Authority that it was not submitting an offer as laid down in the Determination. Furthermore, it would seek redress. Thereupon the Ruling Chamber on 15 August 2003 issued a direction with the same targets as the determination. DTAG had sought summary proceedings before the Cologne Administrative Court (1 L 2207/03) against BK3's most recent determinations (BK3a-03/010 of 18 July and 15 August 2003) obliging DTAG to submit an unbundled resale offer to Tele2 Telecommunication Services GmbH. DTAG's request for suspensory effect

in both cases was turned down by the Administrative Court in – compared with similar cases – an extremely short period of just under 10 days. The company then appealed to the Münster Higher Administrative Court against this decision. Unlike in the court of first instance it seems that a decision will only be made in some months' time.

The lengthy court appeals process. There are three stages to the appeal process. In the first instance the appeal is to the Verwaltungsgericht (Administrative Court). In the second instance the appeal can proceed to the Oberverwaltungsgericht (Superior Administrative Court). Then the appeal could go to the third stage to Bundesverwaltungsgericht (Federal Administrative Court). According to the 1996 Telecommunications Act, RegTP's decision stands pending the appeal decision. In practice, however, RegTP refrains from implementing decisions pending a decision by the Administrative Court and the Superior Administrative Court on whether DTAG enjoys provisional legal protection.

Box 7. Some Important Decisions Made by RegTP That Have Not Been Implemented Because of Appeal to Courts Made by DTAG

RegTP Decision	Date of RegTP decision	DTAG Action and result	Implemented?
DTAG obliged to provide wholesale flat rate Internet access (FRIACO)	11 June 2002	DTAG successfully appealed decision to Cologne Court resulting in injunction against obligation to provide FRIACO. Decision confirmed in February 2003 by Higher Administrative Court in Munster.	No (as of 22 April 2003)
Mandatory provisioning times for leased lines and automatic penalties for late delivery of local loops	March and May 2002	DTAG appealed to Cologne Administrative court which suspended the RegTp decision on 12 November 2002	No (as of 22 April 2003)
RegTP ruled that DTAG's TDN or T-VPN tariffs for business users be replaced by authorised tariffs	15 October 2001	On 13 December 2001, the Cologne Administrative Court suspended implementation of the decision; this ruling endorsed by the Munster Higher Administrative Court on 13 March 2002 leaving business users with legal uncertainty about their contract terms.	No (as of 22 April 2003)
Ex post review of DTAG's prices for "Closed User Groups" Voice Communication Services (as TDN or T-VPN)	9-10 December 2002	On 25 March 2003 the Cologne Administrative Court suspended implementation of these decisions: the ruling has been confirmed in September 2003 by Münster Higher Administrative Court.	
On 17 April 2002 – in response to the EU Numbering Directive requiring pre-selection by January 2000 -- the German Federal Parliament passed legislation to introduce carrier pre-selection and "call-by-call" in local networks starting 1 December 2002.	Legislation passed in April 2002	DTAG appealed. On 24 February 2003, RegTP announced that "for technical reasons" call by call in the local network would not be obligated until 25 April 2003, and 9 July 2003 for carrier pre-selection. These services are now available.	Yes since 25.04.03 /09.07.03

Further delays due to confidentiality rules. The length of appeal procedures is further aggravated because of Germany's confidentiality rules. German law on court proceedings provides for the right of parties to consult all documentation filed by the other party. However, RegTP cannot submit documents in court which are protected by confidentiality rules. This is particularly relevant in regard to the incumbent's cost accounting data.

RegTP is therefore not in a position to submit all the relevant documents to justify its decisions on tariff approval. As a result, the courts cannot deal with many appeals. A number of court actions exclusively concern the confidentiality aspect and must be decided before the cases can be heard in substance. The Supreme Administrative Court decided recently that RegTP has to submit all relevant documents, regardless of confidentiality in relation to the incumbent, as long as the incumbent's viability is not thereby threatened. Before this decision one judgment on tariffs has been rendered to date, annulling the setting of tariffs by RegTP owing to the absence of supporting documents to justify the decisions. Currently RegTP is prevented from submitting all the documents, due to DTAG's appeals on a constitutional issue against the decision of the Supreme Administrative Court.

There have been attempts to address the problem of lengthy appeal procedures due to the confidentiality rules. An amendment of 7 May 2002 (*Post und telekommunikationsrechtliches Bereinigungsgesetz*) gives RegTP the power to decide on confidentiality. However, under the new rules, RegTP must first clarify – as the Ministry of Economic Affairs was previously required to do – which parts of the documentation can be submitted to the court. The delays and uncertainty apparently remain with the EU concluding: “the new legislation is therefore not sufficient to unblock the appeal proceedings.”⁶⁷

In a fast moving communications market it is important that disputes and the uncertainties they create are resolved rapidly. RegTP has to install disincentives for excessive delaying measures being used by DTAG through the legal appeals process and other tactics.

The lengthy court appeals process must be streamlined and shortened.

The opportunity for judicial review of decisions by a regulator is important. However, judicial review should not be allowed to become a mechanism to block the enforcement of regulatory decisions and should be conducted pursuant to due process and in a timely manner. The appeals have resulted in a current backlog of hundreds of lawsuits challenging RegTP rulings. It is essential that RegTP is granted the statutory authority to implement and enforce its decisions and that the courts have the statutory authority to hear appeals in a timely manner.

One obvious measure is for the courts to have more staff to allow appeals to be heard more quickly. Another possible approach would be to set up a specialist body of judges with knowledge of competition law solely to handle telecommunications cases. A countervailing consideration is that such an expertise has already been established in the Cologne administrative court. One other pragmatic proposal for streamlining the process is to reduce the number of appeal courts. That is, to have two rather than three appeal courts. Indeed, this approach has already been adopted in competition cases when appeals against decisions of the Bundeskartellamt are heard only by the Dusseldorf Court of Appeals with the possibility to appeal its decision on questions of law to the Federal Supreme Court.

2.12 *Flat rate Internet access*

According to EU directives, a SMP operator must offer flat rate interconnection to new entrants on a non-discriminatory basis where it offers its own retail flat rate narrowband Internet access to its customers. On 15 November 2000, RegTP ruled that DTAG must offer FRIACO-type wholesale flat rates for narrowband dial-up Internet connections made to its public telephone network. In turn, the carriers can offer wholesale flat rates to Internet service providers that can pass on these flat rate charges to their retail customers.

But RegTP has been unable to give effect to its decision. Following RegTP's decision on wholesale flat rates for narrowband, DTAG did offer a wholesale flat rate with a handover at 1622 locations for a nationwide usage. The problem with this was the very high amount of necessary locations. This meant that to operate profitably, an operator required a considerable amount of traffic and the only ISP/Network operator qualifying on this basis was DTAG's T-Online. In March 2002, some 16 months later, Telefonica Deutschland filed an application with RegTP for an interconnection-based wholesale flat rate (at the 475 points of interconnection where Telefonica Deutschland and other alternative network-operators were already interconnected). On 10 June 2002, RegTP decided in favour of Telefonica Deutschland and ordered DTAG to offer Internet access wholesale on a flat rate basis at the existing 475 points of interconnect. DTAG appealed successfully to the Cologne Administrative Court on 8 July 2002 on the basis of a fast track procedure with the Court granting DTAG's request for suspension of RegTP's decision.

The Administrative Court argued that a wholesale flat rate could not be ordered as an interconnection service, but that first it had to be verified that a flat rate offer is essential. The Court emphasized that DTAG could only be obliged to offer products to competitors that DTAG itself uses internally. New entrant operators are concerned that the use of this criterion of "non-discrimination" could mean that every regulatory decision to oblige DTAG to provide an interconnection product could be denied because DTAG does not use it internally. The revised law should make clear that not only non-discriminatory conduct should be curtailed/prohibited but also *hindering* of new entrants. It is pleasing to see that the draft of the new Telecommunications Act contains this provision. It should be present in the legislation.

Telefonica Deutschland and RegTP appealed against the court's decision in a summary proceeding at the higher administrative court in Munster. However, on 18 February 2003, the higher Court confirmed the decision of the Cologne Administrative Court. The obligation on DTAG to implement RegTP's decision of 11 June 2002 is still subject to appeal before the Munster Higher Administrative Court within the urgency procedure.

2.13 *Application of competition principles*

DTAG is viewed by RegTP as dominant in the market for fixed-network voice telephony service. As a result, DTAG is subject to regulatory requirements in various aspects of its business, including the obligation to submit tariffs charged for various services to RegTP for approval.

The Law against Restraints on Competition prohibits the abuse of a dominant position as well as the distortion of competition through horizontal agreements or collusive behavior by market participants. Agreements or behavior that impose vertical restraints on competition are generally permitted, but may be prohibited by the Bundeskartellamt if they pose a threat of significant distortion to the relevant market. Particular restrictive behaviour in vertical relationships is prohibited *per se*, for example, retail price maintenance.

DTAG is also subject to German competition law, the competition rules of the EU and the competition laws of the various jurisdictions in which it conducts its business.

Box 8. Some Examples of Germany's Recalcitrance in Meeting EU Directives

In April and in July 1999, the European Commission (EC) alleged in an official notice (which represents a first step toward an official infringement proceeding) that Germany had not sufficiently implemented the interconnection directive and the voice telephony directive. With respect to the interconnection directive, the official infringement proceeding was then initiated in November 1999. With respect to the voice telephony directive, no official infringement proceeding was commenced. In both cases, the EC alleged in particular that Germany had not sufficiently ensured the use of appropriate cost calculation systems by dominant providers. In response, RegTP has published guidelines relating to appropriate cost calculation systems.

The EC alleged that Germany had not fully implemented an EC directive requiring that any telecommunications company with a market share of over 25% be considered as having SMP. Germany's SMP is defined as one-third of market share, but RegTP has announced that, contrary to Germany's general competition law, it will investigate SMP at 25% market share⁶⁸.

