Federal Network Agency

Annual Report 2007

Annual Report 2007

Federal Network Agency for Electricity, Gas,
Telecommunications, Post and Railway

Ten years of competition in network industries

Consumer protection and advice

Contents

International Cooperation

Telecoms

Post

Electricity and gas

Railway

President's message

The Annual Report this year appears ten years after the regulatory authority, now the Federal Network Agency, was set up.

This is an occasion to look back not just on the past year but on the past ten years, and to take stock.

If the liberalisation outcomes in the five markets of telecommunications, post, electricity, gas and rail are different, this is, of course, not just or not primarily as a result of the Agency's work but because of the different times the markets were opened and the specific entry barriers for new competitors. Objective analyses and fair comparisons should thus illuminate the market structures and environments as a whole.

In the late 90s technological change, willingness to invest in infrastructure and an open market entry model in telecommunications created a favourable scenario that is now delivering – after ten years – significant success.

If, in the postal sector, the main part of the letter market was required by law to be operated as a monopoly until the end of 2007, similar success in achieving competition is simply not possible.

The energy market is also a good example of how a quasi two-stage market opening has had disadvantages; domestic customers have benefited little from the fruits of competition and the model of "negotiated" access was unsuitable and has wasted time. But the energy market also shows that it is not just network access and use of system charges that represent entry barriers. For instance, the situation as regards the procurement of electricity and gas, the building of power plants and the installation of transmission lines all contribute to making it more difficult to spur competition in the energy than in the telecommunications market. In the energy markets, opening the networks is indeed a basic, but not a sufficient, condition for achieving our goals.

We also have light and shade in the rail market, where we see the extent to which the outcome of the current debate on the legal framework will ultimately determine competitive opportunity.

The Agency is fulfilling its mandate purposefully and with commitment. But it cannot achieve more than is allowed by the political consensus that finds expression in the law.

Ten years, however, have provided us with good experience of the benefits that open, competition-oriented markets deliver to consumers and customers. Also, the innovation dynamic that they trigger, the creativity that is mobilised on the periphery and the efficiency gains and lower prices that they make possible are not theoretical claims; they are demonstrated in the Report by facts and figures.

We would have to look hard to find a product that five million German households have additionally ordered within the space of just one year. But exactly this was the case last year with broadband access. A uniquely competitive environment and steadily falling prices have enabled this unprecedented growth in Europe.

But it is not just the telecommunications networks and the changes they have undergone, but also the new offers and the content carried over them that are strong drivers of growth, investment and jobs.

Online trading, search engines, the distribution of videos, films and music on the Internet are changing how we live and how we consume, and are also creating new production and work structures. All this requires open, low cost distribution channels in the networks.

Many believe that the situation is exactly the opposite with gas and electricity; here, consumption should fall rather than rise as we are all looking to save energy and there is little innovation dynamic.

Of course, given the scarcity of primary energy, given climate change and the promotion of renewable energy sources, we are faced with quite different challenges.

But who says that competition instruments cannot be as effective here as they are in other markets in achieving the goals?

It is precisely the diversity and decentralisation of energy production and consumption that calls for innovation and creativity. The grid is a determining factor in this.

The informed and discerning consumer, who is meanwhile switching supplier more and more often, is the yardstick for the Agency. Only when the grid is able to respond to the ever more complex challenges posed by wind energy, trading and fluctuating demand will it be possible to maintain stability and security of supply in the energy market.

The Agency's role is becoming more, not less, important. It is the go-between in a market whose issues are politically and socially controversial. The list of aims – competition, consumer protection, job security, safeguarding employee interests, protection of the environment, climate protection and long term security of supply – is longer than in other markets. It is our job to see that one does not rule out another in practice. Conflict such as that experienced in installing lines and building power plants must therefore be acknowledged and not swept under the carpet. Yet solutions cannot be found by the Agency alone.

Transparency of facts, resolving issues by dialogue, credibility in relation to those in the political arena and the business community are important principles in our work, and must remain so.

This is the basis on which we want to shape the future. We cannot carry over everything from the past; however, all those who are familiar with the network and competition sets of instruments and who have analysed the technical and economic structures will also be able to develop consistent, long term strategies and to overcome existing problems.

Matthias Kurth
President

Federal Network Agency

Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway

President

Vice President | **Vice President**

General Staff Council
Staff Council
General Spokesperson for Disabled Persons
Spokesperson for Disabled Persons
Data Protection Commissioner

Ruling Chamber 1
President`s Chamber
Market Definition and Market Analysis under Sections 10 ff TKG

Ruling Chamber 2
Regulation of Telecommunications Retail Markets (Markets 1 – 7*, Broadband Services, Mobile)
Regulation of Wholesale Leased Lines (Markets 13, 14)* Subscriber Data, Collection Services, Porting

Ruling Chamber 3
Regulation of Telecommunications, Wholesale Markets, Fixed and Mobile
(Markets 8 – 12, 15 – 18)*

Ruling Chamber 4
Individual Use of System Charges Electricity, Pipe to Pipe Competition Gas

Ruling Chamber 5
Rates Regulation and Special Control of Anti-Competitive Practices Postal Markets

Ruling Chamber 6
Regulation Electricity Networks

Ruling Chamber 7
Regulation Gas Networks

Ruling Chamber 8
Use of System Charges Electricity

Ruling Chamber 9
Use of System Charges Gas

Notes re BK 2 – BK 3
* Commission Recommendation (2003/311/EC) of 11 Feb 2003 nos 1 – 18

Description of the markets on the Agency`s website under Ruling Chambers

Equal Opportunities Commission

Z
Business Support

- **Z 1** Organisation, Personnel
- **Z 2** General Legal Affairs, Finances, Controlling
- **Z 11** Organisation, Occupational Health and Safety
- **Z 12** Policy, Personnel Representation, Legislation, Senior and Upper Grade Service Staff, Special Unit, Further Training
- **Z 13** Medium and Basic Grade Service Staff, Salaries, Remuneration, Tavel and Relocation Expenses
- **Z 14** Buildings, Real Property
- **Z 15** Centralised Internal Administration, Library, Special Unit Translation Service
- **Z 21** General Legal Affairs, Part 7 TKG Legal Issues, Data Protection, Administrative Offences
- **Z 22** Tariff and Contribution Charges Legislation, Collection Services
- **Z 24** Budget, Budgeting, Tax Matters, Personnel Management
- **Z 25** Purchasing, Motor Vehicles, Accident Compensation, Special Unit, Sickness Allowances
- **Z 26** Controlling, Transaction and Cost Accounts, Quality Management

IS
Information Technology and Security

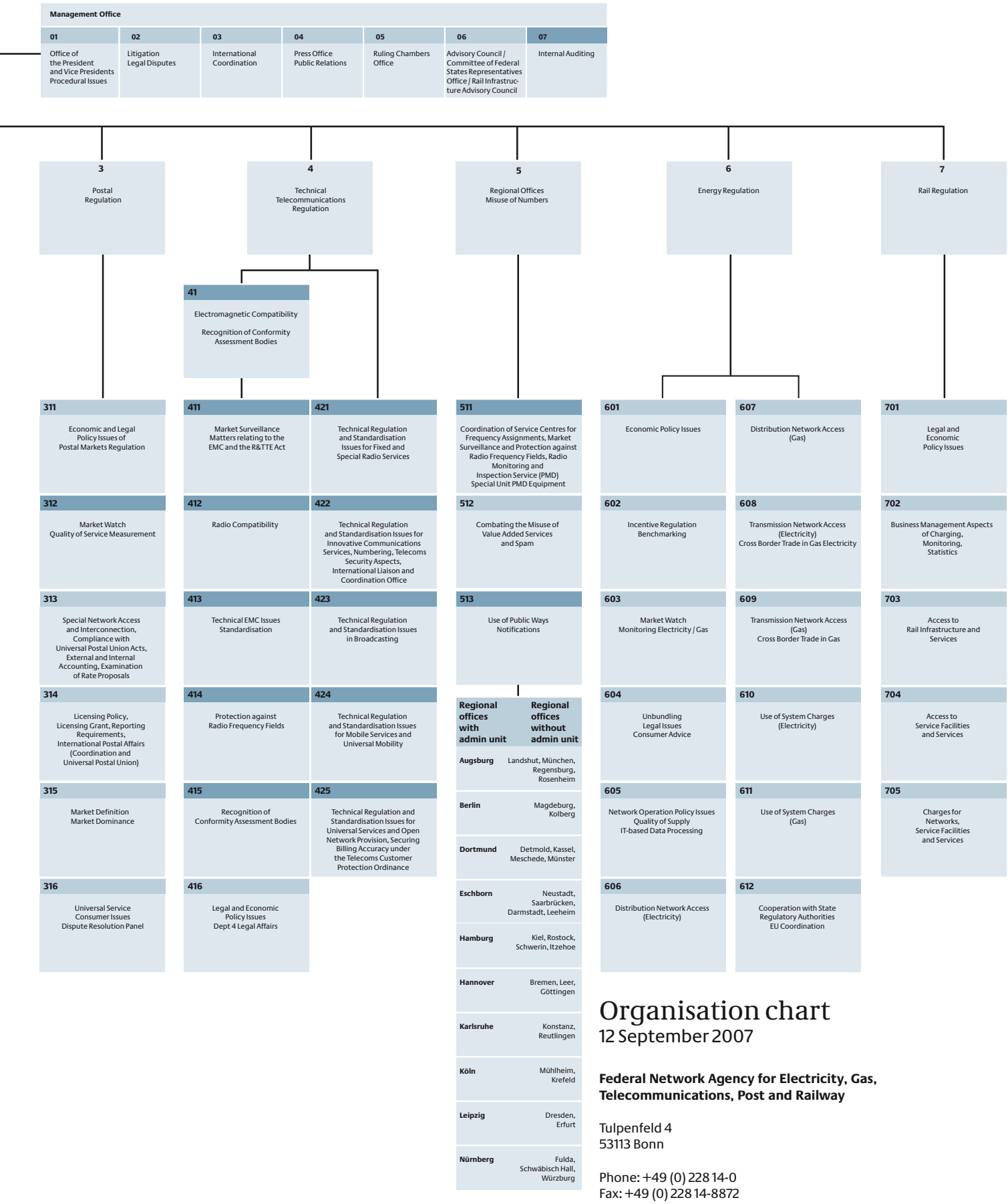
- **IS 11** Information Technology
- **IS 12** IT Solutions Development
- **IS 13** Workflow Structuring and Modelling
- **IS 14** Information Requests, Civil Defence
- **IS 15** Qualified Electronic Signatures, Policy Issues
- **IS 16** Provision Continuity Telecommunications and Post, Technical Implementation of Intercepts
- **IS 17** Compliance with Data Protection and Postal and Telecommunications Privacy, Telecommunications Security, Securing Emergency Calls, Internal IT Security
- **IS 18** Qualified Electronic Signatures, Technical Operation

1
Telecommunications, Regulatory, Economics

- **111** Telecommunications, Regulatory, Economic Policy Issues
- **112** Market Watch, Telecommunications
- **113** Business Management and Accounting Issues, Cost Accounting Telecoms, Examination of Rate Proposals
- **114** Internet Economy
- **115** International Telecommunications Affairs, Reporting Requirements
- **116** Market Definition and Market Analysis, Section 12 TKG Procedures
- **117** Numbering Policy
- **118** Number Administration

2
Legal, Telecommunications, Regulation Issues, Frequency Regulation

- **211** Legal Issues, Sector-Specific Control of Anti-Competitive Practices, Telecoms
- **212** Spectrum Management, Procedures, Market and Competition Aspects
- **213** Frequency Award and Assignment Policy
- **214** Determination of Frequency Requirements, Frequency Usage Plan
- **215** Trunked Radio, Special Award Proceedings, Assignment-Related Aspects of Tariff and Contribution Charges Legislation
- **216** Universal Service, Public Affairs, Consumer Issues, Dispute Resolution Panel
- **220** Technical and Regulatory Issues of Efficient and Interference-free Use of Frequencies
- **221** Radio Frequency, Utilisation Concepts, International Affairs, Frequency Usage Planning, Innovative Radio Applications
- **222** Broadcasting
- **223** Satellite Services, Fixed Services below 30 MHZ, Short Term Usage, Civil/Military Frequency and Site Coordination
- **224** International Mobile Radio Frequency Coordination, Digital Cellular Networks, Public Paging Networks, Railway and Public Safety Authorities and Organisations, Aeronautical, Maritime Mobile and Inland Waterways, Radionavigation and Radiodetermination Services
- **225** Non Public Radio Applications, Amateur Radio
- **226** Radio Relay



Organisation chart
12 September 2007

Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway

Tulpenfeld 4
53113 Bonn

Phone: +49 (0) 228 14-0
Fax: +49 (0) 228 14-8872
Email: poststelle@bnetza.de
Internet: http://www.bundesnetzagentur.de

in Bonn
at other locations (Berlin, Mainz, Saarbrücken)

Ten years of competition in network industries

INTRODUCTION

The Federal Network Agency is required by law to create competition, through regulatory measures, in economically significant network-based sectors. This development was preceded by a regulatory paradigm shift in network industries. Regulators came to the conclusion that access regulation would also spur competition in respect of services provided in network infrastructures. The change of the regulatory approach was due in particular to the increasing link-up of economic activities and the related growing importance of networks, the technical progress of network control and different economic assessments of the competitive performance in network industries. Today, the benefits of competition are the focus of developments; uncontested are the improved effects of incentives, the more efficient provision of services and higher innovation potential of competitive systems. This is impressively reflected in the telecommunications industry, given its developments in the fields of productivity, prices, and the diversity and quality of services offered.

Efficient market results can best be ensured in competitive markets. Here, the competitive process secures that service charges are based on production costs (including an appropriate rate of return on equity). The core function of regulation is to check prices and the scope for action of monopolists or SMP undertakings. The relevant problems arising are apparent in particular in network industries as the network owners are active at all levels of the value-added chain and competitors have to rely on sharing the use of the network in order to be able to offer services to end users. Stringent ex ante regulation is therefore indispensable to facilitate access to fundamental wholesale services such as the local loop (TAL). This applies in particular, given the immanent economies of scale in networks and the fact that it does not appear to make sense to establish alternative infrastructures in many areas for economic, legal, technical or other reasons. The prices prevailing in a competitive market are simulated by means of regulated network access rates and thus also provide optimum incentives for investments.

The central aim of regulation is to determine appropriate rates which also ensure network quality and security. This applies both to telecommunications and to all the other branches of the economy marked by a network structure.

It is to be assumed that competition-based regulation yields better economic results and also promotes efficient investments. Exhausting the growth potential by competitive processes for instance was already declared the aim of telecommunications liberalisation in the telecoms sector as early as 1996 in the legal comments substantiating the Telecommunications Act. There was agreement that a single undertaking with special and exclusive rights would not, as a state monopoly undertaking, be in a position to implement the innovation potential of technical communication and information applications. As a result, other sectors of the economy relying on such services were also supposed to fall short of international competition require-

ments. This basic approach has not been changed in the last few years. This is also reflected in the fact that, according to the new 2004 Telecommunications Act, the decisions of the Federal Network Agency continue to be based mainly on the promotion of markets characterised by sustained competition to allow efficiency gains to be implemented. The aims of regulation have been determined similarly in the Postal Act (PostG), Energy Act (EnWG) and General Railway Act (AEG).

The market results, especially in the telecommunications market, reflect impressively the regulation success achieved so far. A large number of providers have contributed to ensuring substantial efficiency gains. Consumers benefit from low prices of telecommunications services, a host of options to be chosen from and many technical innovations. Furthermore, the technical progress in telecommunications, eg by digitisation, as well as in other industrial sectors partially leads to changes in the employment structure and to staff cuts. On the other hand, new jobs are created for new telecommunications services. Also, the technical progress supports the development of an innovative and internationally competitive telecommunications market, thus improving the competitive situation in Germany as a whole.

SUCCESS IN THE TELECOMMUNICATIONS SECTOR

After ten years of regulation the telecommunications sector is marked by a highly dynamic competitive environment in many areas. Since market opening many alternative providers offering different business models have entered the market. The competitors of Deutsche Telekom (DTAG) first focused on service-specific offerings such as call by call and preselection, but infrastructure-based offerings followed soon. Overall, competitors have made high investments in their own infrastructures; more recently, the volume of competitor investments even exceeds that of DTAG. Nevertheless, competitive service offers are not provided nationwide. Consumers have increasingly used call by call and preselection offers, but remained customers of DTAG in most cases. Customers only began to switch providers more frequently with the growing tendency to use bundles of narrow and broadband access services. Alternative providers benefit from this trend and meanwhile have a share of some 45 percent in domestic calls and 18 percent in telephone lines.

The sustained and vigorous competition in the access market is mainly due to the dynamic broadband sector. In the broadband access market, competitors are at present offering nearly one third of all digital subscriber lines (DSL) on the basis of their own infrastructure or the unbundled local loop, one fifth of the total of nearly 20 million existing DSL lines is requested on a resale basis. Dynamic growth is also seen in a large number of service-based markets. With a penetration of nearly 50 percent of all households Germany is meanwhile one of the leading countries offering broadband access nationwide (other countries are for instance the United Kingdom, France and Italy).

Since market opening private consumers and commercial users have benefited from clearly reduced prices covering the whole range of services offered. Also, a host of price offers and innovative services are available to users, eg video on demand, videotelephony, Internet Protocol Television (IPTV) and more options. Customers are increasingly requesting bundled services (telephony, DSL) which providers offer at cheap flat rates, trying to undercut each other. Here, customers prefer one-stop shop offerings.

Furthermore, technical developments and innovations permit telecommunications services to be offered at ever higher bandwidths for innovative applications – eg IPTV. Accordingly, the service offers have multiplied, and many innovations and new services are available in fixed and mobile networks. At the same time, it is apparent that service and quality will be gaining prominence as important competitive parameters.

Last but not least, the promising competitive developments in the telecommunications markets are due to regulatory activities. The decisions taken by the Federal Network Agency during its regulatory work have created regulatory framework conditions allowing both service- and infrastructure-based providers to offer their services successfully and survive in the market. This has certainly contributed to the fact that the efforts to open markets can be considered a success story.

SUCCESS ALSO IN THE POSTAL, ENERGY AND RAIL SECTORS

Regulation has also made substantial contributions to the other network industries.

The developments of the courier, express and parcel (KEP) services in the postal sector which had been liberalised a long time ago were positive in line with the general economic situation. Competition is functioning – in particular in the area of commercial senders where price competition is fierce. The Agency's regulation has therefore been limited to the special control of anti-competitive practices.

In the letter market which was fully liberalised in 2008 only, the influence of competition has been limited so far. However, despite the remaining monopoly of Deutsche Post AG (DPAG), traces of market structures and tangible competition have developed in the last ten years. This was certainly also due to and fostered by market entry regulation (licensing). Competitors of DPAG have meanwhile achieved a market share of a good ten percent in respect of end-to-end letter services. Additionally, the Federal Network Agency has sustainably promoted further competitive potential by determining market-oriented access regulations and conditions of use. The regulatory decisions taken by the Agency have granted competitors and customers of the market-dominant company DPAG access to its network, its work sharing services, PO box facilities and address information, which DPAG would

not have offered in the same way without regulatory steps being taken.

Furthermore, the letter market is an excellent example of the positive contribution that rates regulation may make to a more competitive environment. With the rates regulation procedure applied in 2002 letter service charges were reduced for the first time. At present, the prices of letter services in Germany are by some five percent lower than in 2002. As opposed to this, the price level has risen sharply in most European countries since 2002. The rates regulation procedure of 2007 then created the basis for largely steady consumer prices for the period from 2008 to 2011. All this may be considered the success of rates regulation from which both retail and business customers have derived benefits. However, rates regulation has also made market entry easier for competitors offering services at competitive prices.

The regulation of the use-of-system charges in the electricity and gas sectors has also had positive effects on a number of procedures. The beginning of 2008, for instance, once again saw a pronounced cut in the system charges levied by the distribution system operators. However, these cuts have neither impaired network quality and security nor have they adversely affected the future investment potential of the system operators. Without any doubt, they will be able to refinance efficient new investments, thus allowing adequate profits to be made. Lower system charges at the distribution network level will also reduce the costs of the distribution networks. In this way private customers can also benefit from price cuts. The higher electricity prices noted at present are certainly not due to increased network costs. On the contrary, the drop in system charges tends to slow down the development of electricity prices and will thus benefit customers. Regulation in the energy sector therefore aims to achieve a balance between network quality and the appropriate charges. The introduction of incentive regulation on 1 January 2009 will provide a range of instruments aiming to increase the efficiency of the networks considerably, giving due regard to quality aspects at the same time.

In addition, competitive mechanisms have been established by means of supplier change options in the energy sector. In 2007, a strong increase in the number of supplier changes is expected. Although the supplier change ratio related to the total take-off in 2006 only amounted to 1.3 percent in the gas sector, the implementation of the new access model to gas supply networks (the so-called two-contract model) and the regulation of the process of changing suppliers created the central basis for more competition. This will certainly also lead to pronounced changes in the gas sector in the years to come.

The effects of market opening are also tangible in the rail sector even though they differ depending on the area concerned. As the Federal Network Agency has only been responsible for the rail sector since 2006, the results of the optimised and intensified competition regulation are not as measurable as desired yet.

The developments so far show a clear relationship between growing competition, a rising number of transport services and the development of prices. In rail freight transport (SGV), for instance, the segment in which competitors of Deutsche Bahn AG (DBAG) already have a market share of around 16 percent, transport services increased by some 41 percent from 2002 to 2007. At the same time, there was a drop in the prices for consigners by some six percent from 2003 to 2006. The market share of competitors in the regional passenger rail services (SPNV) is some 7 percent by now. The growth of SPNV which amounted to 18 percent between 2002 and 2007 fell slightly short of the growth of freight transport. The specific SPNV prices , including the need for public subsidies, dropped by four percent from 2003 to 2006.

There is however no tangible competition at present in the long-distance passenger rail services (SPFV) and the rail infrastructure. Here, prices have increased overall; in the SPFV segment by a total of three percent between 2003 and 2006 and in the rail infrastructure by ten percent from 2002 to 2006. Also, in the SPFV segment, as opposed to the two other segments, no significant growth of transport services was noted.

Thus the working intramodal competition forms the basis for improving the intermodal competitive situation in the rail services. The Federal Network Agency has submitted proposals on how to strengthen or at least simulate competition in particular in the SPFV segment and the rail infrastructure.

First studies, however, show that competitive bidding in regional passenger transport services yields more cost-efficient results and increases the quality of service (frequency of trains). In freight transport a competitive share of 16 percent has been achieved. This intramodal rail competition supports the intermodal competition in favour of rail services and helps shift some of the transport off the road and onto the rail.

CHALLENGES OF REGULATION, TAKING TELECOMMUNICATIONS AS AN EXAMPLE

The example of telecommunications shows clearly that competitive effects resulting from regulatory measures are not necessarily conflicting with employment and investment aims.

Employment effects of liberalisation

It goes without saying that the liberalisation of the telecommunications market has had pronounced effects on the labour market. In this respect it is important to emphasise that the deployment of staff in different jobs is one of the basic elements of modern economies. Thus, the flexibility to deploy staff in areas where they can make the best contribution to meeting user requirements is certainly part of the desired effects of competition and promotes structural change and modernisation.

As a rule, a distinction has to be made between direct and indirect employment effects in the liberalisation of the telecommunications market. While direct effects refer to the effects within the relevant sec-

tor, indirect effects concern the economy as a whole.

Direct employment effects are marked in particular by two aspects. Firstly, the previous monopoly undertaking was forced, due to growing competition, to implement its efficiency potentials. This included the process of optimising operational flows, including new process innovations, on the one hand, and the establishment of future-oriented network infrastructures on the other. Secondly, the past ten years were characterised by technology boosts implying innovation potentials which, due to liberalisation, could be implemented far better than before. Investments have pushed forward progress as well as increased the capital stock and have thus allowed more and improved telecommunications services to be provided with less staff. This growth of productivity is typical in many branches - but especially pronounced in the telecommunications sector – and strengthens the competitiveness of the German economy as a whole.

Admittedly, such productivity gains and the process of exhausting non-realised efficiency reserves in monopoly periods have also led DTAG to cut back on staff, but they have also substantially increased the performance of the company and ensure low-priced and innovative products for its final customers. However, the positive effects of the price reductions resulting from the competitive and regulatory environment also affect the telecommunications market as a whole in a quite significant manner. Obviously, private and business customers are now widely using the funds saved in telephony for new telecommunications services, eg broadband Internet and mobile services. This has helped retain the (by far) major part of the jobs in the telecoms sector cut in the previous monopoly area. In the period from 1998 to 2007, the number of employees in the telecoms sector only dropped from nearly 222,000 to nearly 215,000. The competitors of DTAG have created more than 56,000 jobs since 1998.

Apart from the direct employment effects to be observed in the telecoms sector, there are also considerable indirect effects on other sectors of the economy. They basically result from the reduced price level for telecoms services noticeable due to the competitive situation. This reduced level leads to an increase in the real income of private households and in the value-added benefits for the companies requiring telecommunications services. Private households largely use the additional purchasing power consumptively, ie they buy more and different telecoms and other services. The higher value added for companies in turn flows to the disposable income of households by means of salaries and distributed profits. Additionally, domestic companies save costs and provide innovative telecoms products, improving their competitiveness overall. Ultimately, this will increase their export opportunities on the one hand and reduce the number of jobs to be shifted abroad on the other.

In conclusion, this means that price cuts and innovations in the telecoms sector which can only be achieved to this extent through competitive pressures in the market will benefit the economy as a whole,

strengthen the competitive situation of Germany throughout the world and make a non-negligible contribution to securing and creating domestic jobs. Specific business segments, eg as the online segment, would not have developed as they have without the relevant innovations in the telecoms market. Particularly important in this respect are business models like eBay, Amazon, Skype or StudiVz. eBay, for instance, started its business with 30 employees ten years ago and is meanwhile offering jobs to 15,000 employees worldwide (of these, more than 1,000 jobs are in Germany). Furthermore, all e-commerce segments have contributed to strengthening the logistics sector.

Regulation supports efficient investments

Another very important issue which has more recently been the subject of various empirical studies is the relationship between regulation and investments, more specifically the question whether there is a conflict of goals between regulation and investments. The studies for the telecoms sector focus on different subjects and come to different conclusions. They show for instance that a large number of factors (eg economic growth, labour productivity, capital market costs, gross national product per capita) are of significance to telecommunications companies seeking to make investments; these factors also include regulatory aspects. Partially under study is also the relationship between access regulation and investments in new and alternative infrastructures. From time to time it is assumed that strong access regulation adversely affects investments in alternative and new infrastructures and hence weakens inter-platform competition. The results of the studies should generally be considered with scepticism since they have substantial methodical deficiencies and fail to take vital aspects into consideration. Nevertheless, some basic ideas of the studies are correct, they are however mainly generally accepted ideas. One of the premises is that competition fosters investments. If good regulation promotes competition, there is no conflict between regulation and investments. Other empirical studies stress that regulation affects the investment measures taken both by the market-dominant undertaking and its competitors. They go on to say that the Federal Network Agency is responsible in particular for fixing the prices of wholesale products. Also of relevance is the result of a study arguing that investments of the regulated companies, as opposed to those of competitive companies, are virtually not dependent upon the depth of access regulation.

Competitors without any or without a complete network infrastructure of their own are granted access rights to the dominating, non-replicable network infrastructure at adequate prices determined for this access. These prices will then decide whether or not the investment incentives are appropriate. The experience gained in the past has shown that notably the price of the local loop is a central parameter in the support of intramodal and intermodal competition. Access regulation is typically governed by the criterion of costs of efficient service provision (KeL). This approach promotes efficient infrastructure investments and

is business model-neutral. In using the instrument of long-term efficient costs as a benchmark for prices, a competitive price is simulated. In this way, efficiency pressures are created in a still monopolistic market, with an increasing number of providers producing as efficiently as possible. The resulting diversity of services will create price competition, leading to lower retail prices. This means that there are no basic conflicts of goals between the aims of efficiency gains, more intensive competition and safeguarding the interests of consumers.

Scope of regulation to be reviewed regularly

Crucial in this respect is to regularly pose the central question of how much or how little regulation is required to foster competition and thus create new services, new market entries and investments in network industries. Choosing the correct scope of regulation is vital since both excessive and insufficient regulatory measures have negative implications for the entrepreneurial freedom of the regulated undertaking and its competitors and for the willingness of market players to make investments. Wrong regulation does not eliminate market failure, it leads to market distortions. We must look at each market and examine whether it should be subjected to ex ante or ex post regulation or released from regulation. This applies in particular with regard to the new section 9a TKG included in the Act, which also requires extensive consultation with the Federal Cartel Office (agreement) and the EU Commission (veto).

As a rule, obligations are only imposed on markets in which market entry is difficult for new providers due to immanent economies of scale of the market-dominant undertaking. With a growing dynamic competition regulation should be reduced as efficient competitors are increasingly capable, possibly in parts of the network infrastructure, of providing appropriate services based on their own infrastructures.

It is uncontested that the telecommuncations market is the most dynamic competitive market in the regulated network industries. The developments in this market prove that a step-by-step decrease in regulation is possible and appropriate. While regulation covered the total value-added chain in this market at first, experience has shown that, with today's growing competitive pressures, it appears adequate to restrict regulation to the wholesale markets. In retail customer markets, ex post rates regulation and the sector-specific or general control of anti-competitive practices meanwhile seem to be sufficient. Markets characterised by bottleneck infrastructures can be found in the telecoms sector, in particular in access markets. However, termination markets also require regulation under certain conditions.

Those critics conjuring up irreconcilable conflicts between regulation, entrepreneurial freedom and investments seem to forget that regulation is not effected arbitrarily or at the regulator's discretion, but only for special reasons, ie where market entry without regulation is difficult and competitive structures will not develop without regulatory measures being taken. Cartel

legislation is frequently insufficient, especially in network industries. Experience gained in the energy sector until 2005 has shown that abuse control under cartel legislation is not enough to create competition and that sector-specific regulation is required.

The decisions on where and how to effect regulation are formal and transparent procedures on the basis of the European legal framework, which are carried on and completed in consultation with the parties concerned and the interested public and are subject to review in courts. This applies to all sectors regulated by the Federal Network Agency.

Efficient access regulation and its implications

Rather than regulated access charges based on efficient costs special economies of scale and the related difficulties to refinance the huge infrastructure investments prevent investments in network industries, eg the local loop in the telecoms sector, from being made. Here, duplication of the networks would only be profitable in exceptions. On the other hand, access regulation in non-replicable areas has prompted competitors to make large investments in complementary markets. This is also confirmed by the experience gained in the past ten years which shows that, despite (or because of) the implementation of a host of network access options, both new companies entering the market and DTAG have made large-scale investments. It is therefore not valid to assume that competitors are only "free riders" in this area.

The following developments may serve as examples: firstly, a number of core network operators have gradually established a nationwide core network irrespective of far-reaching interconnection regulations. This network corresponds to all 474 interconnection points offered by DTAG. Secondly, after regulation of the unbundled access to the local loop (including the relevant charges to be paid), competitors have meanwhile access to some 3,300 locations of main distribution frames and invested in their own core and concentrator networks. They are therefore in a position to make full alternative one-stop-shop offers to two-thirds of the population. Additionally, resellers may choose from wholesale offers of DTAG and its competitors.

Deficits of investment studies

In most cases, the econometric models investigating the correlations between regulation and investments in the telecommunications sector only focus on intermodal competition. It is uncontested that the prospect of a temporary monopoly situation offers companies a major incentive for investments and even innovations. In markets without entry barriers, however, other competitors make sure that the monopoly of the forerunner will gradually disappear. In markets characterised by monopolistic network infrastructures this will not happen. Here, only sector-specific regulation following access regulation will facilitate market entry.

As far as we know at present, there are no empirical econometric studies furnishing scientific evidence that former monopol-

ists of the network sectors reduce or totally avoid investments in innovative network platforms as a result of access regulation, thus failing to increase the potential for innovative products. On the contrary, there are some clear indications that access obligations constitute a parameter stimulating the market-dominant undertaking to ensure efficiency-increasing network modernisation measures and other process innovations more rapidly on the one hand, and helping to exploit the established infrastructure more quickly and profitably due to the growing competition-induced market volume on the other.

Access regulation in one transport platform will always affect investments in alternative transport platforms. It cannot be assumed that the lack of intermodal fixed network competition in Germany is regulation-induced. There are historical reasons for the only limited significance of TV cable networks as a transport platform for broadband telecommunications services because cable network operators entered the competitive market for broadband customers with delay only. Furthermore, given the historical separation between transport network (network level 3) and access network (network level 4), it has been difficult for them to access end users directly, with negative effects on the process of marketing new products. However, the increasing competitive pressures between telcos have urged cable operators also in this area to provide bidirectional networks and enter the competition for triple play products.

This is also likely to be the reason why investments in the telecoms sector were lower in Germany until 2006 – like in all other countries with "telephone network monocultures". As long as decisions on charges in fixed networks are strictly based on the criterion of costs of efficient service provision, it can be excluded that such charges will cause distortions in alternative infrastructures. Instead, they will also produce efficiency pressures. Only excessive charges would promote excessive capacities, or charges lower than costs would prevent efficient investments, eg in the TV cable sector.

Clearly, the complex factors influencing investment decisions make it difficult to establish only monocausal links between regulatory and investment decisions. But the fact that, despite decreasing local loop charges in 2005 (the monthly leasing charge was reduced by nearly ten percent alone), fixed asset investments in TV cable networks increased by more than 50 percent in the following year, may serve as an indication that charges based on the costs of efficient service provision do not affect the investments in alternative platforms. TV cable network operators have been successful in doubling their market share in the strongly growing broadband access markets to some five percent by the end of 2007. Furthermore, despite lower local loop charges, competitors continue to invest in their own infrastructure in order to save these charges.

There is no empirical proof for or economic plausibility in favour of the position that the regulatory aims to intensify competi-

tion and promote investments in infrastructures in the telecoms sector are conflicting goals. Indices such as sector-specific infrastructure investments per capita which seem plausible at first sight are not suitable to prove correlations between regulation and investments. It should also be taken into account that, for welfare-economic reasons, investments can never be fostered per se. Crucial in this respect is the efficiency of investments, their quality and thus their contribution to improving capital productivity. Here, regulatory action is helpful rather than obstructive.

Infrastructures of network industries will also be of interest to investors in future

The introduction of next generation networks (NGNs) and the concurrent convergence of networks will entail extensive changes in the telecoms sector. The migration of narrowband circuit-switched telephone networks into IP-based NGNs will affect the telecoms sector at all levels of the value-added chain, ranging from the access level via core networks to the provision of services. It is to be expected that investments in next generation access (NGA) networks will increase the importance of economies of scale and scope in the access area, but the replicability of networks will be reduced at the same time. Depending on the technology used, this may add to the bottleneck nature of access networks and will possibly create permanent natural monopolies.

Regulation will continue to be required wherever bottleneck infrastructures and the danger of high sunk costs are prevailing. The top priorities of regulation will possibly be subject to change in future. In all network sectors it will be necessary to accompany innovative higher-risk investments by using the appropriate regulatory instruments. Adequate incentive mechanisms will have to be provided to promote innovations also in a regulatory environment. One of the instruments suited for this purpose is the risk-adjusted rate of return on equity which allows higher-risk investments to be made. Irrespective of this, it remains valid to say that appropriate efficiency benchmarks in rates regulation increase the efficiency pressures on investments and that competition helps to improve the process of refinancing investments at whole sale level. These are both effects which have a posi-tive impact on investors and their willingness to provide capital for investments.

Long-term regulatory approach and continuity of the framework conditions

Sector-specific regulation has been and is still required in the interest of sector- and overall-economic welfare considerations, but at the same time it is always necessary to regularly raise the question about the scope of regulation. Parallel to this, a debate about the framework conditions of regulation suited for this purpose is indispensable. Guidelines (eg to ascertain market dominance) and benchmarks (eg costs of efficient service provision, ex post and ex ante regulation) should be established on a long-term basis to give companies in regulated network sectors a maximum of planning security and continuity. Publication of the strategic plan and hearings will contribute to transparency and predictability.

Balancing the interests of all market players

The quality of regulatory decisions should be such that the measures taken are efficient, leaving scope for flexibility and minimising intervention in entrepreneurial decisions. To secure regulatory aims, the regulator must safeguard, and achieve an optimum balance between, the interests of all concerned. This means that the dominant company's capability to develop innovative power should be considered in the same way as the increase in competitiveness of alternative providers and the demand of end users for network services provided at a balanced price-performance ratio. It is of particular significance in all network-based branches of the economy that a balance between adequate charges and good network quality is achieved.

CHALLENGES OF REGULATION IN ALL NETWORK INDUSTRIES

The Federal Network Agency has become a competence centre for competition in network industries. In all network sectors the network infrastructure of the incumbent is a so-called essential facility. Functioning competition at the value-added chain levels of service provision, establishment of one's own infrastructure or production, procurement, trade and sales will only develop in these line-based sectors if competitors are granted access to the network infrastructure as the essential facility.

Progress has been varying according to individual sectors so far – in particular due to different legal regulations. Ultimately this means that, for instance in the telecoms sector, first steps of deregulation (eg reduction of rates regulation in the end user area) have already been made whereas, in the rail sector, regulation should in our view even be further strengthened.

The core problem of regulation in the network sectors is network access regulation and the review of and, if applicable, fixing of prices. As a rule, the right to network access cannot be enforced by means of abuse control under cartel legislation. A proactive approach is indispensable in nearly all cases.

An important function in all sectors is to shape the details of price-independent access conditions. The decisions on network access often require a proportionality test to assess the extent to which the incumbent has to provide the capacities available or take additional extension measures to grant competitors access to the market. In the electricity network, for instance, non-discriminatory access is likely to lead to increased power plant investments, and in the rail sector, to investments in rolling stock materials.

In respect of rates regulation it is to be noted that for instance the share of the cost of capital is very high in all sectors. Since it will be crucial in future to apply appropriate regulatory instruments to higher-risk innovative investments, a rate of return on equity in line with the risk incurred will more and more gain in importance. Ultimately, the balance between the requirements for quality and security of the network on the one hand and appropriate charges for its use on the other will have to

be ensured in all sectors. Here, regulation has to make its contribution and resolve the tensions between the regulatory aims – safeguarding the interests of competitors and consumers, promoting innovations and securing investments.

At international level, discussions are at present focusing on the crucial issue to what extent we need European coordination and harmonisation and which measures are necessary to ensure the required harmonisation most efficiently and with as few bureaucratic hurdles as possible.

Remarkable success has been achieved in parts of this field in the last few years due to cooperation of the European regulators. Whether the establishment of new agencies or extended intervention rights of the Commission are justified is a question that is being discussed and rightly disputed at present. Here, different approaches are likely to be necessary and appropriate in the individual sectors. The Federal Network Agency participates in these discussions, again favouring an approach applicable across all sectors which, from its perspective, will contribute to straightening out matters.

Consumer protection and advice

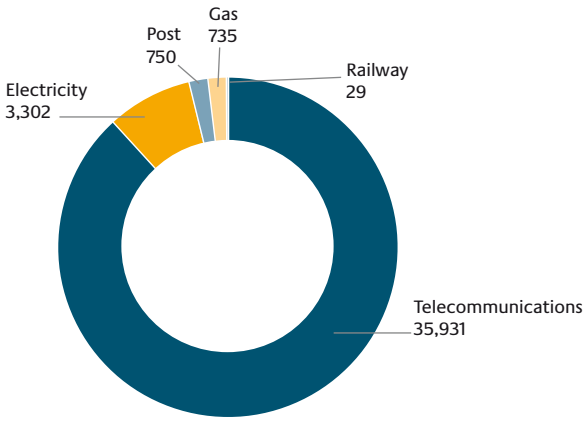
Consumer Advice service

The Consumer Advice service and the dispute resolution service of the Federal Network Agency have successfully continued their work in 2007, offering expert advice in the fields of telecommunications, energy, post and railway; they have thus firmly established themselves as a long-term central point of contact on the one hand and a conciliation body for consumers on the other.

With the entry into force of the Telecommunications Legislation Amendment Act (TKÄndG) of 18 February 2007, the Energy Act (EnWG) and the amendment of the General Railway Act (AEG) the Federal Network Agency has been offering an extended Consumer Advice service for telecommunications, electricity and gas customers as well as for railway users. Long-term experience in offering advice to consumers in the core areas of telecommunications and post enabled the Agency to set up a Consumer Advice service in these areas within a very short period of time.

The total of enquiries and complaints received by the Federal Network Agency in 2007 can be broken down as follows:

Enquiries and complaints, broken down by different sectors:



Total number of enquiries and complaints: 40,747

In 2007, the Consumer Advice service received a total of 40,747 enquiries and complaints. Of these, 25,212 were received by telephone, 5,272 by letter or fax, and 10,263 by electronic means.

TELECOMMUNICATIONS

Most of the information requested by consumers in enquiries and complaints on telecommunications contracts concerned, besides notices of termination and contractual violations, the terms and conditions of contract. Complaints continued to focus on poor customer service and bad business conduct of telecommunications companies in terms of rectifying problems, and in particular their failure to adhere to contractually agreed terms and conditions with regard to charges billed, periods of notice and provider switching problems. Many complaints referred to order confirmations of telecommunications companies, assuming contractual terms and conditions which were disputed by customers (slamming).

There is still a large number of enquiries and complaints about problems relating to difficulties in obtaining digital subscriber lines (DSL). Consumers lament the fact that DSL is not available in certain regions and complain about the long waiting time in switching a DSL provider, delays in the activation of their DSL port as well as bundling with their telephone line. The Agency will continue to regulate the market and the spectrum in such a way as to facilitate the provision of broadband services by market participants.

The number of complaints about calls charged in bills, but disputed by customers is declining. Most of these complaints concerned premium rate numbers (0900 and 0137 numbers, premium text messages) and data services. Bills were mainly disputed for contractual or civil law reasons (non-receipt of bills, no access to online portals, default in payment, cancellation of direct debit arrangements, reminders, collecting arrangements entailing additional costs, wrong tariffs, non-payment of refunds or delays in granting promised refunds, deficiencies in the provision of services ordered, false customer data, etc).

Unsolicited direct marketing and prize promises made in calls, text messages, faxes or e-mails continued to account for a large proportion of consumer complaints. It was noted that in particular unsolicited direct marketing by telephone calls increased substantially as compared to previous years. This is a great nuisance for consumers. In contrast to text message, fax and e-mail spamming it is much more difficult for subscribers to furnish evidence of abuse as there is no written document available for proof. If you wish to read more about the combat of spam, please see page 35.

Frequently, providers also use unsolicited direct marketing calls to change tariff, preselection and contract arrangements against consumers' will.

Numbering enquiries increased and became more complex because customers were more frequently willing to switch providers. The main enquiries and complaints concerned number allocation, portability and reallocation, accessibility or non-accessibility, network identification and porting fees following provider switching.

In respect of the new consumer protection regulations of the Telecommunications Act (TKG) which entered into force on 1 September 2007 the Agency answered in par-

ticular queries regarding entries in the black list for collect calls, the determination of charges for 0180 shared-cost services and 0137 mass calling services, price indication, display or announcement obligations in the case of special service numbers and information requests (eg name of the service provider behind the number in the bill).

Under section 45 TKG the legislator is required to safeguard the interests of the disabled. For this purpose, a text and video relay service is to be supplied for deaf and hearing-impaired persons. The Federal Network Agency will determine the demand, in terms of extent and degree of coverage, after having consulted the associations and companies concerned. It is also authorised to impose obligations on companies to secure this service.

The Agency has established contact with Deutsche Telekom AG (DTAG) and the German Society for Deaf and Hearing-impaired Persons (DG) to prepare its determinations. DTAG and DG both work on the Tess GmbH pilot project (T-Sign & Script) aiming to establish such a text and video relay service in Germany. The Agency has continually monitored the progress of the project and, since early August 2007, provided information on the Tess project in informal talks with the provider associations BITKOM, BREKO, VATM, ANGA, Deutscher Kabelverband and eco. In addition, the legal considerations have been discussed and an ambitious timetable presented. This optimum timetable provides for a smooth transition of the project into effective operation on 1 January 2009.

Consumer interests at European level were safeguarded by the Federal Network Agency's cooperation in the Independent Regulators Group (IRG) and European Regulators Group (ERG), the End Users Working Group and the Tariff Transparency International Roaming Working Group. The year 2007 saw the provision of a report focusing in particular on the level of regulation in the fields of emergency calls, number portability, tariff transparency, service quality and cross-border disputes in the use of Voice over IP (VoIP) services.

The EU Roaming Regulation entered into force on 30 June 2007. Subject to regulation are the wholesale and retail charges for international calls from mobile networks. The Regulation also determines provisions governing the transparency of retail charges. The Agency's Consumer Advice service monitors compliance with the provisions, for instance, by making formal requests for information. The information received is the basis for answering the question whether or not companies have implemented the Regulation's requirements for introducing a Eurotariff and for distinguishing between existing roaming customers with or without special tariffs as provided for by law.

Extensive market research (monitoring) was conducted in late July/early August 2007 to study the introduction of the EU Regulation Eurotariff in Germany. This research covered a written request sent to 22 German providers of international roaming services and the review of customer data supplied by these providers online

and in their sales centres. Finally, the Agency analysed the consumer enquiries and complaints about this subject. The number of consumer complaints about international roaming received by the Consumer Advice service is insignificant. This is a further sign indicating that the Regulation has been implemented successfully so far.

ENERGY

July 1, 2007 was an important date for all European consumers in the energy sector. With a few exceptions only, the energy markets were opened to all energy consumers in all EU Member States. However, the far-reaching liberalisation of the energy markets only marks the beginning of the process of creating an overall competitive energy market. The developments in Germany where the energy markets have been fully liberalised since 1998 clearly show that new suppliers of energy cannot enter and survive in the market before having established appropriate structures.

The year 2007 saw a number of changes in the German energy market. The approval of the electricity prices, for instance, as provided for by the Federal Tariff Code for Electricity (BTOEltV), has been abandoned. The same applied to the transitional regulations governing the implementation of the Basic Supply Ordinances for Electricity and Gas (StromGVV, GasGVV). Due to the legal amendments customers' needs for information were as high as ever. In addition to individually responding to the large number of customer enquiries, the Consumer Advice service of the Federal Network Agency has used this occasion to extend its online information offer. Also, the Agency has published a leaflet giving information on "Supplier switching in the electricity and gas sector".

In 2007, the Consumer Advice service received more than 4,000 enquiries and complaints from gas and electricity customers. The delays/deficiencies in supplier switching were the focus of the complaints received both in the electricity sector (17.4 percent) and in the gas sector (18.8 percent). In this context the following questions were frequently asked: why does the supplier switching process take such a long time, why is it impossible for the new supplier to provide energy, and why is supplier switching impossible if specific equipment is used (eg thermal heat pumps, storage heaters)? Also, the increase in retail prices for electricity (10.6 percent) and for gas (14.1 percent) was of great interest to final customers.

POST

The customer protection tasks which the Federal Network Agency is able to perform in the postal sector have been laid down in the Postal Act (PostG), the Postal Universal Service Ordinance (PUDLV) and the Postal Services Ordinance (PDLV). This is why they are primarily addressed in the chapters "Universal service" and "Dispute resolution".

The number of citizen enquiries and complaints in the postal sector was slightly lower than in 2006. This is due to the fact that, in 2007, as opposed to previous years

in which many customers complained about the closure of postal facilities, the decrease in the number of postal agencies operated either by DPAG or by other staff virtually came to a stop. In 2007, the number of fixed-location facilities was in line with the requirements specified in the PUDLV or even in excess of these requirements.

Many queries addressed matters beyond the Agency's regulatory functions, eg financial services provided by the Postbank or legal consumer protection regulations laid down in the Postal Act and the relevant ordinances, ie provisions determined by the legislator or the issuer of the ordinances. In such cases the Federal Network Agency could only make general comments.

Among the consumer protection issues dealt with by the Agency is most certainly its function to comment on particular universal service issues in its Activity Report presented to the legislative bodies every second year. As in previous years, the Agency recommended a number of PUDLV amendments to the legislative bodies in its 2006/2007 Activity Report. Part of these changes are mere clarifications and more detailed explanations of the ordinance text. Core elements are the details of the self-commitment voluntarily added by DPAG to the regulations of the PUDLV, which however expired at the end of 2007.

And finally, with a view to safeguarding consumer interests, it is also urgently required to give due regard to the process of changing from the monopoly to the competitive environment. Within the scope of its remit the Federal Network Agency has done preliminary work and included this subject in its 2008 Strategic plan (cf pages 209/210).

RAILWAY

The railway sector, which was newly incorporated in the Customer Advice service in 2006, received only a small number of enquiries. Most of the enquiries addressed the Agency's responsibility in particular in the fields of pricing and timetable issues, customer service and handling of customer complaints. The Federal Network Agency ensures under its remit that consumer information on deficiencies is passed on to the companies concerned and the subject-matters of complaints are eliminated.

Universal service

Universal services are services which are generally deemed indispensable. In the telecommunications sector Deutsche Telekom (DTAG) is at present providing the universal services defined in the Telecommunications Act. In the postal sector they are provided by a number of market players and by Deutsche Post AG (DPAG) which has been required by law to do so.

TELECOMMUNICATIONS

In the year under review, the Federal Network Agency received numerous enquiries and complaints from customers about their "right to access to the local loop". Specific problems arising within the framework of legal provisions were solved in agreement with the parties concerned.

In the process of reviewing the current package of directives the European Commission proposed that, with the publication of a Green Book on universal services in 2008, in-depth discussions should be initiated on the universal service directive as a whole. In this context it is for instance planned to discuss the balance between sector-specific and general horizontal consumer protection regulations. Another issue of importance is the question whether a common European-wide universal service standard can be implemented and to what extent private companies can be required to pay for social obligations (cf COM(2006), 334 of 29 June 2006). Within the scope of its review of directives the European Commission suggested to separate the requirement for granting "access to the local loop" from the requirement for "access to telephone services". This will make the future review of universal service obligations much easier (cf COM(2006), 334 of 29 June 2006; cf COM(2007), 697 final of 13 November 2007). The Federal Network Agency actively participated in the announced discussions at European level and will continue to do so in future. Of significance at national level in the period under review was in particular the debate about the scope of universal service and the issue of possibly including access to broadband services.

POST

The Federal Network Agency confirmed again – in agreement with the Federal Ministry of Economics and Technology (BMWi) and the legislative bodies – that, in the year under review, universal postal services were supplied appropriately and adequately altogether. At the end of the period under review, the number of fixed-location facilities (12,617) was still in excess of 12,000, the figure provided for by the PUDLV. The same applied to the number of fixed-location facilities operated by DPAG's own staff. They totalled 5,440 as compared to 5,000 facilities specified by law. In its self-commitment DPAG has undertaken to operate some 108,000 letter boxes nationwide until 31 December 2007. This figure was even exceeded in 2007; there were 110,530 letter boxes at the end of the year.

Once again, DPAG eliminated the deficiencies reported by the Agency in 2007 without delay. It was therefore not necessary to respond to deficiencies officially by imposing fines. Of particular importance is that DPAG dealt with consumer complaints resulting from its self-commitment just as carefully as with complaints relating to the PUDLV.

Special control of anti-competitive practices

Consumer protection in the telecommunications sector has once again been strengthened by improving the relevant provisions. Among other things, existing price indication and announcement obligations have been extended beyond premium services to include further categories of service.

COMBATING NUMBER ABUSE AND SPAM

Overview

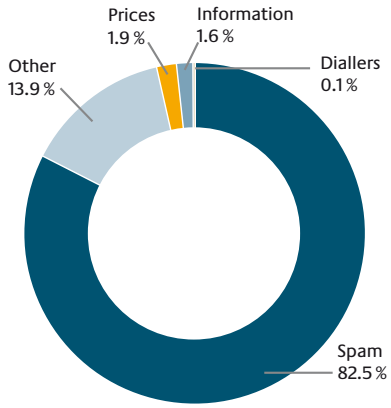
In the period under review, the Federal Network Agency was tasked to combat number abuse and spam under the TKG. The purpose is to strengthen consumer rights and not to give companies acting illegally a competitive edge through breach of law. Section 67 TKG empowers the Federal Network Agency to intervene in cases where it has reliable information on unlawful number use, in particular in order to prevent further abuse taking place. Under section 67(1) sentence 1 TKG the Agency may issue orders and take other appropriate measures to secure compliance with the legal provisions and with the conditions it has imposed in relation to the allocation of numbers. This can include issuing a warning, withdrawing the number in question or ordering the network operator to deactivate the unlawfully used number. The Agency may further require the bill-issuer not to bill and collect for particular calls or may even prohibit certain business models.

In the period under review, the Federal Network Agency dealt with 36,827 enquiries and complaints about number abuse and spam submitted in writing or by telephone. As compared to 2006, this was a reduction by 5,384 which, last but not least, was due to the intensive combat of abuse by the Agency.

Total of complaints about number abuse in 2007 as compared to 2006

With regard to the clearly enhanced consumer protection regulations laid down in sections 66a ff TKG which entered into force on 1 September 2007 it remains to be seen to what extent the regulations will be complied with and how the volume of complaints will develop in 2008. The relevant enquiries and complaints received in writing can be broken down as follows:

Enquiries and complaints about number abuse and spam received in 2007



The Federal Network Agency investigated the consumer complaints received and, in addition to the pending administrative proceedings of previous years , instigated further 1,014 proceedings. Twelve of these deal with business models of individual providers deemed unlawful and prohibited by the Agency. The prohibitions regularly refer to advertising business models violating section 7(2) of the Unfair Competition Act (UWG). The Agency has prohibited a total of 32 business models of this type.

In addition to combating abuse that is actually evident, the Agency always observes the market in order to become aware of possible new abuse scenarios. Some companies have challenged a number of steps taken to combat number abuse in court. However, in none of these cases has a decision of the Federal Network Agency been reversed by a court.

Enhanced consumer protection regulations of the Telecommunications Act

The enhanced consumer protection regulations of sections 66a ff TKG took effect on 1 September 2007. The existing regulations which had largely referred to 0190 and 0900 numbers were supplemented and extended to other categories of service. This also created the legal framework in the TKG for quick and flexible responses to future changes in the telecommunications market and for improvements of the market opportunities for new and innovative telecommunications services. For this purpose the legislator has defined various categories of service for the first time. The most important innovations can be summarised as follows:

In addition to the already existing price indication obligation for premium services, providers are required to inform customers of the gross price to be paid for any type of offer or advertisement in connection with directory enquiry, mass calling, short code or innovative services. Now the price announcement obligation applies not only to premium services, but also to voice directory enquiry and short code services, and to innovative services costing more than €2 per minute or per call. Where a directory enquiry service call is to be reforwarded, the provider has to announce the price to the subscriber prior to reforwarding the call. Where short-code data services are used, eg one-time ring tone order by text message for a mobile phone, the gross price – if higher than €2 per use – must be displayed before the chargeable message begins. Also, the end user has to acknowledge receipt of the price information. According to section 66g TKG the end user is not required to pay charges if the specific consumer protection regulations set forth in sections 66a to 66i TKG are violated. Section 66l TKG is another new and vital regulation stipulating that the provisions of sections 66a to 66k TKG are also applicable in case they are bypassed by other measures.

Upon the entry into force of sections 66a ff TKG the Federal Network Agency issued a total of eight related ordinances and communications published in its Official Gazette. Amongst other things they address issues, such as exceeding price caps, cutting connections by means of identification procedures and deviating from the price indication obligation for short code data services provided in the public interest, and they give further explanations interpreting the provisions on price indication, price announcement and price display.

Price indication/price announcement

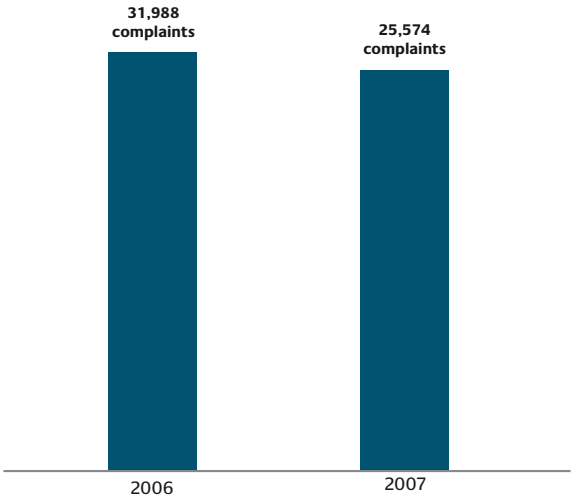
Under section 66a TKG, numbers of premium, directory enquiry, mass calling, shared cost, innovative and short code services are subject to price indication obligations, and under section 66b TKG premium, directory enquiry, voice short code and mass calling services are subject to price announcement obligations. Any infringement of these obligations constitutes number abuse and prompts the Federal Network Agency to intervene. Complaints of this nature were again received in the period under review, in response to which the Agency issued a warning or deactivated the number in question.

It is interesting to note that the Agency receives a relatively small number of complaints about price indication violations. In spite of this fact, other complaints, eg about spam, that are received and investigated frequently also reveal violations of sections 66a ff TKG. All established violations of legal regulations are fined regularly in administrative proceedings, ie both violations of spamming regulations set forth in the UWG and violations of TKG regulations such as wrong pricing information. If, for instance, a text message containing unsolicited direct marketing supplies wrong pricing information, this was and is deemed a violation of section 66a TKG and is fined additionally to the violation of the UWG. Also, price indication violations are the reason or additional reason for deactivation orders or other steps taken by the Agency.

Combating spam

The volume of complaints about spam relating to numbers decreased in 2007. In the period under review, the Federal Network Agency received a total of 25,574 complaints concerning spam sent by fax, telephone and e-mail. Telephone spam includes in particular spam sent by text messages, so-called prize promises and "one-ring fraud" whereby calls are made to a telephone number and broken off after just one ring, prompting the called party to ring the caller by pressing the automatic return call button and dialling the expensive number displayed. Constituting an infringement of the UWG, spam is deemed unlawful number use in accordance with section 67(1) TKG. Additionally, numbers of directory enquiry, mass calling, innovative and premium services may no longer be transmitted as numbers of calling parties with effect from 1 September 2007.

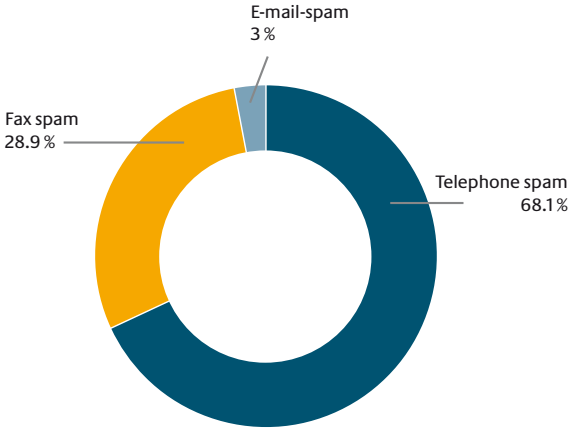
Total of complaints about spam in 2007 as compared to 2006



So-called "press button models" are a special form of illegal advertising for prize promises. Subscribers find 0900 numbers on their telephone bill without having dialled them. The items appear on the bill after users have been called and pressed a specific combination of buttons on their phone during the call. Here, infringements of the UWG and sections 66a ff TKG have been established among other things because number blocking measures taken by network access operators at the request of customers are frequently bypassed. In 2007, the Agency has already initiated and carried on a number of administrative proceedings against such providers.

In the period under review, the Agency received 25,574 complaints about spam which can be broken down as follows:

Complaints about spam, broken down by telephone, e-mail and fax spam



Total number: 25,574

In 2007, the Federal Network Agency has further intensified its combat of telephone spam. In 2006, a whole bundle of measures, including bans on billing and collecting for unlawfully used numbers were imposed not only on the core network operator, but also on 80 access network operators and service providers. This administrative practice was continued in 2007 on a large scale. The reason for increasing these measures was the massive rise in one-ring fraud calls and the resulting consumer complaints. The aim was and is to make this form of number abuse less attractive economically and to reduce spam substantially. Last but not least, the decreasing number of complaints about spam in 2007 was due to the large number of countermeasures taken.

In the period under review, the Agency continued to fight the unlawful use of short code numbers for mobile phones, so-called premium text message numbers, which were the subject of unlawful advertising sent in non-requested text messages. In respect of these short code services, both violations of the UWG and of price indication obligations under the TKG were fined.

Details of the steps taken by the Agency to combat spam-related abuse, including the bans on billing and collecting for particular calls and a list of the numbers that have been deactivated, can be found on the Agency's website. The list is available at www.bundesnetzagentur.de under Verbraucher>Rufnummernmissbrauch-Spam-Dialler.

Information

Even upon expiry of the 0190 numbers on 31 December 2005, the Federal Network Agency answered 187 enquiries in the period under review concerning the last party responsible for a particular 0190 number in accordance with section 66h(1) TKG (previously section 43a(1) TKG). The number of responses to requests about 0900 numbers given in accordance with section 66h(2) (previously section 43a(2) TKG) totalled 379.

Administrative fines proceedings and charges in accordance with section 67(3) TKG

In respect of diallers, spam, price indication and price announcement obligations 39 administrative fines proceedings were initiated in the period under review. A large number of these are still pending. Forty-five notices of administrative fines were issued, thirty-nine of which are final or, upon appeal and transfer to the competent court, have become non-appealable due to the court's decision. The fines determined in the non-appealable notices totalled €87,600.

The violations focused on missing or insufficient price indications in the provision of or advertising for 0900 premium services. In addition, a number of infringements on account of missing or insufficient price announcements in the relevant services were ascertained and fined. The Federal Network Agency identified only a very small number of violations due to the use of non-registered diallers. In accordance with section 67(3) TKG all cases giving reasons to suspect a possible criminal offence were passed on to the competent public prosecutor assuming exclusive jurisdiction as from the date of transfer.

ACTIVITIES OF THE RADIO MONITORING AND INSPECTION SERVICE

Of great significance to consumer protection is the radio monitoring and inspection service (PMD) which, with its fixed and mobile measuring equipment, secures the efficient and interference-free use of the spectrum nationwide. The work of the PMD is based on the Telecommunications Act (TKG), the Electromagnetic Compatibility Act (EMVG), the Radio Equipment and Telecommunications Terminal Equipment Act (FTEG) as well as the Constitution and Convention of the International Telecommunication Union (ITU). Its scope of activities includes interference elimination, frequency usage monitoring, measurements related to market surveillance, measurements of electromagnetic fields and the environment (EMVU), identification of unauthorised spectrum usage and international cooperation.

Interference investigations

Clearing up cases of electromagnetic and radio interference (interference investigations) was and is one of the core activities of the PMD. This includes in particular safety-related radio services and applications used in air travel, by emergency organisations (BOS) or other public bodies.

Depending on the interference case, fully equipped measuring vehicles and many different specialised vehicles are used alongside stationary measuring facilities and direction-finding systems in order to determine both domestic and foreign sources of interference.

Nearly half of all interference cases processed concerned radio and TV broadcast receivers. All other cases mainly related to interference caused to transmitting and receiving stations of other radio services and, to a smaller extent, to electrical or electronic equipment and devices.

More than 10 percent of all interference cases were reported in the aeronautical service, the major part of which referred to frequencies used by emergency services. As a rule, such cases have top priority in processing. Only a few instances of interference concerned the aeronautical radionavigation service.

More frequently than ever, operators of UMTS networks in conurbations complained about interference to their base stations, leading to non-compliance with the quality parameters of their networks. PMD investigations finally revealed that satellite receivers with partially insufficient attenu-

ation of the interference radiation and, increasingly, cordless telephones (DECT phones) which, due to faulty equipment, operate on UMTS frequencies for reception, were the sources of interference. Those causing the interference had to eliminate the sources of interference.

Interference processing and elimination at big events is a special PMD function. In line with the public interest the PMD is present on spot for the whole duration of the event and can investigate the source of any interference immediately, ie prior to, during or after the event. Due to prompt processing the PMD can clear up a high percentage of interference cases. This contributes to ensuring smooth radio and TV broadcasts of important events which millions of people throughout the world can thus follow and take a lively interest in. Equally important is that the emergency and security organisations present can communicate without any problems. The service number 0180 3 23 23 23 (fixed network charge: 9ct per minute) which can be called nationwide and was provided years ago solely for the purpose of reporting radio interference is used very often. In 2007, 546,000 calls were recorded.

Market surveillance in Germany under the EMVG and the FTEG

The Federal Network Agency conducts tests on electrical products that are filtered out from the market and tested by the PMD for compliance with the technical requirements in specially equipped test laboratories and in an accredited test laboratory. The legal basis for these tests are the EMVG and the FTEG. The tests cover compliance with CE marking regulations, the plausibility of the EC declarations of conformity issued by manufacturers, compliance with EMC protection requirements, compliance with the essential requirements under the FTEG, instructions for the operation of equipment for its intended use and possible restrictions on the operation of radio equipment and telecommunications terminal equipment (TKEE).

In 2007, a total of 12,700 market surveillance activities were carried out by the Federal Network Agency. 7,310 series/single devices were tested using measuring equipment or visually inspected. Of these devices, 5,984 came under the EMC Directive and 1,326 under the RTTE Directive. Additionally, 57 products were tested for compliance with the essential requirements for device and product safety in 2007. A fault rate of 51 percent was found. The focus was on radio sockets which had burnt after thermal heating and were thus a substantial danger to life and limb. With regard to CE marking and the declarations of conformity, defects under the EMC Directive were found in 81 products (1.4 percent of the products tested) and defects under the RTTE Directive in 241 products (19 percent of the products tested). Furthermore, 1,475 series and 90 single devices were tested using measuring equipment. In these tests, 435 series devices and 36 single devices were faulty, ie 29.5 percent of the series tested and 40 percent of the single devices did not meet the prescribed requirements. The high percentage of faulty products can be explained by the targeted samples taken, which focused on those devices thought most likely to fall short of the require-

ments. In the course of 2007, some 300 sales bans were imposed in accordance with the EMVG and the FTEG. However, this breakdown does not permit conclusions to be drawn with regard to the market as a whole. In 2007, 88 providers offering 1,079 non-compliant products were ascertained by online search and their online offers terminated.

The national authorities of the Member States that are responsible for frequency management must be notified, in accordance with the FTEG, of radio equipment operated at frequencies which have not been harmonised Community-wide, at least four weeks before it is to be placed on the market. The Federal Network Agency provides the parties seeking to place equipment of this kind on the market with information about the type of frequency assignment required for the operation of the radio equipment (general or individual assignment) and, where applicable, notifies them of any restrictions that may be in place on the use of particular frequencies in Germany. The Federal Network Agency received 2,027 communications in 2007.

Electromagnetic compatibility (EMC) and the environment

The Federal Network Agency monitors compliance with the limits for the protection of persons from electromagnetic fields of radio equipment by carrying out repeated measurements. For this purpose the PMD measures the high frequency spectrum at points selected throughout the country and evaluates the results. In accordance with the legal telecommunications regulations a fixed radio transmitter having an equivalent isotropically radiated power (EIRP) equal to or greater than 10 watts may only be taken into operation if the limits for the protection of persons from electromagnetic fields are complied with. The Agency determines and includes in the site certificates the safety distances to be generally observed throughout the country in accordance with the relevant standards. Site certification is the core part of the Agency's modular EMF monitoring procedure.

Password-protected portal allowing site certificates to be transmitted to municipalities and authorities of the German federal states

Municipalities and federal state authorities may retrieve from the Internet site certificates issued within their remit, using a password-protected portal of the EMF database. There is a total of 2,379 registered users for this access. Since introduction of this service, 66,960 site certificates have been viewed so far.

EMF database

The interested public makes intensive use of the data platform. After entering post codes and/or towns or cities, users may view map sections containing both the local radio equipment requiring site certificates and locations where EMF measurements are taken. Since the EMF database which is accessible to anyone went into operation, more than 10 million searches have been registered.

Automatic measurement system

The Federal Network Agency's automatic measurement system was taken into oper-

ation on 19 March 2007. A total of 12 mobile monitoring stations record the local field strengths round the clock, transmitting them to the EMF database fully automatically. The evaluated measuring results can be retrieved from the database. The time needed between measurements and display of the measuring results is very short. People interested can retrieve local radio equipment immissions on a quasi-real time basis. Since the system went into operation, the mobile monitoring stations took measurements at 33 different locations. More than 353,000 measurement cycles were carried out and the relevant data files transmitted to the EMF database for evaluation and display of the measuring results (as of January 2008).

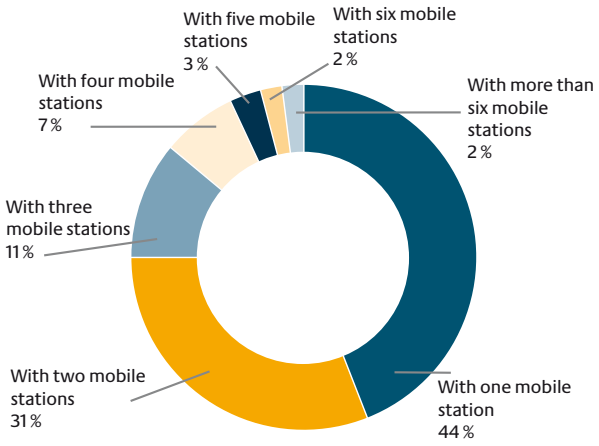
Series of EMF measurements

In accordance with the Ordinance concerning the Controls for the Limitation of Electromagnetic Fields (BEMFV) the Agency is required to review the functionality of site certification by carrying out regular series of measurements. The determinations are made in cooperation with the Environment Ministries of the German federal states. Within the scope of the series of EMF measurements, local immission measurements have been taken at 9,514 measuring locations nationwide so far. The evaluated results are available in the EMF database.

Number of site certificates issued

In the period from 1 October 2006 to 30 September 2007 the Federal Network Agency issued a total of 14,299 site certificates. In the same period 3,026 devices of radio equipment requiring site certificates were tested by the Federal Network Agency.

Shared use of mobile equipment locations



Space services

Also available to the PMD is a special earth station for space service measurements at Leeheim (between Darmstadt and Mainz) to monitor frequency usage and process radio interference. A source on earth causing interference to the satellite uplink also causes interference to the downlink, ie the satellite-earth link. Such cases of interference are localised and clarified by the Federal Network Agency.

DATA PROTECTION IN TELECOMMUNICATIONS AND POST

The privacy of telecommunications and post as well as the relevant other data protection regulations are significant aspects of consumer protection. It is the Federal Network Agency's task to secure compliance with the relevant standards. The strict TKG and PostG provisions are intended for commercial

service providers and give in-depth details about the customers' right to secrecy of the communication itself, but also of the framework within which communications take place. In spite of the far-reaching market liberalisation providers of telecommunications and postal services have not been relieved from the obligation to ensure the privacy of telecommunications and post. Against this background the Federal Network Agency informs service providers and citizens of legal data protection regulations and secures compliance with the standards to the benefit of customers.

In 2007, a number of providers of telecommunications services even established contact with the Federal Network Agency prior to the introduction of new services in order to offer their services in accordance with data protection regulations right from the beginning. Added to the legal control measures (notably information and advice) was the technical control of companies to increase security in telecommunications. In this context the Agency examined 107 security concepts and carried out 54 on-spot checks in the period under review.

In the postal sector checks relating to the secrecy of post and postal data protection regulations were regularly carried out throughout the country without any specific cause in the year under review. In 2007, 130 test reports were provided. It was finally established that, in most cases, great importance was attached to the legal and technical requirements of data protection. All the deficiencies established were eliminated. In 2007, the good cooperation between the Federal Network Agency and the Data Protection Commissioner was continued, the aspect of freedom of information ensured, and in particular the measures taken in all important individual instances were harmonised with a view to achieving effective data protection.

Dispute resolution

End users may ask the dispute resolution service of the Federal Network Agency for conciliation in telecommunications and postal disputes. Customers are making increasing use of the online procedure introduced in March 2006.

Under section 47a TKG subscribers may ask the Federal Network Agency for conciliation in a dispute with a provider of publicly available telecommunications services. Under section 10 PDLV the same applies to postal customers if rights ensuing from the PDLV have been violated. For this purpose the Agency has set up a dispute resolution service for each of these two sectors.

Applications for dispute resolution will however only be admitted if applicants can claim violation of their own statutory rights under the TKG or the PDLV, if no judicial proceedings or other dispute resolution procedures concerning the same matter in dispute are pending, and attempts to reach agreement with the defendants have been made beforehand. The telecommunciations dispute resolution service of the Agency carries out these procedures in accordance with the amended rules of procedure (VFOSchli2006) published in the Agency's Official Gazette of 22 February 2006 as Communication No 77/2006, in conjunction with section 47a TKG.

As a rule, dispute resolution is carried out in writing. It is also voluntary for both parties. Hence follows that the procedure is to be regarded as closed as soon as one of the parties refuses to cooperate. The parties are heard with the aim of reaching amicable agreement. Based on the statements made by the two parties on the case, the Agency may make a proposal aiming at the settlement of the dispute. The outcome of the procedure will to a large extent depend on the parties' willingness to clarify the facts and to compromise in order to reach a solution. Dispute resolution is always subject to fees. The level of the fee is determined in accordance with section 145 sentence 2 TKG, as provided for by section 34(1) of the Court Costs Act (GKG), or pursuant to section 18(2) PostG, the minimum fee is €25 and increases in line with the value of the matter in dispute. The fee is payable once the defendant has agreed to take part in the dispute resolution procedure.

TELECOMMUNICATIONS

With the entry into force of the Telecommunications Legislation Amendment Act on 18 February 2007 the regulations which had been part of the Telecommunications Customer Protection Ordinance (TKV) so far, were integrated in the TKG. Since the Amendment Act became effective, dispute resolution is subject to section 47a TKG.

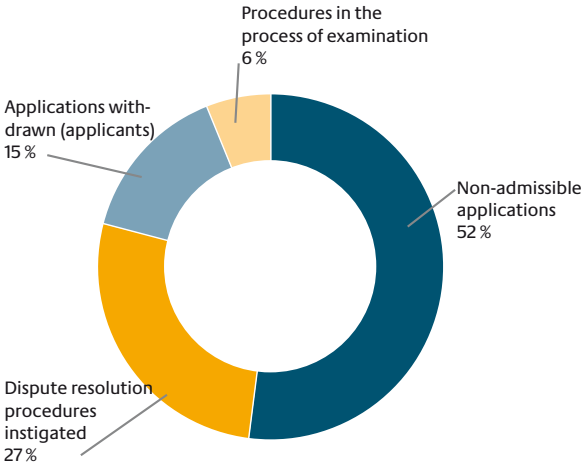
Under section 47a TKG a subscriber may apply for a dispute resolution procedure to the Agency if he argues with a provider of publicly available telecommunications services as set forth in section 47a(1) TKG about the question whether or not the provider has fulfilled an obligation as provided for by sections 43a, 45 to 46(2) and section 84 TKG. With the amendment of the Act, consumer protection has been optimised and extended by customer rights which are now subject to dispute resolution (eg section 43a TKG referring to the constituent parts of contracts). The aim of the procedure is to reach amicable agreement. Based on the parties' statements, the Agency makes a proposal aiming to reach a compromise between the parties concerned. The result of dispute resolution will basically depend on both sides' willingness to reach a solution.

In 2007, the dispute resolution service was called in to conciliate on 604 occasions. The volume of applications thus tripled in the last two years. The values of the matters in dispute amounted to some €81,930. In addition, applicants instigated 386 procedures referring to matters in dispute without any direct monetary values. Two hundred thirty-nine further petitions were submitted to the dispute resolution service, to which the Agency responded by giving advice on and assistance in the possible next steps to be taken or by giving support, in direct contact with the providers, in reaching solutions. Since introduction in March 2006, the online procedure allowing applications, correspondence and enquiries about the state of the case to be handled online, has been increasingly used. As much as 40 % of the applications were submitted online in 2007. However, companies (defendants) are at present only making little use of the possibility to carry out the whole procedure online. The Agency's aim is to promote further acceptance in this respect.

Twenty-seven percent of the applications filed complied with the admission criteria, leading to the instigation of dispute resolution procedures. Fifteen percent of the applications were withdrawn by the applicants following comments made by the Agency's dispute resolution service on the legal requirements and rules of procedure (under the TKV, TKG, VfOSchli) and on the circumstances of the case. In more than 50 percent of the cases the Agency's service was forced to reject the applications after determining that rights under the TKV and TKG had not been infringed (increasing tendency). Most of these cases concerned disputes relating to the conclusion, amendment or termination (notice of termination) of contracts. Such cases are subject to general civil law regulations and therefore cannot be settled by the Federal Network Agency. From consumer perspective, the

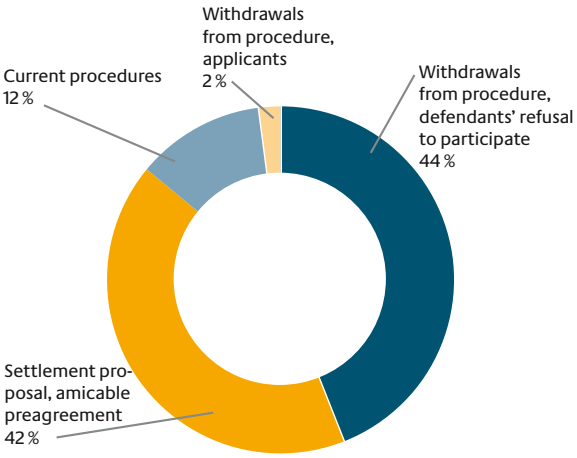
Agency is increasingly required in this respect to take unrestricted action such as an ombudsman. However, section 47a TKG defines in detail the violations of end user rights ensuing from the TKG which are to be settled by the dispute resolution service. In a large number of these cases it was after all possible to clarify the matters in dispute in favour of end users by passing the cases on to the relevant telecoms companies.

Processing of applications for dispute resolution



Defendants refused to participate in the dispute resolution procedure in more than 40 percent of the procedures instigated. Amicable agreement during the procedure or agreement to the Agency's settlement proposal was reached in 42 percent of the cases corresponding to 84 percent of the procedures carried out. There were only isolated cases of procedures which had to be terminated due to applications or the defendants' agreement to the procedure being withdrawn. Therefore, the success rate of the dispute resolution procedures completed in 2007 was most promising.

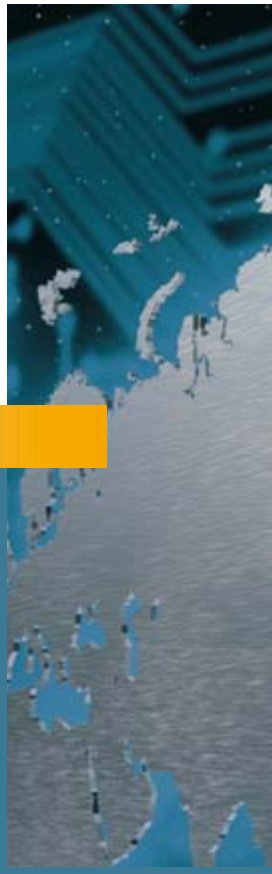
Outcome of the admissible procedures



POST

Customers in the postal sector only made little use of the Agency's dispute resolution service in the period under review, ie there were only 15 cases. Of these, six were completed successfully. No agreement was reached between the parties in two cases, and three cases are still pending. Four applications were rejected as the requirements for instigating a procedure were not met.

In most cases the modest consumer acceptance of the dispute resolution procedure is due to the low value of the matter in dispute as compared to the fee of €25 which has to be paid as a minimum for the procedure.



International cooperation

Telecommunications

From a global perspective, 2007 was dominated by the further revision of the EU regulatory framework for electronic communication networks. The further development of the Independent Regulators Group (IRG) into an institution with its permanent secretariat in Brussels and the implementation of the roaming regulation of cross-border mobile phone calls were also focus issues.

Since its foundation in 1997 the Independent Regulators Group (IRG) has been coordinating regulatory practice in European countries on a voluntary basis. The benefit of voluntary coordination is that its members feel committed to an unanimously agreed approach rather than to harmonisation imposed by regulation.

Following the increased demands on the organisation at European level, the IRG decided at the end of 2006 to set up a permanent secretariat in Brussels. To act autonomously and more effectively as a standalone organisation, the statutes for founding the IRG as a non-profit association under Belgian law with its seat in Brussels were signed at the IRG plenary session on 06/07 December 2007 in Rome by the joining regulatory authorities, among them the Federal Network Agency. In 2002 the consulting board "European Regulators Group" (ERG) was founded by the EU Commission. The aim of this body is to enhance coordination between national regulatory practices by applying the European regulatory framework as uniformly as possible. For this reason, the independent national regulatory authorities for electronic communication are members of this group in addition to the (non-voting) representatives of the Commission. The ERG's main task is to intensify cooperation between the regulatory authorities.

The ERG prepares non-legally binding "Common Positions" (CP) in which it expresses a common stance or fundamental conviction, and "Opinions" in which it states its opinion on specific regulatory issues. The latter are requested by the Commission, for example when preparing new legal provisions such as recommendations. To increase transparency, documents

such as "Common Positions" or the work programme are published for public consultation prior to their adoption.

In 2007 IRG/ERG activities focused on the statements made on the legislative proposals by the EU Commission for revising the existing regulatory framework for electronic communication networks and services. On 13 November 2007 the Commission published both the new market recommendation and proposals for a new package of regulations.

The market recommendation that came into force on 28 December 2007 only covers 7 markets, a clear reduction from the 18 markets that were covered by the old version. Cuts have been made particularly in retail markets but several wholesale markets have also been removed. In view of the fact that the deleted markets are still subject to regulation in some countries, the IRG/ERG called for flexibility in considering national conditions in its statement published on 13 November 2007.

Most of the draft directives submitted by the European Commission include proposals that started evolving in advance of the publication (such as extended Commission competencies; possibility of national regulatory authorities imposing a functional separation). The demand for introducing a European regulatory authority ("European Electronic Communications Market Authority", EECMA) made by commissioner Viviane Reding is also one of the proposals.

The existing ERG is to be replaced by the EECMA as the EU Commission's consulting institution. The EECMA's mandate is to make statements to the EU Commission, as in the case of procedures according to Article 7, standardization according to Article 17 of the framework regulation, analysis of specific national markets, numbering (including number portability), access conditions for digital radio services and frequency regulation.

Another major change compared to the existing regulatory framework would be the suggested extension of the European Commission's right of veto on remedies that is already in place for market defini-tions and analyses. While, according to the EU Commission, the decisions of the national regulatory authorities have largely resulted in an alignment in the member states as far as market definition and market analyses are concerned – last but not least due to the EU Commission's veto right and its application – major divergences allegedly exist that could not be explained by national peculiarities. As the publication of the new proposals was approaching, the ERG dealt intensively with the issue of a functional separation in 2007 and called for the integration of corresponding remedies into the package of directives. In an ERG opinion that was submitted to the EU and published in October 2007, the ERG first defined the term "functional separation" and described the objective as well as the components of such an obligation. The ERG makes it clear that functional separation is intended to implement an existing obligation of equal treatment and shall only apply if this target cannot be reached otherwise. In addition, a cost-benefit analysis must be performed prior to being im-

posed by a national regulatory authority to ensure compliance with the principle of proportionality.