In April 2000, the EC alleged in an official notice that Germany had not fully implemented the EU's full competition-directive and the ONP voice telephony directive. Tariff approval procedures did not sufficiently ensure cost-oriented tariffs and there had been inadequate implementation of price re-balancing provisions.

On 30 October 2000, the Commission commenced an infringement proceeding alleging that Germany had failed to fully implement the EU interconnection directive with regard to local carrier selection, and on 12 November 2002, the Commission brought an action against Germany before the European Court of Justice. The EC alleged that, although the deadline for doing so had expired on 1 January 2000, no carrier pre-selection for local calls was being offered by DTAG. The EC considers that the grounds given by Germany in justification of this are invalid.

An EC regulation on unbundled access to the local loop entered into force in January 2001. In December 2001, the EC opened an infringement proceeding against Germany, among other member states) for alleged failure to implement in national law EC regulations on unbundling of the local loop. (In view of the approval of a relevant fee for line sharing by RegTP on 15 March 2002, the EC has since closed the proceeding.) In March 2002, the Commission announced the commencement of an infringement proceeding against Germany for alleged failure to implement the EU regulation on sub-loop unbundling. Since then DTAG has published an offer for access to the sub-loop that has been approved by RegTP.

Mergers, including the creation of joint ventures, must be notified to the Bundeskartellamt which will prohibit mergers if they create or strengthen a dominant position. Before taking action against abuses of a dominant position in the telecommunication sector, the Bundeskartellamt must consult with RegTP. Market participants damaged by abusive practices on the part of a dominant provider may sue for compensation under the Telecommunications Act.

The Ministry's action in overruling the Bundeskartellamt's decision in the gas industry merger could raise concerns if it is interpreted as signalling a retreat from pro-competitive reform.

2.14 Germany and the WTO agreement

As noted earlier, there are no foreign ownership, size of shareholding or other ownership restrictions on individuals and corporations investing in the incumbent PTO(s) in Germany. So in this regard, Germany accords well with WTO principles. But there are strident allegations that Germany may be in violation of commitments made to the 1997 WTO agreement on basic telecommunications and in particular to the principles espoused in the so-called "Reference Paper" attached to the agreement that Germany accepted in full as a member of the European Union.

Germany has been accused by some new entrants of having failed to prevent DTAG from engaging in anticompetitive practices in a range of areas e.g., in the provisioning of local access leased lines, from ensuring that fixed-to-mobile termination rates are nondiscriminatory, cost-oriented, transparent and reasonable and accordingly, being in violation of the WTO Reference Paper.⁶⁹

2.15 *The impact of convergence on regulation*

The new EC Framework Directive seeks to respond to convergence trends by covering all electronic communications networks and services within its scope. With the much broader concept of electronic communications networks, the new package comprises the whole industry and takes into account convergence and new technological developments. Different sectors will also receive similar regulatory treatment with the application of the dominance concept required by the new EU regulatory framework since sector-specific regulation will become more embedded in general competition law.

The question of a single regulator for the converging communications sector has been raised in Germany (by the Monopolies Commission) but it appears that this would be difficult to achieve. Under the German Constitution, telecommunications is a federal matter and the regulation of the telecommunications markets is thus a responsibility of the federal government. The federal states, by contrast, are responsible for broadcasting regulation. Thus, it would be difficult to have a single regulator (e.g. along the lines of the UK's OFCOM model).

A key need is to ensure effective co-operation and co-ordination between regulators in the various communications sectors. It is also crucial that new services being spawned by convergence should not be suffocated by regulation.

3. **PERFORMANCE OF THE TELECOMMUNICATIONS INDUSTRY**

3.1 *Introduction*

The rationale for regulation is the desired effects it is expected to deliver. Thus regulatory impacts should be regularly and systematically reviewed to ensure that promised benefits are being delivered.

In assessing regulatory impacts, the focus should go well beyond the number of new entrants to include:

- The nature and extent of accelerated network development and modernisation.
- Market and revenue growth.
- Lower prices.
- Increased range of services based on leading edge technology and infrastructure.
- Improved quality of service.
- Expanded customer choice.
- Enhanced productivity.
- Increased net benefits to the community.

3.2 Network growth and modernisation

DTAG has made substantial investments in its telecommunications networks since 1990, including the installation of a new network in eastern Germany after German reunification in 1990. DTAG's fixed-line network has fully digital trunk switching and international trunk switching, 100 percent digital local switching and 100 percent digital transmission. The company has introduced asynchronous transfer mode (ATM) technology and wavelength division multiplexing (WDM) technology on the basis of its advanced network.

Table 2 (on page 4 of this document) shows that the total number of lines in Germany grew from 46.53 million in 1998 to 53.72 million lines in 2002. Competitors provided only 0.3% of total lines in 1998, but by 2002 were providing about 4.4% of total telecommunications lines. By January 2002, 80% of access lines in Germany had been upgraded with DSL capability.

RegTP estimates that since market liberalisation, more than EUR 20 billion has been invested in Germany's telecommunications infrastructure and equipment. During 2002, telecommunications companies invested a total of EUR 6.4 billion in fixed assets, 30% of this going into mobile networks and 70% into fixed networks, including cable TV.

Table 9 shows a breakdown of DTAG's worldwide capital expenditure into fixed line and mobile categories for the period 1999-2001 and indicates that the company's capital expenditure on the fixed network increased by about 26% in 2000 and by a further 28% in 2001. The company's capital expenditure on the mobile network increased by some 16% in 2000 and by about 94% in 2001. DTAG's total capital expenditure increased sharply by almost 300% in 2000 compared with capital expenditure in 1999. However, in 2001, DTAG's capital expenditure fell by about 54% compared with expenditure in 2000. Nonetheless DTAG's capital expenditure in 2001 was still almost double the expenditure in 1999. The item "other capital expenditure" for 2000 includes the abnormally high one-off investments in UMTS licenses.

Table 9. Deutsche Telekom's capital expenditure for the period 1999-2002 (EUR millions)

	1999	2000	% change 1999/2000	2001	% change 2000/2001	2002	% change 2001/2002
Fixed network	2 373	2,985	25.8%	3,831	28.3%	2,609	-31.9%
Mobile network	750	873	16.4%	1,692	93.8%	826	-51.2%
Buildings	364	263	- 27.7%	159	- 39.5%	177	-11.3%
Other capital expenditure	2 487	19,415	680.7%	5,186	- 73.3%	3,150	-17.3%
Total	5,974	23,536	294.0%	10,868	- 53.8%	7,625	-29.8%

Source: Deutsche Telekom AG's Form 20-F submitted to the US Securities and Exchange Commission, 23 April, 2002, p. 80.

German reunification in 1990. DTAG devoted considerable effort to expanding and modernising telecommunications infrastructure in the former East Germany where telecommunication facilities were obsolete. In 1989, one year before reunification, there were only some 100 lines for east to west traffic, but by the end of 1991, there were more than 30,000 lines. Between 1990 and 1997, DTAG implemented its so-called "Telekom 2000" development programme to provide a phased build-out and complete digitisation of East Germany's supply network, complete local network upgrade, introduction of mobile services and broadcasting coverage parity for the eastern German states. During this time, DTAG invested EUR 25.5 billion and installed 120,000 km of optical fibre as well as 276,000 km of copper cable. Digitisation and the use of optical fibre have given East Germany one of the most modern telecommunications networks in the world. In the first three years of its "Telekom 2000" development programme, DTAG alone accounted for around 10% of total economic investment in East Germany.

By 1994, mobile rollout (C and D1 networks) was practically complete. A wide range of mobile and data services was available across the country and a further 4.6 million households were connected to modern cable television networks.

Throughout Germany, the number of mobile subscribers has increased to about 60 million with a penetration rate of 71.7% as of December 2002 which was ahead of the US (47.7%), Japan (62.1%) but behind the average of about 77% in Western Europe. But with the German market nearing saturation, growth in mobile subscribership has been slowing with the four German operators attracting only some three million new users in 2002.

3G/UMTS

It had been estimated that investment in building out the UMTS infrastructure could amount to some EUR 20 to EUR 30 billion. But there is now uncertainty about the actual investment programme that will be undertaken. DTAG's T-Mobile, Vodafone, mmO2 plc and KPN's E-Plus still have plans to provide 3G services in Germany. T-Mobile announced in January 2003 that it would launch 3G in Germany in the third quarter of 2003. To begin, around 200 towns and cities in Germany will be serviced, exceeding the minimum coverage of 25 per cent of the German population required by its license. However, Mobilcom has announced it is withdrawing from the market. And in July 2002, Telefonica and Sonera (Group 3G) announced they had decided to halt all GSM operations in Germany. It is not clear whether or not they still intend to meet their 3G license commitments to roll-out 3G infrastructure.

3.3 Development of competition

There has been strong competition in the provision of long distance and international services. Table 10 indicates that as of 2001, DTAG's share of the national long distance market has fallen to 60% and its share of international calls to 50%. However, competitors were responsible for only 4.4% of the 53.7 million lines provided in Germany in 2002 with DTAG providing some 96.6% of Digital Subscriber Lines (DSL) for high-speed Internet access.

A Monopolies Commission report (published in December 2001) while pointing to signs of effective competition in the markets for international and national long-distance calls, noted a tendency towards consolidation in the German telecommunications market (with DTAG beginning to regain some of its lost market share).

As Table 10 indicates, the market share of new entrant operators in the provision of access lines is still very low. In 1998, market share was 0.5%, rising to 1% in 1999, 1.7% in 2000 and 3% in 2001 and about 5% in 2002. But this small aggregate figure does not tell the full story. In fact, limited competition has been occurring in some local networks.

Table 10. Market share of new entrants in Germany, 1998-2001
(Share of switched minutes – per cent)

Year	Access line (channels)	National long distance	International
1998	0.5	30	30
1999	1	40	40
2000	1.7	34	56
2001	3	40	50
2002	4.4	n.a.	n.a.

Note: New entrants share of total national call minutes was 5.9% in 1998 and 18.2% in 1999.

Source: OECD, Communications Outlook, 2003.

RegTP estimates⁷⁰ that some 47% of 188 German cities with a population over 50,000 inhabitants are able to switch from DTAG to an alternative carrier. Among these alternative carriers are so-called “city carriers” which are a notable development in Germany. These city carriers are operators that were usually active within their respective regions or communities in various services such as local utilities, public works and even local banks. City carriers can offer diversified services. Carriers without a licence generally provide infrastructure-related services such as leasing of rights-of-way, dark fibre, dark copper, antenna space, and thus function more as a carriers’ carrier. Some city carriers (with a class 3 licence) provide basic carrier services, leased lines, Internet access, and re-sell mobile and voice services. Other city carriers (with Class 4 licenses) provide public telephony. Some (that hold both class 3 and class 4 licenses) can provide the full spectrum of telecommunications services, including telephony and value-added services.

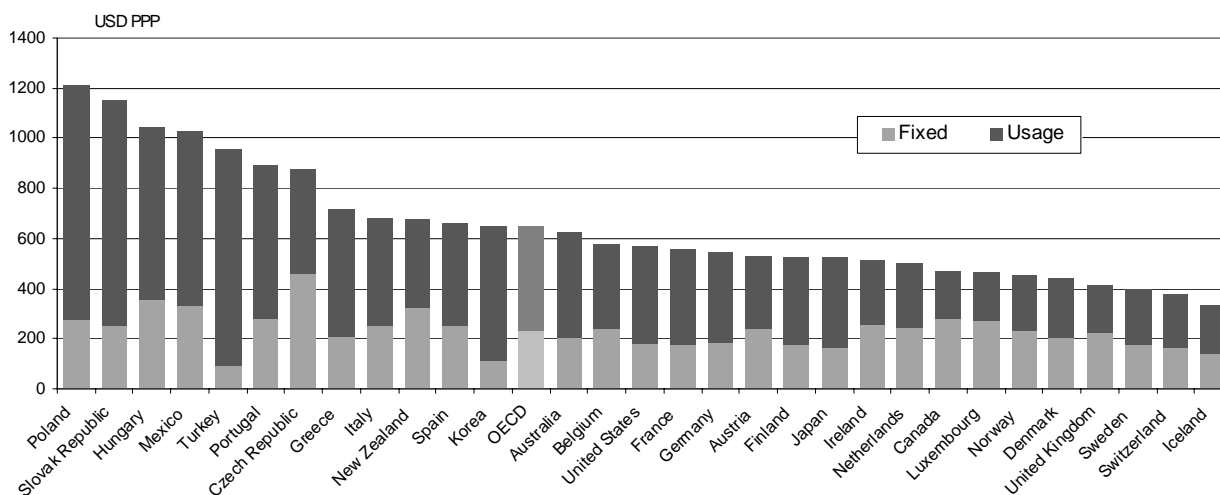
As of January 2003, 64 carriers were active and offering local service, among them e.g. NetCologne (Cologne), Versatel (Dortmund), TeleBel (Wuppertal), HanseNet (Hamburg), and BerliKomm (Berlin).

3.4 Prices

Before liberalization Germany was considered to have the highest prices in the OECD, in particular for international long distance calls. Since the German voice telephony market was deregulated on 1 January 1998 there has been a big drop in the price of long distance calls as a result of competition. RegTP estimates that prices for some national long distance calls during weekdays, are now only about 7% of what they were during the monopoly period. Since 1998, competition has driven down the price of international calls by as much as 95%.

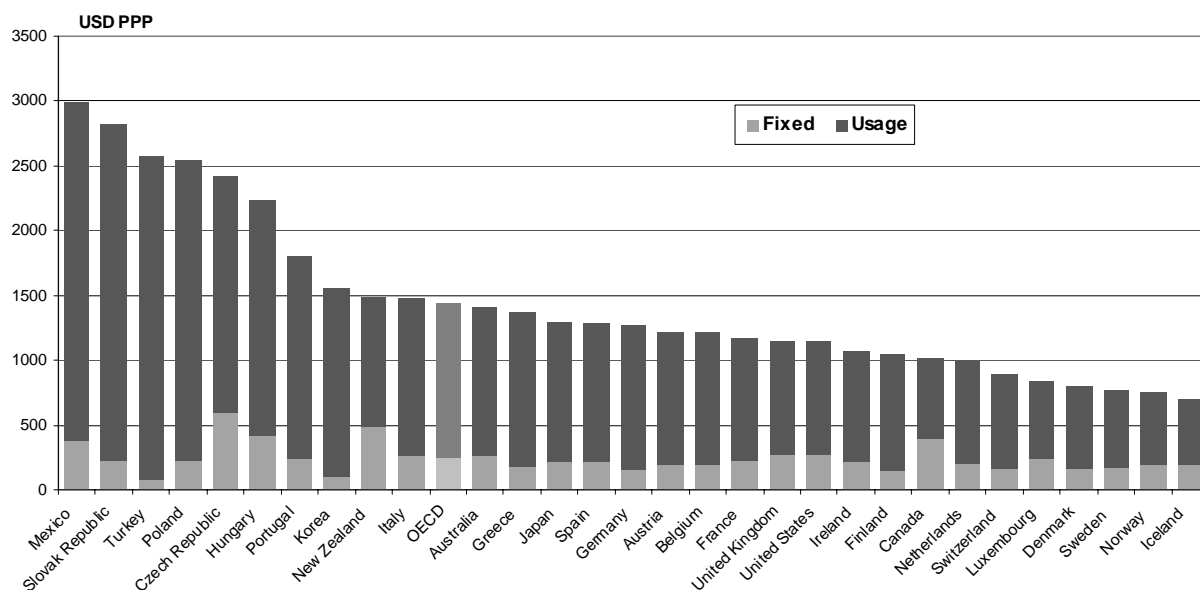
OECD data presented in Figure 4, indicate that as of August 2002, telecommunication prices in Germany for a basket of household telecommunications services were comparable with the OECD average, but above those in countries that were early in opening their markets, such as Denmark and the Netherlands. (Note that the comparisons are based on standard prices and do not reflect price discounts.)

Figure 4. OECD composite basket of residential telephone charges, including VAT, Aug 2002



A similar OECD international comparison of a basket of telecommunications services used by business is presented in Figure 5 and indicates that prices for this segment are about average for OECD countries.

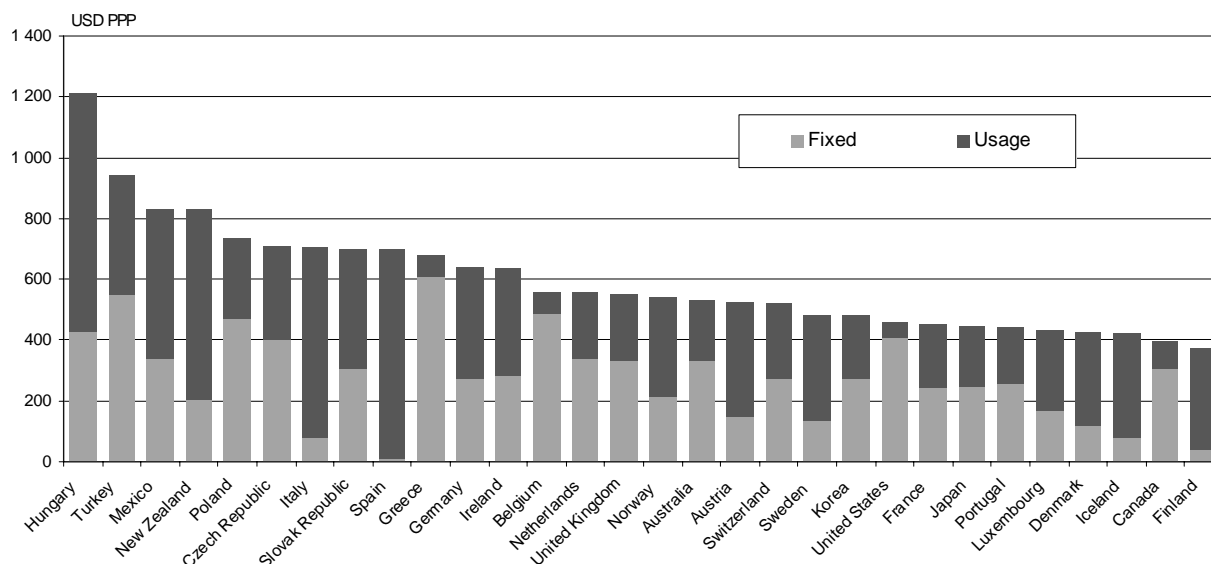
Figure 5. OECD composite basket of business telephone charges, excluding VAT, Aug 2002



Mobile prices

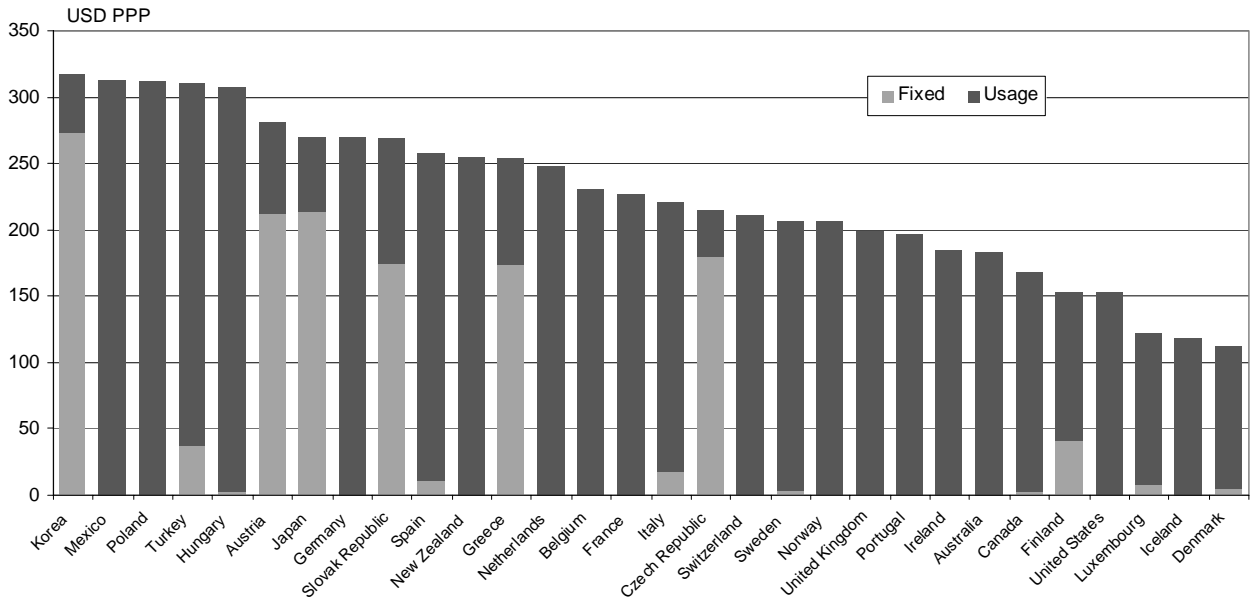
A comparison of a basket of mobile service prices as of August 2002 presented in Figure 6, indicates that Germany's mobile prices are about middle of the range for OECD countries.