Follow-up work was performed in the field of "Harmonisation" after updating the Common Positions on the "Remedies" ("Remedies Handbook") because frequent criticism by stakeholders in the hearing on the revised Remedies CP revealed that this manual was too abstract or too general with the result that its application and compliance could not be reviewed by regulators. To take this criticism into account, the ERG adopted two additional Remedies CP for "ERG Common Position on Best Practice in Bitstream Access Remedies" and "ERG Common Position on Best Practice in Wholesale Unbundled Access (incl. Shared Access) Remedies" in which the general principles of the remedies paper were broken down according to specific markets (market nos. 11 and 12 of the recommendation) and the measures imposed there.

These two common positions are based upon the understanding of all ERG members stipulated in the so-called "Madeira Declaration" that total harmonisation in the sense of “uniformity” cannot be the measure of all things because it disregards any existing differences due to national peculiarities. If all regulators did exactly the same, this would result in over-regulation in some countries and under-regulation in others; measures would be imposed too early in some countries, in others too late; the measures would in no way be optimal in terms of reasonable expenditure for solving problems. Therefore, it is only feasible to decide on the basis of the same principles in order to achieve a "harmonisation of effectiveness" but not "uniform measures for the sake of harmonisation".

The ERG responded accordingly to a letter from commissioner Reding dated 30 November 2006 that calls for an ERG that – together with the EU Commission – would make binding decisions in particular when imposing remedies (as part of a new procedure according to Article 7 of the framework regulation). This was rejected by the ERG in its reply to the commissioner dated 27 February 2007 because it does not consider the included "Veto on remedies" necessary. Due to the obligation described above that has been accepted on a voluntary basis, the regulators have already been following the same principles when imposing remedies so that the measures are consistent. Hence, a "Veto on remedies" is not required. As long as national markets exist, it is better – due to the national regulatory authorities’ more detailed knowledge – to maintain the current model of "decentralised implementation" of regulatory measures because the most suitable measures are imposed for national market situations by the independent national authorities. Stronger regulatory coordination could only be feasible in the future in the case of increased pan-European and cross-border services; in this case the ERG (in its extended form) would be the appropriate body. This position was emphasized by the ERG in a second letter to commissioner Reding dated 06 November 2007 in which it reiterated its readiness for an immediate inten-sification of the cooperation, in particular during the procedure according to Article 7.

Another issue that the IRG/ERG has dealt with in the period under review is the monitoring of compliance with the International Roaming Regulations that came into force on 30 June 2007 by mobile network providers and other providers of roaming services. The national regulatory authorities will be responsible for their implementation, ie in particular reviewing the compliance of transparency and information obligations towards retail customers and price caps at upstream and retail customer level. After the directive came into effect, several guidelines on interpretation and application by the national regulatory authorities have been prepared and submitted for public consultation by the ERG.

In the field of "Innovation", the third pillar of the work programme for 2007, the IRG/ERG had already responded to developments with regard to investment in so-called "Next Generation" networks and launched relevant projects that were handled by a project team headed by the Federal Network Agency. The "Report on IP-Interconnection" was published in March 2007 as a first result. Because of the significance attributed to laying new fibre-optic networks in the access area, a common position on regulatory principles for Next Generation Access (NGA) networks was prepared by the ERG that could also be submitted to the Commission after public consultation in response to the corresponding request as "ERG Opinion on Regulatory Principles of NGA" and was published on the ERG website on 03 October 2007.

Finally, the Federal Network Agency continued its activity on the Electronic Communications Committee (ECC) and Contact Network of Spam Authorities (CNSA) during the period under review and hence intensified the cooperation particularly with the regulatory authorities in Austria and the Netherlands.

Post

The Federal Network Agency contributes its lengthy experience in regulating postal affairs to international governing bodies and thus actively supports reform processes and the establishment of relevant framework conditions.

UNIVERSAL POSTAL UNION

In coordination with the Federal Ministry of Economics and Technology (BMWi) the Federal Network Agency cooperates on the Universal Postal Union (WPV/UPU), on the Council of Administration (sovereign and regulatory issues) and on the Postal Operations Council (operational implementation of the Universal Postal Contract). One major issue that is currently subject of discussion is a basic reform of the Universal Postal Union. Commission 1 of the Council of Administration (chaired by: Germany) has performed several studies and surveys following the Universal Postal Union Congress of Bucharest in 2004 with the aim of improving all aspects of work within the Universal Postal Union, including its structure and composition as well as the decision processes within the individual bodies. The studies were mainly intended to adjust the existing organisational structure, particularly in terms of the separation and distribution of governmental, regulatory and operational functions in line with the liberalisation processes that have already been completed in some of the member states.

EUROPEAN COMMITTEE FOR POSTAL REGULATION

The European Committee for Postal Regulation (CERP) works on comparing the regulatory framework conditions for the postal sector in the 48 member states and on elaborating proposals for harmonisation, if this appears to be appropriate and reasonable. The vice chairman is from the Federal Network Agency. There are three working groups with several project groups each. The working group "Politics" discusses the implementation and application of the European postal regulation, definition, scope and objective of the Universal Service as well as the sector-specific regulation and opening of postal markets in cooperation with the Agency. The project group "Cost Accounting and Price Control" of the working group "Economics" is chaired by the Federal Network Agency. It has drafted a

recommendation on cost accounting that is currently being revised with the objective of meeting the modified framework conditions in future liberalised postal markets. A project group "Statistics" was established upon request from the European Commission in the working group "Monitoring Group / Market Data" to perform statistical surveys in the postal sector. The Federal Network Agency played a decisive role in drawing up the framework conditions for these surveys. The Agency also cooperates on the project group "Consumer Issues" that documents various regulatory approaches in terms of consumer protection as well as general rights of the regulatory authorities with regard to postal user relations.

EUROPEAN COMMITTEE FOR STANDARDISATION

The Technical Committee on Postal Services (CEN/TC331) of the European Committee for Standardisation (CEN) develops standards in the postal sector that, in addition to purely operationally/logistically oriented projects, also include the fields of quality measurement. The working group CEN/TC331/WG1 for the field of developing quality measurement procedures relevant for regulation is headed by the Federal Network Agency. The work in this working groups includes the revision of the standard for measuring the transit time for single piece priority mail and first class mail (EN13850) as well as the revision of the standard which governs the handling of claims and inquiries (EN 14012).

TEMPORARY PARTNERSHIPS IN THE POSTAL SECTOR (TWINNING PROJECTS)

In 2007 the Federal Network Agency carried out a twinning project. Based on cooperation between the administrations of an "old" member state of the European Union and the corresponding administrations of a "new" member state, specific knowledge and experience shall be passed on to the latter through personal contact and exchange. These measures are for a limited period of time and financed with funds from the European Union.

Project partner was the regulatory authority of Poland. The project took place during September 2006 and March 2007 with the objective of advising and supporting the Polish regulatory authority in terms of promoting competition and market supervision, making it familiar with methods and broadening existing knowledge applied in other EU member states. Particular focus was placed on the mechanisms of price control, market entry promotion and market monitoring. In addition, it was a matter of enhancing the administrative capacities of the Polish project partner for implementing the appropriate measures. In addition to the extensive transfer of knowledge and experience, the learning effects achieved during the preparation of recommendations for any future changes in the law contributed in particular to the success of the project.

Energy

In 2007 the Federal Network Agency intensified its cooperation with European energy regulators and cooperated in the development of regional electricity and gas markets as an intermediate step towards a European single market. One focal point of its work was executing the competencies of the existing energy regulatory framework. In addition, it supported the co-decision procedure on the so-called "Third Energy Package" with the core issues unbundling and European Regulatory Agency.

In 2007 the Federal Network Agency continued its cooperation with the regulatory authorities of other EU member states. It has been a member of the European governing bodies "Council of European Energy Regulators" (CEER) and "European Regulators Group for Electricity and Gas" (ERGEG) since 2004. As an association under Belgium law, the CEER is a platform founded by the regulatory authorities for the exchange of all issues that are relevant to all of its members. Following Commission Decision 2003/796/EG of 11 November 2003 the ERGEG was established as a formal advisory committee of the Commission. Both committees support the Commission in consolidating a European single market for electricity and gas and contribute to a uniform application of directives 2003/54/EU and 2003/55/EU as well as regulations 1228/2003 and 1775/2005 in all member states.

In 2007 the activities of CEER and ERGEG were dominated by the energy policy initiatives and law proposals made by the European Commission. In April 2007 the ERGEG submitted its comment to the Commission on the Commission communiqué dated 10 January 2007 on "An Energy Policy for Europe". The commentary deals with the following six issues: Unbundling, legal and regulatory framework for a European system of energy regulation, network regulation, further development of network provider associations to "ETSO plus" or "GIE plus", competencies and independence of the national regulatory authorities as well as transparency requirements.

On 19 September 2007 the Commission adopted a package of five legislative proposals ("3rd energy package") for changing the above directives and regulations as well as for a regulation on the establishment of an agency for cooperation between the

energy regulating authorities (ACER). In a press release the ERGEG emphasized its general support for the proposals of the Commission and its readiness to contribute the regulators' expertise by way of concrete suggestions for improvement. This concerns the structure and competencies of the agency, which is intended as a pure advisory committee. On the other hand, in its detailed commentary "Key comments on the European Commission's Third Package" dated 20 December 2007, the CEER calls for the agency's independence to be strengthened vis-à-vis the Commission and the network provider committees and direct decision powers to be given to it. The regulatory authorities agree on the aim of effectively unbundling the network and sales interests of integrated energy supply companies in both the electricity and gas sector.

The Federal Network Agency executes the competencies in regulation No. 1228/2003/EG on network access conditions for cross-border electricity trade. See page 162 for a detailed description of the Federal Network Agency's activities in this respect.

The aspired development of regional electricity and gas markets as an intermediate step towards a European single market has been intensified by the ERGEG since 2006 as part of so-called "regional initiatives". In 2007 the Agency continued its cooperation in four of the seven regional initiatives in the electricity sector. As part of the North-West regional initiative, the Federal Network Agency supported easing cross-border gas trade, in particular between the Netherlands and Germany (see page 169).

The Federal Network Agency was represented in nine electricity-specific working groups of the CEER and ERGEG. The work of the regional initiatives was evaluated in the Electricity Regional Initiative Task Force to ensure the development of compatible solutions. This is particularly in Germany's interests as the electricity exchange hub in Europe. The Electricity Market Task Force dealt with compliance with regulations in the bottleneck management guideline and the content of future studies on the general energy and retail market. Other issues were lost energy and financial transmission rights. The Electricity Transmission Network Task Force looked at approval processes for the construction of new lines in various countries as well as incentives for investment in cross-border infrastructures. In addition, it worked on the definition of an "EU grid" included in the legislative proposals of the Commission. The Security of Electricity Supply Task Force analyzed various methods to ensure "Generation Adequacy" in order to develop recommendations for a uniform method in 2008.

In the gas sector, the Federal Network Agency was represented in twelve working groups and headed one working group in 2007. Here, the work focused on the development of guidelines for applying the regulations of Article 22 of the Natural Gas Energy Directive 2003/55/EG. The question here was how network providers can apply for exceptions to the regulation.

Further working groups dealt with transparency, access to storage facilities, the secondary market, capacity calculation and open season procedures for demand-

oriented determination of requirements and allocation of capacities.

The Federal Network Agency will be represented in all gas-specific working groups of the ERGEG and CEER and will chair a European working group together with the Belgium regulatory authority in 2008 that is intended to ensure more efficient capacity management in European gas networks. The Agency will be responsible for the issues "capacity allocation" and "bottleneck management". In addition, it will continue to head the working group on Article 22 - Exemptions.

In the cross-sector CEER and ERGEG working groups, the Federal Network Agency supported the interests of consumers on European level. As part of the Unbundling, Reporting & Benchmarking Task Force, an international project concerning efficiency benchmarking of transmission network providers was prepared with the Federal Network Agency in the chair. The results of this project will be used by the Agency as part of the incentive regulation. Following a public consultation the Task Force adopted the "Guidelines of Good Practice on Regulatory Accounts Unbundling". Having published its 2007 monitoring report, the Federal Network Agency met its reporting obligations towards the Commission under the Directives 2003/54/EU and 2003/55/EU.

By cooperating in the consumer-related ERGEG working groups (Customer Focus Group, Customer Protection Task Force, Retail Market Functioning Task Force) the Federal Network Agency has actively supported the interests of the consumers at European level in the year under review. The working groups dealt with issues such as regulating retail prices, formulating a European Charta of energy consumer rights and identifying obstacles when changing suppliers. The Federal Network Agency was also involved in the European Commission’s information campaign about the consumer rights on the single European market for energy.

Railway

The increase in cross-border rail traffic was another clear indication of the merging of national markets. The Federal Network Agency supports this development in technical committees to enable non-discriminatory access to networks and availability of capacities with modern systems.

WORKING GROUP RAIL REGULATORY BODIES

The Federal Network Agency also took part in the quarterly meetings of the Working Group Rail Regulatory Bodies to discuss cross-border issues of railways regulation in 2007. The work of this group, which comprised representatives from the European regulatory authorities and the European Commission, focused particularly this year on the revised version of the Europe's First Railway Package as well as on the introduction of incentive systems for reducing failures and increasing the efficiency of the railway network by operators of the railway systems.

In November 2007 one of these meetings was held by the Federal Network Agency. The meeting was held alongside the international congress fair #railtec in Dortmund to enable contact between the representatives of the authorities and the railway companies. Meeting topics included the design of a European incentive system by the International Union of Railways (UIC) as well as agreements concerning cross-border railway traffic. Following the working meeting, a forum about "Equal Opportunities for All – How to Regulate Free Access to the Network?" was held to which the participants of the working group were also invited.

RAIL NET EUROPE

International activities also focused on Rail Net Europe (RNE), an organisation that brings together Rail Infrastructure Managers from across Europe and is based in Vienna. Its mandate is to promote competitiveness and enhance the quality and efficiency of cross-border railway traffic by intensifying cooperation between members, coordinating procedures and activities in international sales and simplifying the allocation of railway capacities for

international railway traffic. In cooperation with other regulatory authorities, the Federal Network Agency is currently particularly interested in the software "Pathfinder" provided by the RNE for path requests on the Internet. It is particularly important to make sure that this communication tool is applied and the required path information made available in a non-discriminatory manner. The regulatory authorities and European Commission found out about this system at the end of 2007 at a meeting of a RNE meeting in Vienna.

INTERNATIONAL GROUP FOR IMPROVING THE QUALITY OF RAIL TRANSPORT IN THE NORTH-SOUTH CORRIDOR

The Federal Network Agency attends regular meetings of the ”International Group for Improving the Quality of Rail Transport in the North-South-Corridor" (IQ-C). The working group comprising representatives from the regulatory authorities of the Netherlands, Italy, Switzerland and Germany observes cross-border railway traffic on the corridor between Rotterdam and Milan to identify any barriers to competition. The tasks of the IQ-C working group include observing the RNE’s activities when allocating international paths via the so-called "One-Stop Shop" for this corridor, informing each other of cases of discrimination and exchanging opinions about the next steps to be taken.

In addition, the work involves defining the as yet undefined legal terms "discrimination", "overloaded railway routes" and "railway route capacity". The first of a series of workshops planned was organised in September 2007 by the Federal Network Agency alongside the Eisenbahnrechtliche Forschungstage (railway law research days) in Tübingen on the issue of "Discrimination". At the meeting the scope of the term "discrimination" was discussed with experts on the basis of several cases of discrimination when accessing the infrastructure and associated services along with the uniform application and enforcement of the requirement of a non-discriminatory access. There was agreement that the term discrimination requires a wide interpretation to ensure effective and genuine competition and an attractive railway traffic offer.

BILATERAL MEETINGS AND INTERNATIONAL WORKSHOP "CAPACITY OF RAILWAY PATHS"

The Federal Network Agency held bilateral meetings with other regulatory authorities during the course of the year. Both the meeting with the British Office of Rail Regulation and the Polish Urzàd Transportu Kolejowego were initial events leading to further meetings in the coming year during which the exchange of opinions on specific issues is intended by be stepped up. The working meeting held in the 4th quarter with the Swiss arbitration commission for railway traffic and Trasse Schweiz AG, an independent path allocation agency, was also intended to serve as an exchange of experience and opportunity to discuss common regulatory issues. In particular, possible approaches for avoiding discrimination during all phases of path

allocation were discussed, ie from the contractual basis and planning to implementation of the network timetable.

A key discussion point in 2007 was the definition of the term "Capacity". For this purpose, the Federal Network Agency organised an international workshop on the issue of "Capacity of Railway Paths" in October. Experts from Austria, Switzerland, the Netherlands and Germany presented the latest approaches and gave ideas for activities in the field of railway regulation. The event resulted in a lively exchange of opinions between researchers, regulatory authorities, ministries and the European Commission.

Telecoms


L1
L2
L3
L2
L3

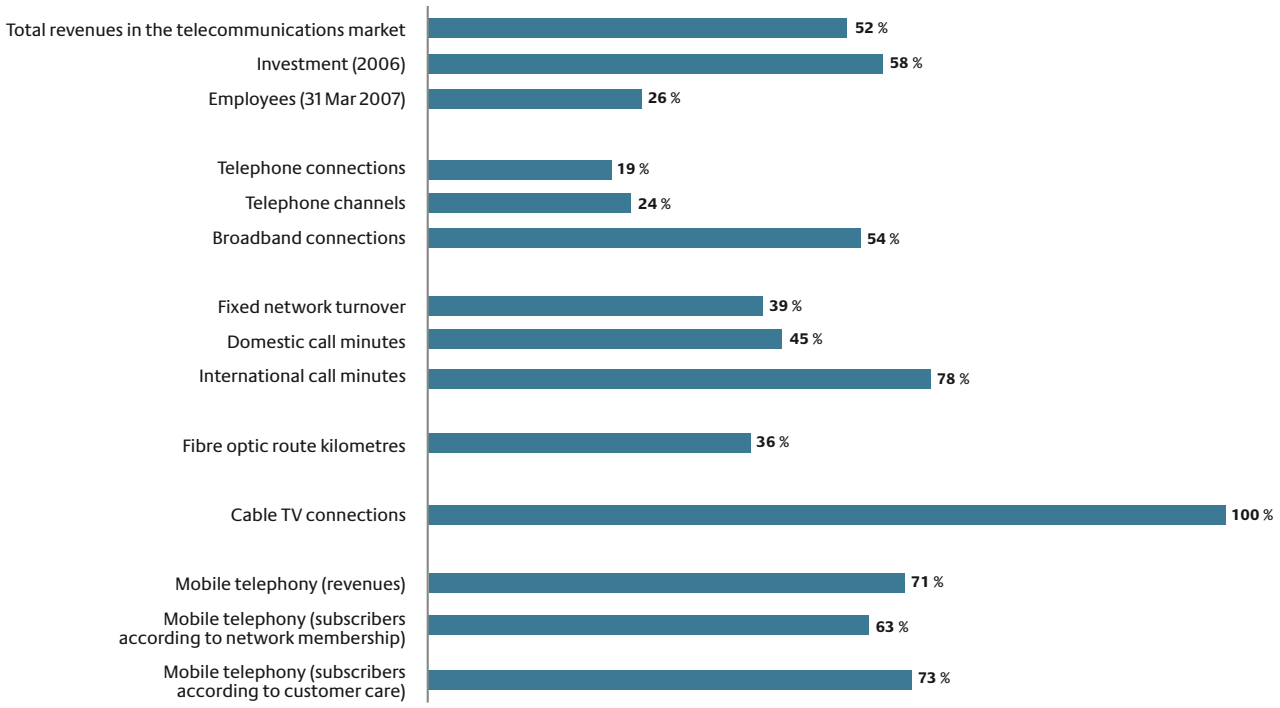
Market watch

VoIP and mobile telephony compete with conventional fixed network services – Prices for fixed network and mobile communication services are declining drastically, unfailing dynamic of the broadband growth market, Germany gains ground in international comparison, competitors increase their market shares – Customer growth in the field of cable Internet – Mobile data traffic on the advance – Increasing real investment.

COMPETITION SITUATION 10 YEARS AFTER MARKET OPENING

While mobile telephony was already subject to competition in the early nineties, this generally started in early 1998 for the areas that have not been liberalised so far. A variety of new services has emerged in the decade from early 1998 till the end of 2007. The situation of Deutsche Telekom AG's (DT AG) competitors by the end of 2007 is as follows in the key areas.

Selected figures on competitor shares in 2007

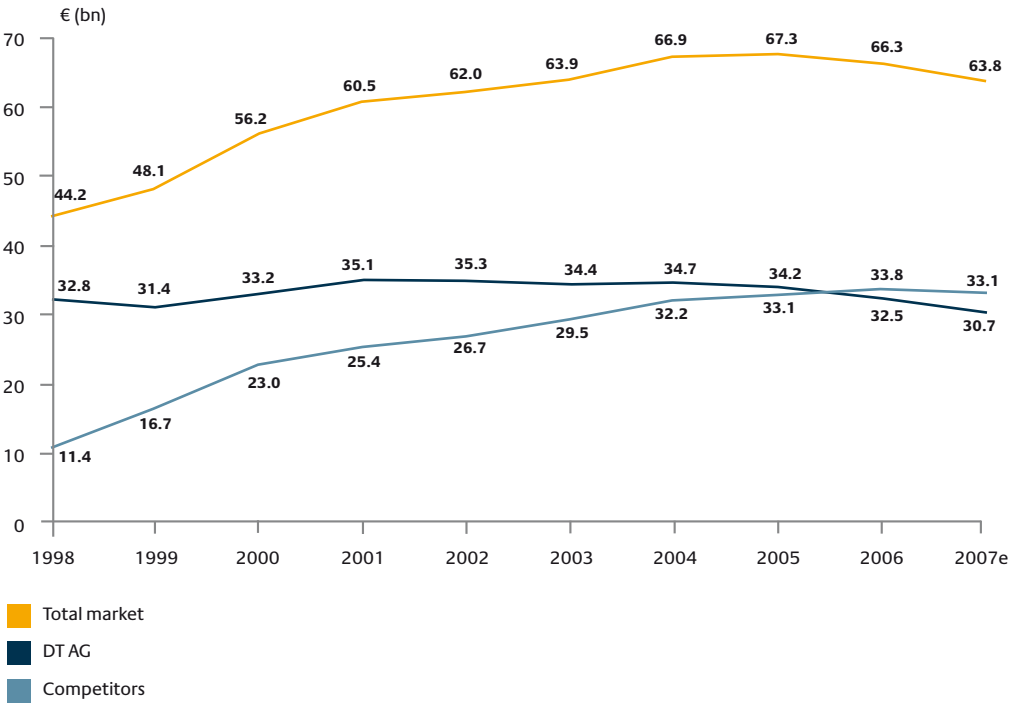


TOTAL MARKET FOR TELECOMS SERVICES

Revenues

The Federal Network Agency expects revenues[1] of €63.8 billion on the telecommunications service market[2] in 2007. Having decreased for the first time in 2006, this trend has continued in 2007.

Revenues on the German market for telecoms services

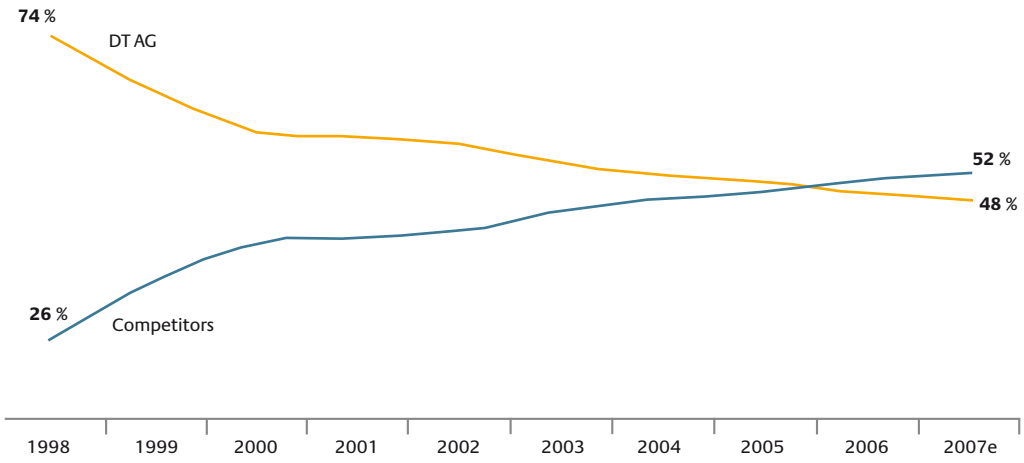


Competitor data for the overall market can deviate from the total of the individual values due to rounding up.

The revenues of competitors continuously showed positive growth rates up to 2006. At a total of €33.8 billion they exceeded the volume of DT AG (€32.5 billion) for the first time in 2006. Due to declining prices in the fixed network and mobile telephony, the positive growth rates could not be maintained in 2007. The competitors reached a market share of 52 percent compared to 26 percent in 1998.

1 Cumulative revenues comprising revenues of DT AG and its competitors in Germany.
2 Definitive figures for 2007 are not yet available. The 2007 figures cited here are estimates (shown in tables with "e").

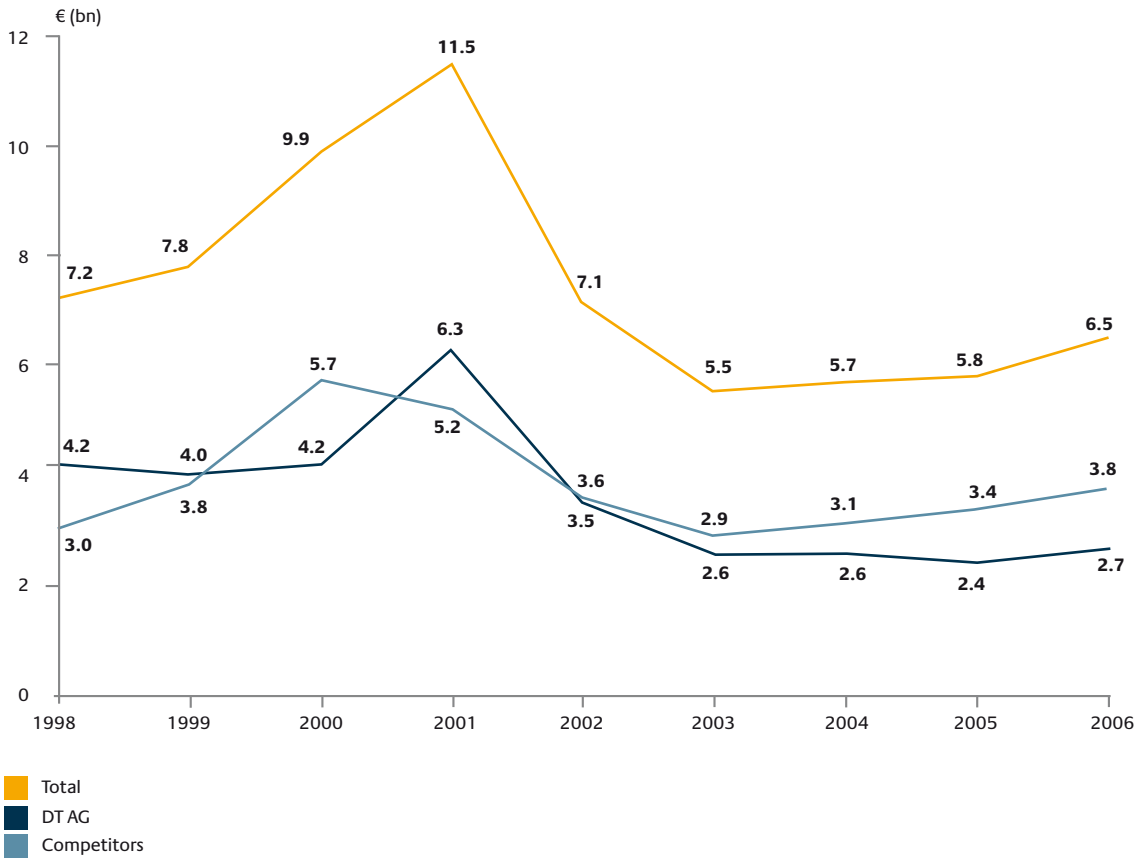
Percentage of DT AG and competitor turnover out of overall turnover on the telecommunications service market



Real investment

Real investment volume in the field of fixed network and mobile telephony has risen by 12 percent to €6.5 billion in 2006. Thus, after moderate growth in both preceding years, capital spending showed a marked upward trend. Whether this has continued in 2007 cannot be defined in numbers yet.

Real investment on the German telecommunications market



The competitors have continuously increased their capital spending since 2004 to €3.8 billion in 2006. They exceeded those of DT AG by €1.1 billion which increased its expenses for the first time in 2006. In 2006 the competitors' share amounted to 58 percent.

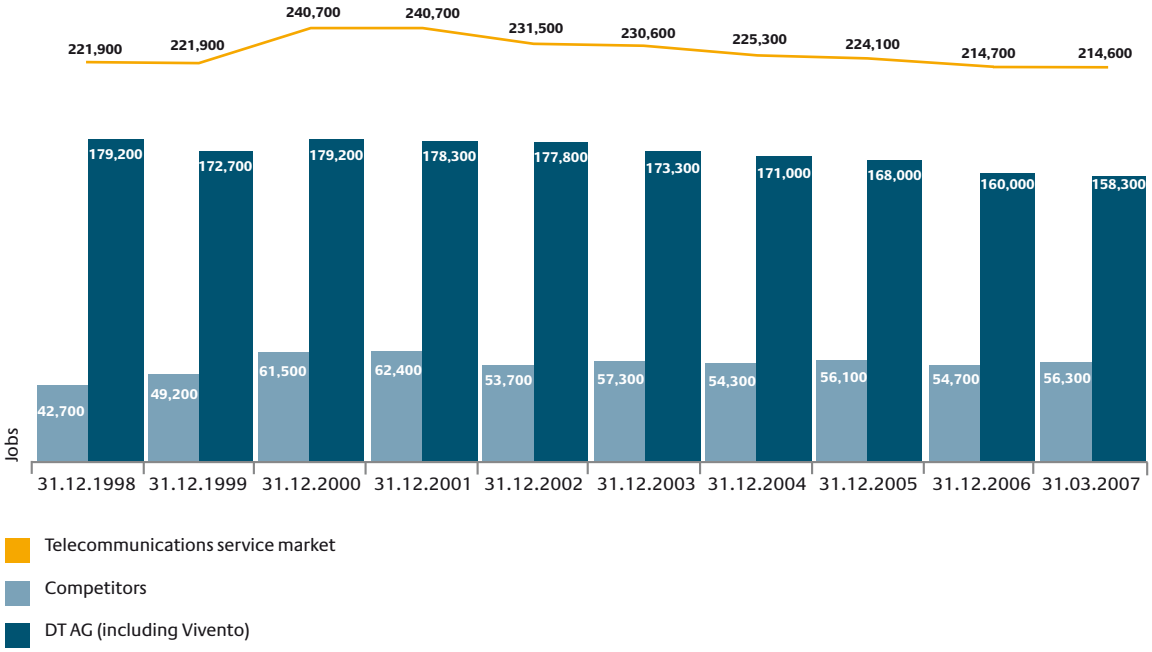
The increase in investment volume was supported by the positive development in fixed networks. In 2006 investment in the fixed network increased by 14 percent to €3.8 billion, whereas investment in mobile telephony rose by 9 percent to €2.7 billion.

Employment

214,700 people were employed with telecommunication companies in Germany at the end of 2006. This constitutes a decline of 4 percent compared with the preceding year (224,100). By the end of the first quarter of 2007, the number of employees had continued to decline to 214,600.

The number of employees working for competitors increased by approx. 3 percent to 56,300 by the end of the first quarter in 2007. 2.5 percent of the jobs were cut the previous year. In the first quarter of 2007 DT AG reduced its workforce by 1,700 employees and in 2006 by 8,000 employees. While the number of employees has clearly declined at DT AG, it has remained relatively constant at its competitors since 2004.

Jobs on the telecommunications service market

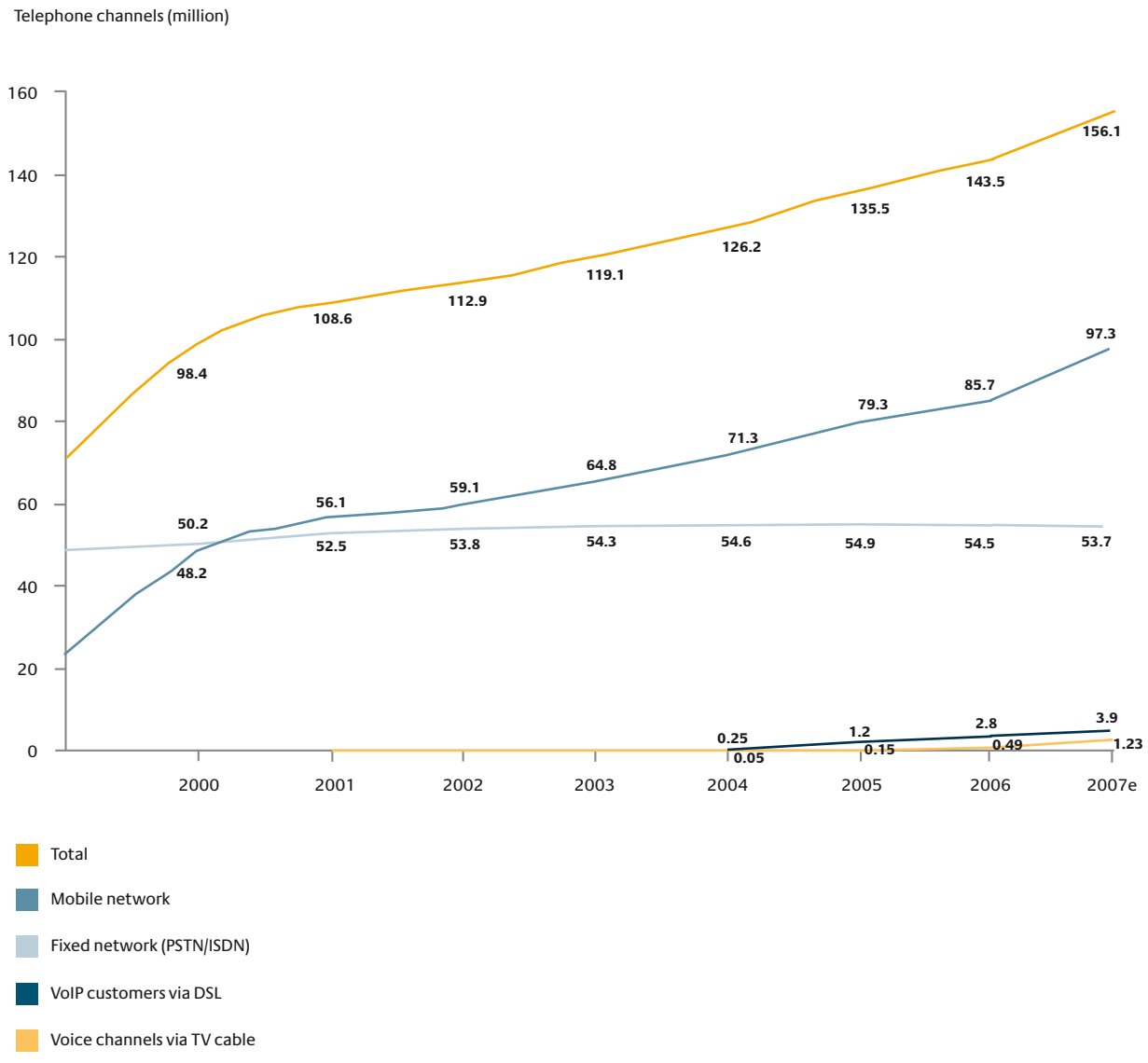


FIXED-NETWORK SERVICES

Voice communication

A comparison of the various means of access possibilities to voice communication offered by mobile and fixed networks shows that increasingly more voice options have emerged in mobile than in fixed networks since 2001 due to the rapid growth in the number of mobile phones. Voice communication over the conventional fixed network has now been joined by access via cable TV networks, not to mention VoIP services provided via DSL lines. At year's end 2007, the number of cable connections used for telephone calls had risen to approximately 1.2 million, while the number of DSL lines used for VoIP had climbed to some 3.9 million.

Development of means of access for voice communication



While the number of channels[3] in the conventional fixed network (PSTN) has declined since 2006, the number of mobile voice channels[4] has grown continuously. This clearly shows that wireless technology is in a position to mount a serious challenge to fixed networks and also highlights the substitution of mobile phones for fixed lines.

The various types of conventional fixed network access and cable connections together accounted for a total of 54.91 million telephone channels at the end of 2007[5] compared to 54.96 million in the preceding year. This shows a slightly declining tendency in the number of telephone channels since 2006.

Competitors increased their number of telephone channels in the fixed network in 2007 to 13.02 million, achieving 23.7 percent of the total number of channels.[6]

By the end of 2007 the total number of fixed network connections provided by DT AG and its competitors was 38.12 million. This reflects a drop in both the number of telephone lines and the number of telephone channels. The total number of lines comprised 24.04 million analogue lines, 13.07 million basic rate ISDN lines and 113,000 primary rate ISDN lines.[7] Cable telephony accounted for a growing share of this figure, ie 790,000 lines. The number of coin and card telephones in 2007 amounted to approx. 110,000 as in the previous year. There has recently been a renewed upturn in the use of public telephones, notably by travellers from within the euro zone who use payphones. This trend is opposed by the roaming charges for pan-European mobile communication calls that were reduced in 2007.

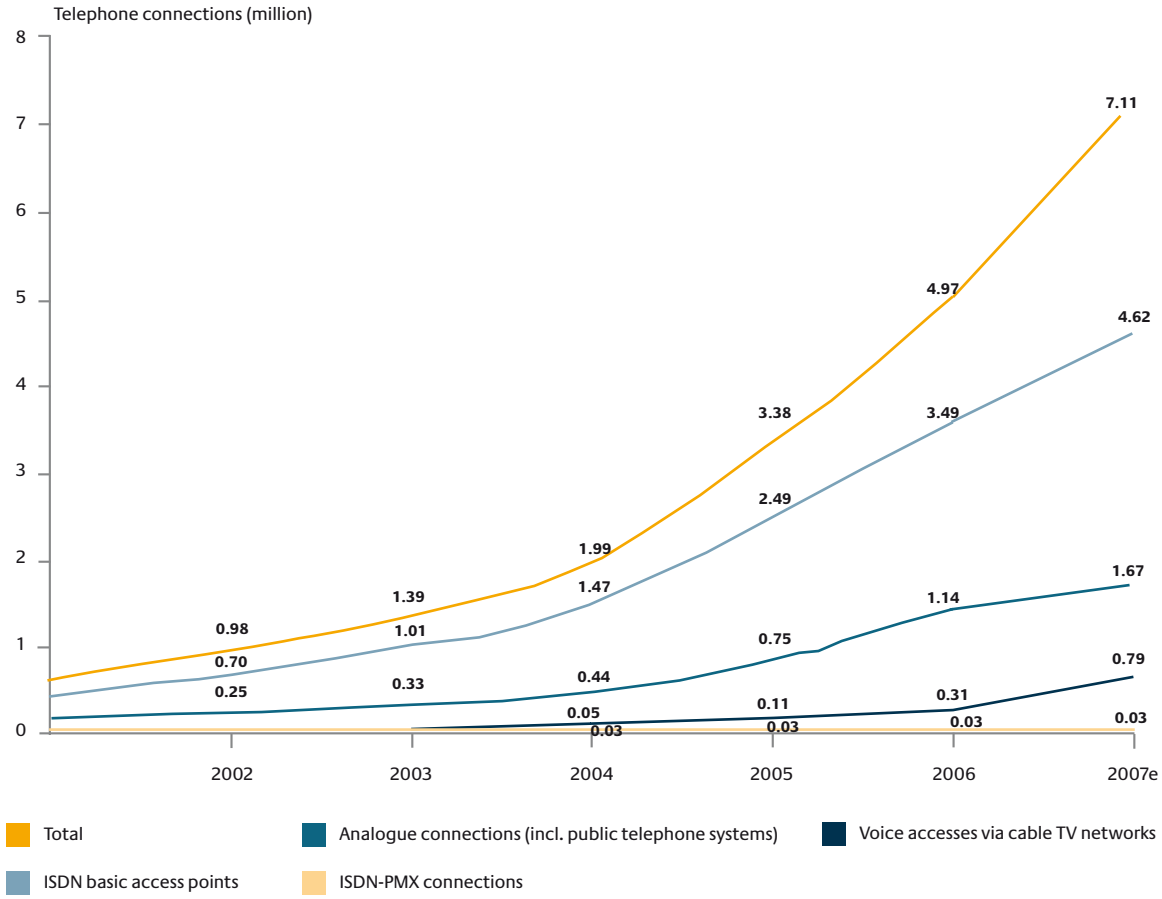
The total number of telephone connections provided by alternative fixed network operators including cable TV networks rose from just under 1 million to more than 7 million between 2002 and 2007. By the end of 2007, 65 percent of these connections were basic rate ISDN lines. The share of cable telephony was already more than 11 percent.

At the end of 2007, there were 86 companies, besides DT AG, that offered analogue lines, ISDN lines or cable telephony on the basis of either local loop access agreements with DT AG or their own facilities.

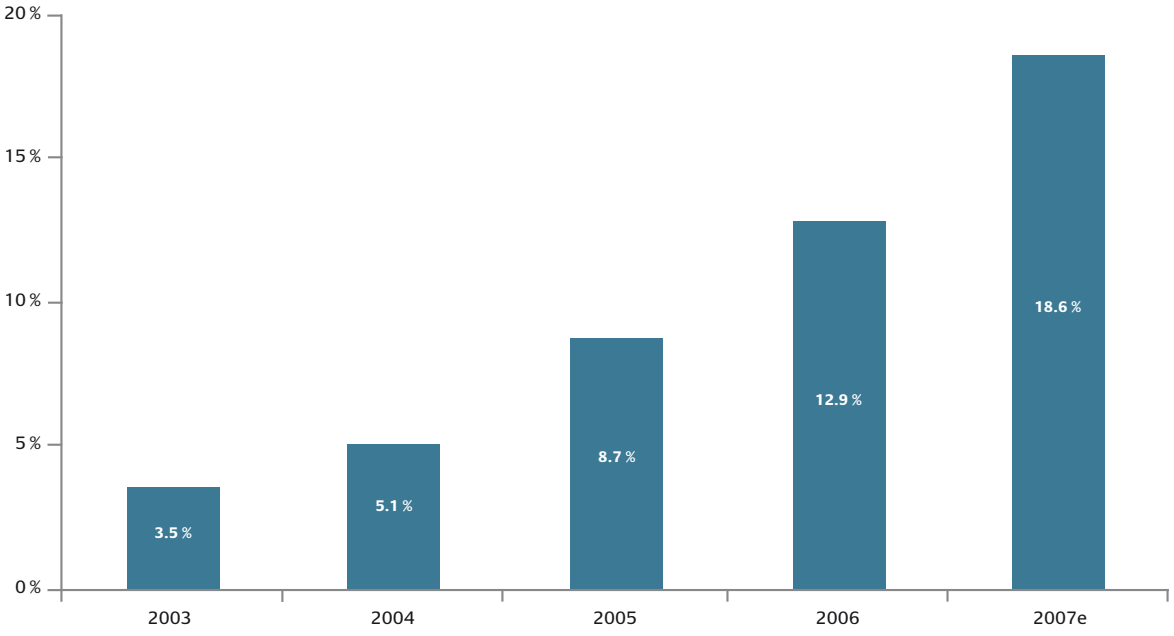
They have enjoyed various degrees of success in increasing their share of regional markets in recent years. In some parts of Germany, the national average in 2007 of 18.6 percent for telephone lines and 23.7 percent for telephone channels was significantly exceeded.

3 Telephone channel: Parameter that represents the totally available voice channels via the different access types such as analogue accesses, ISDN basic accesses and ISDN primary rate accesses. The calculation of the parameter includes an analogue access with one telephone channel, an ISDN basic access with two telephone channels and an ISDN primate rate access with 30 telephone channels. Public telephone systems (öTel) are included with one telephone channel. With reference to the voice channel via VoIP, a voice channel was assigned to each registered customer with a network access into the PSTN/ISDN Network as part of the VoIP offer. Approximately 1.5 channels per access were determined on average for cable TV telephony. The number of channels and accesses include a small share of personal need both for competitors and for DT AG.
4 One voice channel is counted for any registered mobile phone.
5 53.68 million channels in the traditional telephone network (PSTN) and 1.23 million channels in cable networks.
6 See also figure 6 of the activity report Telecommunication 2006/2007 of the Federal Network Agency.
7 See also figure 7 of the activity report Telecommunication 2006/2007 of the Federal Network Agency.

Development of telephone connections of alternative subscriber network providers



Development of the ratio of alternative subscriber network providers at the telephone connections



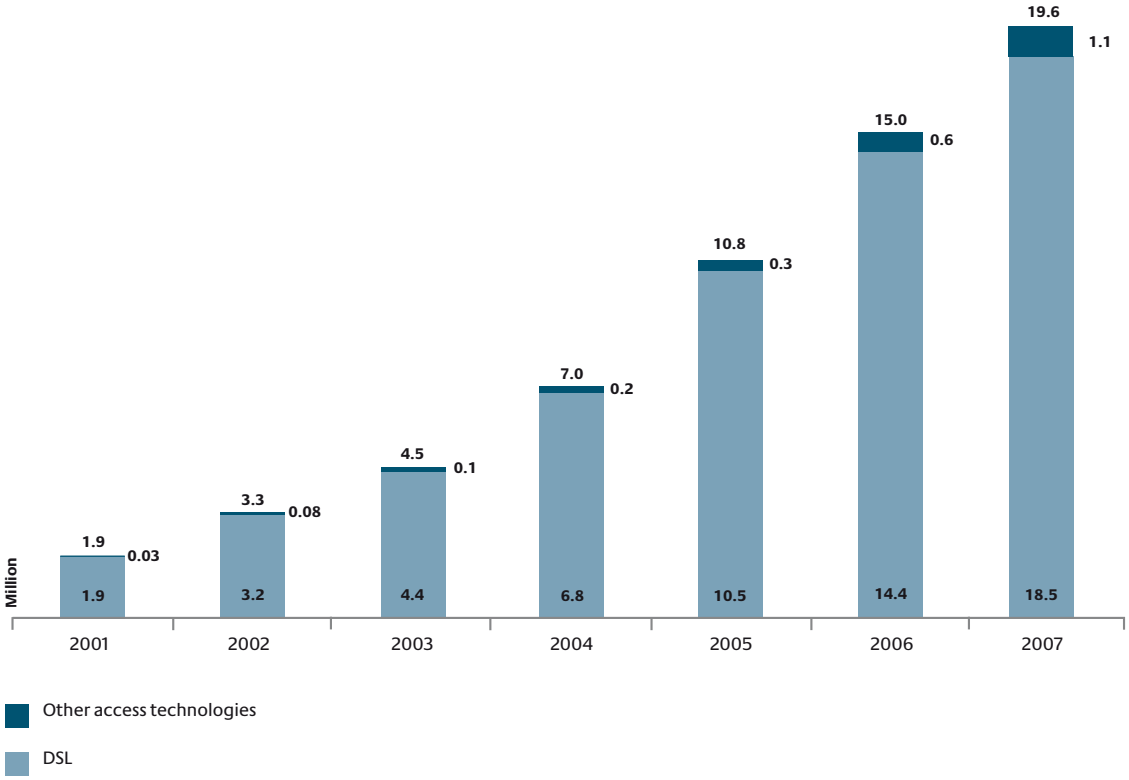
Broadband access technologies

The high demand for broadband connections continued unabated. In Germany, broadband access is usually provided via digital subscriber lines (DSL), cable TV (cable modem), satellite or powerline. At the end of 2007, the total number of broadband connections in Germany amounted to approx. 19.6 million. Thus, almost 5 million new broadband connections were provided within 1 year.

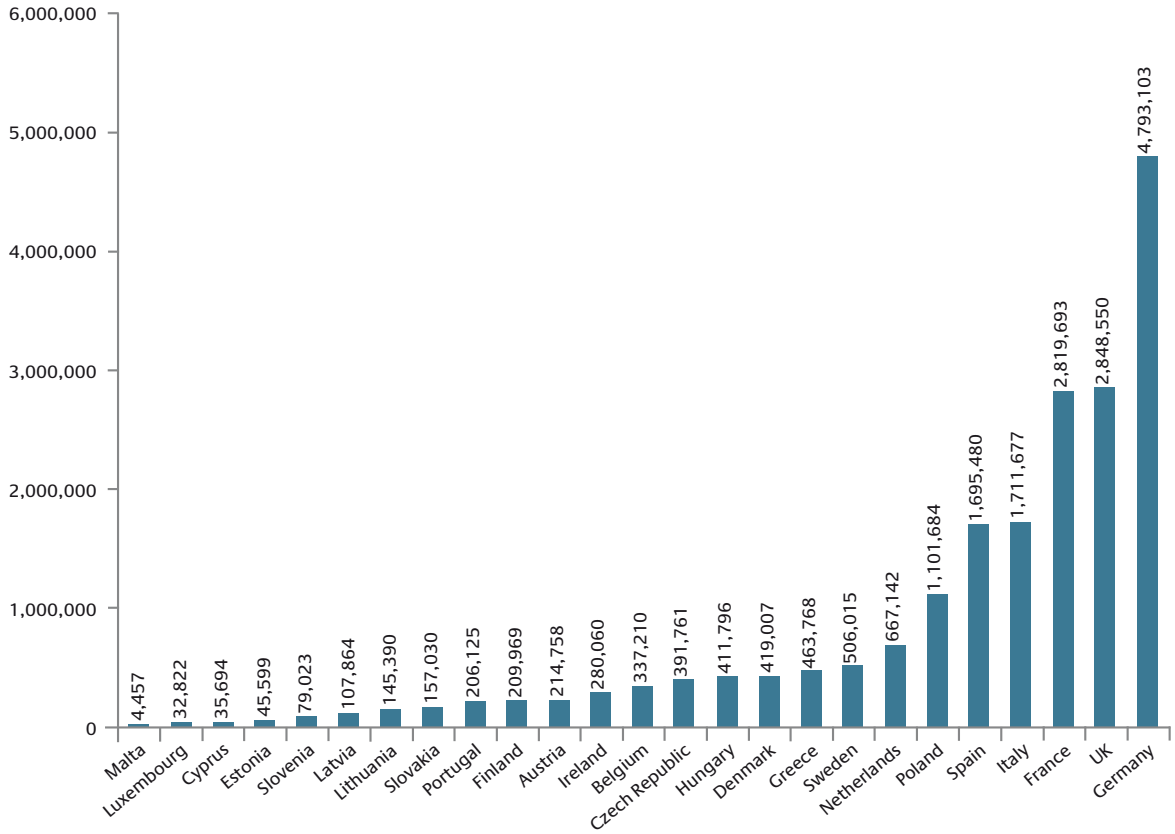
At the end of 2007, approx. 18.5 million (some 95 percent) of all broadband connections were DSL lines, around 985,000 relied on cable modems, 9,500 used powerline technology and around 36,500 were satellite-delivered. These figures clearly show that DSL remains the dominant access technology in Germany, followed by cable TV connections. The clear year-on-year gains made by companies providing broadband access via cable TV networks mean that alternative access technologies have slightly increased their market share at the expense of DSL. This figure was approx. 1 million at the end of 2007. It would still be inaccurate, however, to talk of vigorous competition between different access technologies.

Broadband growth in Germany is impressive by international comparison.

Total broadband access



Growth in fixed network broadband connections in Europe (EU 25)



Source: European Commission, Broadband access in the EU (COCOM 07-50)

The illustration shows that Germany, as the biggest European economy, reported the highest absolute increase in the number of broadband lines between July 2006 and July 2007 with just under 4.8 million new broadband lines. Other big European countries such as the UK, France and Italy were significantly behind.

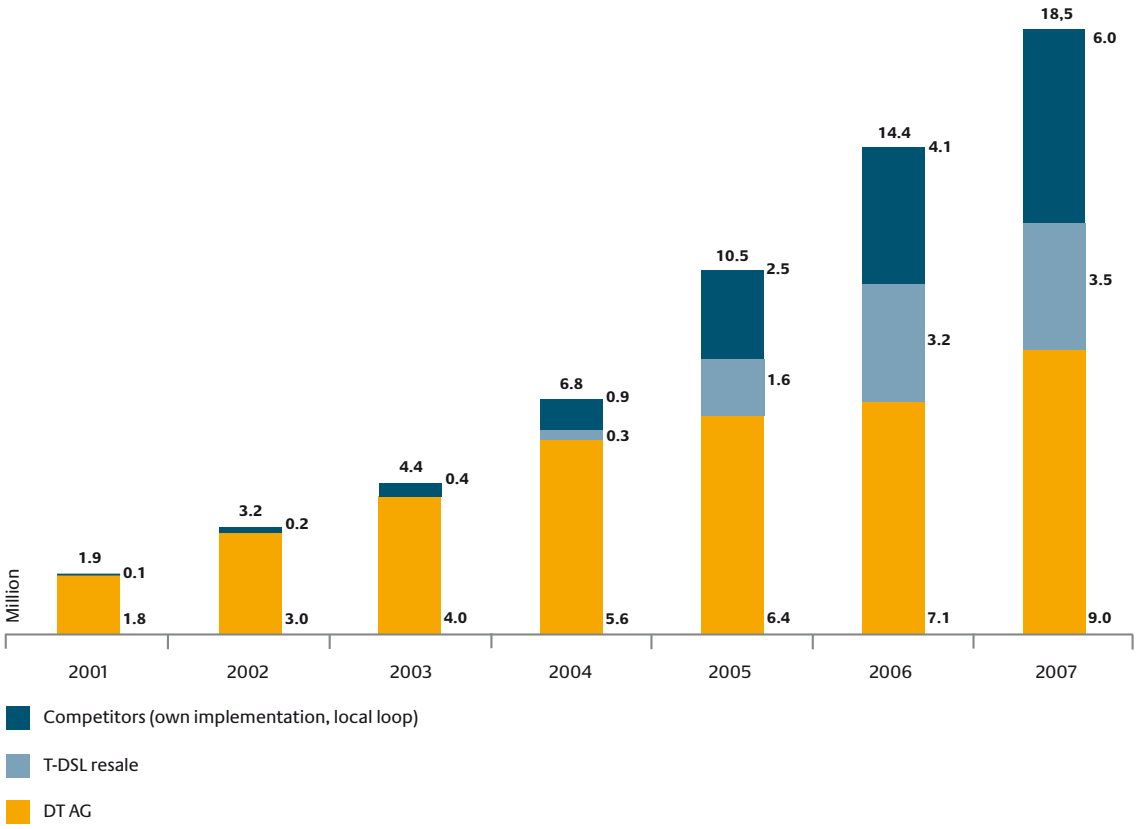
It also shows that Germany is more successful in terms of relative growth (relating to the number of inhabitants) than the big countries. It is only outperformed by smaller countries such as Denmark, Luxembourg and Ireland.

DSL lines

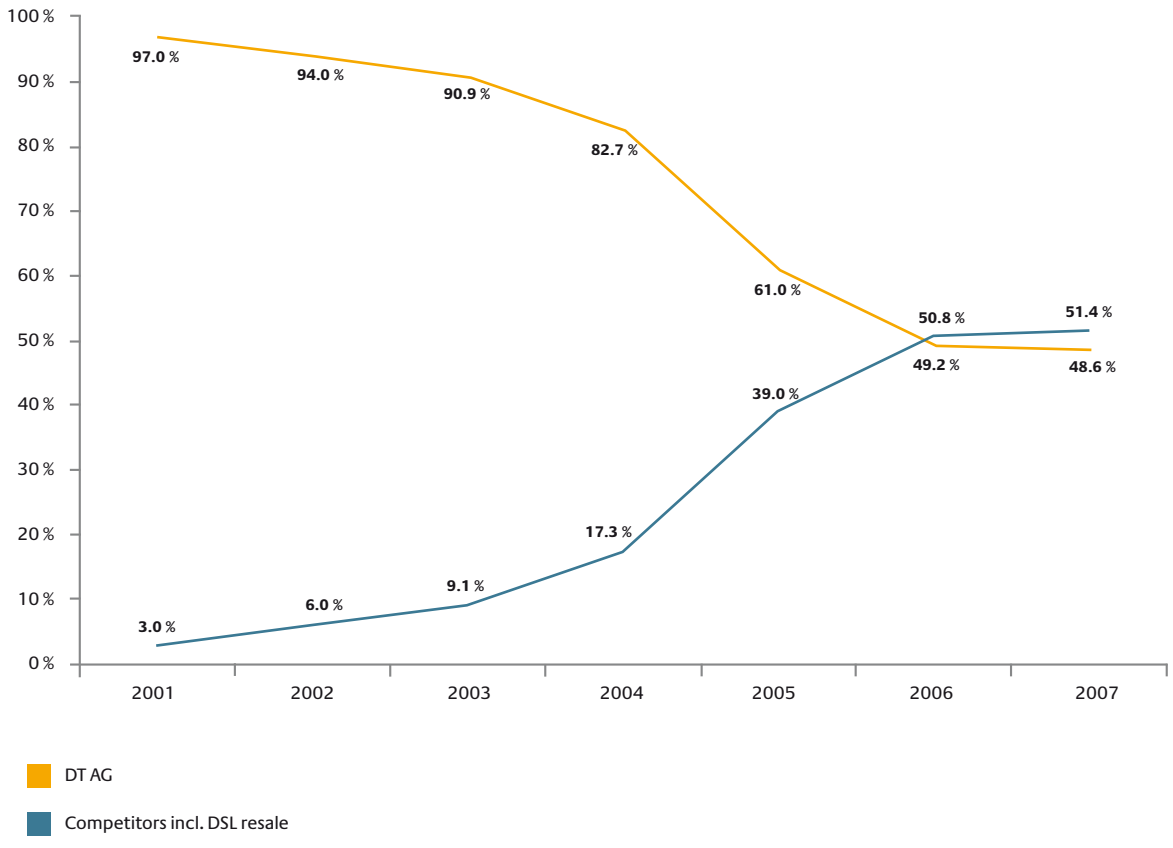
High levels of competition continued in the field of DSL in 2007. More than 4 million new DSL connections were put into operation in 2007, resulting in approx. 18.5 million operational DSL lines in Germany by the end of 2007. This corresponds to a growth rate of approx. 28 percent over the previous year.

End customer of DT AG directly accounted for approximately 9 million DSL lines at the end of 2007, representing a market share of around 49 percent.

DSL lines in operation



Development of share of DSL lines sold



Resellers of DT AG's DSL lines recorded particularly strong growth in the past few years. They do not operate their DSL business using their own network, but sell DT AG's DSL lines under their own name. While DT AG is mostly responsible for the technical implementation of these connections, competitors can offer the entire service consisting of broadband connection and rate as a one-stop solution in those areas in which they do not have their own network up to the main distributors of DT AG. These so-called T-DSL resale offers require a contractual agreement with DT AG. By the end of December 2007, 31 undertakings had signed such agreements. They accounted for approx. 19 percent of DSL subscriber business at the end of 2007. The growth rates of DSL resellers were clearly lower than in previous years. Reseller growth declined during 2007 in favour of the infrastructure-based growth of DSL connections and the related demand for local loops. Competitors that had a concentrating access network in addition to an IP backbone achieved a significant increase with approx. 6 million activated DSL connections at the end of 2007 or approx. 32 percent of all DSL connections sold. These products rely primarily on local loops leased from DT AG that allow high bit rates.

Germany remained the European leader in terms of the number of DSL lines in operation in 2007. No other EU country achieved such high growth with DSL lines. At the same time, there was a significant increase in national market penetration (measured as a percentage of households). An estimated 46 percent of German households were equipped with a DSL line at the end of 2007.

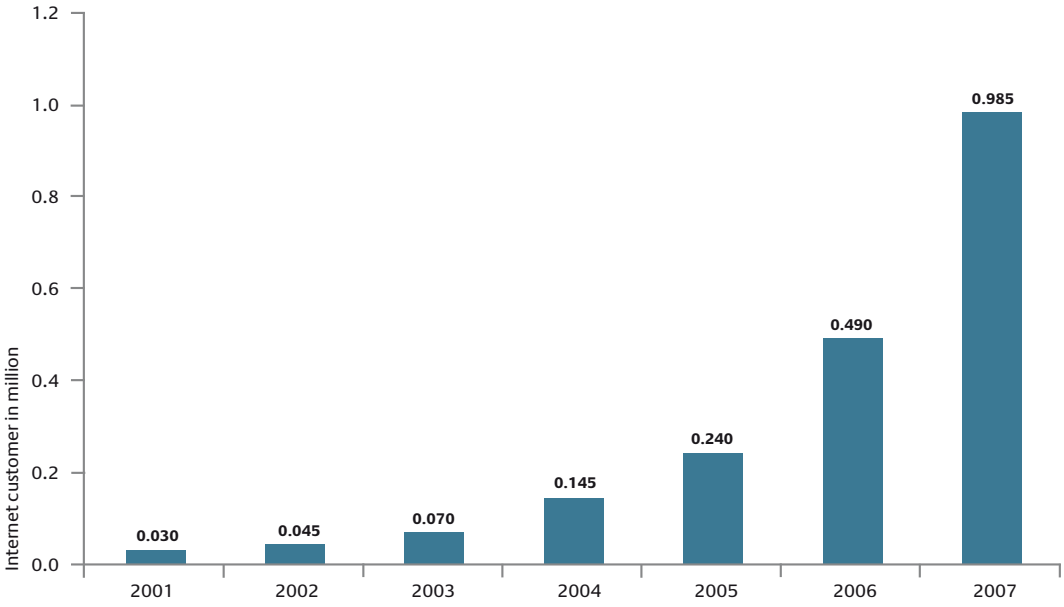
Approx. 70 percent of German customers use DSL lines with bandwidths starting from 2 Mbit/s. Germany thus leads the field in comparison with other European countries.

Cable access

In the regions where they are available, fast Internet connections over cable TV networks with return channel capability now represent a real alternative to the conventional fixed network. Competitive offers with data rates of more than 30 Mbit/s meant that approx. 1 million cable customers had opted for this means of access, provided by 50 operators by the end of 2007[8]. More than 80 percent of these customers selected rates offering bandwidths of 2 Mbit/s and higher. The rapid infrastructure rollout allowed 21 million households to be connected in theory by the end of 2007.

8 This figure includes all individual companies, regardless of whether they belong to the same group.

Development of Internet access via cable modem



Powerline

Powerline technology is another means of providing high-speed Internet access. This procedure transmits data to the retail customer via the power network. At year's end 2007, this technology was the preferred choice of approximately 9,500 households, while 300,000 could be connected with a minimum of delay. Powerline use has thus remained unchanged over the past few years.

Satellite

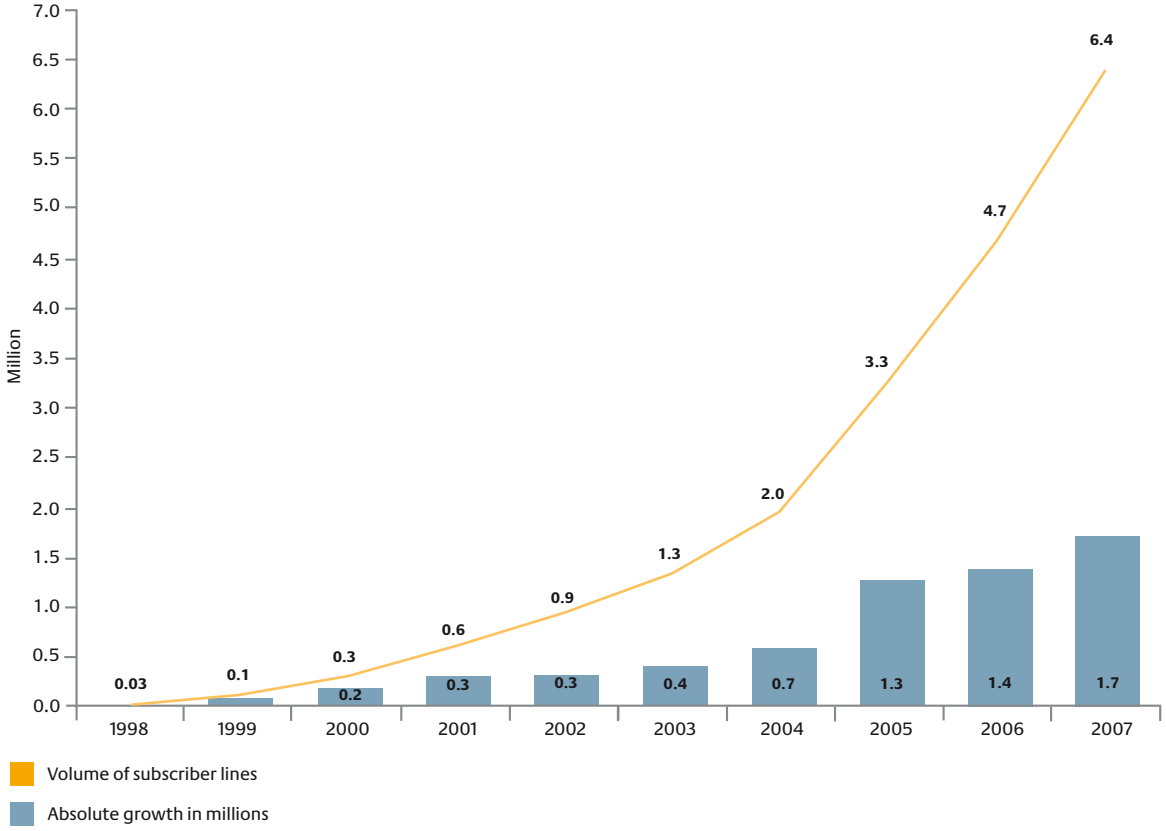
Data transmission by satellite technology offers Internet access at almost any location, irrespective of the local infrastructure. This technology – available in two variants – can therefore be used in regions where DSL is not available and where there are no TV cable networks offering return channel capability. Bi-directional systems use satellites to carry both the up and downlink. The costs of the relatively expensive system required to do so was substantially reduced from €1,500 to approx. €300 due to the technical progress made in recent years. Combined with new rates they are no longer interesting for business applications only. This type of data transmission was used by approx. 9,000 customer at the end of 2007. Hybrid services, which only route the forward channel via satellite and the reverse channel via the telephone line, have reached user numbers of approx. 27,500.

Wholesale products

In addition to local loops laid by themselves and wireless connections, competitors mainly use DT AG's existing local loops as a wholesale service.

Using this service requires a contractual agreement with DT AG. At the end of 2007 a total of 109 undertakings had concluded such agreements with DT AG.

Development of local loop traffic volumes



DT AG's wholesale service offer includes various local loop options. In 2007 all product variants sold amounted to a total of approx. 6.4 million and Germany still maintains the top position in the European Commission statistics[9].

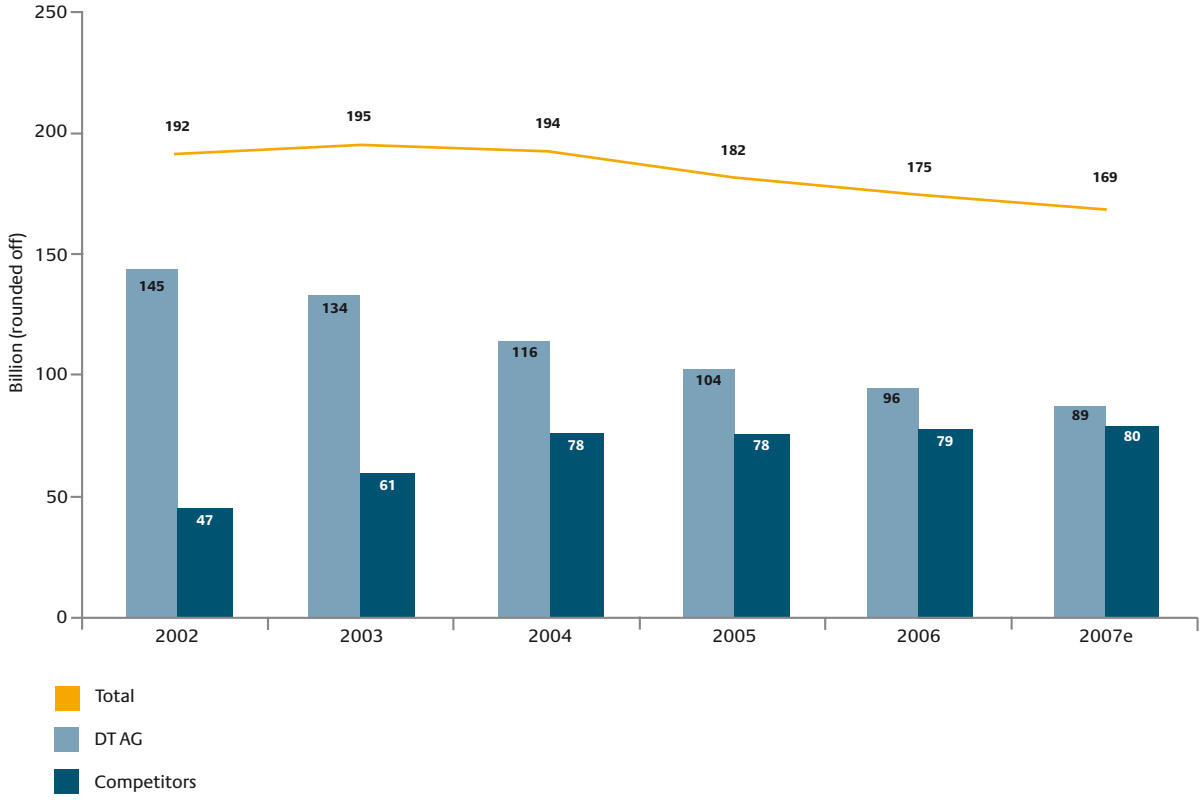
This rapid growth is due primarily to the strong demand for high-speed local loops on the part of competitors, which are used in particular to provide DSL lines. With about 1.7 million new leases of local loops in 2007, the highest growth rate ever was recorded.

TRAFFIC DEVELOPMENT

The downward trend in traffic volume via analogue and ISDN lines is continuing. The volume of domestic and international calls has experienced a marked decline and reached about 175 billion minutes in 2006 compared to about 182 billion minutes in the year before. Traffic volume in 2007 was estimated to be 169 billion minutes.

9 European Commission, Broadband access in the EU (COCOM 07-50).

Development of domestic and international calls in the fixed network[10]



The impact of VoIP and mobile telephony substitution has increased significantly over the past two years, leading to a drop in call minutes in the fixed network. Reduced rates in mobile networks have reinforced the shift in call minutes away from the fixed network towards mobile networks. In addition, the rapid growth in the number of broadband lines resulted in many customers demanding VoIP services and approx. 9 billion minutes handled via IP-based networks in 2006. In 2007, traffic volume via VoIP increased to approx. 16 billion minutes or about 10 percent of overall traffic.

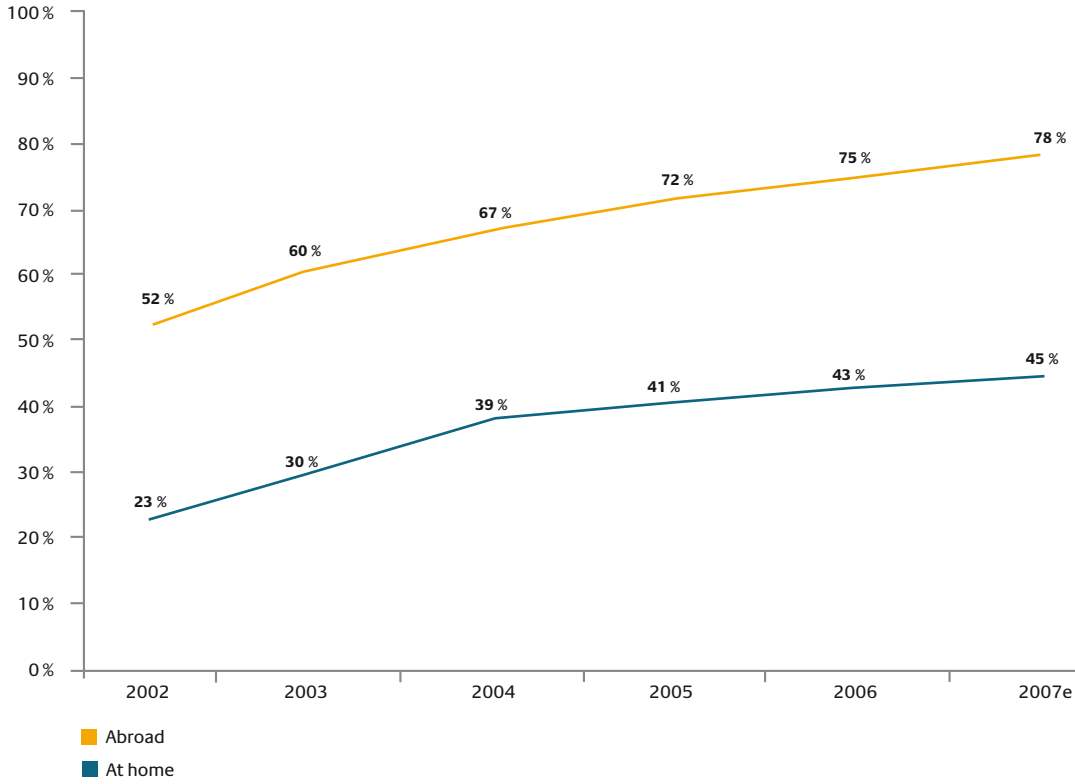
DT AGs share of domestic and international calls continued to decline.

The increased number of competitors is based upon a significant increase in traffic volume via direct lines and the corresponding increase in flatrate offers. Accordingly, the dynamic growth in direct connections resulted in a decline in traffic volumes via call-by-call and preselection.

More than 40 percent of all traffic transported by competitors of DT AG accounted for direct connections in 2006. This corresponds to an increase of 13 per cent compared to the previous year.

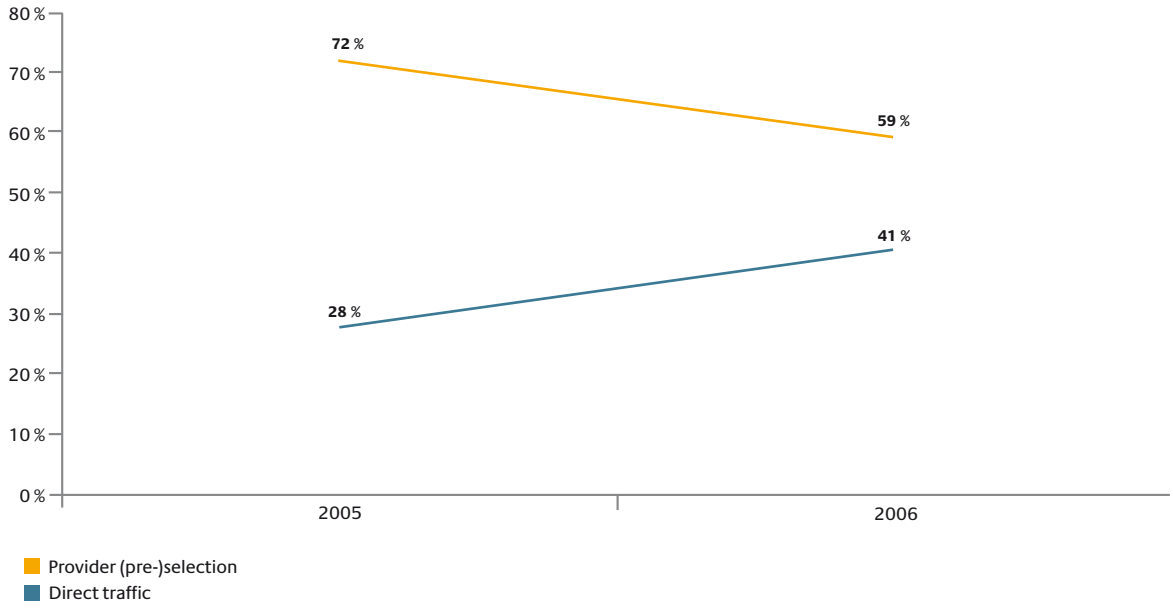
10 According to new findings, it can be assumed that information from DT AG competitors about the traffic originated via provider (pre)selection also included transit services in the past. This is why data has been adjusted retrospectively.

Competitor share in the fixed network

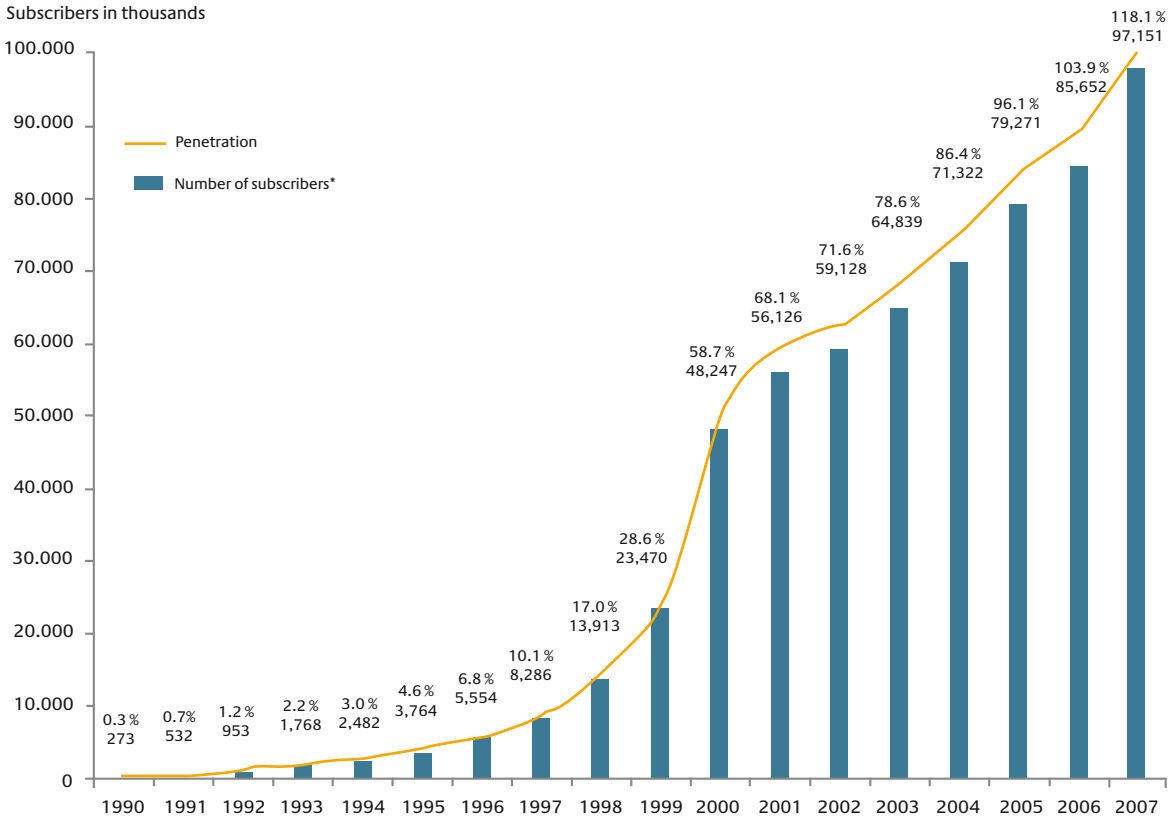


Provider (pre-)selection traffic declined, particularly in the case of call-by-call. Total call-by-call traffic was below preselection traffic for the first time in 2006.

Traffic shares of competitor access variants



Subscriber trend and penetration in German mobile communication networks



* Contract conditions. One user can have several contractual relationships. Data up to 2000 incl. C-network, from 2005 incl. UMTS.

MOBILE SERVICES

Subscribers

At the end of 2007, mobile networks had about 97.2 million subscribers. This constituted a penetration rate of 118 percent with the result that – according to the statistical average – each inhabitant in Germany had more than one mobile phone contract.

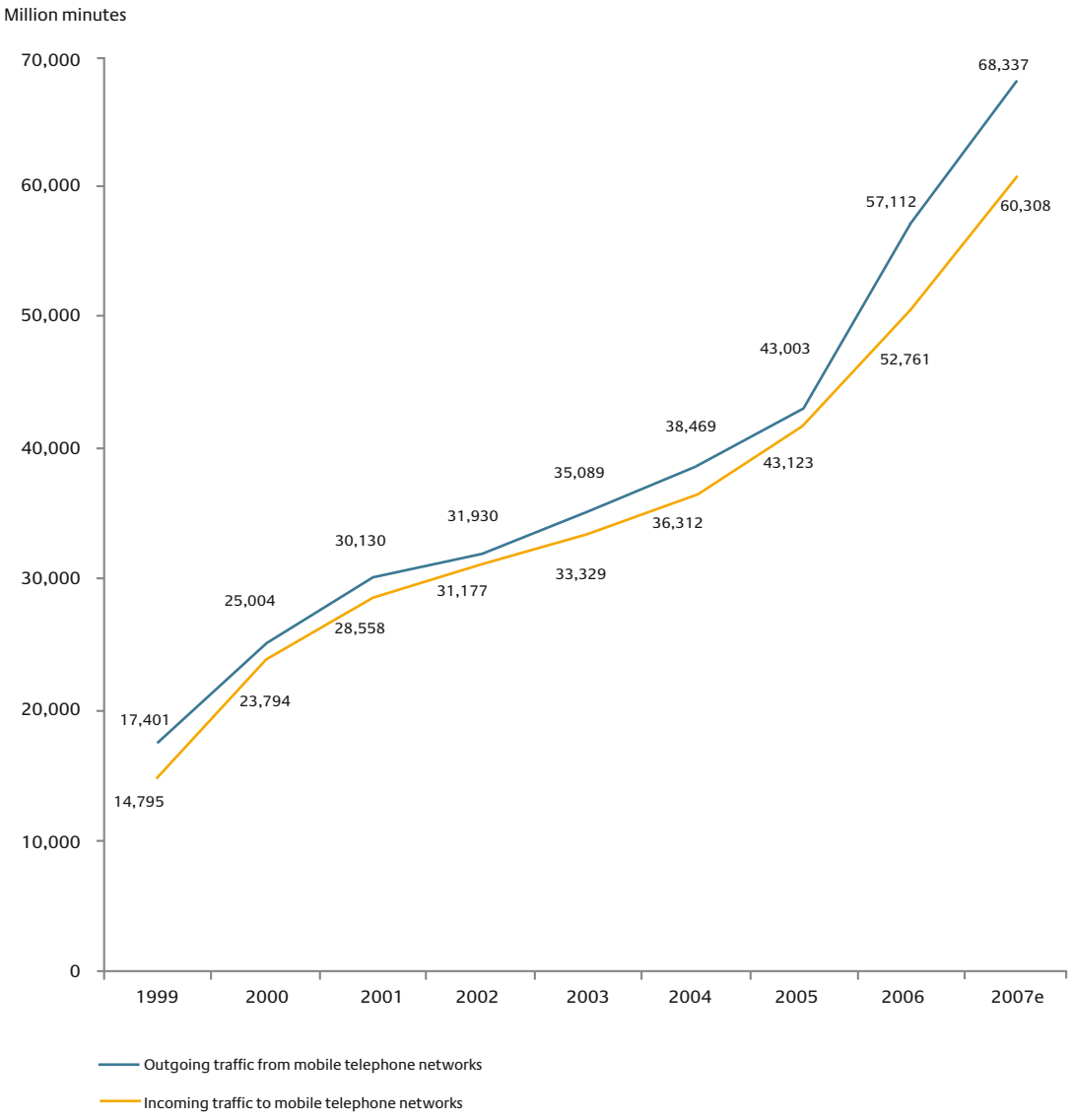
Numerous households do without a fixed network telephone and use mobile phones only. Figures for 2007 have not been available yet, but according to E-Communications Household Survey[11] about 10 percent of all households in Germany only had one mobile phone line and approximately 65 percent had both a fixed and mobile line at the end of 2006.