Figure 6. OECD basket of average user mobile telephone charges, Aug 2002



On the other hand, Figure 7 indicates that prices for a basket of mobile services for low-users were relatively high in Germany compared with other European countries.

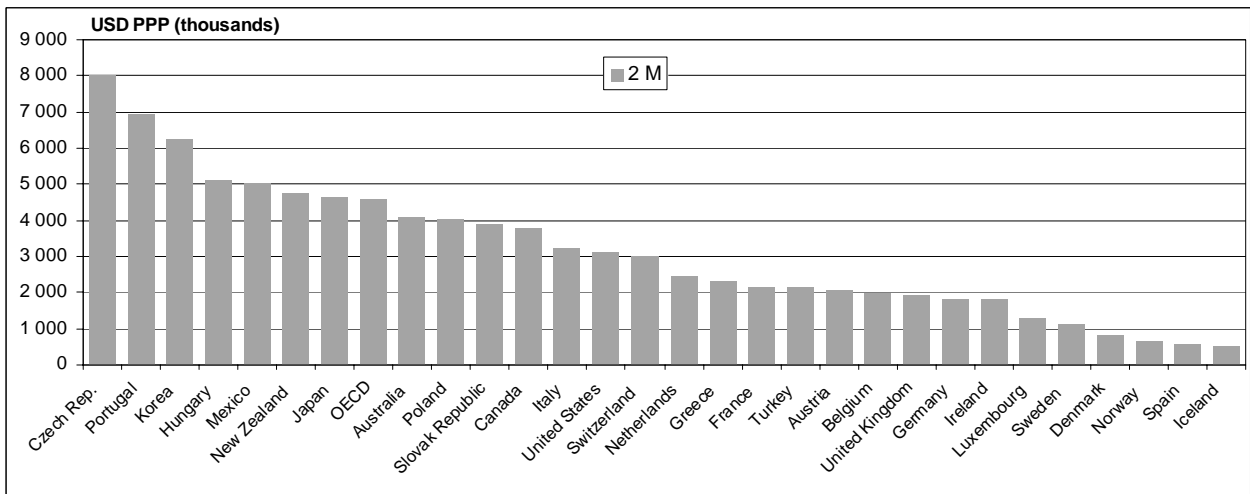
Figure 7. OECD basket of low user mobile telephone charges, Aug 2002



Leased lines

A comparison of OECD countries leased line baskets as of August 2002 is presented in Figure 8 and indicates that Germany's leased line prices are at the lower end of the range. However, as noted earlier in this document, Germany's provisioning times for leased lines have been one of the longest.

Figure 8. Comparison of OECD leased line baskets, Aug 2002



3.3 Revenue

Table 11 indicates the share of revenue from various telecommunications services. Revenue in total has grown strongly during 1998 – 2002, but this envelopes different experiences for individual categories of services. Revenue from access provision and calls has been declining. However, revenue from interconnection charges and mobile telephony has been growing strongly.

Table 11. Revenue from telecommunications services

Segment	1998 (In billions DM)	1999 (In billions DM)	2000 (In billions DM)	2001 (In billions DM)	2002 (In billions DM)
Total	84.4	93.3	108.2	115.7	119.2
Access provision and calls	45.8	42.4	41.0	41.0	42.9
Mobilephones	18.6	25.7	35.2	38.4	39.3
Leased lines	2.1	2.3	2.4	2.5	2.7
Interconnection	3.5	7.2	10.3	12.5	11.3
Cable TV	4.5	4.8	5.0	5.2	5.5
Other services	9.9	10.9	14.3	16	17.4

Source: RegTP at www.regtp.de. 2001/2002 preliminary estimations.

Call minutes on the fixed line network rose steadily between 1997 and 2001, falling for the first time in 2002, in part because users have been switching to making calls on mobile phones. Internet traffic is now an important determinant of the volume of traffic in the fixed network in Germany and a large shift from switched to DSL calls⁷¹ has been occurring.

Table 12 indicates that DTAG's international net revenue remained steady at around EUR 35 billion per year between 1997 and 1999, and after full market opening increased significantly to EUR 40.9 billion, EUR 48.3 billion and EUR 53.7 billion, in 2000, 2001 and 2002 respectively. However, DTAG's net income has fallen substantially. From a net income of EUR 1.7 billion in 1997, EUR 2.2 billion in 1998, EUR 1.3 billion in 1999 and EUR 5.9 billion in 2000 to a net loss of EUR 3.5 billion in 2001 and a massive loss of EUR 24.6 billion in 2002 (largely due to write-offs).⁷²

Table 12. Trend in DTAG's Net Revenue (billions of EUR)

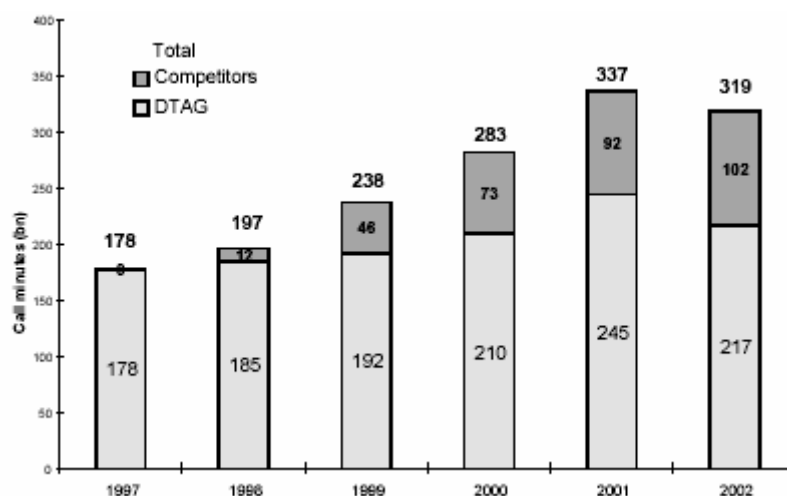
1996	1997	1998	1999	2000	2001	2002
32.3	34.5	35.1	35.5	40.9	48.3	53.7

Source: Deutsche Telekom, Annual Report 2002.

As Figure 9 indicates, call minutes for fixed line calls declined in 2002. However, there was continued growth in revenues from access charges, due to further growth in ISDN and T-DSL. Price-related revenue decreases in fixed-network voice telephony in Germany during 2002 was offset by increases in revenue in the areas of mobile communications, data communications and systems solutions and consumer Internet services.

The introduction of full competition in January 1998 has, however, resulted in a decline in the percentage of DTAG's revenue accounted for by the traditional fixed-network voice telephony business from 36.8% in 2000 to 30.2% in 2001. This decrease has resulted primarily from competition in the long distance voice telephony business but has also been due to the increasing use of mobile telephones. As Figure 9 indicates, the market share of new entrant operators on the fixed network continued to increase in Germany. But DTAG still had a 54.3 percent share of the overall German telecommunications market in 2001 (measured in terms of switched minutes).

Figure 9. Call Minutes in the Fixed Network, 1997-2002



Note: Figure for 2002 is provisional

Source: RegTP Annual Report 2002, available at <http://www.regtp.de>

Competition within the fixed-line voice telephony market has led to sharply declining tariffs, with DTAG introducing several tariff reductions in recent years, in response to competitive challenges, and in some instances, to meet requirements imposed by the price cap regime.

Mobile services

Prices for mobile service have fallen by almost 60% since 1995. This has both resulted from and contributed to increased demand for mobile telephony services such that mobile phones are increasingly competing with DTAG's traditional fixed-network voice telephony business, particularly in the market for local calls.

Cumulative revenue earned by mobile companies totaled EUR 23.7 billion in 2002, an increase of 2.8% on 2001. RegTP attributes the rise to network operators who were successful in marketing new data services based on GPRS (General Packet Radio Services), HSCSD (High Speed Circuit Switched Data) and i-mode⁷³. The number of SMS rose sharply by 47.5% in 2002. The new operators alone recorded total revenue of EUR 18.4 billion in 2002, an increase of 5.2% over 2001. Service providers, by contrast, suffered losses of around 4.5% over the same period.

DTAG's Debt

Table 13 shows the development of DTAG's substantial debt problem. From a debt level of EUR 51.1 billion in 1996, debt appears to have been on a declining trend falling to EUR 44.9 billion in 1997 and EUR 39.9 billion in 1998. However, in 1999 debt increased to EUR 42.3 billion and rose sharply by EUR 18.1 billion to EUR 60.4 billion in 2000, in significant part due to the purchase of UMTS licenses but also due to acquisitions made by DTAG. There was a further increase in total debt to EUR 67.0 in 2001. Since then DTAG has been making strenuous efforts to reduce debt through asset sales and cost savings and this was reflected in 2002 with the debt level falling slightly to EUR 63.0. The pertinent point is that DTAG's present debt problem is not primarily a direct consequence of market opening and competition but of the company's investment initiatives. As observed earlier, DTAG's net revenue in fact increased sharply in the years following market opening.

Table 13. Trend in DTAG's Debt (billions of EUR)

1996	1997	1998	1999	2000	2001	2002
51.1	44.9	39.9	42.3	60.4	67.0	63.0

Source: Deutsche Telekom, Annual Report 2002.

3.6 *Quality of service*

Quality of service has shown significant improvement as a result of improvements in telecommunications technology that has significantly improved quality of service worldwide. But competition has also exerted pressure for improvements in quality of service. Indeed, quality of service is a key element of competitive strategy for a number of operators.

As noted earlier, telecommunications operators in Germany are required to provide RegTP with quality of service data. RegTP should publish the quality of service information it collects in a format that assists customers in making informed choices and that provides valuable feedback to operators concerning their quality of service performance. Some insights may be gleaned from the long practice in this regard in countries such as Australia, the UK and the US.

3.7 *Productivity and employment*

Total factor productivity estimates are not available for German telecommunications companies. A simple measure of labour productivity is the number of access lines or channels per employee. Although this measure has some deficiencies, it is useful as one point of comparison. Revenue per employee is also widely used as an indicator of productivity. As elsewhere, labour productivity in telecommunications has increased in Germany as a result of the rapid network growth combined with a slower growth in the workforce and indeed, more recently, a reduction in the workforce.

Table 14 indicates that in Germany the number of channels per employee increased steadily from 156.7 in 1992, to 192.7 in 1995 to 209.4 in 1997 to 215.9 in 1999, falling somewhat to 208.6 in 2000 but recovering to 216.2 in 2001. Revenue per employee increased from about US\$126, 000 in 1991 to USD 155,700 in 1993 to 212, 100 in 1995, fell to US\$202,700 in 1997, but recovered to US\$229,000 in 1999 and rose further to US\$236,000 in 2001.

Table 14. Germany: Labour productivity indicators for the telecommunications sector

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Channels per employees		156.7	163.9	179.9	192.7	213.8	209.4	211.4	215.9	208.6	216.2
Revenue per employee '000 USD	126		155.7		212.1		202.7		229.0		236.0

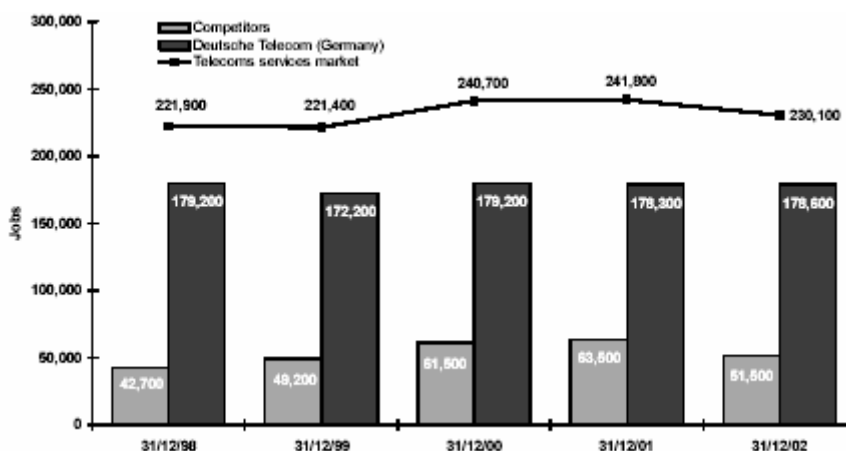
Source: OECD, Communications Outlook 2003

RegTP should require DTAG Telecom to publish productivity estimates, including total factor productivity estimates to enable improved monitoring and to assist in setting the (productivity-based) "X" factor in the price cap formula. RegTP should also take steps to improve its own expertise in undertaking productivity studies.

As Figure 10 indicates, the number of people working in the German telecommunications services market rose from 240,700 at the end of 2000 to 241,800 at the end of 2001. This was a slight positive growth rate of 0.46% compared with a 8.7% rise in 2000. In 2002, for the first time since market liberalization in 1998, the number of jobs in the German telecommunications sector fell by 5% to 230 100. The main reason for the drop was a 19% reduction in the number employed by new entrant operators as they shed staff or went out of business. DTAG's workforce has remained steady (at around 178 600). However, DTAG has announced jobs cuts of some 42,500 but this will impact only after 2003 with job reductions expected to continue until the end of 2005.

In the mobile sector overall, the total number of people employed was 31,500. Without DTAG's employees, the workforce in the mobile market was 22,760.

Figure 10. Jobs in the German Telecommunications Services Market



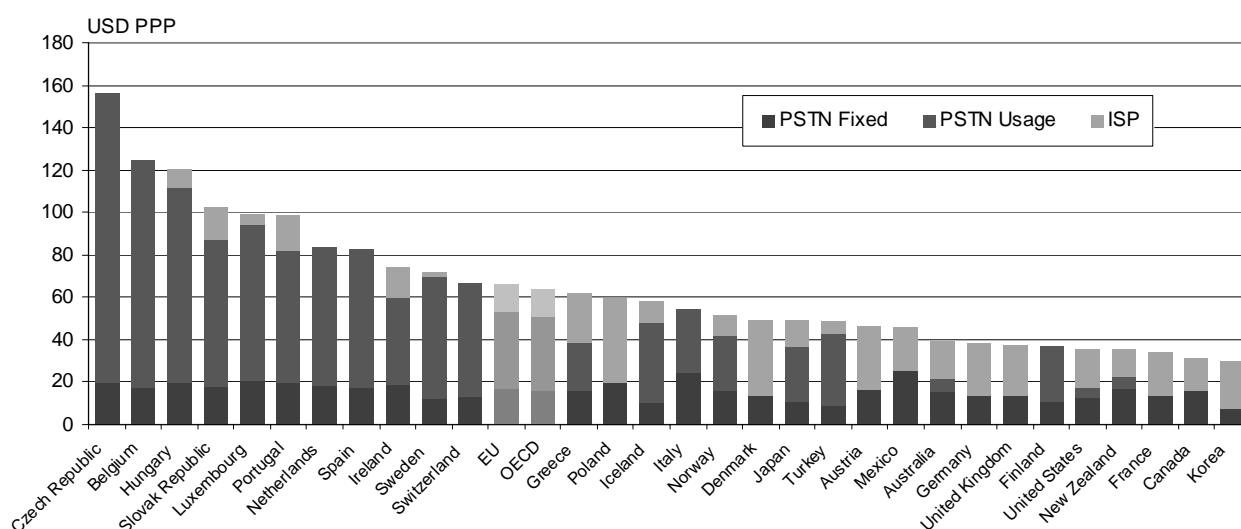
Source: RegTP Annual Report 2002, p. 9

3.8 Internet developments and performance

Germany has one of the largest numbers of Internet users with both narrowband and broadband Internet use increasing rapidly. In narrowband, German consumers have a wide variety of tariffs for dial-up Internet access, with relatively low access prices for residential consumers, including pay-as-you-go Internet access (entailing no registration, no monthly subscription, and no minimum usage) and unmetered packages. RegTP has estimated that by the end of 2002, almost 35 million Germans over 14 years of age (representing over 50% of this demographic group) had accessed the Internet in various ways.

As Figure 11 indicates, the price of a basket for 40 hours of day-time Internet access in Germany was eighth lowest in the OECD.

Figure 11. OECD Internet Access basket for 40 hours of day-time use, discounted PSTN rates, Sept 2002 (incl. VAT)



Broadband. DTAG is by far the biggest provider of DSL services in Germany. Table 15 shows that by the end of June 2002, over 90% of access lines (as a % of total subscriber lines) had been upgraded with DSL capability. DTAG sold over 3.1 million T-DSL lines by the end of the year, roughly a million more than in 2001.

Table 15. DSL coverage in Germany, France, Sweden, UK and US

DSL coverage (% of lines)	2000	2001	2002	2003
Germany	60	80	90	
France	32	76	86	91
Sweden		70	75	
UK	50	60	66	
US	36	50	62	65

Source: OECD, companies.

By the 3rd quarter of 2002, the penetration rate of broadband subscribership in Germany reached 3.15 per 100 of population. This was higher than France (1.64) and the UK (1.26) but lower than Sweden (6.8) and the US (5.84). Data for June 2003 show that the Germany is 14th in terms of penetration rates in the OECD with a penetration rate close to 5 per 100 inhabitants. DTAG has announced plans to spend EUR 730 million over four years to upgrade its East German network to deliver DSL.

3.9 Benefits to community and employment

Because the fall in prices of long distance and international services has been offset by an increase in the prices for local services, the extent of gains to customers cannot be generalised. Clearly customers who make more long distance and international calls are likely to be better off. But most consumers will gain from the enhanced productivity, choice and quality of service with flow on benefits to the community.

The longer run dynamic efficiency effects of competition will yield continuing benefits to the telecommunications industry -- a critically important sector of the German economy. In terms of the size of the sector, telecommunications and postal services together account for 1.9% of the gross production value

and 2.4% of the gross value added of the economy. The telecommunications services market alone accounts for about 70% of these shares. Thus, this market contributes around 1.4% to the gross production value and around 1.7% to the gross value added of the economy⁷⁴.

Accelerated network development has created employment in the telecommunications industry with multiplier effects in other industries. At the end of 2002, the licensed competitors in the fixed network (not including cable TV) had a total of 22,700 on their payrolls. Around 6,000 persons are employed by license-exempt telecommunications service providers, cable TV providers and other radio services⁷⁵. However, as in many other countries, considerable “downsizing” by telecommunications carriers is occurring in Germany. Importantly, market liberalisation has helped Germany to accelerate deployment of the infrastructure requirements of the information economy. This will help position Germany to benefit from opportunities that emerge and will also help enhance the country’s international competitiveness.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 *General assessment of current strengths and weaknesses*

While a good start to regulatory reform has been made in Germany, there is need to reaffirm the commitment to vigorously enforce competitive safeguards. This is especially so since early signs of success in pro-competitive reform are fading in the face of rising concerns over DTAG’s re-monopolisation of the telecommunications market, including broadband DSL.