Continuous strong growth has been recorded in the mobile discounter segment, where independent discounters compete with mobile service providers and sales brands owned by the network operators. Following their first appearance on the market in 2005, discount services had attracted approx. 8.9 million users by the end of 2007.

The share of prepaid customers out of the total number of subscribers was around 55 percent in 2007.

11 Special Eurobarometer 249 "E-Communications Household Survey" conducted between November and December 2006, published April 2007.

Development of voice traffic in mobile radio networks



Mobile calls

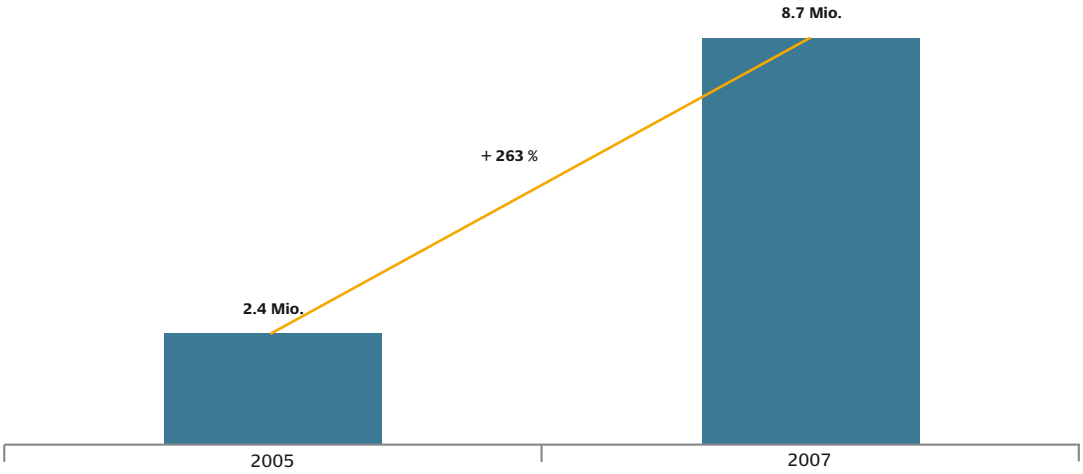
Discount offers, flat rates and the rise in demand for Homezone rates have resulted in a increase in mobile traffic.

By year's end 2007, an estimated traffic volume of 68.3 billion minutes was achieved compared with 57.1 billion in 2006. Incoming traffic amounted to 60.3 billion minutes. Growth was driven, on the one hand, by the falling price of mobile phone calls. The extensive range of flat rate offers has, on the other hand, resulted in a dramatic increase in outgoing mobile phone traffic.

Mobile data transmission

With reference to the population, network coverage of the Universal Mobile Telecommunications Systems (UMTS) in 2007 – depending on the network provider – was between 56 and over 80 percent. The num-

Rise of UMTS usage (number of regular users)



ber of regular UMTS users has more than tripled from 2005 to 2007[12].

There is now a large number of UMTS mobile phones available, as well as laptop cards and surf boxes that permit the use of UMTS-based services. In addition to UMTS, mobile data transmission is also possible via GPRS using the modulation procedure EDGE (Enhanced Data Rates for GSM Evolution). This technology is mainly employed in areas without full UMTS coverage, or by users without the right UMTS hardware. At some busy locations, network operators have installed WLAN hotspots that permit mobile data communication. The number of WLAN hotspots of various providers allowing wireless data transmission was more than 10,000 at the end of 2007.

As well as the wide range of UMTS mobile phones currently available and the number of services that now require high-speed data transmission, the significant drop in the price of network operators' data plans has also contributed to growing customer acceptance. Furthermore, the UMTS network is gradually being upgraded with HSDPA (High Speed Downlink Packet Access) broadband technology. The maximum transmission rate for receiving data is currently around 3.6 Mbit/s. Transmission rates of 7.2 Mbit/s are even possible in conurbation areas and, in the later stages of rollout, transmission speeds will be boosted to as much as 14.4 Mbit/s. In view of the speed comparable to DSL 6000 and the pricing, this technology offers an alternative to fixed network lines. In addition, HSUPA (High Speed Uplink Packet Access) opened up the possibility of uploading data at rates of up to 1.4 Mbit/s in 2007.

These developments have resulted in a growth in data traffic. It can be assumed

12 This figure is made up of subscribers who are directly registered for UMTS services plus users with fixed data plans/options who are assumed to use UMTS-based services on the basis of their regular usage pattern.

that the volume of data transmitted via GPRS and UMTS has doubled to 1.7 million Gbyte in 2007 compared to 2006.

Text and multimedia messaging (SMS/MMS)

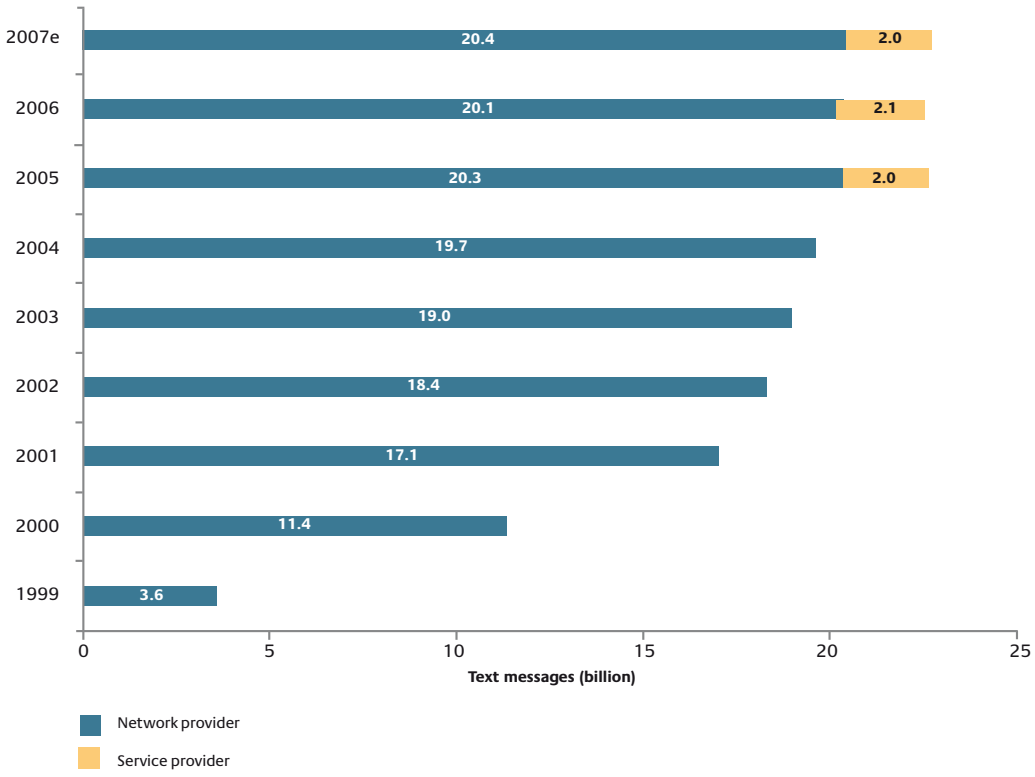
An estimated 20.4 billion text messages were sent via the short message service centres of the four German mobile network providers in 2007. Another 2 billion short messages were sent via short message service centres belonging to mobile service providers.[13] The total number of text messages sent in 2007 is estimated at 22.4 billion. These figures do not include premium text messages.

Comparisons with previous years indicate that the market is reaching the saturation point. Declining prices for call minutes mean that text messages are often replaced by a phone call.

There were 147.7 million multimedia messages sent in 2005, rising by about 4 percent to 153.4 million in 2006. This growth rate continued in 2007.

13 For the first time, data was collected regarding text messages sent via SMSCs belonging to mobile service providers in 2005. This data was not included in the past.

Development of text messages sent



INTERNET

Internet use

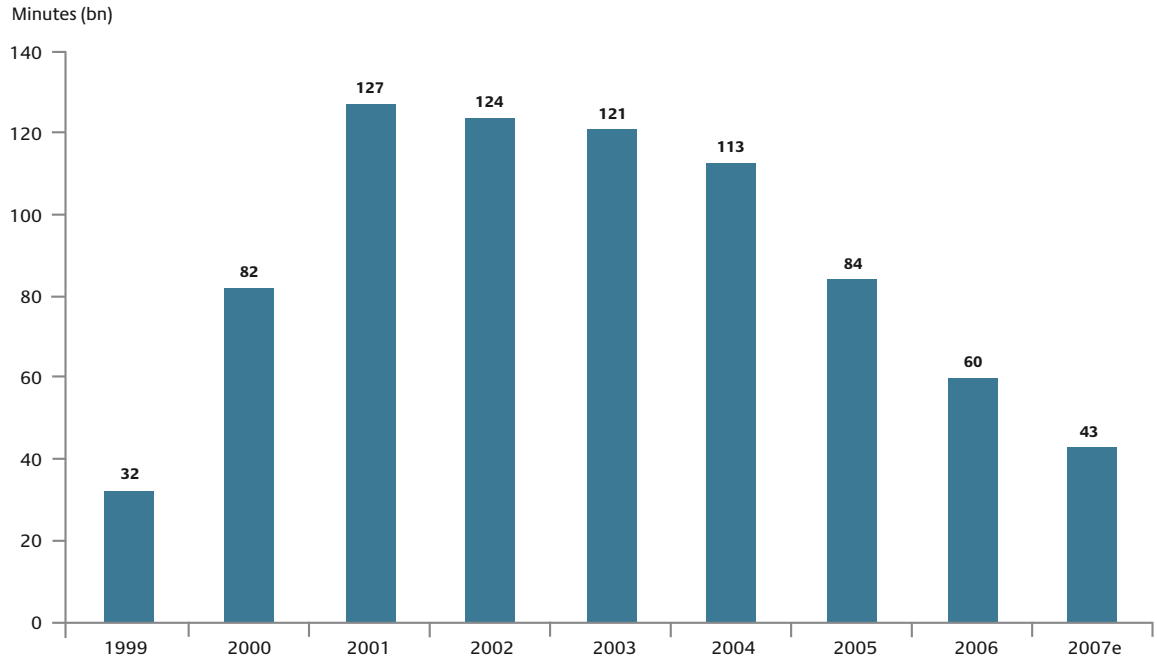
The (N)ONLINER Atlas 2007 reveals that in 2007 some 39.2 million users used the Internet regularly. For the first time, more than 60 percent of the population over the age of 14 was online. Internet use continued to rise, but at a slightly slower pace than the previous year at just two percent. According to Allensbacher Computer- und Technikanalyse (ACTA), private Internet use is now realized in 63 percent of cases via DSL lines or similarly fast types of Internet access.

In addition to Internet use at home, work, school and university, the Internet can also be used at various commercial or non-commercial venues such as Internet cafés or libraries. The Berlin-based foundation "Digitale Chancen" identified around 9,000 of such locations across the country.

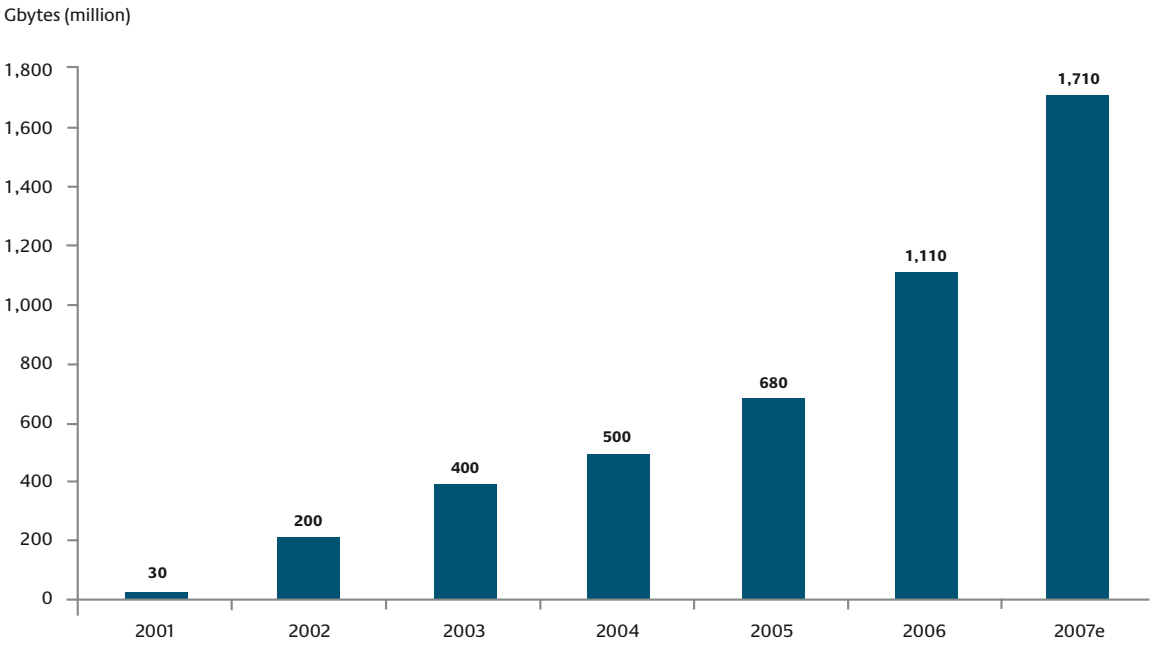
Internet traffic

As expected, the volume of narrowband traffic to the Internet generated via analogue or ISDN lines continued to fall. The volume of dial-up connections to the Internet was approximately 43 billion minutes at the end of 2007 compared to about 60 billion minutes at the end of 2006. This trend reflects the shifting of Internet minutes towards DSL and other broadband access technologies. In contrast, the volume of broadband Internet traffic (measured in Gbytes) grew strongly, a testament to the unremitting demand for broadband services. By the end of 2007, a data volume of more than 1.7 billion Gbytes was estimated.

Internet connection minutes narrowband



Broadband traffic volume



VOICE OVER IP

Voice over IP (VoIP) is a service allowing voice transmission via a packet-switched data network based upon Internet protocol. The use of VoIP services generally requires broadband access to the Internet.

VoIP has been widely used in corporate networks for some time now. The first commercial offers for use at home have been available on the market since the end of 2003. In 2007 VoIP services were offered for the mass market by about 80 providers.

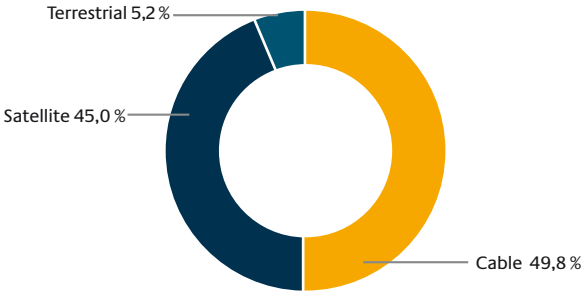
While in 2006 2.8 million customers were registered with these providers for VoIP services, this figure rose to about 3.9 million in 2007. These are mostly customers of DSL line providers that generally offer VoIP, DSL access and access to the Internet as a product bundle.

Registered VoIP users generated a call volume of some 9 billion minutes via IP-based networks. By year's end 2007, an estimated 16 billion call minutes were handled via VoIP.

BROADCASTING/CABLE TV

According to figures from the Société Européenne des Satellites (SES), at year's end 2006 49.8 percent of the approximately 37 million German households with television received their signal via cable (this figure includes those households that receive signals via a satellite master antenna yet do not have their own satellite receiver). 45.0 percent had their own satellite dish, while 5.2 percent received terrestrial television. Compared to the reception possibilities of the previous years, cable continued to lose ground to satellite reception. A very small number of users received TV via DSL line.

Infrastructural connection of TV households at the end of 2006



Source: SES/ASTRA

PRICE TRENDS

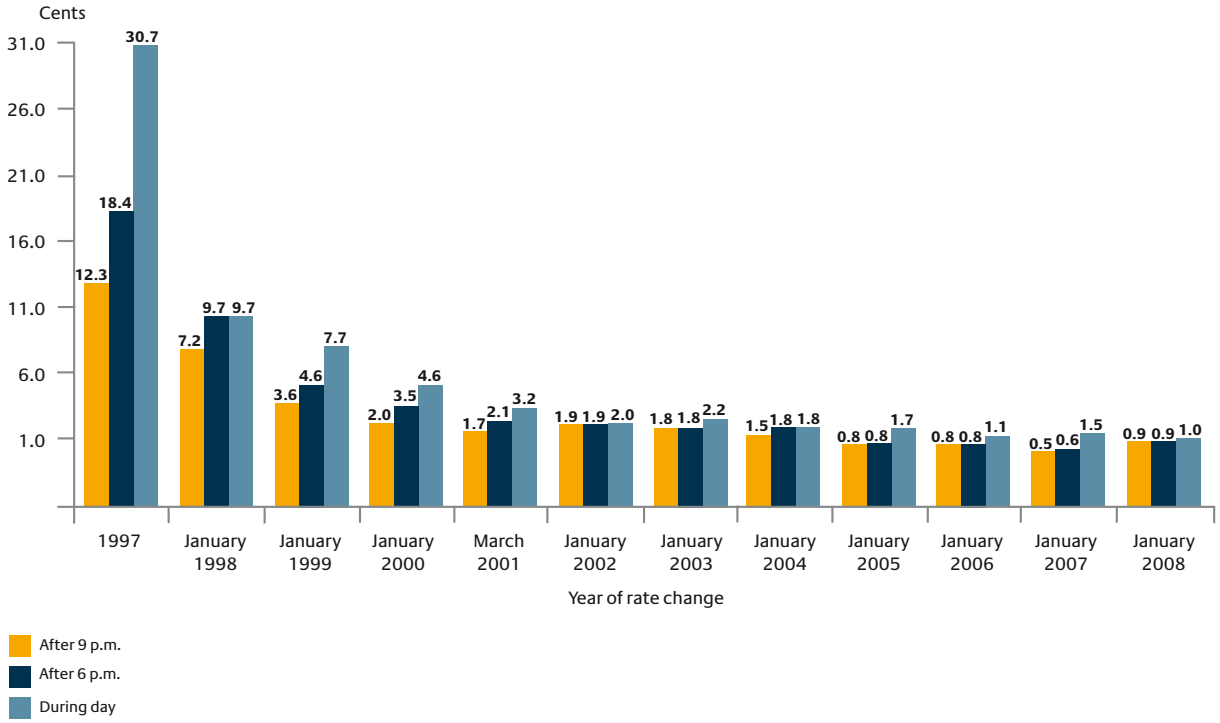
The price trend in the fixed network was dominated by package offers comprising flatrate narrowband and broadband connections and services. Pricing competition continued unabated. Offers consisting of a telephone and DSL access including flat rate telephony and Internet access were available from individual providers for as little as €30 depending on the DSL bandwidth selected at the end of 2007. The quality of the offers – for example higher bandwidths – increased at the same.

Calls to the German fixed network through a call network operator via call-by-call revealed an asymptotic development, with charges of approximately 1 cent per minute. Domestic calls were available during the day at the beginning of 2008 for just a thirtieth of what they were before liberalisation in 1997.

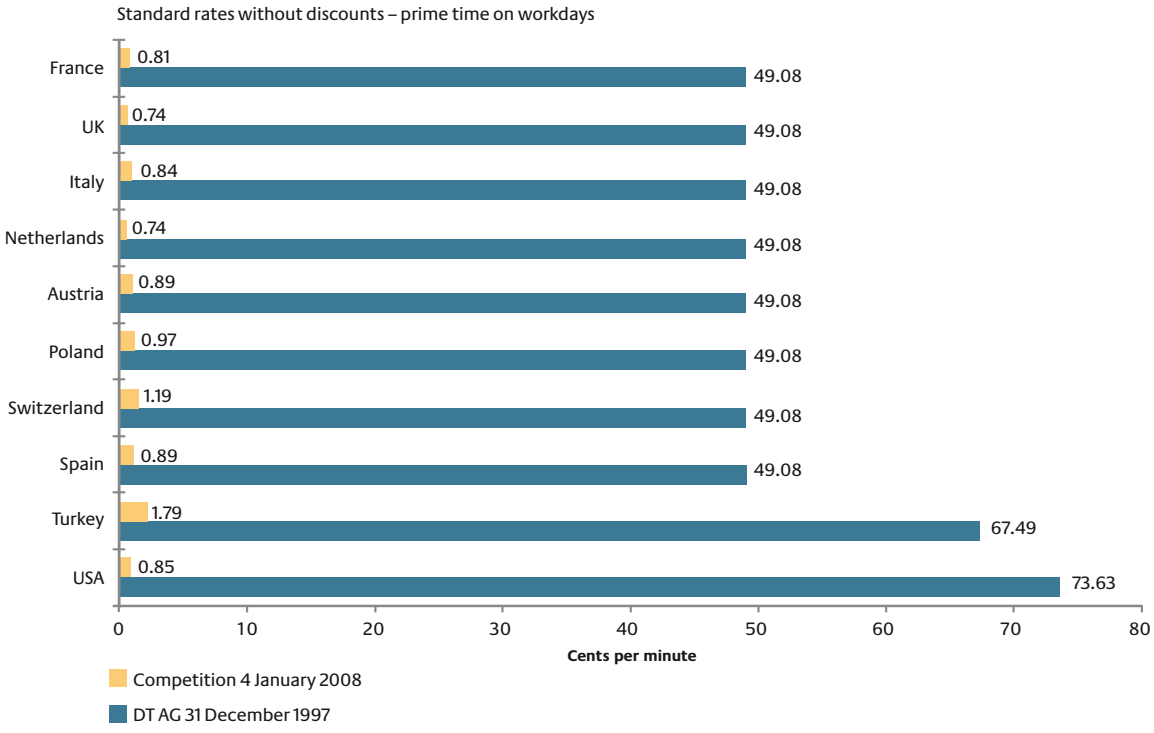
At the start of 2008, time-based charges for international calls continued to fall compared to the previous year. They often only cost a fraction of a cent. Prices have fallen by as much as 98 percent compared to 1997 depending on the destination.

Minimum rates for national trunk calls

Standard rates without discounts; prices in cents per minute, on workdays, call-by-call



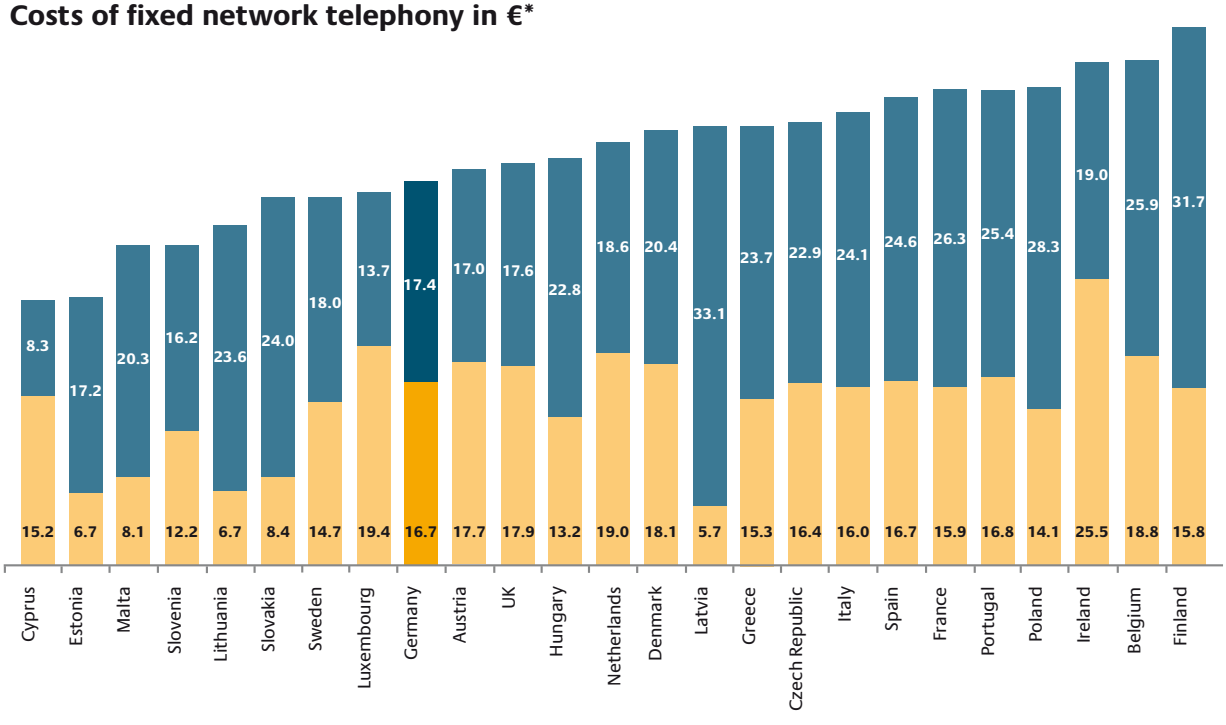
Development of foreign rates to the ten most important destination countries



Under the influence of the competition, the standard rates of DT AG have meanwhile reached a level that can be considered one of the lowest by comparison with international incumbents. The costs in Germany are lower than, for example, Finland, France, UK, Italy, Netherlands, Austria and Spain.

By the end of 2007/start of 2008 calls could be made to the fixed network at rates starting from €0.08 per minute in the area of discount mobile telephony. Flat rates offering unlimited calls to fixed lines or to other subscribers in the same network are available for as little as €10. There were also special call plans allowing customers to make cheap calls from a Homezone. In addition, there were a large number of price plans whereby customers pay a fixed price for a certain number of call minutes. Entry into force of the EU roaming regulation on 30 June 2007 made mobile cross-border communication substantially cheaper for citizens travelling in some areas of the EU.

Costs of fixed network telephony in €*



* Standard telephone rates of incumbents for private users incl. VAT, determined according to the "2000 composite OECD basket". Data basis: 2006

Sources: EU price barometer 2008, 12th implementation report of the EU Commission, Directorate-General for the Information Society

Ruling chamber decisions

In 2007, a variety of decisions were issued on local loops. Opening cable conduits enabled competitors to offer their own VDSL products – local loop rates were newly approved – a local loop standard offer was issued. For the first time, it was possible to determine mobile communication termination charges on the basis of cost documents submitted.

REASSIGNMENT OF RESPONSIBILITIES BETWEEN THE TELECOMMUNICATIONS RULING CHAMBERS

In September 2006 the responsibilities for market regulation in the telecommunications sector were newly regulated and divided between ruling chamber 2 and ruling chamber 3[14]. Following this, ruling chamber 2 is responsible for regulating retail markets and retail lines in the fixed and mobile network areas, in the field of leased lines and broadband services as well as in connection with porting. As far as upstream services are concerned, ruling chamber 2 is additionally responsible for regulating leased lines, access to subscriber data, collection and decisions about disputes having arisen in connection with the obligations of providers in the case of mobile telephone licenses. In addition to its former responsibility for regulating upstream service markets in the field of mobile telephony, broadband services and broadcasting, ruling chamber 3 had been entrusted with the responsibility for the interconnection points and the local loop for which ruling chamber 4 had been responsible for so far. Ruling chamber 4 is now responsible for the tasks in the field of energy regulation.

RULING CHAMBER 1

Allocation of DVB-H frequencies

On 08 October 2007, ruling chamber 1 awarded T-Systems Media&Broadcast GmbH the contract for performing technical radio and television operations of a nationwide Digital Video Broadcasting-Handheld (DVB-H) transmission network. In the preceding tender process, the company proved that it is best suited to meet

14 See publication in the Official Gazette 19/2007 dated 26 September 2007, Communication No. 780/2007, page 3800.

the legal and technical requirements of the terms of tender. Extending the transmitter network for the nationwide provision of mobile broadcasting services in DVB-H standard is scheduled to start in 2008 and be completed by 2015.

Digital cellular mobile radio in the range 1.8 GHz, 2 GHz and 2.6 GHz

In Germany the entire spectrum available in the ranges of 1.8 GHz, 2 GHz and 2.6 GHz is to be allocated simultaneously for digital cellular mobile telephony. The drafts of the President's Chamber decisions on the court order and assignment procedure selection were published for this purpose on 04 April 2007. After evaluation of the comments, the Chamber made the decisions about the court order and assignment procedure selection for allocating these frequencies in the ranges 1.8 GHz, 2 GHz and 2.6 GHz for digital cellular mobile telephony in its publication on 19 June 2007. Due to the expected shortage on account of excess demand, the assignment of frequencies is to be preceded by an auctioning procedure. A draft of the President's Chamber decision on the individual determinations and rules prior to performing an assignment procedure was published on 26 September 2007 for comments to be made (see also page 103).

Global System for Mobile Communications

By publishing activity complex II of the Global System for Mobile Communications (GSM) concept in the Official Gazette of the Federal Network Agency dated 28 November 2007, a uniform contract period for the GSM mobile communication service was introduced and an option granted to GSM network providers to extend the contract period until 31 December 2016 (see page 104).

Broadband Wireless Access

Following the auctioning of frequencies in the field of Broadband Wireless Access (BWA) based upon the President's Chamber decision dated 26 September 2006, it was published regarding the frequency packages C and D not allocated in this range that the President's Chamber intended to allocate these frequencies in line with demand according to the determinations made in the President's Chamber decision of 26 September 2006. Comments were invited on the intended procedure.

RULING CHAMBER 2

Issue of regulatory orders

Ruling Chamber 2 is responsible for rates regulation and the special control of anti-competitive practices on the markets for voice telephone services and public payphones, as well as resale and preselection. In 2007, one focus of its activities was the execution of the proceedings on the possible issue of obligations on the markets for "connection from the fixed network to domestic mobile networks". The starting point for these proceedings was the determination issued by the President's Chamber, according to which DT AG and its affiliated companies – at present particularly T-Systems – possess significant market power on relevant national markets for "connections from the fixed network to domestic mobile networks".

Following a wide-ranging consultation and consolidation procedure, during which, apart from the companies concerned, numerous competitors, the Federal Cartel Office, the European Commission and national regulatory authorities in other EU Member States were also given the opportunity to state their views on the regulatory obligations being envisaged, the Ruling Chamber issued a ruling on 14 December 2007, placing an obligation on DT AG and its subsidiaries, in particular T-Systems International GmbH, to inform the Federal Network Agency about its rates measures and the rates measures of its affiliated companies in the field of rates for connections from the fixed network to national mobile networks two months prior to the date when they are to enter into force. Calls via VoIP services are exempt from this obligation.

As in the rates approval procedure, the notification procedure also allows rates measures to be prohibited before they come into force, provided they are found not to be compatible with the criteria set out in section 28 TKG in a well founded anti-competitive test. Even if no clear breach can be identified, the ex post regulation of the Federal Network Agency makes it possible to carry out a comprehensive ex post examination of the rates in question at any time in case of suspicion and to prohibit such rates where there is a breach of section 28 TKG.

Measures in the field of rates regulation

In the course of 2007, the Ruling Chamber received advance notification of twelve tariff measures planned by DT AG (T-Com), including its T-Online, T-Systems and Congstar divisions.

All tariffs were reviewed by the Federal Network Agency to ascertain whether they were clearly compatible with the requirements of section 28 TKG. In 2007, it was not necessary to prohibit any tariff measures. However, in some cases reference was made to potential competition conflicts and ongoing reports on the development of usage statistics demanded.

In addition to this, since the issue of the regulatory order, all new individual contracts concluded to date by T-Systems, i.e. individually agreed services that are not easily transferable to a large number of other end users, have been submitted to the Federal Network Agency for information upon conclusion and reviewed by means of a clearly anti-competitive test to ascertain whether there are any reasons to suspect a breach of section 28 TKG. By the end of 2007 a total of 72 contracts had been submitted and reviewed by the ruling chamber.

For the first time, an administrative proceeding was initiated last year as part of these individual contracts due to the follow-up regulation of rates for retail services (municipalities of Rhineland-Palatinate).

Arbitration proceedings

Ruling chamber 2 had to deal with three arbitration proceedings in the year under review. One proceeding dealt with the provision of subscriber data according to section 47 TKG. Two other proceedings were initiated in 2007 following disputes between mobile communications service providers.

RULING CHAMBER 3

Issue of regulatory orders

On 7 March 2007 DT AG was informed about the regulatory order for Asynchronous Transfer Mode (ATM) bitstream access. The ATM bitstream access is an upstream service allowing competitors to offer high-grade DSL connection on downstream retail markets that are mainly required by business customers. An obligation to grant access to the ATM bitstream access at non-discriminatory conditions, provide separate accounting and publish a standard offer was imposed on DT AG under this regulatory order. As far as rates were concerned, the ruling chamber considered a follow-up rates control as adequate.

In the field of the markets for broadcasting services separate regulatory orders were issued on 25 April 2007 to the cable network providers Iesy Hessen GmbH & Co. KG (now Unitymedia Hessen GmbH & Co KG), Ish NRW GmbH (now Unitymedia NRW GmbH), Kabel Baden-Württemberg GmbH & Co. KG (KabelBW) and Kabel Deutschland Vertrieb und Service GmbH & Co. KG (KDVS) as well as to T-Systems Business Services GmbH. The decisions issued to cable network providers define both the conditions for feeding broadcasting signals by broadcasting organisers in the cable networks as well as for transmitting such signals by cable network providers to the operators of smaller cable distribution networks (of the so-called network level 4). Transparency obligations with regard to feeding and signal provision conditions, discrimination bans and access obligations for signal provision as well as ex-post regulation in cases of price abuse are imposed on the undertakings. The regulatory order issued to T-Systems Business Services GmbH concerns signal provision in the VHF radio broadcasting range and also calls for ex-post rates regulation.

On 23 May 2007 DT AG was informed about regulatory order on market no. 7 “Minimum offer for leased lines up to 2 Mbit/s for retail customers“. With this decision an obligation was imposed on DT AG to provide a minimum offer of leased lines. The rates charged for this were subject to follow-up rates control without any notification obligation.

After detailed discussions with all market participants and the EU Commission as part of the national consultation proceedings and the notification procedure, the ruling chamber imposed a new regulatory order for access to the subscriber line on DT AG on 27 June 2007. As a consequence of the determination by the President's Chamber on the market definition and market analysis made simultaneously for the first time, obligations had to be imposed on DT AG in the regulatory order to effectively and adequately counteract any market failure due to substantial market power. Accordingly, all obligations already imposed on DT AG in the last regulatory order of April 2005, namely to grant competitors unbundled access to its subscriber lines under non-discriminatory conditions and at rates that had been approved by the ruling chamber in advance according to the cost standard of efficient service provision. In addition, DT AG was required to grant its competitors access to its cable

conduits and, if no conduit capacities are available, to unconnected fibre-optic cables to grant access to the "last mile". Moreover, it was clarified in the regulatory order that DT AG must also grant its competitors access to the local loop in cable distributors. This is to allow competitors to expand their own high-speed networks as DT AG is currently doing with its VDSL rollout. An expedited application filed by DT AG to the Cologne administrative court against these measures remained largely without success.

On 31 October 2007 the ruling chamber announced another regulatory order to DT AG. Obligations in the field of upstream leased lines were imposed on the group in the field of termination segments (market 13) in the form of an access obligation, a collocation obligation, a ban on discrimination, a rate approval obligation, an obligation to publish a standard offer as well as special regulations for leased lines with less than 2 Mbit/s. This updated the regulation that had been in place so far. Substantial market power was not, however, detected in the area of TV transmission segments (market no. 14). Any regulating obligations that had existed in this area were revoked accordingly.

On 28 November, the ruling chamber finally placed a regulatory order on DT AG on the market for regional IP broadband supply under which the undertaking was obliged to enable interconnection for the purpose of regional IP broadband supply and grant collocation. In addition, the group was imposed with a ban on discrimination, a transparency obligation and an obligation to disclose its upstream service prices for access services on the market for regional broadband supply and its internal accounting prices and to submit its sales figures and revenues for externally offered and internally used upstream services on the market for regional broadband supply. Rates must be approved in advance and are subject to the cost standard of efficient service provision.

The issue of a regulatory order on the market for IP broadband supply not mentioned in the market recommendation of the EU Commission was required on account of a phenomenon in Germany that retail customers generally purchased the line and (DSL) broadband service under two contracts (so-called 2-contract model).

Decisions in the field of rates regulation

On 30 March 2007 the Federal Network Agency approved the rates to be paid by competitors to DT AG on a monthly basis for the lease of local loops. The rate for the most frequent basic variants “CuDA 2 Dr” and “CuDA 2 Dr high bit rate” was reduced from €10.65 to €10.50. The determination of the cost of efficient service provision was based on the “Analytical Cost Model – Local Loop 2.0” by the Scientific Institute for Communication Services (Wissenschaftliches Institut für Kommunikationsdienste, or WIK) to determine the value of investment as in preceding local loop procedures as well as, for the first time, on the industry process model of the “International Performance Research Institute” (IPRI) to quantify overhead costs. While the investment value declined slightly despite an increase in copper prices, the calculatory interest rate rose due to higher interest

levels on national and international capital markets and a higher percentage of equity capital at DT AG. Regarding overhead costs, the IPRI industry process model used for the first time showed a lower value compared to the aggregate used before.

With its decision announced on 29 June 2007 the ruling chamber approved new rates that have to be paid by competitors once when leasing local loops or returning them to DT AG. An installation fee of €36.19 was approved for the most frequent variant, a simple takeover of a copper twin wire without any switching work having to be performed at the end customer site. The termination charges that have to be paid by competitors when returning local loops to DT AG was set at €5.21 if the retail customer returns to DT AG or switches to another provider and €20.93 if the local loop is returned without the customer switching to DT AG or to another competitor. In another decision on 29 June 2007 the installation and termination charges as well as the monthly rates for shared access to the local loop, known as line sharing were approved. A monthly rental price of €1.87 was determined for granting access to the high bit rate part of the local loop from 01 July 2007. The rate for the most frequently used provision variant, the new connection without work at the cable distributor and without any work at the retail customer site was approved at €60.82.

By its decision dated 30 November 2007, the ruling chamber allowed new termination rates starting on 01 December 2007 for the German network providers T-Mobile Deutschland GmbH, Vodafone D2 GmbH, E-Plus Mobilfunk GmbH & Co KG und O2 (Germany) GmbH & Co OHG. The termination rates that have to be paid by other network providers to the mobile network providers for delivering calls in their mobile networks amount to 7.92 cent/minute for the two D networks and 8.8 cent/minute for the two E networks. Hence, the new rates for T-Mobile and Vodafone D2 are just 10 percent lower and for E-Plus and O2 more than 11 percent lower than the previously applicable rates of 8.78 and 9.94 cent/ minute. While these rates had to be established solely on the basis of an international rate comparison when determined for the first time in 2006 because none of the 4 undertakings had submitted any feasible cost statements, the new rates could be determined for the first time based upon the cost documents submitted or derived on the basis of these. Apart from the network costs, the costs of the UMTS license have been taken into account on the basis of a current valuation to calculate termination rates. UMTS license cost were also taken into account to determine mobile termination rates in other European countries in which high auctioning prices were reached, such as in the UK. On the whole, this enabled the specific cost situation of German mobile network providers to be taken into account in terms of network, personnel and license costs, frequency equipment, network topology, geographic conditions and usage behaviour better than is possible with an international rate comparison. The new decisions show that former rate reductions were justified and can now be backed up by a calculatory approach.

There was a slightly smaller difference between termination rates in the D and E networks compared to last year's decisions. The ruling chamber thus acknowledged that the economies of scale of the E network providers are still less favourable due to their original equipment with 1,800 MHz mobile radio frequencies and their later market entry as well as the lower market shares compared to both D network providers, but also took the fact that these disadvantages will gradually diminish in the future into account. The European Commission also stated on several occasions in the past that it expects an adjustment of termination rates of network providers with different original frequency equipment in the forthcoming years. The rates approval period until 31 March 2009 provides a reliable planning basis for all market participants.