Key objectives of the government are to encourage efficient investment in infrastructure and promote innovation in the interests of consumers but also the economy at large. Stimulating the requisite investment in the communications sector requires installation of stable, predictable, pro-competitive, technologically neutral regulation. OECD studies testify that countries with pro-competitive regimes are doing best in regard to telecommunications development and modernization, including broadband availability and take up.

This concluding section draws on the preceding discussion to assess the strengths and weaknesses of regulatory reform in Germany and makes recommendations that would help address these weaknesses.

Strengths

There are a number of strengths observable in the German telecommunications sector as indicated in Box 9 below.

Box 9. Strengths

- Government supportive of the development of high speed communications infrastructure and services
- Widespread availability of good quality telecommunications infrastructure with high penetration rates for both fixed line and wireless
- Ease of market entry
- Unique development of competitive local exchange carriers as a source of competition to the incumbent
- Some recent pro-competitive decisions by an adequately resourced regulator
- Clear demarcation between the role of the competition authority and the industry specific regulator
- Local loop unbundling is developing for telephony and starting to be used for broadband Internet access)
- Wide availability of DSL by population coverage (90%)
- A government resolved to restrict regulation to the minimum necessary to promote competition.

The government is resolved to minimise regulation and to move as quickly as possible from ex ante to ex post regulation. This resolve is a strength and commendable in the right competitive circumstances. But such action should not be hasty and premature. For instance, in Germany, the incumbent's dominance of the local loop means that active *ex-ante* regulation continues to be needed.

Weaknesses

There are also a number of important weaknesses that characterise the German telecommunications sector as summarised in Box 10 below.

Prompt and effective enforcement of pro-competitive regulatory rules has not occurred. At times this has been because RegTP has been recalcitrant in applying EU advocated pro-competition regulation to such an extent that it provoked EC notices of infringement and threats of court action. However, on a number of occasions when RegTP has made pro-competitive decisions, it has not always been able to implement them immediately because of a suspensory decision by the Court. For instance, a RegTP decision to mandate DTAG's provisioning times for leased line and local loops, with automatic penalties for late delivery, was suspended by a court injunction of 12 November 2002. **Indeed, a major problem in Germany is that virtually all major decisions taken by RegTP have become "bogged down" in lengthy court appeal processes. RegTP's decisions do become effective immediately through section 80 of the Telecommunication Act unless a fast track procedure by the Court suspends them. The opportunity for judicial review of decisions by regulators is important. But DTAG should not be permitted to use judicial review as a means of blocking regulatory decisions. In a fast-moving communications market disputes and the uncertainties they create must be resolved rapidly. There must be strong disincentives/sanctions against the use of excessive delaying measures being used by DTAG.**

Box 10. Weaknesses

- Inability of the regulator to implement and enforce regulatory decisions.
- Vagueness in wording of the 1996 Telecommunications Law giving rise to disputes and uncertainties about regulatory powers.
- Relatively slow decision making procedures by regulator.
- Slow process for privatising last 42.3% of DTAG.
- Concerns over independence of regulator.
- A dominant incumbent that has been successful in blocking or at least delaying implementation of pro-competitive regulatory decisions through invariable appeals to the courts.
- Failure to promptly restrict DTAG's use of price squeeze tactics.
- Failure to address high fixed-to-mobile termination charges.
- Weakened potential for cable to compete in provision of telephony and broadband Internet access due to a fragmented cable sector and delays in upgrading cable because of hold-ups in DTAG's divestment of its cable interests.
- Impact of broader legal system in generating difficulties for regulatory decisions (including time-consuming legal procedures and 'confidentiality' provisions).
- Weak representation of consumer interests (particularly residential and small business).

RegTP has been unable to dispel continuing allegations of anti-competitive behaviour by DTAG. Indeed, questions have been raised about whether Germany is in violation of commitments made under the provisions of the WTO Reference Paper to implement effective competitive safeguards in the telecommunications market.

There have been concerns expressed about the independence of the regulator. One reason for such concern is RegTP's continued support for the Ministry's position against regulation of fixed-to-mobile termination charges, alone among regulators in EC countries⁷⁶ and contrary to widening and compelling regulatory conclusions internationally.

The roll out of DSL broadband in Germany has been relatively good. It is the lack of choice facing consumers and DTAG's consolidating dominance that is raising concern. With over 94% of the broadband DSL market, DTAG is not just dominating at the local loop network level but also at the Internet service provider level. A significant worry is that, in trying to encourage fast deployment and take-up of broadband, governments and regulators may turn a blind eye to the tactics of incumbents to leverage their dominance in some areas if they appear to be rolling out DSL rapidly. It is shortsighted to allow DTAG to adopt policies that have allowed it to acquire near monopoly status in the broadband market even if the method used by the incumbent is politically attractive low 'dumping' prices that succeeds in accelerating take-up. In the longer term, the monopoly position acquired by an incumbent is likely to constrict innovative broadband development. The evidence indicates that Germany's broadband penetration is relatively low among OECD countries. Permitting DTAG to expand DSL broadband subscribership through 'dumping prices' can have significant repercussions not only on other providers of DSL technologies but also on the providers of alternative broadband technologies. For instance, it could further erode the weak position of cable as a competitor in the provision of broadband.

The government's attitude towards universal service, and also "digital divide" concerns pertaining to narrowband and broadband access do not appear to be based on adequate systematic data-based analysis. This is not meant as an argument against a primary reliance on market forces for delivering telecommunications services. It argues that policy positions be adopted and reviewed on the basis of thorough systematic analysis.

4.2 *Potential benefits and costs of further regulatory reform*

While the impacts of reform – some of which are long term – need to be judged over many years, experience of OECD countries testify to the benefits that can be delivered by market liberalisation. Consumers and businesses alike have benefited significantly. New entrants and competition have stimulated investment and innovation and there have been improvements in products, product choice and quality of service. Prices for long-distance and international voice telephony have fallen markedly and the price for Internet use has also been falling.

Section 3 of this document points to some early evidence of benefits already identifiable in Germany. The onset of competition and the entry of new operators backed by international companies has yielded benefits by way of:

- Lower national and international long distance prices for fixed-line and mobile service, although offset to some extent by increased local service subscribership charges.
- Accelerated network development for mobile and digitalisation for fixed line.
- A wider range of services, including advanced services.
- Increased choice for customers.
- Improved quality of service.

From a longer-term perspective, the most important impact of pro-competitive regulatory reform is its contribution to facilitating dynamic growth, innovation and employment. The onset of competition has already accelerated the development and adoption of new technologies and services, the growth of information-intensive sectors, and the development of the information economy.

On the costs side, as noted earlier, problems with billing could increase. DTAG's move to reduce debt and cut costs could result in some job losses. However, job opportunities resulting from new entrant activity will help offset job losses at DTAG. The challenge of ensuring delivery of the potential benefits of competition while minimizing costs is formidable. But the potential benefits are substantial. To minimise regulatory costs, it is important that regulations be abandoned or modified as competitive circumstances change and regulations once appropriate are no longer necessary and may, indeed, become a constriction to market dynamics especially in fast converging technological and commercial markets.

The most immediate task is to ensure the competitive development of local PSTN DSL/Bitstream, and fixed-to-mobile termination rates.

4.3 *Policy recommendations*

The following recommendations are based on the above analysis, taking into account the "Policy Recommendations for Regulatory Reform" set out in the OECD *Report on regulatory Reform* (OECD, June 1997):

1. *Ensure that regulations and regulatory processes are transparent, non-discriminatory, and applied effectively.*

The revised new Telecommunications Law must articulate clearly the regulatory powers conferred on RegTP, including its powers to apply sufficiently severe penalties when DTAG abuses its dominant position. It is critical that where RegTP has the right to intervene, the courts cannot overrule its decisions because of ambiguities in the law. The law should be clear that not only discriminatory conduct should be curtailed/prohibited but also *hindering* of new entrants. It is pleasing to see that the draft of the new Telecommunications Act contains this provision. It should be present in the legislation.

- *The new Telecommunications Act should specify with clarity the regulatory powers conferred on RegTP in ex-ante regulation.*

In a fast moving communications market it is important that disputes and the uncertainties they create are resolved rapidly. The regulatory regime has to install disincentives for excessive delaying measures being used by DTAG through the legal appeals process and other tactics. The opportunity for judicial review of decisions by a regulator is important. However, judicial review should not be allowed to become a mechanism to block the enforcement of regulatory decisions. The appeals have resulted in a current backlog of hundreds of lawsuits challenging RegTP rulings. It is essential that RegTP is granted the statutory authority to implement and enforce its decisions and that the courts have the statutory authority to hear appeals in a timely manner.

- *The lengthy court appeals process be streamlined and shortened*

Questions raised about the independence of the regulator can lead to investor uncertainty that will only be definitively dispelled if the regulator's decisions are truly independent of the government and the Ministry of Economics and Labour. The full privatisation of DTAG would help in dispelling some of this uncertainty.

- *Independence of the regulator needs to be ensured. The government should ensure proceed with the full privatisation of DTAG as soon as possible under transparent and non-discriminatory conditions.*

The existence of the Beirat – consisting solely of politicians -- within the formal institutional structure of RegTP, can accentuate concerns about RegTP’s independence from political influence, despite protestations to the contrary. It is not evident that such an advisory body, comprised of politicians, is necessary to an independent regulator.

- *The role of the Beirat should be reviewed with a view to its removal.*

New entrants should be able to obtain timely access to leased circuits at (wholesale) cost-oriented prices. This would help ensure effective access to local markets and facilitate the development of local competition. RegTP should persevere with its efforts to effect the inclusion of deterrent contractual penalties to reduce delays in the contracts for the provision of leased lines and local loop unbundling. The new telecommunications act should include a provision for RegTP to levy fines on telecommunications operators at a level that threatens deterrent penalty. DTAG should be actively pursued and required by RegTP to publicly report data on leased line prices and performance. This would include reporting data in a manner that indicate performance differences between the delivery of services to their own retail operation and in meeting the orders of new entrants.