On 30 November 2007, the ruling chamber announced three resolutions on the rates applications submitted by DT AG for interconnection accesses (ICAs) and collocations in connection with ICAs and access to local loops As part of these three rates approval procedures, the severance payments and provisions for premature retirement as part of DT AG's current personnel restructuring programme that were asserted for the first time by DT AG as neutral expenses under section 31(3) TKG are in part acknowledged and factored into the calculation of the approved rates. While acceptance of these expenses had not been possible in the past due to inadequate cost statements, DT AG improved its documentation of these expenses sufficiently for them to meet the legal requirements stipulated by TKG. These decisions show that the TKG includes adequate legal provisions to enable any reasonably justified additional costs for personnel restructuring measures that exceed the costs for efficient service provision to be factored accordingly in the rates to be approved.

Review of standard offers

Against the background that DT AG was required to publish a standard offer for interconnection services in connection with the regulatory order dated 05 October 2005 for which there is general demand, the contract draft was reviewed by the ruling chamber in the period under review according to the provisions stipulated in section 23 TKG. For this purpose it made a first partial decision on 04 April 2007 in which it required DT AG to revise its contract draft in some respects. The group responded by submitting its revised standard offer including most of the requirements of the ruling chamber. The second phase of the review of the standard offer for DT AG's interconnection services was completed with the decision dated 20 July 2007. The minimum period was limited until 31 July 2008. This short validation period is mainly to enable any required changes to be made to the electronic ordering and accounting procedure included in the standard offer in a timely manner and to review the functionality of the selected regulations to protect the existing status during DT AG's transition to Next Generation Networks.

In another decision of 28 August 2007 the ruling chamber specified the conditions under which competitors can be granted

access to DT AG's "IP bitstream". Following the review of conditions, the ruling chamber required DT AG to change or correct its standard contract offer for IP bitstream in some respects and submit a revised contract text by the end of September factoring in the requirements stipulated in the decision. Major aspects to be taken into account by DT AG were the offer of "standalone bitstream" by April 2008 and the offer of IP bitstream for symmetric access variants as well. In addition, DT AG had to include improved fault clearance conditions and ensure minimum quality allowing voice services to be offered via the IP bitstream. Moreover, DT AG had to modify, add or even delete completely some general contractual terms. In December a public negotiation was held about the revised contract text.

With its decisions on 31 October 2007 the ruling chamber determined the standard offers for the four German mobile network providers T-Mobile, Vodafone, E-Plus and O2 on call termination on individual mobile telephone networks (market no. 16). After specifically requiring network providers to revise their standard offers in a first partial decision on 06 July 2007, the offers were again reviewed by the ruling chamber in its second partial decision based on criteria such as equal opportunities, fairness and timeliness, and corrected where necessary. Regulations on safety services and the provision of network access points were particularly controversial in this respect. The standard offers of the four mobile telephone network providers were given a minimum term of 2 years.

Finally, the ruling chamber accounted its decision on DT AG's standard contract for access to the local loop on 21 December 2007. Apart from the usual general contract terms such as payment, liability and termination conditions, this contract also includes provisions stipulating how competitors can order local loops from DT AG and according to which DT AG must switch over the local loops ordered. The review of the sample contract paid particular attention to the regulations therein on ordering and installing local loops. By introducing financial sanctions, incentives have been provided for local loop orders to be scheduled in an improved and more precise manner by competitors and DT AG to make the ordered numbers of local loops available to competitors on time. DT AG's new standard contract and consistent implementation of the new regulations therein has good chances of ensuring that the problems that arose at the end of 2007 with the provision of local loops will no longer occur in the future.

Further decisions

Database established as blacklist for reverse charge calls – Number 115 allocated as public service number – World radio conference success for Germany – Nationwide frequency coverage allocated for DVB-H standard.

NUMBERING

Various number resources are required for the operation of telecommunications networks and the provision of telecommunications services. The Federal Network Agency ensures that all resources required on the liberalised telecommunications market are available on a non-discriminatory basis, in good time and in sufficient quantities. It also determines the purposes for which and the framework conditions under which each type of number is to be used and allocates numbers in blocks or individually to providers and retail customers. Given the constant dynamic development of technologies and business models on the telecommunications market, the Federal Network Agency repeatedly reviews whether existing arrangements need to be adapted or new number resources created in order to promote competition, consumer interests and technological development.

Assignments in 2007

In the range of local numbers and national subscriber numbers (numbering range 32) assignments have developed as follows up to 2007.

Year	Blocks of 1,000 local numbers assigned	Blocks of 1,000 local numbers assigned – total	Number of assignees (as of 31 December 2007)
1997/1998	3,088	3,088	53
1999	3,662	6,750	72
2000	44,111	50,861	89
2001	8,511	59,372	86
2002	4,281	63,653	81
2003	5,190	68,843	76
2004	11,440	80,283	74
2005	14,000	94,283	85
2006	31,571	125,854	94
2007	22,349	148,203	96

In terms of the most important service call numbers, assignments have developed as follows in the past two years:

Services	Numbering range	Numbers allocated in 2006	Numbers allocated in 2007	Total telephone numbers allocated
Freephone services	(0)800	11,500	9,216	182,650
Shared cost services	(0)180	11,005	9,620	140,059
Premium rate services	(0)900	7,378	10,497	87,635
Personal numbers	(0)700	3,166	2,177	100,605

Assignment conditions and conditions of use for "harmonised services of social value"

Due to a decision of the EU Commission dated 15 February 2007 (Official Gazette of the European Union L 49 dated 17 February 2007, page 30), national numbering ranges beginning with 116 are only allowed to be used for harmonised services of social value in Member States of the European Union (EU). A harmonised service of social value is defined in the decision of the EU Commission as a service meeting a common description to be accessed by individuals via a freephone number, which is potentially of value to visitors from other countries and which answers a specific social need, in particular which contributes to the well-being or safety of citizens, or particular groups of citizens, or helps citizens in difficulty.

The Commission based its decision on the Federal Network Agency's experience because, by assigning call number 116 for the reserved emergency call, Germany has been playing a pioneering role in Europe since 2004.

Proposals can be submitted to the EU Commission on which services a number is to be reserved for. In a continuously updated list, the EU Commission bindingly determined which numbers are reserved for which services; assigning the numbers, however, is the task of the Member States. Once a number has been included in the list, it can be assigned at national level. In order to be able to assign numbers, the Federal Network Agency published assignment conditions and conditions of use at the end of August 2007.

Universal public service number "115"

The Federal Ministry of the Interior (BMI) applied to the Federal Network Agency for assignment of the telephone number 115. This universal number ("public service number") will enable citizens, undertakings and institutions to contact all public service authorities. After a public hearing, the telephone number 115 was included in the national numbering plan and assigned to the Federal Ministry of the Interior (BMI) by the Federal Network Agency as a public service number in December 2007.

Database solution for blacklisting reverse charge call services

Under section 66i TKG, the Federal Network Agency has created a database solution for blacklisting numbers to be blocked by reverse charge call services for incoming reverse charge calls. Since 01 September 2007 all providers of reverse charge call services are required to call up this list on a daily basis. Telecommunications service providers inform the Federal Network Agency every day about all applications they have received for numbers to be blocked or unblocked.

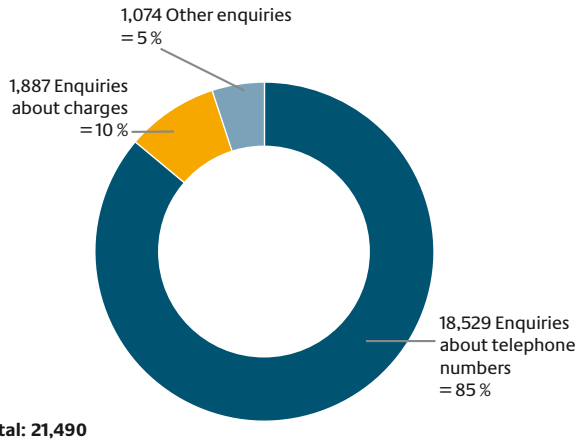
Telecommunications numbering regulations

The telecommunications numbering regulations entered into force on 15 February 2008. Based upon section 66(4) TKG, the regulatory framework on numbering with regard to the Federal Network Agency's powers, on the one hand, and the rights and obligations of market participants on the other is specified in these regulations. It is based mainly on the Federal Network Agency's proven practices to date. In addition, a numbering concept on developments on the telecommunications market and effect of these on numbering is to be published annually. When the numbering concept is prepared for the first time based upon the telecommunications numbering regulations, part of the work on a numbering concept that was already started as part of the project plan by the Federal Network Agency can be used.

Enquiries about number management

This year, the number management call centre at the regional office in Fulda dealt with 21,490 enquiries. These mainly concerned the allocation of telephone numbers. In particular, the number management office answered questions about the value added service ranges (0)700, (0)800, (0)900, (0)180) and (0)137 and local numbers. Furthermore, information was given on decisions about charges and the procedures to be followed when applying for and setting up telephone numbers. In addition to telephone enquiries, 5,989 emails were answered by the number management call centre.

Enquiries answered by the number administration



Total: 21,490

FREQUENCY REGULATION

The purpose of frequency regulation is to manage the provision of frequencies appropriately as a resource and ensure that demand is met and the requirements of the market are satisfied. Since fewer frequencies are available in specific frequency ranges than demanded by the market participants, they have to be allocated by the Federal Network Agency in a non-discriminatory manner on the basis of transparent and objective procedures. As part of this, the focus is not just on existing frequency usage, but also future technological and market developments. Comprehensive planning is required at both national and international level to facilitate efficient and interference-free frequency usage for a wide range of purposes and technologies and ensure fair and functioning competition on telecommunications markets.

World Radio Conference 2007 and European harmonisation

In view of the limited number of appropriate frequencies, one of the topics at the World Radio Conference 2007 was to find a balance between radio broadcasting requirements and the rapidly rising demand for mobile frequencies. Agreements were reached to allow faster and enhanced communication in times of crisis, early recognition of damage to the environment and climatic changes by satellites and the unhindered development of the European aviation industry. The outcome of the conference was therefore a great success for Germany.

The Federal Network Agency was also actively involved in shaping the framework conditions for the use of frequencies as part of the European Conference of Postal and Telecommunications Administrations (CEPT), the Radio Spectrum Committee (RSC) and the Radio Spectrum Policy Group (RSPG) of the European Union. The decisions on BWA wireless broadband distribution systems, use of GSM mobile communications in airplanes, ultra wide band (UWB) applications and intelligent transport systems (ITS).

Updating of the frequency usage plan

The Frequency Usage Plan (as of May 2006) must be updated again on account of the first regulation on the modification of the Frequency Band Allocation Ordinance of 23 August 2006, which transposed the results and decisions of the 2003 World Radio Conference of the International Telecommunication Union into national law. The Frequency Usage Plan was updated in several stages with the participation of the advisory council, federal government and states, as well as interested public groups. The fully updated Frequency Usage Plan is scheduled to be published in the first quarter

of 2008. Print copies of the Frequency Usage Plan can be ordered after its publication on the Federal Network Agency's website.

General assignments

According to section 55 (2) TKG, general assignment is the norm. Frequencies are only allocated individually if general assignment is not possible (e.g. risk of harmful interference). In 2007 numerous general assignments were adjusted or re-issued, e.g. for broadband fixed wireless access (BFWA), radio applications of railways for automatic vehicle identification for rail vehicles and train control systems, radio-controlled motion detectors of small capacity and tank radar, remote surveying and tracking, tracking down and locating objects, radio frequency identification applications (RFID) and medical radio applications.

All general assignments and the guidelines on the preparation of general assignments can be downloaded from the Federal Network Agency’s website .

Digital cellular mobile communications in the range 1.8 GHz, 2 GHz and 2.6 GHz

After frequencies were returned in the so-called UMTS core band following a pan-European harmonisation of frequency ranges for UMTS/IMT-2000 mobile communications in the so-called UMTS extension band, additional frequencies for digital cellular mobile communications are being provided in the ranges at 2 GHz and 2.6 GHz. In addition, opening up the so-called E-GSM frequencies in the 900 MHz frequency range for civil use means that frequencies are available in the 1.8 GHz range for digital cellular mobile communications.

As part of a more flexible type of frequency regulation, the frequency ranges 1.8 GHz, 2 GHz and 2.6 GHz shall be dedicated to digital cellular mobile telephone without limitation to specific standards and technologies. The procedure for changing the Frequency Usage Plans was initiated.

In a first step, the drafts of the President's Chamber decisions on the court order and the selection of the assignment procedure were published on 04 April 2007. After the evaluation of the comments, the Chamber decided on the court order and the selection of the assignment procedure to assign these frequencies in the ranges 1.8 GHz, 2 GHz and 2.6 GHz for digital cellular mobile telephony on 19 June 2007.

The hearings and interests expressed revealed that insufficient frequencies are avail-able for frequency assignments for digital cellular mobile telephony. Since frequencies are not adequately available, the assignment of frequencies shall be preceded by an auctioning procedure.

Individual regulations (assignment conditions) shall be determined prior to the execution of an assignment procedure. Comments were invited on the appropriate draft on 26 September 2007. A decision of the President's Chamber will be passed in agreement with the advisory board (see also page 91) after evaluation of the comments.

In the next step, a decision will be prepared by the President's Chamber on the auction regulations and comments invited on this. The auction regulations will be based upon

the determinations of the decision about the assignment conditions, so that the auction regulations can be prepared at a later point in time.

Auctioning will be preceded by a certification process that will be opened after publication. Auctioning will therefore not take place until 2009.

GSM concept

While the first action complex of the GSM concept was mainly intended to allocate the so-called EGSM frequencies to E network operators as part of the transfer of part of the frequency usage rights from the 1,800 MHz to the 900 MHz range, action complex II brings the limited frequency usage rights of GSM network operators into line with a uniform point in time. As part of this, the GSM network operators T-Mobile Deutschland GmbH (D 1 network), Vodafone D2 GmbH (D2 network) and E-Plus Mobilfunk GmbH & Co. KG (E1 network) have been given the option of extending their licences until 31 December 2016.

The GSM network operators mentioned exercised their option in the middle of the year and are obliged to pay the appropriate charge. As a consequence, the frequency ranges concerned are not available for another individual assignment until the end of the year.

International frequency coordination for mobile radio

Efficient and interference-free frequency use in the border areas of the Federal Republic of Germany requires the coordination of frequencies with neighbouring countries. The general regulations of international frequency coordination for land mobile radio are bindingly stipulated in the so-called HCM agreement.

Approximately 3,300 coordination requests from abroad were answered in 2007. During the same period, approximately 11,000 coordination requests were sent abroad.

Point-to-point radio relay, in particular frequencies for broadband wireless access

Following the decision by the President's Chamber of the Federal Network Agency of 26 September 2006 on the procedure for the assignment of frequencies in the 3,400 to 3,600 MHz range for broadband wireless access (BWA), the frequencies were auctioned in December 2006. By assigning the frequencies, the Federal Network Agency hopes to improve broadband coverage for the population, particularly in rural regions. Three companies have been awarded the contract for nationwide coverage. Two companies have been successful in parts of Bavaria.

It was not possible to assign all the available frequencies in the auction. Comments from the public were invited early in 2007 on the intended new assignment of these frequencies. Eight comments were received. Apart from the demand for rapid assignment of this spectrum, many of the comments expressed requirements and interest. The Federal Network Agency plans to assign the frequencies in a two-phase procedure. The frequencies are to be assigned on request as far as possible. If

more applications are filed in one region than frequencies are available, the assignment shall be preceded by an auction procedure. The draft of the assignment decision is scheduled to be published in the first quarter of 2008.

The frequency range from 3,600 to 3,800 MHz was intensively scrutinized in 2007 in order to be able to make additional frequencies for wireless broadband network access points available.

Broadcasting

As a result of the Regional Radio Conference 2006 (RRC06) the 2006 Geneva Agreement entered into force on 17 June 2007. This ITU conference had the goal of comprehensively revising the plans and guidelines that had been in place since 1961 and, in this way, driving ahead the digitalisation of radio and television broadcasting internationally. Wide-ranging negotiations about the concrete implementation were held on national and international level even after the effective date of the agreement. The Federal Network Agency paid particular attention to the identification of possibilities for innovative and multimedia services apart from the classical broadcasting assignments. It was possible to allocate nationwide frequency coverage for mobile and multimedia applications using the DVB-H standard (see page 90).

By the end of 2007, another 224 DVB-T frequencies had been allocated for regular operation. At the same time, 796 analogue frequencies for radio and television broadcasting were not assigned during this period. Analogue VHF radio broadcasting is growing rapidly again. The Federal Network Agency had to adjust its procedures to market requirements, in particular due to the emergence of new companies in the radio and television market that has been dominated by monopolies so far. New assignment regulations were prepared for broadcasting service frequencies that are likely to be used in 2008.

Frequency assignments for digital trunked radio of authorities and organisations with safety tasks

On 01 March 2007 a frequency assignment for a nationwide uniform digital voice and data radio network for the Federal Agency for Digital Radio of Authorities and Organisations with Safety Tasks (BOS) in the frequency range from 380 to 385 MHz / 390 to 395 MHz was issued to BOS.

Wideband trunked radio, assignment of remaining spectrum via application procedure

In mid-2005 a second application procedure for wideband trunked radio was opened. Due to the application situation it was clear that the remaining frequency range would no longer be adequate for all applicants and the frequencies would have to be assigned by auction. The assignment procedure was suspended due to an action brought against the President's Chamber decision of 17 February 2004 on the assignment of frequencies for wideband trunked radio. Once the action brought forward was legally rejected and the decision of the President's Chamber confirmed, two of the original three applicants withdrew their applications. Contrary to the original application situation, sufficient frequency was thus available that could then be assigned

through the application procedure. This was completed in September 2007.

Narrowband trunked radio

In 2007 the demand for narrowband trunked radio frequencies has continued to rise. Interest is focused on digital trunked radio frequencies, mostly in TETRA standard. Interest is shown by special user groups such as airports, harbours, company fire brigades, energy companies, chemical parks, municipal utilities and transport services. The number of applications has risen extremely due to the marketable TETRA technology, the obsolescence of tradition private mobile radio and in particular the decision to extend the nationwide radio network for BOS also using TETRA technology. In order to avoid a special assignment procedure in the medium and long run, such as the auction procedure, the allocation practice was changed in 2007. The previous two-stage procedure for a public trunked radio network was adjusted to the single-stage allocation procedure for non-public networks. Applications for public trunked radio networks will therefore no longer be considered according to their region, but to their location. Accordingly, a difference is no longer made between public and non-public trunked radio networks.

Satellite radio

Satellite radio includes all facilities that are required for technical communication via or with satellite ands via satellite-supported networks. In 2007 four new satellite systems were registered with the ITU by the Federal Network Agency. Satellite transmission often requires large-scale cooperations on account of the considerable personnel and material resources required for the projects. It is hard to imagine current on-site reporting by broadcasting companies without the use of satellite-supported transmission paths.

Amateur radio

In 2007 around 1,100 amateur radio certificates and some 1,700 amateur radio admissions and call signs were issued. In February 2007 the Federal Network Agency published the revised catalogue of questions that includes examination questions for the "Technical Knowledge" subject for class A. The catalogue of questions contains examples of harmonised examination content and requirements that can be used for examinations for amateur radio certificates.

2007 saw two hearings and orders in the Official Gazette regulating details for amateur radio examinations and publishing guide values for unwanted emissions. By another order in the Official Gazette, the protected zones around TV broadcasting stations in the frequency range between 50.08 and 51.00 MHz were abolished.

Private mobile radio

Private mobile radio (PMR) consists of various radio applications and other fields of application. It is thus tailored to users' individual requirements. Users include industrial enterprises, transport and logistics companies and energy supply, trade and crafts companies, business enterprises, authorities, public bodies, sports clubs and service companies. BOS radio is extremely important. In the field of private mobile

radio, analogue applications have been increasingly replaced by digital applications. Approx. 9,000 operations were processed in 2007 in the field of PMR.

Short-term assignments

Short-term assignments are issued by the Federal Network Agency when sporting and cultural events, state visits and other occasions that attract significant media coverage are held. In 2007, the Federal Network Agency issued 1,953 short-term assignments. These provided for a total of 13,072 frequency uses in extremely varied frequency ranges between 40 MHz and 22 GHz for 1,108 events. The majority of short-term assignments were issued for motor sports events (such as Formula 1 and DTM), cycle races, music events and winter sports events. To ensure the interference-free and efficient use of these frequencies, the Federal Network Agency was present with personnel and measuring vehicles on the ground at 98 events.

Point-to-point radio relay

Digital exchange of messages and data via radio relay communications provides a low-cost and flexible alternative for providers (such as mobile communications companies and industrial park operators instead of leased lines or providing their own cable connections. Because of this decisive advantage and the increasing number of options available for using high bandwidths, radio relay continues to have high growth rates.

Approximately 20,000 requests for new assignments of frequencies, changes to existing frequencies and legal successions were processed by the Federal Network Agency in 2007 for point-to-point radio relay. As such, the number of orders has doubled in recent years.

In addition, the Federal Network Agency was involved in planning and licensing procedures as part of the Building and Emission Control Act, incl. representing public requirements. As part of its involvement, statements were prepared on the issue of the impairment of radio relay links in connection with the scheduled erection of wind power stations and other higher building structures (antenna masts and towers, chimneys, high-rise buildings). In 2007 a total of some 500 participation procedures and requests for mutual assistance and information were processed by the Federal Network Agency.

RADIO COMPATIBILITY OF RADIO EQUIPMENT

The Federal Network Agency carries out its tasks to determine radio compatibility prior to the introduction of new radio services in close cooperation with other international administrations, developers of new technologies and potential operators. Numerous technical compatibility studies undertaken in 2007 by ITU and CEPT international bodies were actively supported by the Federal Network Agency, among them detailed investigations of short-range devices (SRD) such as at ITS. The report on compatibility issues between ITS and other radio systems was in the public comment phase when it was accepted finally by the Electronic Communications Committee (CEPT ECC). In addition, the Federal

Network Agency was involved in the development of new procedures for compatible technology and service neutral frequency uses in the same frequency bands, the so-called WAPECS bands (Wireless Access Policy for Electronic Communications Services). The investigations for Ultra Wide Band (UWB) applications such as wall penetration sensors or floor radars were continued in various frequency bands. Numerous compatibility tests and reports had to be completed in advance of the 2007 World Radio Conference for the various topics discussed there. In addition, both the organisational and technical preparations for introducing a new regulation on the protection of public telecommunications networks and transmitting and receiving radio systems (SchuTSEV) that are operated in defined frequency ranges for security reasons were made.

ELECTROMAGNETIC COMPATIBILITY AND ITS STANDARDISATION

Standardising electromagnetic compatibility (EMV) focused on cooperation on and control of developing EMV standards for unwanted emission of units in the special committee for radio interference of the International Electrotechnical Commission (IEC CISPR). Numerous technical papers were submitted successfully and factored into the definition of the content of standards. Thanks to the committees' painstaking technical work, the Federal Network Agency was able to make a substantial contribution to safeguarding consumer interests and increasing the reliability of decisions performing conformity assessment procedures and thus also reducing the associated costs for the benefit of industry and consumers.

PROVISION OF STANDARDS, IN PARTICULAR HARMONISED STANDARDS FOR RADIO EQUIPMENT

The development of standards for radio equipment ensures efficient use of the available frequency range. In addition, particular importance is attached to determining an adequate level of electromagnetic interference to protect public telecommunications networks and transmitting and receiving radio systems that are operated in defined frequency ranges. Numerous new editions of the relevant standards are evidence of the Federal Network Agency's successful cooperation .

EUROPEAN-WIDE CORDINATION OF CONFORMITY CERTIFICATES AND MARKET SUPERVISORY ACTIVITIES (TELECOMMUNICATIONS CONFORMITY ASSESSMENT AND MARKET SUPERVISORY COMMITTEE – TCAM)

The Commission is very interested in getting a better idea of the devices launched on the European market and its distributors, and fostering European-wide market supervision. The market supervisory authorities of the Member States have performed a market supervisory campaign in recent months to check the extent to which the basic requirements of the R&TTE directive are met. This review includes both administrative requirements (such a technical documentation, labelling requirements) and technical requirements (such as compliance with harmonised standards). The

results were discussed after evaluation with interested parties (such as industry and EU Commission) at TCAM. The Commission is planning an information workshop for the target group, firstly, to give information and, secondly, to discuss industry issues. The Federal Network Agency is involved in the working group established by the Commission for the preparation of an R&TTE guide.

EUROPEAN INFORMATION PROCEDURE

A European-wide information process was defined for the field of standards and technical regulations to ensure smooth functioning of the European single market that is intended to give maximum transparency on national regulations. Under this process, all Member States of the EU must notify the EU Commission of any drafts of national (technical) regulations such as technical provisions and interface specifications. These can then be reviewed and commented on by the Commission and the other Member States. In 2007 the Federal Network Agency submitted a total of 29 draft regulations from the telecommunications sector – in particular radio– for notification. Most of these regulations concern German interface specifications. They include information and technical parameters for the different types of radio equipment and provide guidance for manufacturers. One of these basic requirements is the efficient and interference-free use of frequencies. On the other hand, more than 380 drafts submitted by other Member States were reviewed by the technical departments of the Federal Network Agency and changes suggested, if necessary. Thus, the Federal Network Agency contributes to European-wide harmonisation.

RADIO FREQUENCY IDENTIFICATION

During Germany's Presidency of the EU Council, the government pushed the issue of Radio Frequency Identification (RFID). As part of preparations for the EU RFID symposium held in Berlin in June 2007, the Federal Network Agency prepared, on behalf of the Federal Ministry for Economics and Technology (BMWi), an analysis grouping standardisation activities of RFID systems strategically in view of any action required by industry and politics. The technology for recording objects wirelessly using radio chips, which has been used in closed applications so far, is increasingly gaining importance in the telecommunications sector, because its key benefit is highlighted through networking – network aspects of identification systems (NID) – for example by connecting readers to databases and application programmes via telecommunications networks. The idea of a far-reaching networking of objects (Internet of Things) was developed by the industry with large business potential and a huge impact on society. This has therefore become a key issue for the Federal Network Agency and is supported at ETSI and EU level.

TECHNICAL STATEMENTS AND ASSESSMENT

The increasing variety and complexity of new telecommunications technologies requires the relevant technical framework conditions to be increasingly considered in

detail and factored in to decisions made during regulatory procedures. This is why the technical departments are involved with technical statements and consultations in many procedures of the ruling chambers. Major issues were the examination of the applicability of ATM bit stream regulation on Ethernet-based networks, because ATM technology is increasingly replaced by Ethernet technology, such as standard “IP Bit Stream Access” offers.

INTERFERENCE-FREE BROADCASTING COVERAGE

The Federal Network Agency was involved in preparing regular operation of DVB-H by preparing technical specifications for small gap fillers. These devices are intended to compensate attenuation within a house so that DVB-H can be received in a flat or floor of a house. They are allowed to have a maximum transmitting capacity of 1 mW to avoid interference with other radio services. This includes stringent requirements in terms of unwanted emissions, prevention of oscillations and selectivity. The Federal Network Agency submitted its experience and results gathered to the ATRT working group DVB-T-Repeater. High shielding demands must be placed upon cable TV networks, and in particular any connected equipment such as radio and TV sets to avoid unwanted user signals being transmitted in the equipment. On the Federal Network Agency’s initiative, limit values and measuring procedures for evaluating the screening of sound and TV broadcasting receivers were included in the draft of the international standard for the emission of multimedia equipment (prCISPR 32). The Federal Network Agency’s demands in terms of non-interference when using the same frequencies were also represented in the non-standardisation committees, e.g. in the "Broadcasting reception equipment" working group, which deals with the technical conditions of further transmission of broadcasting and comprises representatives of industry, housing companies and associa-tions from all over Germany. In 2007 issues were discussed that dealt with the technical demands for cable TV networks, in particular extension with return channel capability for double and triply-play applications on network layer 4.

STANDARDISATION WORK IN THE FIELD OF NEW TECHNOLOGIES AND RECONFIGURABLE RADIO SYSTEMS / SOFTWARE DEFINED RADIO (SDR) AND COGNITIVE RADIO (CR)

The Federal Network Agency is actively involved in the standardisation and further development of new technologies and reconfigurable radio systems. It is involved in national research projects such as WIGWAM (high bit rate data transmission of 1 GB per second via radio) and EASY-C, a research project for pushing key technologies for the next generation of mobile radio networks as well as in international research projects such as EÇR (End-to-End Reconfigurability). One of its main aims – in cooperation with the industry – is to prepare regulatory requirements early to ensure timely introduction of new concepts based on new technologies and allow rapid innovation. At the same time, the aim is to establish a global process for the introduction of new

technologies. A substantial improvement in the use of frequency range can be expected with reconfigurable radio systems. Several committees (EC, ETSI, CEPT, ITU) have now started preparing specifications. Corresponding research projects are currently being planned by the EU involving the Federal Network Agency.

TRAFFIC TELEMATICS – INTELLIGENT TRANSPORT SYSTEMS (ITS)

Applications dealing with communication between vehicles ("vehicle-to-vehicle") and between vehicles and roads ("vehicle-to-road" / "road-to-vehicle") were in the focus of the accelerated activities during the reporting period of both industry and standardisation committees. The required spectrum compatibility tests at CEPT have already been completed for 5.9 GHz ITS systems.

These systems are provided by major car manufacturers (car-to-car consortium, C2C) for so-called "Multi-Hop" systems that are intended to generate major infrastructural improvements for increased traffic security and improved traffic flow on roads/motorways with a positive impact on the economy (for example by avoiding traffic congestions and waiting periods). To take the requirements of the European Commission e-Safety initiative into account, a protected/secure frequency band is required for future highly reliable services to increase traffic safety. The core feature of the future pan-European standard is the definition of 3x10 MHz for protected services and applications in the frequency band above the 5.8 GHz ISM band (5.875 to 5.905 GHz). In addition, the preferred frequency band is proposed for the control channel in the range between 5.885 and 5.895 in order to enable technical solutions on as global a basis as possible.

EMERGENCY CALL

The increased use of VoIP and the technical problems making it hard to reach the local emergency call control station, in particular in the case of nomadic use of VoIP, means that the cooperation necessary between infrastructure provider and service provider has gained importance. This applies particularly if the current location of an emergency caller is to be transmitted to the control station as intended. Section 108 TKG and the current draft of the directive on emergency call connections (NotrufV) provide for the preparation of a Technical Directive by the Federal Network Agency with the help of associations, representatives of emergency call control centres designated by BMI, network providers and manufacturers. As part of the preparatory work for the Technical Directive to be prepared, the Federal Network Agency was involved in the draft directive on emergency calls. This mainly applied to the technical specifications that must be considered in IP networks and for emergency calls from VoIP terminal equipment. A European Commission initiative that promotes the automatic transmission of locational information for vehicles having had an accident to the emergency call control centres (eCall) must also be taken into account. International standards and approaches were examined as part of this.

QUALITY AND REPORTING OBLIGATIONS FOR TELECOMMUNICATIONS PROVIDERS FOR THE CALCULATION OF CALL CHARGES

Customers expect the invoice amount for telecommunications services they have used to be accurate and correct. For this purpose, the data on the individual telecommunications services used must be recorded correctly and then calculated according to the contractually agreed rates. All telecommunications providers that offer services to the public and calculate their call prices according to time and/or distance-based rates have so far been required to furnish proof that their accounting systems work accurately and correctly. Section 45g TKG now stipulates that the review must also include call services with volume-based accounting. In preparation of the publication of execution conditions, the Federal Network Agency has gathered ideas from all market participants: retail customers, network and equipment providers. The aim is to give customers faith in the correctness of rate determination, give providers planning security when developing their accounting system and provide experts and legal bodies with a standard for assessing accounting systems.

RADIO MONITORING AND INSPECTION SERVICE

Decision-making in the telecommunications sector is supported by measurements made by the Federal Network Agency's radio monitoring and inspection service.

Technical research into the introduction of new transmission procedures in VHF sound broadcasting

In connection with testing new transmission procedures in VHF sound broadcasting, four different transmission procedures were tested in practice as part of test radio assignments.

The transmission procedures are based upon purely digital and analogue/digital transmissions in the VHF sound broadcasting band II (87.50 MHz to 108.00 MHz) and are identified as follows:

- HD radio (analogue/digital)
- FMeXtra radio (analogue/digital)
- DRM+ (University Hanover) digital (COFDM)
- DRM 120 (Technical College Kaiserslautern) digital (COFDM)

In connection with the test radio assignment for new transmission procedures, the PMD of the Federal Network Agency performed wide-ranging technical compatibility tests with safety-related radio services of the BOS and aircraft radio service with the participation of the institutions concerned. These were urgently required to ensure interference-free operation of safety-related radio services when launching the broadcasting stations planned for the new VHF audio broadcasting transmission procedures. Based upon the results of the compatibility tests performed by the Federal Network Agency, the test radio assignment was carried out within a limited period of time.

In addition, extensive laboratory measurements were taken at a variety of radio receivers to determine the required protection ratios in the VHF range. It was essential to determine the protection ratios required between the new analogue/digital radio signals and the analogue FM sound radio signals to ensure interference-free VHF audio radio reception in the coverage area.

The PMD of the Federal Network Agency continued to be involved in the field measurements taken in the radio field of these transmitters to be able to draw conclusions on the laboratory measurements from the findings made there. The evaluations and findings derived will ensure interference-free audio broadcasting reception.

Technical research into UWB applications

The applications to be examined were soil and wall penetration radars as used in building and road construction. The measurements were of special interest because they occupy a large bandwidth due to their modulation. The examinations were performed both in the Federal Network Agency's laboratory at Kolberg and on site. They not only serve to verify current limit values and measuring methods as part of EU standardisation, but also the national frequency assignment planned.

Research into levels of radio noise

In 2007, the research into "man-made noise" in the frequency spectrum which began in 2006 was continued with measurements in the frequency range below 30 MHz. The results of this kind of "noise research" have provided crucial parameters for planning radio networks and are required for the considerations of international working groups within the ITU. The research has also thrown light on the effectiveness of existing EMC standards and any adjustments that may be required.

Compatibility of inductive automatic train control facilities with radio broadcasting in the medium-wave band

Wide-ranging measures were taken during the reporting period in cooperation with a manufacturer of automatic train control facilities regarding the interference range of facilities in the frequency range between 800 and 900 kHz. During the extensive compatibility tests, it was checked whether it was possible to receive digital broadcasting DRM (digital radio mondial) close to the track system with automatic train control in an interference-free manner in the commonly used frequency range.

UMTS coverage measurements

The licenses for operating third-generation mobile radio networks (UMTS/IMT-2000) include a coverage obligation (part B, section 4) under which licensees are required to provide a specific coverage rate for the population. Proof is furnished by comparing the mobile coverage determined by the PMD with the data submitted by the licensee.

The results measured show the actual coverage for the population living in the coverage area.

Research into frequency usage in preparation for WRC-07

In May 2007, the Federal Network Agency again coordinated an international project designed to measure frequency usage in the range from 4 to 10 MHz that involved more than a dozen administrations throughout Europe and a measuring station in the Caribbean. The results of measurements taken at over 20 monitoring stations with a considerable volume of data were required as a basis for evaluating the current use of the short wave range as well as for the new assignment of frequencies in this range during WRC-07.

Monitoring of frequency uses

In the course of its work monitoring frequency uses, the radio monitoring and inspection service (PMD) checked some thousand frequency assignments for a range of radio applications to ascertain whether operators complied with the provisions on the assignment of frequencies last year. The review of frequency usage makes it easier to form a clear idea of the current situation and control compliance with regulatory standards in the field of frequency management. The review provides essential information about the actual situation and therefore supplements the administrative elements of frequency regulation (National Table of Frequency Allocations, Frequency Usage Plan, frequency allocations), integrating them into a self-regulating system. The intention is to identify negative effects on frequency usage at an early stage and minimise the amount of interference caused as a result.

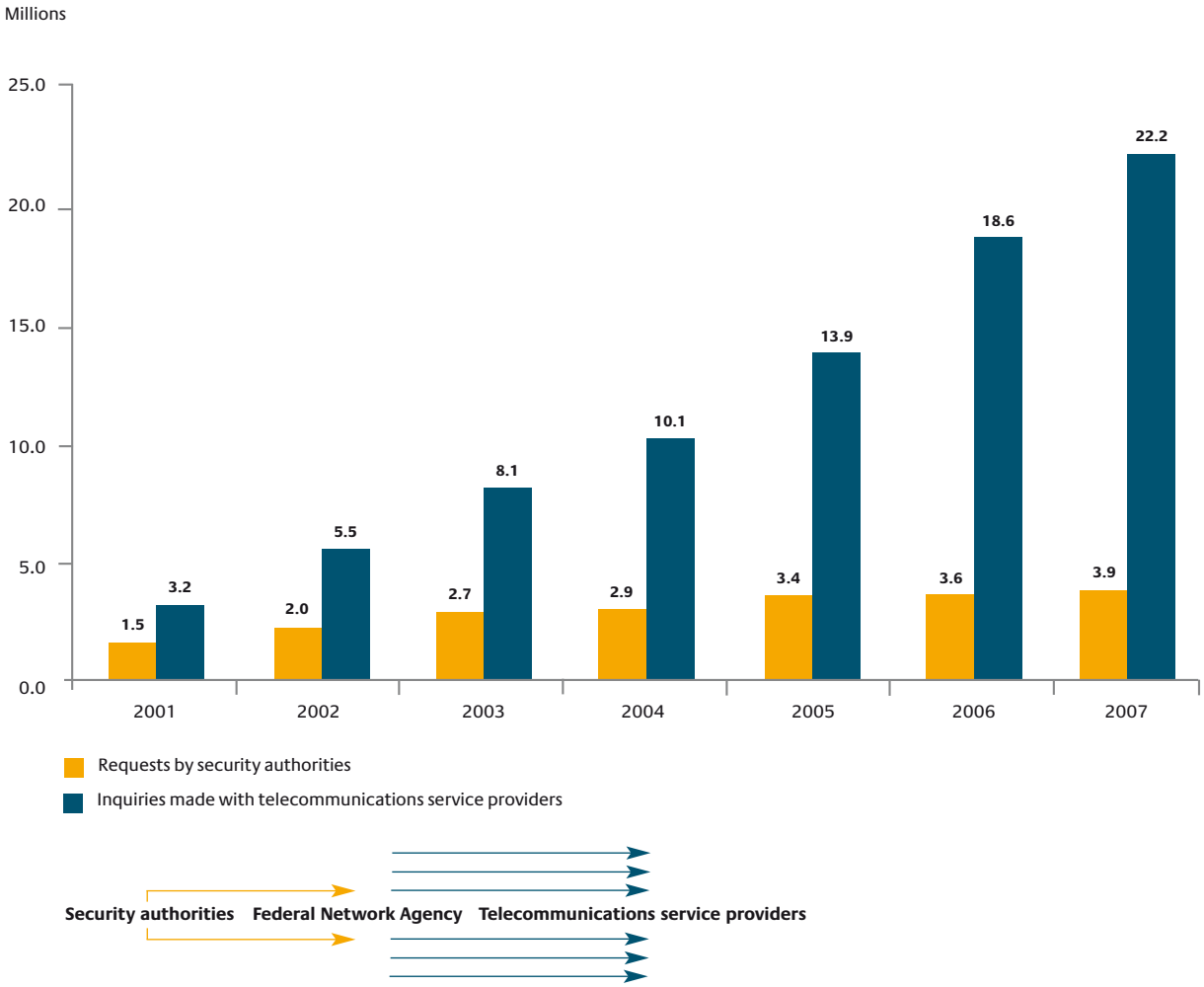
A statistical procedure used to determine test values is applied when monitoring the areas of private mobile radio and radio relay services. The calculation of test values includes total stock and the failure rates of the previous random samples This statistical procedure represents an efficient and economic way of monitoring frequency uses. With this procedure, only as much testing is carried out as necessary, i.e. as little as possible. There are plans to include other radio services in this procedure.

PUBLIC SECURITY

Automatic information procedure under section 112 TKG

Following the liberalisation of the telecommunications markets, customer data are no longer held by a monopolistic state-owned enterprise, but are gathered by a large number of telecommunications companies. To assist the security authorities in the performance of their statutory duties, these telecommunications companies supply information from their customer files about the names and addresses of individuals with telephone numbers to the authorities via the Federal Network Agency. The number of authorities and telecommunications companies involved in this system is still on the increase due to new legal requirements. At present, about 1,000 authorities registered with the Federal Network Agency are able to retrieve relevant customer data from a total of 110 telecommunications companies.

Development of information requests from security authorities and inquiries made with telecommunications service providers



Qualified electronic signature

The Federal Network Agency is the "competent authority" under the Act Governing Framework Conditions for Electronic Signatures (SigG). The duties associated with its role in this capacity include, in particular, the accreditation of certification service providers, the supervision of certification service providers, the operation of the state Trust Centre as the supreme certification authority (root authority), the administration of a directory of certificates issued and revoked, the recognition of evaluation and certification bodies, the determination of appropriate algorithms for qualified electronic signatures and the provision of support for legislative procedures.

The tasks involved in the operation of the Trust Centre as a root authority include the generation of signature keys for accredited certification service providers, the issuing of certificates for certification service providers and the provision of a directory of certificates that can be used at any time by any party to check which certificates have been issued and revoked by the Federal Network Agency. In 2007, the systems deployed in the root authority were adjusted to take account of the requirements

of the current algorithm catalogue. The qualified certificates issued by the Federal Network Agency were oversigned for the first time (oversignature as defined by section 17 Ordinance Governing Framework Conditions for Electronic Signatures (SigV): Since qualified electronic signatures become outdated due to the limited validity of algorithms they are based upon, signed documents must be provided with a new qualified electronic signature prior to the expiry of the suitability of algorithms or the associated parameters. This ensures the conclusiveness of documents and signatures on a long-term basis).

The amount of advisory work done on the topic of qualified electronic signatures has increased at national and international level. In 2007, the Agency has continued to cooperate with CAST e.V., a competence centre for IT security in Darmstadt.

In 2007, the Federal Network Agency complied with its statutory obligations to publish the following information: Products for qualified electronic signatures that have received certification, manufacturers' declarations that comply with the requirements of the SigG and the Ordinance on Electronic Signatures as well as suitable algorithms and the associated parameters for qualified electronic signatures.

Technical implementation of intercepts under section 110 TKG

In carrying out its duties in relation to the technical implementation of intercepts, the Federal Network Agency makes an important contribution to the maintenance of public security in Germany. In particular, the Technical Directive provided for by section 110(3) TKG is essential to the development of interception technology by telecommunications companies, manufacturers and the security authorities involved. The Directive is amended to take account of new telecommunications technologies whenever this becomes necessary. To this end, the Federal Network Agency – as required by the legislation – contributes to the discussions about new topics, initially in the bodies responsible for standardisation. In the year under review, industry associations, authorised bodies and manufacturers were all involved in the elaboration of version 5.1 of the Technical Directive that came into force in February 2008 and was extended, in particular, to cover the field of IP-based multimedia services (such as VoIP). It was put into force by its publication in the Official Gazette of the Federal Network Agency.

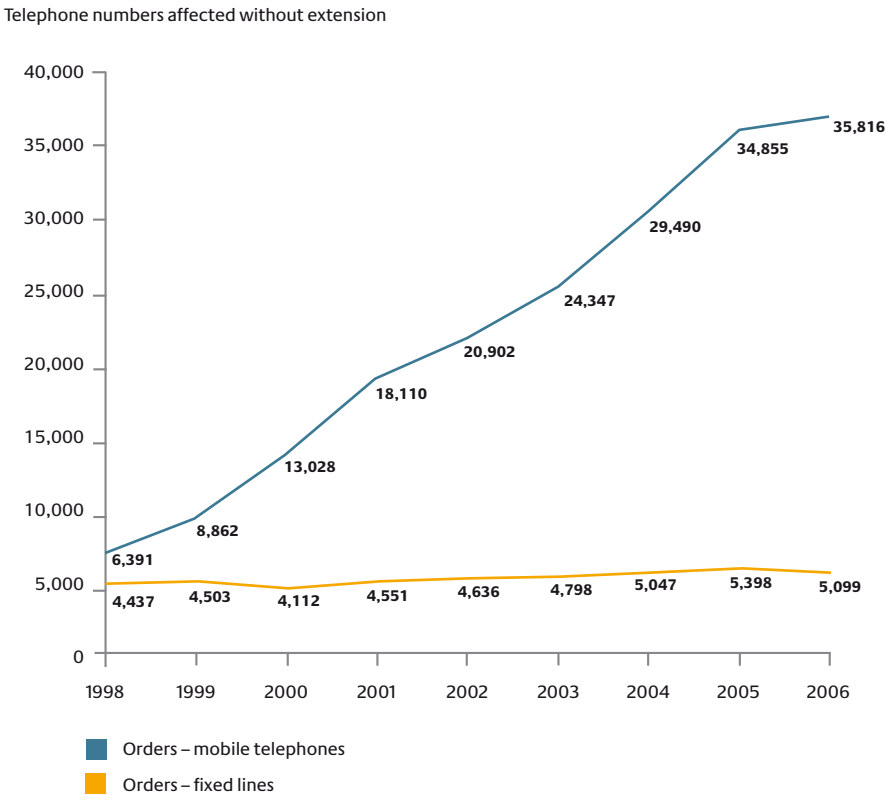
Annual statistics of intercept orders under the Code of Criminal Procedure

According to section 110(8) TKG, the operators of telecommunications systems have to prepare annual statistics on intercept orders under the Code of Criminal Procedure and make these available to the Federal Network Agency. The accumulated data is published on an annual basis in the Federal Network Agency's Official Gazette. With the entry into force of the revised Act on telecommunications surveillance and other undercover investigation measures along with implementation of Directive 2006/24/EU, these annual statistics will no longer need to be prepared by the Federal Network Agency from 1 January 2009. In

the future, the statistics will be prepared by the Federal Office for Justice on ordered measures under its responsibility on an annual basis by 30 June of the year after the reporting year in accordance with section 100a of the Code of Criminal Procedure and published on the Internet.

Based upon the surveillance measures ordered in 2006, 5,099 IDs were monitored in the fixed network area (analogue and ISDN) and 35,816 IDs in the mobile phone area. Despite the ever increasing number of mobile phone connections in 2006, there is only a minor increase in the number of connections monitored in this area. A slight decline in the number of surveillance measures was identified in the fixed network area.

Statistics of intercept orders under the Code of Criminal Procedure



Administrative court proceedings

The proceedings decided by the courts in 2007 ranged from basic market regulatory issues to legal disputes about frequency matters.

A total of 122 main proceedings and summary proceedings were initiated against decisions of the Federal Network Agency before Cologne administrative court in the telecommunications sector in 2007.

94 main proceedings and 33 summary proceedings were decided in 2007. 74 main proceedings and 23 summary proceedings ended positively for the Federal Network Agency 6 main proceedings and 5 summary proceedings ended in a draw.

In 2007 the focus of legal disputes was on reviewing the legitimacy of regulatory orders according to section 13 TKG. Both decisions by Cologne administrative court as the court of first instance, and first supreme court decisions by the Federal Administrative Court were passed.

The Federal Administrative court had to fight actions taken by a number of city carriers against the regulatory order on the local loop market (market 11) dated 20 April 2005 in five appeal proceedings. In their actions they demanded additional obligations to be imposed on DT AG in addition to those already included in the regulatory order. They called for an obligation to expand capacity, the approval of coopera-tion possibilities between companies with authorized access, the imposition of a transparency obligation and a separate accounting system; they also wanted the access obligations to be extended to pure optical fibre local loops. In its rulings on 28 November 2007 (reference number 6 C 42.06, 6 C 43.06, 6 C 44.06, 6 C 45.06 and 6 C 46.06), the Court worked on the basis that a competitive undertaking has generally a right to take action with the aim of imposing additional regulatory obligations on a regulated undertaking with substantial market power. Obligations to grant access (section 21 TKG), to provide transparency (section 20 TKG) and for separate accounting (section 24 TKG) would also be

in the interests of consumer protection. However, an obligation action intended to impose additional regulatory obligations would only be permitted if the undertaking bringing action has already filed applications relevant to the principal object of the action during the administrative procedure against the Federal Network Agency. In its decisions, the Federal Administrative Court pointed out that the Federal Network Agency does not have decision powers as part of its regulatory activity, but that it is entitled to an extensive scope in terms of the selection and design of the measures it implements for markets in need of regulation. In view of the request for access to the local loop in the form of pure optical fibre, the Federal Administrative Court does not consider the plaintiffs' rights violated. The definition of the relevant market does not affect any of the plaintiffs' subjective rights. On the contrary, it is in the public interest. The Federal Administrative Court does not consider the competitors' legal protection options compatible with European law at this level. As a result, the Administrative Court thus confirmed the rulings of Cologne administrative court rejecting the action.

The first regulatory order on market no. 11 dated 20 April 2005 was also the subject of a former appeal decision by the Federal Administrative Court. In this case, a competitor of DT AG appealed against the revocation of the access and rate approval obligation for the pure optical fibre local loop that was included in the regulatory order. In its ruling of 14 February 2007 (reference number 6 C 28.05), the Court confirmed the legitimacy of this regulation. It did not see any legal grounds for the revocation, but re-interpreted the revocation into a permitted finding of the voiding of an access and rate approval obligation.

With these supreme court decisions by the Federal Administrative Court, the first regulatory order on market no. 11 is now final and conclusive.

The subject of the decisions by Cologne administrative court was the legitimacy of the regulatory order by the Federal Network Agency concerning market nos. 1 to 6 (voice telephony service) of 23 June 2006. In its ruling of 05 September 2007 (reference number 21 K 3395/06) Cologne administrative court largely rejected DT AG's action aimed at suspending the entire regulatory order. The court acknowledges room for the Federal Network Agency's judgement both in the case of market delimitation and in assessing the demand for regulation. The decision also confirms that system solutions can provide access to the public telephone network, private and business customers can be grouped in an access market and provider selection and provider pre-selection can be provided for all call services. Only the imposed notification and submittal obligation for national VoIP connections was cancelled. The appeal lodged by the plaintiffs against the decision is currently pending before the Federal Administrative Court under reference 6 C 38.07.

The action brought by DT AG against the regulatory order (market no. 9) aimed at an alternative subscriber network provider with the aim of establishing an approval

obligation for access and collocation rates at the expense of the subscriber network provider in addition to the imposed obligations was unsuccessful. According to Cologne administrative court, such a claim would be rejected alone on the basis that no protective effect for third parties is attributed to section 30(1) sentence 1 TKG (judgement of 01 August 2007, reference 21 K 4013/06).

With its judgement of 05 September 2007 (reference number 21 K 4193/06), Cologne administrative court also rejected an action brought by DT AG against the regulatory order on market 12 (IP bit stream). The appeal has not yet been decided on by the Federal Administrative Court. In this case, the Cologne administrative court also confirmed room for judgement by the Federal Network Agency on the market definition and analysis.

With its judgements of 01 March 2007 (reference number 1 K 3928/06, 1 K 4148/06) and 08 March 2007 (reference number 1 K 3928/06, 1 K 4314/06), Cologne administrative court allowed the actions brought by the four mobile network providers against the regulatory orders of 29 August 2006 on market 16 after having rejected the urgent applications earlier to the extent that a cancellation of the obligation on ex-ante approval of the access and collocation rates was demanded. Contrary to the Federal Network Agency, Cologne administrative court assumed that the rates are only allowed to be subjected to ex-post control. Since these rulings are legally still not binding and the Federal Administrative Court rejected the applications brought by the mobile network providers for an amendment of the summary proceedings decisions with the objective to suspend enforceability of the Federal Network Agency's regulatory orders (decisions of 13 June 2006, reference 6 VR 2.07, 6 VR 3.07 and 6 VR 5.07), the applicable rates of the mobile telephone companies still have to be approved in advance despite the decisions of Cologne administrative court. The Federal Administrative Court will have oral proceedings in spring 2008 on the appeals of the Federal Network Agency and the mobile network providers.

In the meantime, Cologne administrative court has made a decision about the urgent applications by the four mobile network providers according to section 123 Code of Administrative Court Procedure (VwGO) in connection with section 35 (5) TKG on a temporary approval of higher termination rates than those approved by the rates approval decisions of 08 November 2007 and 16 November 2006. These applications were rejected (decisions of 23 April 2007 – reference 1 L 1997/06 –, 18 June 2007 – reference 21 L 1845/06 –, 20 June 2007 – reference 21 L 170/07 – and 08 August 2007 – reference 1 L 289/07 –).

DT AG's applications under section 123 Code of Administrative Court Procedure (VwGO) in connection with section 35 (5) TKG for a temporary approval of higher rental, provisioning and termination rates for the local loop were also rejected by Cologne administrative court (decisions of 21 August 2007 – reference 1 L 911/07 – and of 17 December 2007 – reference 21 L 1425/07 –). The rates approval decisions of

30 July 2007 and 29 June 2007 that were subject to proceedings by the Federal Network Agency were based upon a cost model to determine the overhead costs.

On 19 April 2007 (reference number 6 C 21.06) the Federal Administrative Court decided that telecommunications markets are only subject to special abuse control by the Federal Network Agency under section 42 TKG if they are markets defined and analysed by the Federal Network Agency for which the application of general competition law is inadequate. The subject of the proceedings was an action brought by a public directory assistance provider, who considered the fact that a DT AG subsidiary only refers to DT AG's directory assistance service in its telephone directories and not to alternative providers to be abusive. The action for official intervention according to section 42 TKG was unsuccessful because a market definition and analysis for this market was not available.

This ruling was also confirmed by the Federal Administrative Court in its additional decisions of 19 September 2007 (reference number 6 C 34.06, 6 C 35.06, 6 C 36.06, 6 C 37.06, 6 C 38.06). The subject of the proceedings was a decision by the Federal Network Agency based on section 42 TKG of 11 November 2005 under which DT AG was required to provide analogue telephone and ISDN connections to competitors at its General Terms and Conditions. Since a final market definition and analysis was not available when the abuse order was issued, the decision of the Federal Network Agency was found to be illegal by the Federal Administrative Court.

Reference must also be made to the decisions taken in preliminary proceedings according to section 99 Code of Administrative Court Procedure by the Administrative Court of 09 January 2007 (reference number 20 F 1.06) and 22 March 2007 (reference number 20 F 2.06, 20 F 3.06 and 20 F 4.06) on the protection of operating and business secrets in administrative court proceedings. Based on European legal provisions, in particular Art. 4 of the framework regulation and the relevant judiciary of the European Court of Justice (ECJ), the Federal Administrative Court concluded that withholding file components and submitting blacked-out pages of official files was not permitted. To protect the operating and business secrets submitted along with the files, so-called "in-camera" proceedings can be performed by the court during the preliminary and main proceedings. This prevents any operating and business secrets included in the administrative files being disclosed to all parties involved in the court proceedings.

A decision of 22 November 2997 taken by the European Court of Justice in legal case C-262/07 must also be mentioned on the interpretation of the transitional provisions included in the European regulations that have been transposed to German law with section 150 TKG. Grounds for this decision by the European Court of Justice was a preliminary ruling by the Federal Administrative Court in an appeal on the obligation to obtain approval for specific retail offers. The European Court of Justice responded to the question submitted to it that, according to Community Law, a statutory requirement provided for in earlier domestic law

on the approval of rates for the provision of voice telephony services to end users by a company with a dominant position on this market are to be maintained provisionally. As such, the question of whether only those obligations resulting from concrete administrative decisions are valid in the transitional period after the effective date of TKG 2004 or also any abstract legal obligations was clearly decided by the ECJ in the latter sense and thus in concordance with the Federal Network's opinion.

With its judgement of 25 April 2007 (reference number 21 K 3675/05), Cologne administrative court confirmed the legitimacy of the revocation of Quam GmbH's UMTS license. By notice of 15 December 2004, the Federal Network Agency revoked the license due to a breach of the coverage obligation required with the license. Quam GmbH appealed against this decision with the Münster higher administrative court (reference number 13 A 2069/07). In connection with the UMTS auction, two decisions by the ECJ of 26 June 2007 are also important with regard to legal cases in Austria and the UK (C 284/04 and C 369/04). In its ruling, the ECJ decided that the assignment of frequency usage rights by the responsible national regulatory authority by way of auctioning does not represent an economic activity as defined by the 6th Council Directive 77/388/EEC of 17 May 1977 on the harmonisation of the laws of the Member States on turnover taxes. Moreover, the national regulatory authority only exercises the control and regulatory function given to it regarding use of electromagnetic spectrum.

Following this, the actions lodged with Bonn regional court against the Federal Republic of Germany on issuing an invoice entitling to input tax deduction (1 O 586 / 04), and against Bonn-Innenstadt tax office with the Cologne finance court on whether the UMTS license auction (11 K 6395 / 04; 11 K 6443 / 04) can be and is subject to income taxes, were revoked by the companies filing the actions.

With its judgements of 15 June 2007 (reference number 11 K 572/06 and 11 K 573/06), Cologne administrative court ruled in favour of two actions by a competitor on extending frequency usage until 2016 in the 2.6 GHz band for a total of 36 frequency assignments that are limited until 31 December 2007. According to the court, the reason for the original limitation of the assignment – to legally protect the reservation of the 2.6 GHz band for UMTS/ITM-2000 applications intended at that time – was no longer valid. The expected demand for UMTS/IMT-2000 applications in the 2.6 GHz band did not arise. Following the successful complaints against denial of leave to appeal by the Federal Network Agency, the appeals were allowed in both action proceedings under decisions by Münster higher administrative court on 19 October 2007 (reference number 13 A 2394/07 and 13 A 2395/07).

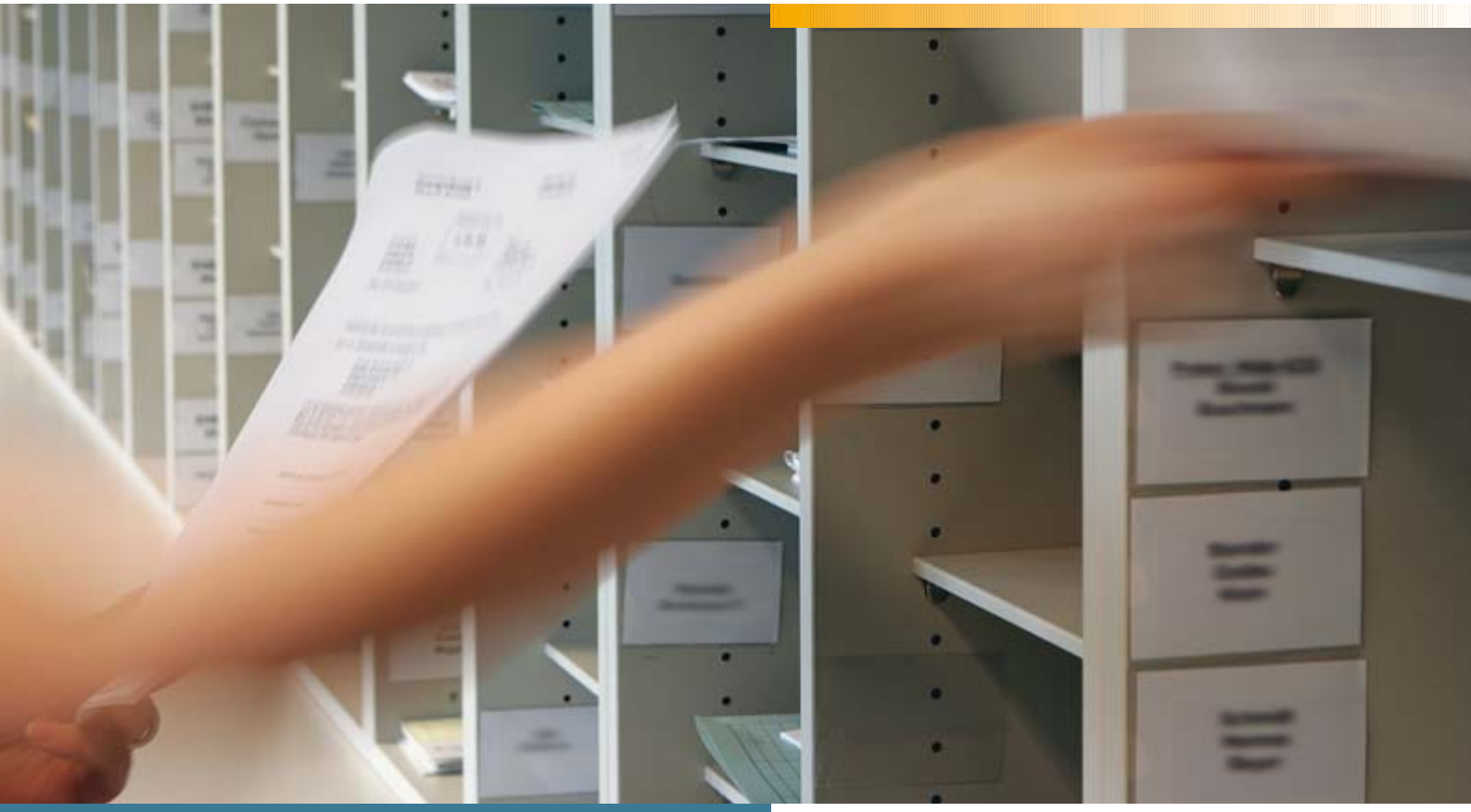
In its rulings of 23 November 2007, Cologne administrative court rejected actions against the Federal Network Agency on frequency translation in the 900 GHz and/or 1,800 GHz band (reference number 11 K 3270/06 und 11 K 5392/06). With its administrative decisions on frequency translation

of 03 February 2005, the Federal Network Agency had assigned radio frequencies to two mobile network operators in 900 GHz band, requiring them in return to terminate use of previously assigned radio frequencies in the 1,800 GHz band by 31 January 2007. Two undertakings lodged actions against this by asserting their own claim to assignment of the frequencies. Such a claim was rejected by the court, however, stating that the plaintiffs could not plead a breach of their right to frequency assignment according to section 55 (5) sentence 1 TKG, because they do not belong to the persons protected by this regulation.

The actions filed by two mobile network operators against a collateral clause of the decision on frequency translation also remained unsuccessful. This collateral clause stipulates that mobile network operators have to leave specific frequencies of the range assigned to them to be used by third parties to fulfil any legally required radio applications. In its rulings on 23 November 2007 (reference number 11 K 4798/06 and 11 K 4653/06), however, Cologne administrative court confirmed the legitimacy of this collateral clause.

In another decision (decision of 29 November 2007, reference number 11 L 1214/07), Cologne administrative court rejected an undertaking's expedited application against the court order on the frequency assignment procedure for the 2.6 GHz band. The court based its decision on a reconciliation of interests and assumed that a uniform assignment procedure would be in the general interest of efficient frequency usage and rapid assignment where required.

Post



Market watch

Full liberalisation holds more opportunities for new market players.

TEN YEARS OF REGULATION/ DEUTSCHE POST AG'S LETTER MONOPOLY HAS EXPIRED

As in other infrastructure sectors, the development of postal markets depends heavily on the statutory framework. After the postal reforms of the 1990s, the 1997 Postal Act was the first regulatory framework that aimed to create competition in the postal services market. It made one remarkable exception, granting Deutsche Post AG (DP AG) a monopoly on letter services initially until 2002 and then until 2007. The effect this monopoly has had in terms of hampering postal market development is obvious.

The expiry of DP AG's monopoly at the end of 2007 marked the end of monopoly rights in the letter market. Despite its existence, in the ten years of letter market regulation considerable competition has been allowed to develop. To date, however, the partial liberalisation of Germany's letter market has primarily led to competition in end-to-end services. In particular, the Postal Act allowed for full liberalisation in value-added ("higher quality") services, paving the way for profitable business models in the end-to-end sector. DP AG as the incumbent had to grant its competitors access to its mail sorting facilities – a crucial competitive factor – but only did so as late as in early 2005.

Meanwhile hundreds of competitors have entered the letter market and are more or less well established throughout the nation, especially in rural areas. For commercial users, in particular, they have become a genuine alternative to DP AG. Their wide service range is helping to diversify the letter services market. In addition, they are instrumental in ensuring the continued basic provision of postal services.

DP AG has responded to the competition for instance by lowering prices for the service of documents (Postzustellungsauftrag, or PZA) and for parcels for private consumers and small customers. In other words, com-

petition has already produced visible benefits for consumers.

Altogether, however, after a decade of "restrained" market liberalisation the level of competition in the letter market is still not satisfactory. Yet it must be borne in mind that a competitive framework is in place that could fully come to bear now the market is completely liberalised.

CHANGES IN THE REGULATORY FRAMEWORK

The expiry of the monopoly –DP AG's statutory exclusive licence – will in itself not directly lead to more competition. Promoting fair and well-functioning competition in the market, as intended by the Postal Act, requires support in the shape of a suitable statutory framework. For one, competition in Germany is affected by the fact that some of DP AG's services are VAT-exempt, a situation that at the end of 2007 was still distorting competition. The increase in standard VAT to 19 percent on 1 January 2007 led to even greater distortions. For another, the Regulation on mandatory working conditions for the mail services industry, which was enacted by the German Federal Ministry of Labour and Social Affairs on 28 December 2007, is anticipated to have an effect. However, the actual impact will only become apparent at a later point in time.

INTERNATIONAL MARKET COMPARISON

Considering that a monopoly was in force until the end of 2007, thanks to a decade of regulation in the German letter market competition has developed relatively well compared to other countries. Even Sweden, Finland, New Zealand and the UK, which are generally perceived as the pioneers of liberalisation, have not succeeded in performing any better even though their markets began to open far earlier.

Liberalisation of letter markets in selected countries

	Market opened (year)	Competitors' market shares in 2006 (by volume, end-to-end services)
Sweden	1993	~ 8%
Finland	1995	< 1%
New Zealand	1998	~ 8.5%
UK	2006	< 1%
Germany	2008	~ 8.7%
Netherlands	2008	~ 12%
Spain	2011	~ 10%

Source: National postal companies, regulatory agencies, own estimates

DEVELOPMENT OF GERMAN MARKET COMPARED TO UK

Of all European markets the UK market is most suited to a comparison with Germany. Its size and geographic and population structure is similar to that of Germany. Based on existing market data alone, so far the gradual liberalisation of the letter market has resulted in more competition in Germany than it has in the UK.

This is due to the fact that both countries pursued different market opening strategies. In Germany, competition developed because DP AG's competitors created their own parallel delivery networks, some of which now have nationwide coverage. The competitors offer the full range of mail delivery operations, from collection to delivery, from a single source (also referred to as end-to-end services) and are hence able to meet most of the demand for alternative postal services. In addition, in their capacity as consolidators they inject around 700 million letter items into DP AG's delivery networks. However, this alternative has only been available since mid 2005.

By contrast, instead of creating their own delivery infrastructure almost all of Royal Mail's competitors in the UK make use of the incumbent's mail sorting facilities. In 2006 competitors handled just 35 million letter items end-to-end, compared to the almost 22 billion items that were handled overall. One major reason why competitors prefer to use Royal Mail's infrastructure rather than offer end-to-end services themselves is that access fees are low. Discounts of up to over 50 percent are granted on injected items, making this a more attractive option for competitors without their own delivery networks.

LICENSING

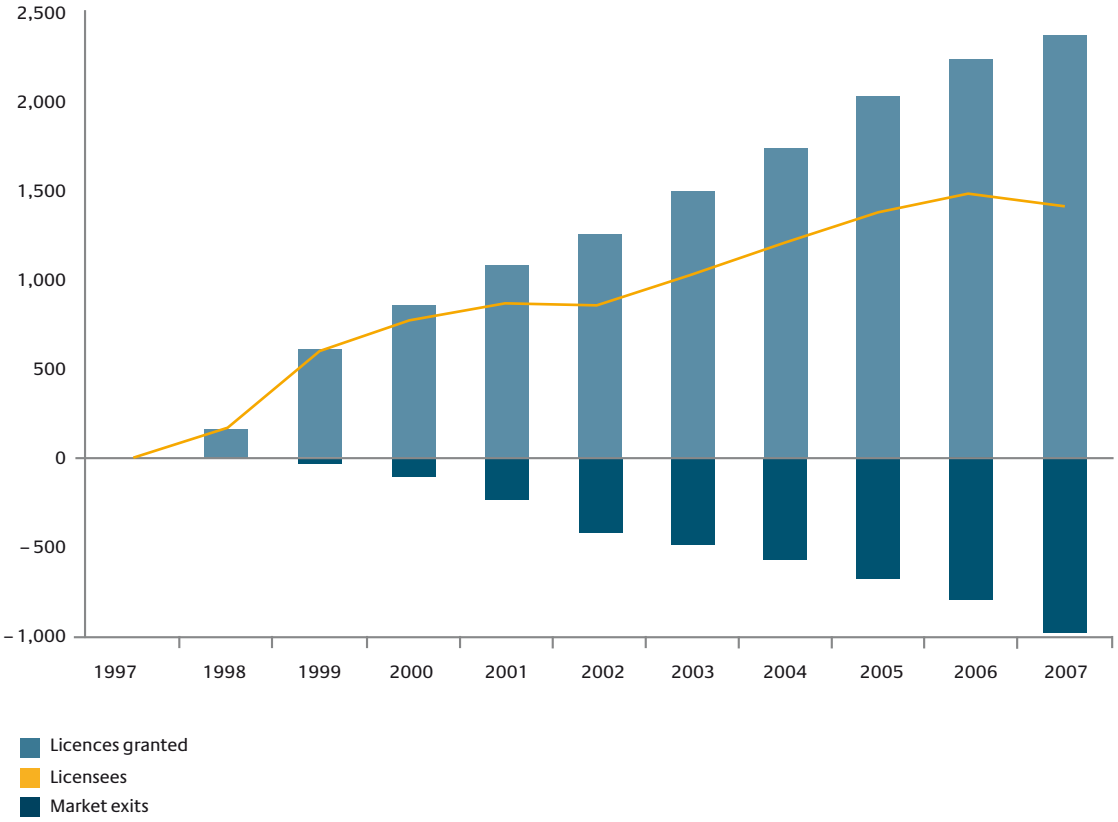
To date, the Federal Network Agency has granted 2,372 providers a licence for the conveyance of letter items. 963 have since withdrawn from the market. Initially, these market exits were due to insolvency and business wind-ups; for the last two years, however, takeovers and mergers (market consolidation) have been the main reason for the decline.

Licensing statistics 1998 to 2007

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Licence applications	384	291	210	238	181	236	259[1]	271[1]	229[1]	131	2,430
Licences granted	164	455	241	221	179	239	255	281	211[1]	126	2,372
Licences denied	3	1	0	0	0	3	3	0	1	0	11
Market exits	0	17	70	134	181	68	81	105	119	188	963

1 Figures later adjusted to reflect delays in processing and the withdrawal of licence applications.

Licences and market exits 1998 to 2007



At the end of 2007, 845 licensees were active in the letter market, most of them small and medium sized enterprises providing mainly niche services due to statutory restrictions. Nevertheless, these licensees offer a wide range of services. With over 1.8 billion letter items and more than €1.3 billion in revenues their market share currently far exceeds ten percent.

Most licensees are small enterprises with annual revenues of less than €10 million. In 2007 only 22 providers generated revenues of over €10 million; four had revenues of over €50 million. This is also due to the fact that while DP AG's exclusive licence was still in force, competitors did not have access to the required volumes. Even after the monopoly weight and price limits came down in 2003 and 2006, competitors were not able to benefit fully from economies of scale and scope.

Number of providers by revenue size 1998 to 2007 [1]

	up to € 10,000	€ 10,001 up to € 100,000	€ 100,001 up to € 500,000	€ 500,001 up to € 1 m	> € 1 m up to € 10 m	> € 10 m
1998	30	51	26	3	7	3
2000	91	178	129	23	15	4
2002	96	186	149	32	41	7
2004	181	263	175	53	77	10
2005	127	209	152	47	91	12
2006	122	199	120	43	109	20
2007e	112	204	112	46	130	22[2]

1 The number of providers departs significantly from the number of granted licences and active licensees as revenues generated by corporations have been consolidated.
2 including four providers with revenues of over €50 million
e = expected

Market consolidation continued in 2007, with further takeovers and investments. Providers have recognised that to survive in the competition particularly for the "last mile" before the consumer's doorstep, they have to extend their reach and improve capacity utilisation of their delivery networks by cooperating with their peers. Small, regional providers operating in regional niche markets are also seizing the opportunities of liberalisation. As competition increases in the wake of full market opening, the industry is anticipated to continue consolidating.

A significant number of licensees are challenging the trend towards consolidation and continue to work independently and without cooperation partners, with most of them covering areas of up to 1,000 or even 10,000 km². Cooperation among licensees can allow them to extend their operating reach quite considerably, with some providers covering the entire country. For instance, of the 262 providers that previously each covered up to 10,000 km², 113 entered into a partnership to extend their operating range to between 10,000 and 250,000 km². Another 42 providers have joined forces to serve areas of more than 250,000 km².

Developments in the various Länder also confirm that a number of competitors besides DP AG are working to offer sustainable, full-coverage letter services. In this context, a remarkable number of licensees are active in the new Länder. The licence density in these regions confirms that alternative providers are instrumental in ensuring that structurally disadvantaged regions, too, receive postal services.

WORKING CONDITIONS

In the wake of market changes and the expiry of DP AG's exclusive licence, the Federal Network Agency took the opportunity to perform a detailed examination of the working conditions offered by licensees. In addition to consulting with legal and economics experts, the Agency conducted a full survey of working conditions among 1,509 licensees. The reference date of the survey was 31 March 2007, and the response rate was 94 per cent. The survey

and response evaluation process was de-layed by objections and lawsuits, with some main actions still pending before the competent administrative courts.

The survey revealed that at the above reference date, 845 licensees were active in the market. Of these, 250 operated either independently, or with family members or equal business partners, or exclusively with agents.

595 licensees employed contracted staff. Altogether, these 595 licensees employed 48,411 staff, 8,620 of whom worked on full-time and 11,625 on part-time contracts. 26,966 employees worked on what is known as an insignificant basis. 960 were on short-term"minijob" contracts. 240 were trainees or interns. Almost 92 percent of employees (44,394) were operational staff (sorters, drivers, delivery staff).

The weighted average hourly wage of all employees working for licensees was €7.79. On average, delivery staff earned €7.28, sorters earned €7.68 and drivers earned €7.63. As is often the case, hourly wages in eastern Germany were lower than those paid in western regions. The average hourly wage for operational staff (sorters, drivers and delivery staff) was €6.17 in the east and €7.84 in the west.

Around 40 percent of licensees' employees – most of them in insignificant employment – were not paid by the month or hour, but on a per-item basis. Half of these employees provided services in the licensed area in conjunction with non-licensed or unrelated (non-postal) services.

On average, full-time employees worked 39.5 hours a week, while part-time staff worked 23.9 hours a week. The average working week for persons in insignificant employment was 12.4 hours. All licensees complied with the statutory requirements governing leave entitlements. Special allowances, such as holiday or Christmas bonuses, were only paid by a small number of providers.

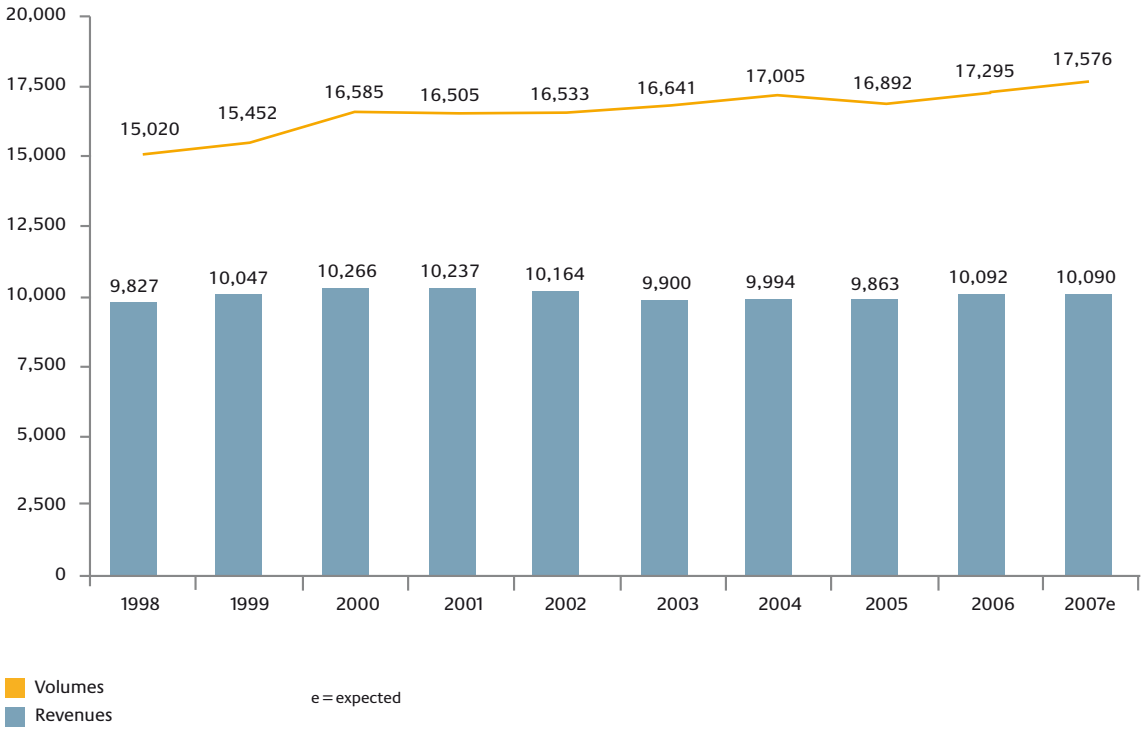
The survey reflects the situation among licensees as at March 2007. On 28 December 2007 the Federal Ministry of Labour and Social Affairs enacted the Regulation on mandatory working conditions for the mail services industry. Under this Regulation, the legal standards established by the collective agreement on minimum wages for the mail services industry, which was negotiated between Arbeitgeberverband Postdienste e. V. (an employers' association) and ver.di, the United Services Union, extend to cover all eligible employees who are not covered by said collective agreement. Since 1 January 2008 the employees in the old Länder including Berlin who are now covered by the Regulation have been paid a minimum hourly wage of at least €9.80 for delivery staff and €8.40 for those in other jobs. The minimum hourly wage for employees in all other Länder is now €9.00 for delivery work and €8.00 for other functions. The Federal Network Agency's previous licensing rules (governing the granting and review of licences) were amended to reflect these changes.

LETTER MARKET INDICATORS

Revenues in the licensed area (commercial conveyance of letter items up to 1,000 g) totalled around €10 billion in 2006. The letter market accounts for a substantial part of the postal market, which also includes CEP (courier, express and parcel) services and press products. Overall, revenues underwent a slight increase to just under €24 billion.

For 2007, revenues in the letter market are anticipated to remain stable at around €10 billion. By contrast, volumes have continued to rise. The increase has been sufficient to compensate for the drop in prices. Despite the growing popularity of electronic communication (e-mail and text mes-saging) business mail volumes continue to grow, which is stabilising overall letter volume growth.

Development of revenues and mail volumes in the licensed area



Market shares in the licensed area in terms of revenue

	2002	2003	2004	2005	2006	2007e
Market shares Competitors	3.0%	3.9%	5.3%	7.6%	10.7%	12.9%
Market shares DP AG	97.0%	96.1%	94.7%	92.4%	89.3%	87.1%

e expected (forecasts by competitors and Federal Network Agency)

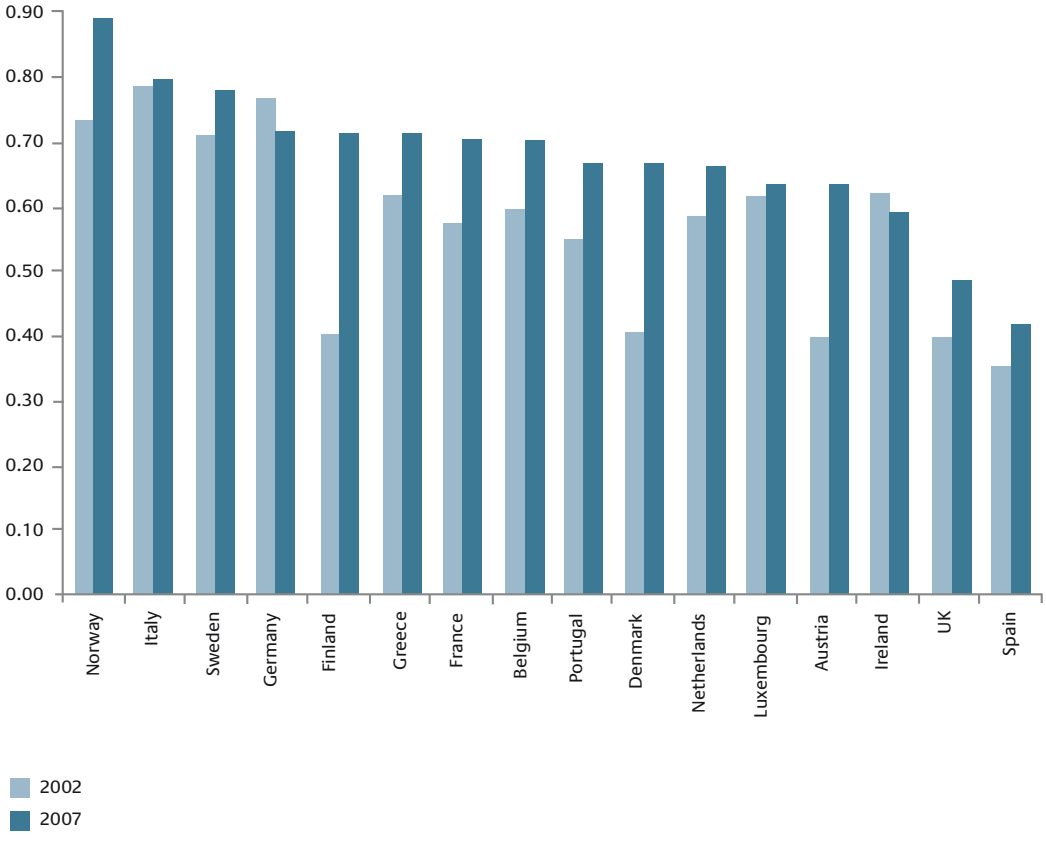
Competitors' revenues in the licensed area currently exceed €1.3 billion. Measured in terms of revenue, licensees' market shares in 2007 increased to approximately 12.9 percent.

LETTER PRICE LEVELS

In November 2007 the average price level for individual letter items in Germany was five percent lower than in 2002. The majority of competitors' prices (including VAT) were lower than those of DP AG.

Unlike in Germany, price levels in most European countries have increased substantially since 2002. Compared to the rest of Europe, Germany is now in the mid-range.