- *Ensure timely provision of leased circuits for all product offerings at cost-oriented wholesale prices, including obligations on DTAG to commit to Service Level Agreements, penalties and reporting obligations.*

The development of competition and local loop unbundling require that prices are re-balanced. RegTP and DTAG need to agree on a target date to achieve rapid re-balancing.

- *Ensure that prices are re-balanced as rapidly as possible with a specified transparent time schedule for achieving this goal.*

The price cap system on end-user prices used in Germany is too complicated and has inhibited price rebalancing. The price cap regime should be abandoned or at least simplified by abandoning the four sub-cap baskets in favour of a single basket that would to allow rebalancing to occur more quickly while reducing the overall average level of prices faced by consumers. Price caps on services in the competitive national long distance and international call markets should be removed.

- *Streamline and simplify the price cap system.*

RegTP has concluded that the German mobile market is competitive and does not need to be regulated. RegTP’s position is in sharp contrast with findings by a growing number of regulatory agencies (including regulators in the UK, France and Italy) that fixed-to-mobile termination charges have been excessive. An independent review of the mobile market should be conducted as required by the EC’s recent Relevant Markets Recommendation as soon as possible with immediate application of regulatory controls to mobile operators found dominant -- including jointly dominant -- in termination markets.

Provisions of the new draft Telecommunications Act that prohibit ex ante regulation of wholesale prices where retail markets are “competitive” should be deleted or modified to permit regulation of such wholesale markets including fixed-to-mobile termination charges.

- *An independent review of mobile termination charges be conducted as soon as possible*

Accounting separation is an important regulatory instrument. Under the provisions of the Telecommunications Act, DTAG (as a dominant operator) is required to practice accounting separation. But this requirement is not being adequately enforced and DTAG is required only to apply Germany's standard accounting rules.

Regulatory provisions concerning accounting separation should be strictly enforced

Spectrum is of increasing importance and the government should ensure efficient spectrum management and that spectrum is available for innovative solutions. The government should commission an independent review to advice on spectrum management, including further action necessary to ensure that all users, including non-commercial users, use spectrum in the most efficient way. It is important to implement the provisions foreseen in the draft Telecommunications Act allowing for spectrum trading should be permitted, subject to appropriate conditions.

Spectrum trading should be permitted subject to appropriate conditions

2. *Reform regulations to stimulate competition and eliminate them except where clear evidence demonstrates that they are the best way to serve the broad public interest.*

As noted earlier, the government's resolve to minimise regulation and to move as quickly as possible from ex ante to ex post regulation is commendable in appropriate circumstances. Improved information will be necessary to facilitate policy development and review, including a regular review of regulatory effectiveness. RegTP should define performance indicators for evaluating the development of effective competition and obtain and publish data on these indicators on a regular basis, in order to enable the cost-effectiveness of regulatory decision-making to be monitored. In this context RegTP should be provided with the legal authority to obtain and publish data which in its view is in the public interest and would help improve competitive conditions.

- *Establish a mechanism to ensure that regulations in all areas of telecommunications are regularly and systematically reviewed to ensure they are achieving their intended purpose and with a view to eventual streamlining.*

The development of competition provides increased scope for customer choice. In order to assist customers in making this choice:

- *The regulator should determine – after broad consultation with consumers – information to be made publicly available that will enable consumers to make comparisons between operators. More broadly, the regulator should define performance indicators that enable evaluation of the effectiveness of competition and should ensure requisite data is available on a timely and regular basis.*
- *Establish explicit performance indicators to assist in the evaluation of the effectiveness of competition.*

Infrastructure competition is critically important. With the sale of DTAG's cable interests, a major barrier to the development of an alternative technology telecommunications operator no longer exists.

The government should follow-up on its report of May 2003 addressing the development of cable networks to ensure that these networks development as a source of telephony and broadband high speed Internet access, and the policy options for addressing these barriers.

There must be effective implementation of carrier selection and pre-selection in the local market. In this context, a problem in some member states has been strong win-back campaigns from incumbents.

- *RegTP should make a ruling restraining DTAG from engaging in win-back campaigns to recover a customer for a period of four months.*

The delivery of broadband services to regional, rural and remote areas in Germany is likely to continue to present difficulties since the distinctive features of these areas, such as a low population and revenue base are a significant disadvantage for a service supply industry based on economies of scale. By contrast with a growing number of OECD countries, there does not appear to have been systematic evaluation of the existence and policy implications of the so-called “broadband digital divide” in Germany. The German government is sensibly placing primary reliance on market provision. But as widely recognised, there may be some market deficiencies that may need to be addressed by government and this needs to be done in a coherent, consistent and cost-effective manner. In this context it would be useful if the regulator reviewed on a regular basis the extent to which universal service objectives are being met.

- *The government should initiate a study to identify barriers to broadband deployment and take-up, especially in marginal less favoured areas, and the policy options for addressing these barriers.*

Representation of the interests of residential and small business consumers appears weak in Germany. RegTP’s mandate requires it to safeguard the interest of consumers. RegTP should encourage, indeed assist, the development of more effective consumer representation. Such encouragement could include provision of financial resources as is done in a number of OECD countries, including the UK and Australia. As regulation is reduced there may also be benefit in fostering the use of industry codes of practice. But the regulator must be vigilant in ensuring that the dominant operator complies with the established Codes of Practice.

- *Introduce formal industry codes of practice to strengthen industry self-regulation*

The regulator should also report on: the time taken to complete an investigation from the date the complaint is received; and the average time taken to handle all complaints.

3. *Review and strengthen where necessary the scope, effectiveness and enforcement of competition policy*

- *Ensure that the Bundeskartellamt has adequate staff with appropriate skills to operate effectively in a competitive environment.*
- *Re-profile RegTP to significantly boost skills in monitoring and addressing anticompetitive conduct.*

NOTES

- ¹ The issue of full privatization remains a live one in Germany. For instance, the German Monopolies Commission has criticised the government for not moving ahead fast enough to fully privatise the former state enterprise because, as long as privatization is not complete, there would be the suspicion that if the government interferes it is in terms of its economic interest as a major DTAG shareholder.
- ² Among other initiatives DTAG owns: Voicestream a US operator (acquired for US\$24.9billion in 2001); 51% of Croatian incumbent Hrvatski Telekom; One2One of the UK (now T-Mobile); Maxmobile of Austria; Fixed network operator Multilink of Switzerland; 59.6% of Hungarian incumbent Matav – which itself holds a 51% stake in Macedonian incumbent MakTel; 51% of Slovak incumbent Slovenske Telekomunikacie; 51% of Czech city carrier PragoNet; 60.8% of the Czech mobile operator RadioMobil; 50% minus one share of Dutch mobile company Ben of the Netherlands; 45% of mobile operator MTS of Russia; 45% of PTC, Poland’s largest cellular operator.
- ³ RegTP Press Release, “Kurth: Use consolidation in the telecommunications markets as an opportunity,” Bonn, 12 February 2003.
- ⁴ RegTP Press Release, “WLAN frequencies in the 5 GHz band available for general use,” Bonn, 13 November 2002.
- ⁵ Germany’s action was consistent with a later EC recommendation that asks member states to facilitate the use of WLAN and subject the use of available radio spectrum to the least onerous authorisation system. European Commission adopts recommendation to promote public broadband services in Europe,” europemedia...net, 21 March 2003.
- ⁶ “Deutsche Telekom has 3.4 million customers”, Telecom.paper, 17 March 2003.
- ⁷ RegTP Press Release, “Kurth: Use consolidation in the telecommunications markets as an opportunity,” Bonn, 12 February 2003.
- ⁸ Typically, over 30 analogue TV and approx 40 analogue programmes can be received at present for around EUR 13 (including VAT; home user agreement). The analogue offer is supplemented by several digital packages – in all, around 100 international TV and around 20 radio programmes; mostly pay-TV, in addition to the basic fee. Yet only about 1.6 million households have signed up for the digital offers.
- ⁹ Europemedia.net, “Banks secure goodish-ish deal”, 03/02/2003
- ¹⁰ RegTP’s web site at <http://www.regtp.de>
- ¹¹ Section 66(5) of the 1996 Telecommunications Act
- ¹² See for instance, Emma McClune “German carriers braced for RegTP disappointment,” 20 May 2002 which reports of “..a powerful political lobby attempting to protect Deutsche Telekom’s falling share price..”.

- 13 RegTP press release, New arrangements in the leased line market – RegTP sets rules for fair access to leased lines, Bonn, 3 June 2002.
- 14 EU legislation can take a number of forms. Regulations have general application, and are binding in their entirety and directly applicable in all Member States. Directives are binding, but national authorities may choose the form and method of implementation.
- 15 In particular, the new EC regulatory framework:
- a) Sets out the rights, responsibilities, decision-making powers and procedures of the national regulatory authorities (NRAs) and the Commission. This includes the NRAs' obligation to submit to the Commission and the NRAs of other EU member states in draft form the regulatory measures that they intend to take with respect to market definition and significant market power, and the Commission's power to require NRAs to withdraw such drafts, if the Commission considers them to create a barrier to the single European market or to be incompatible with EU law.
 - b) Identifies specific policy objectives that NRAs have to achieve in carrying out their responsibilities (namely, to promote an open and competitive European market for communications services, to promote the interests of European citizens and to consolidate the EU's internal market in a converging technological environment).
 - c) Provides that operators with significant market power in relevant communications markets will be subject to certain obligations as set out in the directives on universal service and access. Significant market power, a notion that includes cases where a company has market power individually or jointly with other companies, is defined on the basis of the concept of dominance as developed in the case law of the European Court of Justice and the Court of First Instance of the European Communities.
- 16 Commission of the European Communities, Brussels, 11/02/2003, C(2003)497. Commission Recommendation of 11/02/2003 "On Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services".
- 17 The full range of markets defined include:
- Call origination on the public telephone network provided at a fixed location.
 - Call termination on individual telephone networks provided at a fixed location.
 - Transit services in fixed public telephone network.
 - Wholesale unbundled access (plus shared access) to metallic loops and sub-loops.
 - Wholesale broadband access.
 - Wholesale terminating segments of leased lines.
 - Access and call origination on public mobile telephone networks.
 - Voice call termination on individual mobile networks.
 - The wholesale national market for international roaming on public mobile networks.
 - Broadcasting transmission services to deliver broadcast content to end users.

- 18 According to one report, the EC decided that the leased-lines retail market above 2Mbit/sec is competitive, despite disputes from NRAs from Ireland, the Netherlands and Luxembourg. Tatum Anderson, "NRAs get green light for market reviews," Telecom Markets, 25 February 2003.
- 19 European Commission, Communications from the Commission to the Council, the European Parliament, the Economic and Social Committee and Committee on Regions, Eighth Report on the Implementation of the Telecommunications Regulatory Package, COM(2001) p.33
- 20 Developing policies on the secondary trading of spectrum is to be a key priority of the EC's newly established radio Spectrum Policy Group. Some key questions to be considered are: What is the potential of spectrum trading as a new and complementary way of managing the spectrum more efficiently? Is spectrum trading a solution to consolidate the 3G market? What would be the consequences of countries introducing spectrum trading in an un-coordinated manner?
- 21 Draft of the new Telecommunications Act as of 20 February 2002.
- 22 In recent years, in determining tariffs under the cost-based system, RegTP has refused to accept some costs of a service e.g., of line sharing, claimed by DTAG.
- 23 See EC 8th Implementation Report (section 2.4.2) at http://europa.eu.int/information_society/topics/telecoms/implementation/annual_report/8threport/finalreport/deutschlandfinal.pdf
- 24 Dr. Annegret Groebel (RegTP's International Relations Manager), "LLU – Assessing the Status of LLU", Paper presented to a conference on "Interconnection 2003", Rome, 25 February 2003.
- 25 European Commission, Communications from the Commission to the Council, the European Parliament, the Economic and Social Committee and Committee on Regions, Eighth Report on the Implementation of the Telecommunications Regulatory Package, COM(2001) p.35
- 26 European Commission, Communications from the Commission to the Council, the European Parliament, the Economic and Social Committee and Committee on Regions, Eighth Report on the Implementation of the Telecommunications Regulatory Package, COM(2001), Annex 3.3, p.1
- 27 The problem of lengthy ex post reviews has been addressed in the draft new Act by limiting ex post reviews to two months. However, market participants are dubious that ex post regulation will be effective because it is tied to abuse of market dominance criteria that the regulator historically has been reluctant to cite.
- 28 This seems to be in contradiction with RegTP's argument that fixed-to-mobile termination rates should not be regulated because rates in Germany are not high compared with rates elsewhere.
- 29 Communication No 126/2002, Official Journal 4/2002, p. 374-376
- 30 These long delivery times reportedly have improved significantly. Competitors say this is because of the threat of the RegTP ruling, while DTAG says lowered demand for leased lines has allowed them to reduce their work backlog. There are reports of delivery times for many types of lines improving to between 30-45 days. However, competitors fear the delays may lengthen now that DTAG has successfully overturned the RegTP order in the courts.
- 31 Ministry of Economics and Technology reply to OECD questionnaire, June 2002.
- 32 "Telstra forced to separate wholesale and retail books", Reuters, 19 March 2003.

33 Draft of the new Telecommunications Act as of 20 February 2002.

34 <http://www.regtp.de>

35 Under an element-based interconnection system the tariff for transmission of traffic is based on the number and type of network elements used in transmission and not on the distance over which the traffic is transmitted.

36 WIK Consult, Telecommunications Market, Germany: Market trends – Key players- Regulation, 2002, p.163.

37 <http://www.regtp.de/aktuelles/reden/02537/22/index.html>

38 RegTP data used are from Cullen International Western Europe Regulatory Support Services, “Telecommunications Western Europe: The Cross-Country Analysis”, 31 December 2002.

39 Dr. Annegret Groebel (RegTP’s International Relations Manager) in a written statement to OECD.

40 OFTEL, Consumers’ use of mobile telephony, Q8 February 2002, available at: <http://www.oftel.gov.uk/publications/research/2002/q8mobr0402.pdf>, paragraph 4.9 page 11.

41 RegTP’s Official Journal of 8 March 2000 (QJ 5/200, Verf.21/2000).

42 Estimates made by ECTA as reported by OFTEL, “International Benchmarking study of Internet access (dial-up and broadband) – 6 December 2002. Available at http://www.oftel.gov.uk/publications/research/2002/benchint1202_4.htm

43 The costs of efficient service provision comprise:

the long run incremental costs of providing the service,

a reasonable mark-up on volume-neutral common costs, and an appropriate return on capital employed, as far as the costs are required to provide the service.

44 This was lowered to 11.8 EUR in a RegTP decision of 29 April 2003.

45 RegTP press Release, “DT AG local access rates have been partly approved”, Bonn, 20 December 2002. Available at <http://www.regtp.de/en/aktuelles/pm/02708/index.html>

46 RegTP press Release, “DT AG local access rates have been partly approved”, Bonn, 20 December 2002.

47 Sub-loop unbundling allows access to the incumbent’s network on an unbundled basis closer to the customer than at the Main Distribution Frame (MDF), that is at a point between the customer’s location and the incumbent’s site. For example, this arrangement can be used to supply very high bandwidth services that can only be transmitted at a short distance on copper pairs.

48 Line sharing splits the line into a higher and a lower frequency portion, allowing the lower frequency portion to be used for voice and the higher frequency portion for data transmission (typically for high-speed Internet access). Competitors are entitled to request access just to the higher portion. The remaining lower frequency portion can be used simultaneously by DTAG for telephone service. Line sharing is expected to advantage specialised broadband operators by allowing them to focus on providing competitive and innovative high-speed data services without needing to take on the added responsibility and cost of providing voice services. Consumers can obtain broadband service from the most competitive provider without installing a second line.

49 RegTP Press Release: “Regulator determines prices for line sharing”, 18 March 2002

50 European Commission, Communications from the Commission to the Council, the European Parliament, the Economic and Social Committee and Committee on Regions, Eighth Report on the Implementation of the Telecommunications Regulatory Package, COM(2001), p.21

51 Public Network Europe, March 2002, Volume 12, No.3, page 27

52 Stephen Temple, “Europe’s Failure to Focus on the 3G Challenge”, Financial Times, 26 February 2003, p. 11

53 February 6, 2003, Current Analysis.

54 Matthias Kurth (President, RegTP), “Mobile Virtual Network Operators – Regulatory Perspectives in Germany,” Speech presented in Rome, 20 September 2001

55 The report of this study is available at
http://bmwi.de/Homepage/download/telekommunikation_post/Breitbandstudie.pdf

56 JLM Conseil, “Cable networks and telecommunications”, Report of a study commissioned by the Autorite de regulation des telecommunications, January 2003.

57 “German local call by call is introduced on 25 April 2003”, Telecom.paper, 25 February 2003.

58 DTAG’s Form 20-F statement to the US Securities and Exchange Commission.

59 Federal Ministry of Economics and Technology, Directorate-General VII, “The Development and Prospects of Telecommunications in Germany,” Bonn, Germany, April 1999.

60 The EC suggests that Member States in co-operation with the Commission should support, where necessary, broadband deployment in marginal less favoured areas, and may use structural funds and/or financial incentives to do so. Particular attention should be paid to outermost regions. The EC recommends that Member States should facilitate investment and has committed to encourage and organize exchange of local and regional experience and private/public partnerships.

61 See “Universal Service Obligations and Broad” DSTI/ICCP/TISP(2002)4/FINAL, 22 January 2003.

62 Ministry of Technology and Labour, Response to OECD Questionnaire, June 2002.

63 RegTP Annual Report 2002.

64 RegTP, Annual Report 2002, p.82. Available at <http://www.regtp.de>

65 For a more detailed account of these appeals to the courts, see ITEM 8. Financial Information pp 142-144 of Deutsche Telekom’s Form 20-F statement filed with the US Securities and Exchange Commission, 17 April 2003,

66 “Clear direction for the telecoms market,” RegTP Press Release, Bonn, 30 March 2001.

67 European Commission, Communications from the Commission to the Council, the European Parliament, the Economic and Social Committee and Committee on Regions, Eighth Report on the Implementation of the Telecommunications Regulatory Package, COM(2001), p.25.

68 RegTP Official Journal Notice 574/2001.

- 69 Submission to OECD study by the German Association of the Providers of Telecommunications and Value-Added Services, Oberlander Ufer 180-182, Cologne, Germany, 28 February 2003. The allegations are also made by CompTel Submission to United States Trade Representative, Section 1377 Request for Comments Concerning Compliance with Telecommunications Trade Agreements, 9 January 2003. The USTR in its report to Congress states “Lack of an independent regulator with adequate authority has been the Achilles heel of competition in telecommunications markets throughout the world. Addressing this problem has been identified as a priority matter in China, France, Germany, India, Japan, Mexico, South Africa and Switzerland. An independent regulator is also a necessary condition for adequate implementation of WTO commitments.”(page 4).
- 70 In its mid-year report for 2000.
- 71 RegTP, Annual Report 2002, available at <http://www.regtp.de>, p. 20-21.
- 72 Deutsche Telekom, Annual Report 2002.
- 73 RegTP, Annual Report 2002, available at <http://www.regtp.de>, p. 26
- 74 WIK Consult, Telecommunications Market, Germany: Market trends – Key players - Regulation, 2002, p.221
- 75 RegTP, Annual Report 2002, p. 9-10.
- 76 Emily Bourne, “Mobile operators must face up to new regulation – PwC”, *Total Telecom*, 15 April 2003.