Letter price levels (in €) in 2002 and 2007
As at November 2007 (Consumer price parity)



WORKSHARING SERVICES (ACCESS TO INCUMBENT'S NETWORK)

Under the Postal Act the incumbent, DP AG, is obliged to offer its customers and competitors worksharing services and/or grant them access to its network. DP AG offers access to worksharing services in its outbound mail sorting centres (BZA), where outbound mail is consolidated, and the inbound mail sorting centres (BZE), which handle the delivery of incoming mail. DP AG is also obliged to grant access to its PO box facilities and to its database of change-of-address information.

All worksharing agreements negotiated by DP AG must be submitted to the Federal Network Agency. Agreements were concluded in the following areas:

In 2007 DP AG also submitted to the Agency 42 agreements concerning access to PO box facilities and 22 agreements concerning access to change-of-address information.

A 2005 resolution by the Federal Cartel Office paved the way for consolidation. DP AG was obliged to grant access to its mail sorting centres also to those providers who – in the exclusive area – consolidate mail items from several senders and prepare them for injection into the network via DP AG's mail sorting centres (so-called consolidators). The Federal Network Agency has issued all licences required for this service.

Consolidation is generally perceived as an alternative to market opening as a result of end-to-end services. Its introduction in

Worksharing agreements in 2007

	Type of item			
	Individual items		Infopost	Total
Point of access	BZA	BZE	BZE	BZA/BZE
Contracting party				
End customers	70	165	53	288
Consolidators	13	14	10	37
Total	**83**	**179**	**63**	**325**

As at 31 December 2007

2005 raised great expectations. However, consolidation has not yet had a substantial impact on competition. Despite extended access for competitors to DP AG's mail sorting centres, after a promising start the number of providers is currently stagnating. In its annual market survey the Federal Network Agency identified volumes of around 500 million items for 2006. The figure is expected to rise to around 700 million in 2007.

WORKFORCE DEVELOPMENT IN THE LICENSED AREA

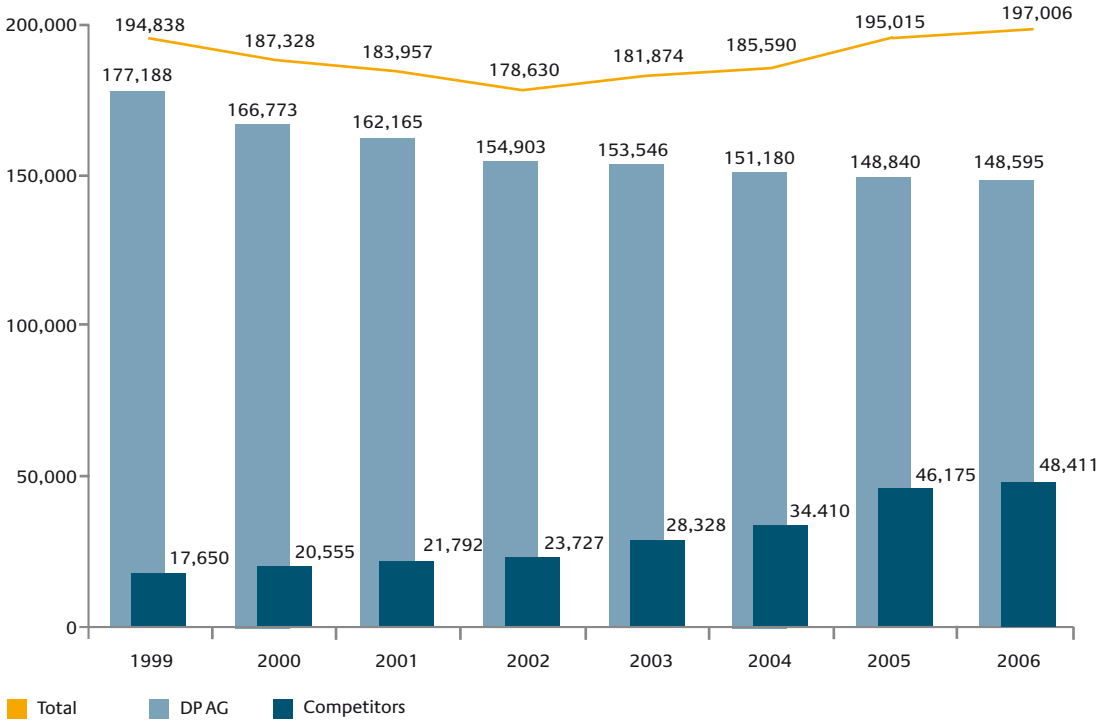
Since 1999 DP AG has shed almost 30,000 jobs in the licensed area alone. However, in the same period competitors created more than 30,000 new jobs.

Between 1999 and 2006 DP AG cut its full-time workforce by more than 21,000. The number of part-time jobs dropped by over 12,000. By contrast, since 1999 competitors have created over 6,000 full-time and around 7,500 part-time jobs. These jobs were not transferred from DP AG and there is no connection to DP AG's workforce reduction programmes.

UNIVERSAL SERVICE

DP AG's statutory obligation to provide universal service expired together with its exclusive licence at the end of 2007. In accordance with Article 87f of Germany's Basic Law, since 1 January 2008 universal services have been provided by both DP AG and the competitors. While universal service coverage is not expected to suffer as a

Workforce development (DP AG and competitors)
(Full- and part-time and insignificant employment contracts)



Workforce figures by type of contract – Annual averages in 1999 and 2006

		Full time	Part time	Insignificant contracts / "minijobs"	Insignificant contracts / short-term "minijobs"	Total
DPAG	1999	114,343	62,507	338	no separate figures available	177,188
	2006[1]	92,913	50,116	3,543	2,023	148,595
Competitors	1999	2,300	4,160	11,190	no separate figures available	17.650
	2006	8,620	11,625	26,966	960	48,411[2]

1 To ensure comparability with the previous year's figures DP AG's figures exclude the 21,500 administrative employees shown pro rata for the first time in 2006.
2 including 240 trainees and interns

result, should market mechanisms fail Articles 12 to 17 of the Postal Act can be invoked. The Federal Network Agency can hence ensure full universal service coverage even in a competitive environment. In other words, the basic provision of postal services remains certain.

Ruling chamber decisions

In 2007 the Ruling chamber took a decision on the new price cap formula. DP AG's prices for private customer letters remain stable also after the market has opened. Fees for the service of documents have dropped again.

RATES REGULATION

In price cap proceedings Ruling chamber 5 approved the average change parameters for DP AG's prices for the next four years.

Contrary to the previous proceeding, the products and services still subject to price capping are now assigned to one single basket containing the types of service most frequently used by private and small business customers. From 1 January 2008 charges for bulk items, which apply to posting volumes of 50 or more letter items, are only subject to ex post rates regulation or the special control of anti-competitive practices by the Federal Network Agency.

Setting the annual productivity increase rate (the "X" factor) at 1.8 percent has stabilised letter prices for 2008 to 2011, even though this is a highly personnel-intensive sector. This decision refutes the frequent assumption that opening postal markets would mean higher prices and lower quality for private consumers and that the benefits of liberalisation would be felt only by large-scale customers.

The Ruling chamber has carefully examined baseline price levels to ensure that no excessive prices, which could be used by DP AG for cross-subsidisation, will be approved. Besides the costs of efficient service provision, when determining baseline prices and setting the productivity increase rate account must also be taken of neutral costs. These consist of various items including wages, salaries and social security contributions above the market average, and other financial burdens that DP AG's competitors do not have to bear.

After the publication of the final price cap parameters DP AG submitted its prices for

individual products (such as standard letters and postcards) to the Ruling chamber for approval. As the submitted prices remained within the range set in the price cap proceedings, the Ruling chamber gave its approval.

SPECIAL CONTROL OF ANTI-COMPETITIVE PRACTICES

The abuse proceeding against DP AG and its wholly-owned subsidiary Deutsche Post In Haus Service GmbH (DPIHS) concerning its package offer of worksharing services by DP AG and preparatory services (franking, sorting and numbering of items) by DPIHS was closed in April 2007. The package offer had raised public attention when complaints were made suggesting that the offer represented an attempt to circumvent existing price regulation, with dumping prices hampering competition for consolidators. The agreement had been negotiated by DP AG and DPIHS with various Bavarian state ministries and their subordinate agencies and concerned the conveyance of their postal items. Similar agreements had also been signed with state agencies in Hesse and Lower Saxony.

The Chamber examined whether the structure of these agreements constituted an anti-competitive practice. DP AG's framework agreement is in fact a standardised, Ruling chamber-approved worksharing agreement for large-scale customers that grants discounts for items that have been prepared for posting in a certain way. These preparatory services can either be performed by the customers themselves or by providers such as DPIHS. The fact that DPIHS offers these services in competition with other providers is itself not objectionable. The examination focused on whether DPIHS's prices were cost-covering or, as competitors claimed, were in fact dumping prices. It was also examined whether there was an anti-competitive connection between the standard worksharing agreement and DPIHS's service.

The Chamber found that DPIHS was offering its services at cost-covering prices. The examination was conducted using DP AG and DPIHS's detailed cost documentation and price calculations concerning their preparatory services. In particular, the Ruling chamber verified whether, and if so to what extent, the charges covered actual non-personnel, personnel and overhead costs. The Federal Network Agency also audited four DPIHS service centres to verify that they were not using DP AG's production infrastructure. The Ruling chamber was satisfied that DPIHS has its own sales organisation and own sales staff. Neither were allegations substantiated that DP AG would only grant access to worksharing services if customers also used DPIHS's services. Altogether, no evidence was found of dumping prices nor of inadmissible service packages.

APPROVAL OF RATES FOR THE SERVICE OF DOCUMENTS

Several provisions of the German Code of Civil Procedure and other administrative procedural laws stipulate that there has to be a system to serve documents formally, together with proof of delivery and time of delivery. To this end, postal service providers are served with what is known as a

Postzustellungsauftrag, or PZA. Proof of delivery is furnished by means of a certificate of service issued by the provider that is returned to the sender.

The rates approval procedure for the service of documents is a special form of rates regulation, as the need for rates approval and the requirement that rates may not include unjustified surcharges or discounts and may not be discriminatory are extended to cover all providers of this type of service, even though they are normally only applicable to incumbents.

Due to the non-discrimination rule, no customer-specific rates may be offered. However, providers may offer regional rates provided these are justified by regional cost differences. Scaling rates according to volume is also acceptable, provided applicants can provide evidence of lower costs thanks to economies of scale and scope.

In 2007, 118 providers applied for and were granted rates approval. More than ten percent of these rates were rates scaled according to volume. Besides the emergence of scaled rates, over the last two years the prod-uct itself has begun to change, with more providers now offering electronic recording and return of certificates. Providers are also offering rates that differ by region. In 2007, almost 54 percent of competitors offered the service nationwide, while the remainder were regional operators.

Overall, absolute price levels have contin-ued to drop, whether at DP AG or its competitors. DP AG recently responded to the changing market situation by gaining approval to cut its rates considerably.

Administrative court proceedings

The Federal Network Agency successfully argued its cases before the administrative courts. All of the Agency's decisions were confirmed.

In the period under review, again several cases were pending against decisions of the Federal Network Agency concerning postal matters. Most of these had been brought by DP AG concerning the issue of D licences (higher quality services). However, as the exclusive licence expired in 2007 most of the cases are anticipated to no longer be in dispute. This is particularly true for the suits brought by DP AG against the Agency's issue of licences for "shipment tracking" and "integrated mail and logistics services". Upon expiry of the exclusive licence, since 2008 licensees have been entirely free to structure their services as they wish.

One notable decision is that of the Federal Administrative Court dated 27 June 2007 which confirms the higher quality nature of "overnight delivery" services. The Court fully concurred with the Agency's interpretation of the legal provisions governing higher quality services (Article 51, para. 1, sentence 2, no. 4 of the Postal Act). In none of the suits DPAG had brought between 1998 and the end of 2007 concerning the issue of D licences by the Agency had the plaintiff succeeded in gaining a favourable ruling on its contrary interpretation. In interpreting the relevant statutory provisions the Federal Network Agency has demonstrated strong legal compliance and responsibility in considering the interests of the involved providers.

Of the other rulings pronounced in 2007, special mention should be made of the legal dispute concerning the disclosure of information on working conditions in the area of licensed letter services, the dispute concerning the approval of DP AG's rates for the service of documents, and complaints brought by an association against rates approvals in price cap proceedings.

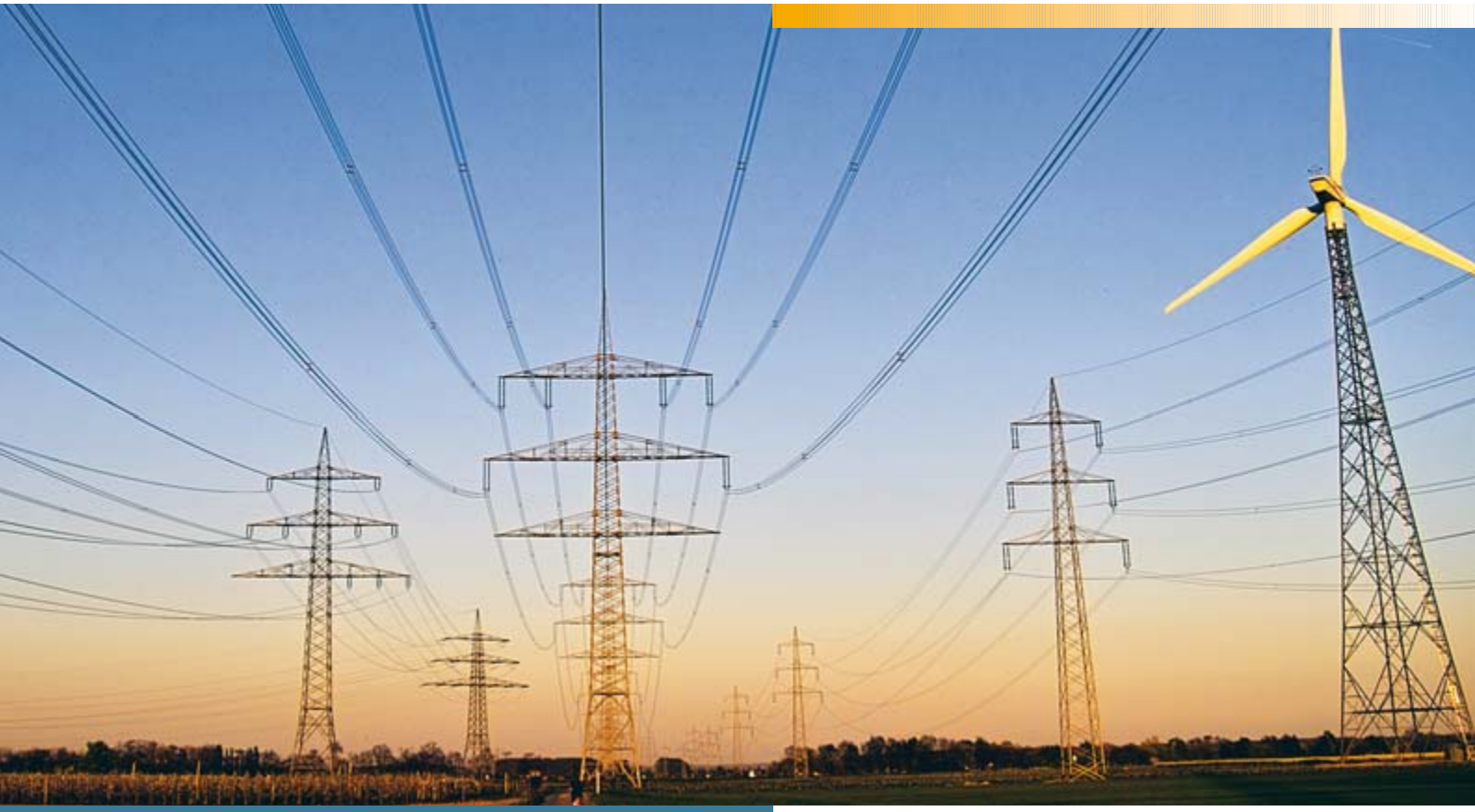
In the first of these cases, which gained considerable public attention as it was closely related to the setting of a minimum wage for the mail service industry, in June 2007 the Federal Network Agency had con-

ducted a full-scale survey requesting licensees to disclose information on their working conditions. Licensees were asked to provide information on, inter alia, workforce structure, wages and salaries, types of employment contract, leave entitlements, number of facilities and number of conveyed items. 47 of the licensees surveyed appealed to the Cologne Administrative Court to give suspensive effect to their objections. The Court allowed the appeals. However, the Münster Higher Administrative Court overturned the decision and rejected the appeals for suspensive effect. Following a summary examination the Higher Administrative Court had no objections to the questions in the Agency's survey, particularly those relating to volumes, number of facilities, and types of delivery - issues that the Cologne Administrative Court had considered objectionable. This information, the Higher Administrative Court ruled, was necessary for the Agency to fulfil its regulatory functions, particularly against the backdrop of the continued liberalisation of postal markets.

In the second case referred to above, competitors of DP AG that engaged in the service of documents in early 2007 had filed emergency motions against the decision of Ruling Chamber 5 concerning the approval of DP AG's new rates for the same service. The plaintiffs believed the Ruling Chamber's decision to be unlawful as DP AG's new and approved rates were based on anti-competitive discounts. They also objected to a change in calculation methods for various reasons, one being that DP AG's VAT-exempt status had not been taken into account. The Cologne Administrative Court on 11 July and the Münster Higher Administrative Court on 8 November 2007 rejected the competitors' urgency motions against the approval of DP AG's new rates. The Higher Administrative Court examined various points of the approval, including the lawfulness of competitors' involvement in administrative proceedings (third party protection in the Postal Act's pricing rules), the lack of information on non-compliance with calculation methods and the effect of DP AG's VAT-exempt status on pricing. The Court ruled that it currently saw no obligation on the part of the Agency to take into account DP AG's VAT exemption (whose applicability to the service of documents is disputed) when approving rates, and to increase DPAG's rates owing to its exempt status. However, a final decision on this and other matters, said the Court, would go beyond the scope of an urgency motion. The main proceedings continue.

In the third case referred to above, an association (acting here as a customer) had objected to the approval of rates for DP AG's postal services in price cap proceedings, claiming that the rates in question were based on unauthorised discounts. The Cologne Administrative Court ruled that the relevant provision, namely Article 20, paras. 1 and 2, of the Postal Act had no third party protection component in relation to the plaintiff and therefore did not assign him subjective rights. Rather, the Court continued, the prohibition on surcharges and discriminatory rates served the common interest in that it safeguarded and promoted competition. The suit was hence dismissed (decisions dated 27 November 2007).

Electricity and gas



Market watch

In 2007 the Federal Network Agency once again conducted a comprehensive survey of the German energy market. This survey serves primarily as the basis for creating market transparency, but also as an indicator of the efficiency of legal rules and regulation.

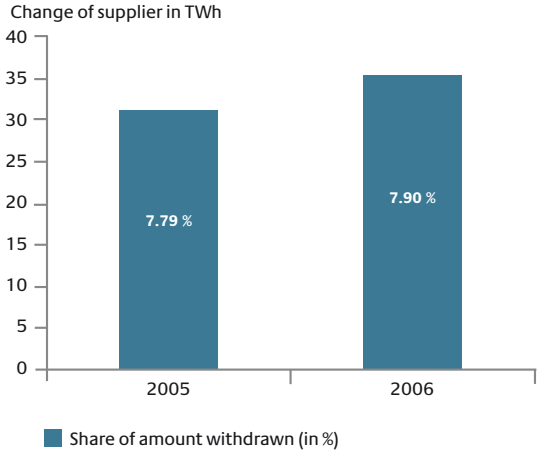
Under section 35 of the German Energy Act (EnWG) the Agency is obliged to perform monitoring tasks in order to fulfil its regulatory tasks in the areas of electricity and gas. For this purpose the Federal Network Agency is tasked under section 63 (4) of the Energy Act to publish an annual report. The Federal Network Agency's monitoring report 2007 was presented to the public in November 2007. The monitoring report focuses in particular on a review of whether or not key requirements of the Energy Act were implemented by the market players. The monitoring report 2007 present the progress achieved. Aspects to be emphasized are the reduction of network costs in the electricity and gas sector, which were achieved due to the review and approval of network charges by the Federal Network Agency or the state regulatory authorities. In addition the introduction of the new model for access to the gas network has created the sine qua non for the development of an effective, competitive market. However, a number of questions, in particular regarding operational unbundling and unbundling of the use of information as well as access to gas supply networks, still require clarification. On 20 August 2007 the Agency set out standardised processes for switching gas supplier (GeLiGas), which apply across Germany. The undertakings are required to create and implement the framework conditions by 1 August 2008. Another achievement in the year 2007 was the reduction of the number of gas market areas from originally 19 to eight by 1 October 2008.

CHANGE OF SUPPLIER FOR ELECTRICITY AND GAS

According to information from the distribution system operators (DSOs) for electricity, the total volume of change of supplier by final consumers in 2006 amounted to 35.09 TWh. This equates to a supplier change ratio of 7.90 percent (in 2005: 7.79

percent) of the total amount final customers withdrew from gas system operators, amounting to 444.32 TWh. The change ratio of 13.52 percent and 11.42 percent in both categories, "medium-sized industry and trade sector" and "large and very large industrial customers", in 2006 as well as 2005 were significantly higher than the change ratio of 2.55 percent in the category "households and small trade". In the course of the 2007 monitoring round, the transmission system operators (TSOs) were, for the first time, asked for data on the amounts withdrawn by final customers and on changes of suppliers. The overall supplier change ratio for TSOs and DSO in the electricity sector amounted to 9.41 percent in 2006.

Change of supplier by final customers of electricity [1]

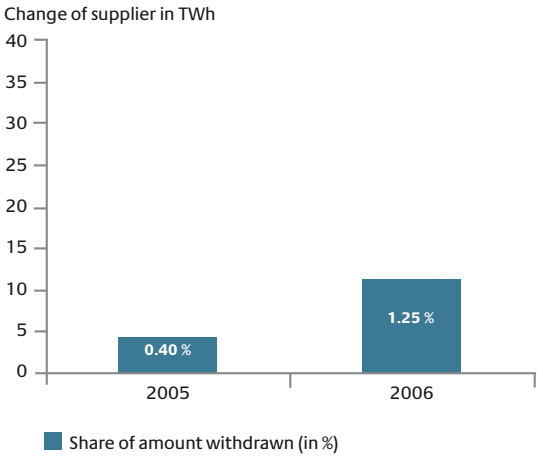


1 according to information by DSOs for electricity
Source: Federal Network Agency monitoring report 2007

Under section 37 of the Gas Network Access Ordinance (GasNZV) gas network operators have been obliged since 2006 to use standardised procedures in order make a change of supplier easier and to make provisions for an electronic exchange of data with transport customers in a standardised format. However, these statutory requirements have not yet been implemented everywhere. Once again, the supplier changes processed in 2006 were primarily company-specific processes, which simply tie in with the principles of section 37 of the GasNZV.

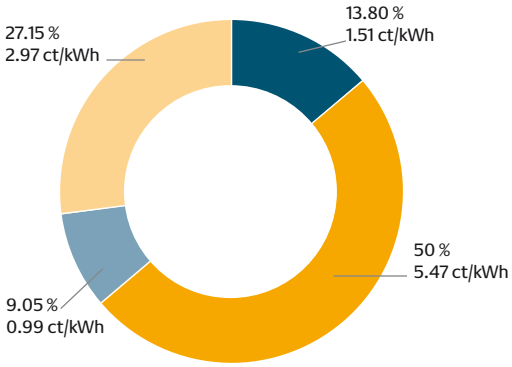
Despite the obligation for all gas network operators to allow for a change of supplier, only a little over 90 percent of the network operators had defined appropriate handling procedures for this in 2006. However, due to anti-competitive framework conditions the opportunity to freely select gas suppliers was barely used. This is particularly obvious when looking at the change ratio for household customers in the gas sector. Compared with 2005 this equates to an increase of ten percentage points. According to information from the gas network operators the share of the overall volume of supplier changes as a percentage of the overall take-off capacity is only 1.25 percent, after 0.4 percent in 2005. The highest change ratio in 2006, in relation to the take-off capacity, was found in the category "large industrial customers" (>10,000 MWh/year ≤ MWh/year), standing at 3.3 percent. The change ratios of the categories "medium-sized industry and trade sector" and "households and small trade" were at a very low level overall, with 0.41 percent (0.12 percent in 2005) and 0.04 percent (0.001 percent in 2005) respectively.

Change of supplier by final customers of gas[1]

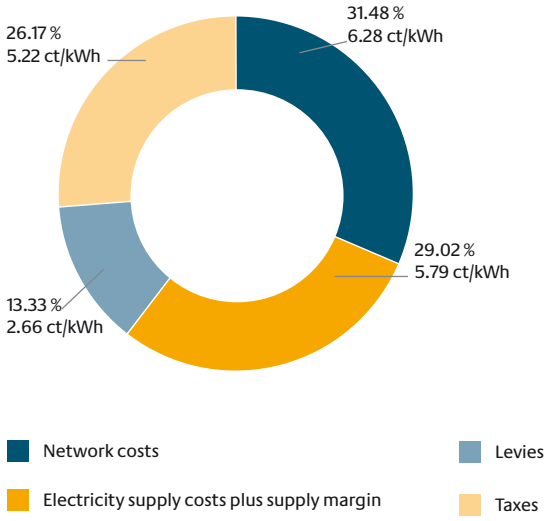


1 according to information by transmission system operators (TSO) gas and DSOs gas
Source: Federal Network Agency monitoring report 2007

Composition of the electricity retail price levels 2007 (Ig)



Composition of the electricity retail price levels 2007 (Dc)



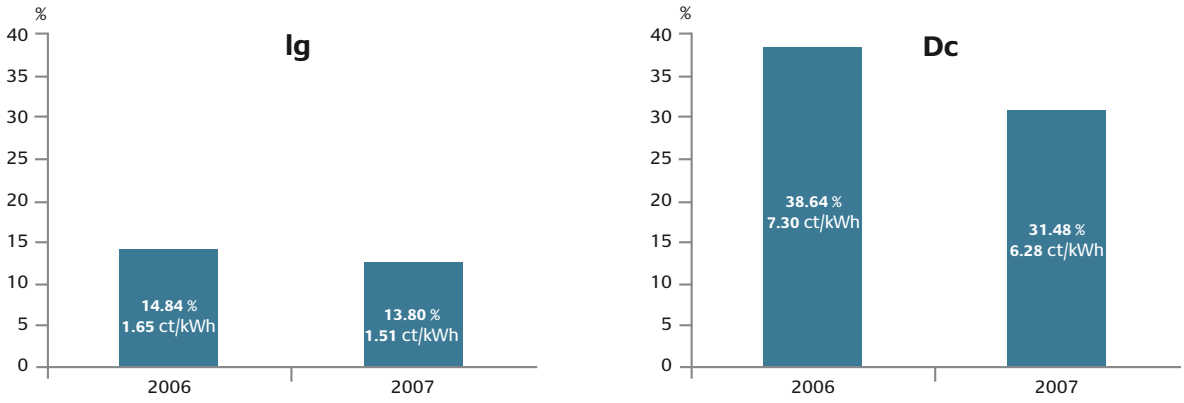
As of 1 April 2007
Ig: Industrial customers
Dc: Household customers outside of universal supply
According to Eurostat customer category
Source: Federal Network Agency monitoring report 2007

COMPOSITION OF THE ELECTRICITY AND GAS PRICES

Electricity

The data collection for the monitoring report served to gather data from wholesalers and suppliers for electricity to reveal the current average retail price level (as at 1 April 2007) for the Eurostat customer categories Ig (industrial customers, consumption of 24 GWh/year), Ib (industrial customers, consumption of 50 MWh/year) and Dc (households). Furthermore an estimated breakdown into network costs (net system charges incl. charges for metering, account statement and collection), electricity supply costs plus supply margin (costs for obtaining energy plus margin and pro-rata overheads), levies (licence charge, RE and CHP surcharge) and taxes (electricity tax and VAT) was requested. The mean averages weighted by volume, and taking into account the sales volume 2007 of each company to the final consumers in the related customer category, were 10.94 ct/kWh for industrial customers (producing sector), applying a reduced electricity tax, and 19.95 ct/kWh for household customers (outside universal supply).

Share of network costs in the electricity retail price



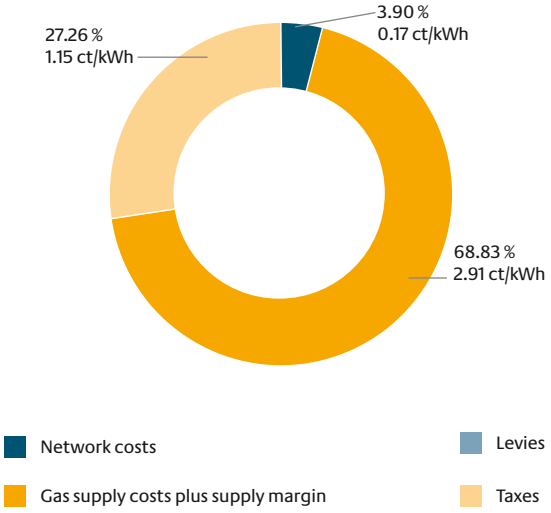
As of 1 April 2007
Ig: Industrial customers
Dc: Household customers outside of universal supply
According to Eurostat customer category
Source: Federal Network Agency monitoring report 2007

Gas

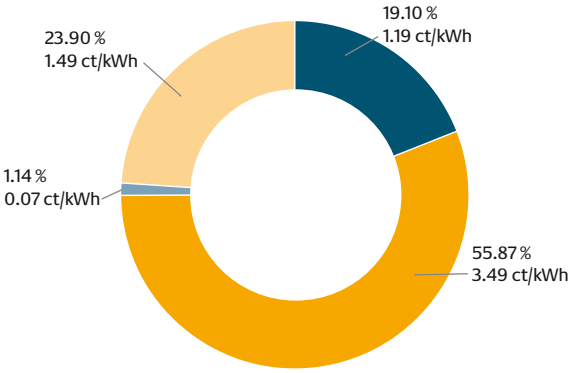
The Federal Office of Economics and Export Control (BAFA) determines the cross-border price of gas (statistical average price of all imports by gas supply companies for the national supply, excluding natural gas tax). Following price increases of 36.22 percent in 2005 the cross-border price rose once again by 32.31 percent.

The Federal Network Agency collected data from wholesalers and suppliers of gas during the reporting period, with the purpose of revealing, inter alia, the average retail price level (prices as at 1 April 2007) in ct/kWh for Eurostat customer categories I4-1 (industrial customers) and D3 (household customers). Furthermore an estimated breakdown into network costs (system charges incl. charges for metering, account statement and collection), gas supply costs plus supply margin (costs for obtaining energy plus margin and pro-rata overheads), levies (licence charge) and taxes (natural gas tax incl. discounts and VAT) was requested. The mean averages weighted by volume, and taking into account the sales volume 2007 of each company to the final consumers in the related customer category, were 4.23 ct/kWh for industrial customers and 6.24 ct/kWh for household customers outside universal supply.

Composition of the gas retail price levels 2007 (I4-1)

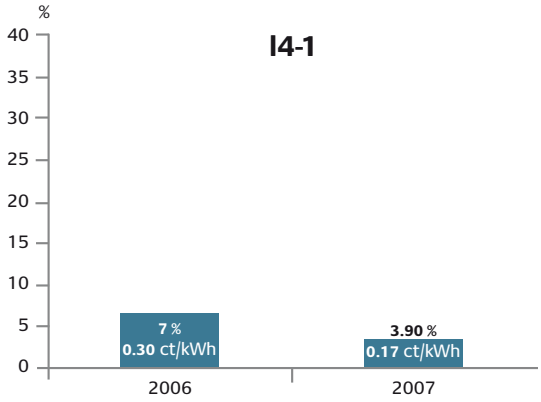


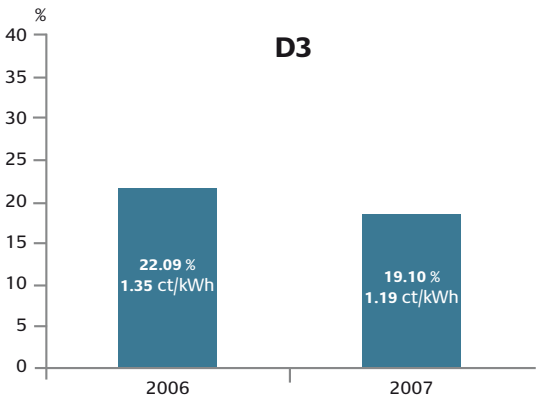
Composition of the gas retail price levels 2007 (D3)



As of 1 April 2007
I4-1: Industrial customers
D3: Household customers outside of universal supply
According to Eurostat customer category
Source: Federal Network Agency monitoring report 2007

Share of network costs in the gas retail price





As of 1 April 2007
I4-1: Industrial customers
D3: Household customers outside of universal supply
According to Eurostat customer category
Source: Federal Network Agency monitoring report 2007

Activities and proceedings

In 2007 the work of the Federal Network Agency in the energy sector was largely characterised by three major areas: preparations for the introduction of incentive regulation, proceedings for approving gas and electricity charges, and further improvements in the areas of network access and unbundling.

INCENTIVE REGULATION

The Federal Network Agency's presentation on 30 June 2006 of its report on the introduction of incentive regulation pursuant to section 21a of the Energy Act (EnWG) formed the basis for a draft ordinance by the German government as stipulated in section 118 (5) EnWG as well as for the prompt passing of an ordinance by the German government with the consent of the Bundesrat as per section 21a (6) of the EnWG.

On 16 November 2006 the Federal Ministry for Economics and Technology (BMWi) published a benchmark paper on the Incentive Regulation Ordinance (ARegV), which was based on the concept present in the Federal Network Agency's report. This was followed on 4 April 2007 by the presentation of a draft bill of the ARegV. After the subsequent inter-ministerial consultation, which resulted in a change of the draft bill, this was adopted by the Federal Cabinet on 13 June 2007. On 21 September 2007 the Bundesrat dealt with the draft ordinance. After the Federal Cabinet had agreed to changes by the Bundesrat on 10 October 2007, the ARegV entered into force on 6 November 2007.

Concept of incentive-based regulation

The ARegV stipulates the definition of revenue caps for strict 5-year regulation periods[1] from 1 January 2009. The concept of incentive regulation supersedes the cost-based approval of charges operated to date with a type of regulation that offers incentives for an efficient operation of electricity and gas supply networks.

The starting point for a determination of the revenue cap are always those costs which have been reviewed in the second

1 In derogation of this the first regulation period for the gas sector will be four years.

round of approvals and which are adjusted by the permanently non-controllable cost elements.

The revenue caps to be determined contain company-specific efficiency targets that are calculated on the basis of efficiency comparison methods. The efficiency targets are guided by the most efficient companies (frontier companies) and are based on the requirement that less efficient network operators will receive ten years from the beginning of incentive regulation to overcome the established inefficiencies.

When determining the efficiency values of DSOs by means of the efficiency comparison methods Data Development Analysis (DEA) and Stochastic Frontier Analysis (SFA), the capital costs of the network operators, which were made comparable, and their actual capital costs were applied. That resulted in four efficiency comparisons; in line with the stipulated best billing solution the results most favourable to the network operator will be used. Furthermore a minimum efficiency limit of 60 percent was set.

The Federal Network Agency performs these efficiency comparisons across Germany and transmits to the state regulatory authorities the efficiency values of the network operators within their remit. If the state regulatory authorities do not use the results of the efficiency comparison provided by the Federal Network Agency, they may perform their own efficiency comparison for which they can also draw upon data of network operators not within their own remit.

Gas network operators with fewer than 15,000 connected customers and grid operators with fewer than 30,000 connected customers may choose to participate in a simplified procedure for determining efficiency values, instead of undergoing the efficiency comparison. In this case the efficiency value after the first regulation period is 87.5 percent. In addition 45 percent of the overall costs are estimated to be permanently non-controllable. In the context of this simplified procedure these network operators can also dispense with the second round of a cost-based approval of charges, scheduled for 2007/2008, if they do not intend to claim an increase in costs.

The efficiency targets for the TSOs will be determined as part of a European efficiency comparison. Where the reliability of this comparison cannot be guaranteed, a reference system analysis will be applied. The efficiency targets for the TSOs (gas) will be determined as part of a national efficiency comparison. Where the existing data is insufficient for this, a European efficiency comparison or a reference system analysis will be performed.

The figure used for the general development of monetary value is the overall consumer price index of the Federal Statistical Office; if this changes the revenue cap is adjusted once a year. The overall consumer price index is adjusted by the general productivity factor in that sector, which takes into account the different developments of productivity and the input prices in the network economy and general economy. This general productivity factor in the sector is 1.25 percent per annum in the first

regulation period and 1.5 percent per annum in the second regulation period.

An annual adjustment is made to the revenue cap if the permanently non-controllable cost elements change or, upon application, in case of an unacceptable hardship caused by unforeseeable events.

To ensure supply quality the ordinance stipulates annual quality-dependant increases of or reductions from the revenue cap starting with the second regulation period – or in case of sufficient data in the electricity sector already from the first regulation period. Customer surveys or methods such as analytic cost models can be used to determine the increases or reductions.

Furthermore the DSO has, upon request, the chance to receive a lump-sum investment supplement to the revenue cap, amounting to an annual maximum of one percent of the capital costs. A longer-term change of the supply function of DSOs will be taken into account by means of an expansion factor in the regulation formula, through which the revenue cap can also be adjusted annually in line with the required expansion investments. In case of TSOs an approval of investment budgets is intended for required expansion and restructuring investments.

And finally the ARegV stipulates that the Federal Network Agency shall observe the investment behaviour of the network operators and draw up a report by 30 June 2013, which contains an assessment of the need for further measures.

Implementation of incentive regulation

The Federal Network Agency had already made preparations for the launch of incentive regulation before the ARegV entered into force. In addition to the tender and/or award of consultation projects for the application of analytical cost models used in conjunction with the approval of TSO's investment budgets, and for the monetary evaluation of network reliability as well as for national and international efficiency comparisons, the Agency in particular laid the foundations for the necessary data collection among network operators.

The data collection among DSOs (electricity) was launched on 10 December 2007. The data collection among DSOs (gas) and the TSOs (gas and electricity) will follow immediately.

International cooperation

The information exchange with other European regulatory authorities was continued by means of regular meetings of the CEER Workstreams Incentive-based Regulation and Efficiency Benchmarking, where current developments in the different countries were presented and discussed. This task force is headed up by the Federal Network Agency and part of the superordinate Unbundling Reporting and Benchmarking Task Force (URB TF), of which the Agency is vice chairman. In addition the Agency is involved in the Electricity Quality of Supply Task Force (EQS TF), which focuses on regulating quality.

ACCESS TO ELECTRICITY SUPPLY NETWORKS

Network concept

During the reporting year the Federal Network Agency had to specifically deal with the question when to assume that an electricity network exists, which is subject to regulation in the sense of the Energy Act (EnWG). During the course of this it was established that the network concept contains no de-minimis rule in terms of customer numbers, peak loads or power capacity, which would have to be met in order to meet the criterion of being an electricity network. Neither can the concept of a customer installation be used, which originates from times before market liberalisation, because a customer installation in itself could also be a network. An evaluation of an installation as a network always requires an overall assessment of individual factors (such as cross-border installation, objective behaviour of network operators, and collection of network charges).

Reliability and performance of supply companies

In order to protect consumers the Federal Network Agency has, during this reporting period, for the first time prohibited the business activities of an energy supply company under section 5 of the Energy Act (EnWG) in terms of the acquisition and supply of household customers with electricity.

A company had published an extensive internet offer for supplying household customers with electricity (electricity supply contracts with a duration of twelve months, two years, four years, eight years and ten years).

The company had failed to provide the Agency with proof, as required under section 5 sentence 3 of the EnWG, of its technical and economic ability to perform. Furthermore the Agency also had considerable doubts about the reliability of the company's management. The Higher Regional Court Düsseldorf rejected the company's appeal in a judgement dated 30 January 2008 and fully concurred with the Agency's decision.

Power plant connection

In the context of proceedings initiated by a petitioner for a power plant connection, the Federal Network Agency had to deal with the issue of a suitable network connection point for the connection of a power plant; this matter lasted until mid 2007. Closely related to this issue is the question of how to distribute the costs of the boosting efficiency required for such a connection – costs which can arise both from changes to the connection point itself and from expansions to or changes in the network.

The Federal Network Agency used both the issue of suitability of the network connection point requested by the party requesting connection of a power plant and the distribution of costs related to the connection of the power plant in this individual case to develop principles that were adopted by the issuer of the Electricity Production Facilities Connection Ordinance (KraftNAV), which entered into force on 13 July 2007. The parties involved in the specific proceedings were able to come to a mutual agreement, applying these principles.

Selection of network level

Two landmark decisions regarding section 17 of the Energy Act (EnWG) forced the Federal Network Agency in 2007 to consider to what extent a user can surrender his connection in the subordinate network level and instead demand that the facilities owned by him be directly connected to the upstream network level. In both cases the network operator had refused such a reconnection of the applicant's facilities at substation level.

In consideration of the origins of section 17 EnWG and taking into account section 17 (1) of the Electricity Network Charges Ordinance (StromNEV), according to which the charges payable by the user depend on the connection level of the take-off point, the Federal Network Agency affirms a general right to choose the connection level, both for new customers and for existing ones. The Agency is of the opinion that the free choice of a buyer which offer from a provider he wishes to accept or not, is one of the basic conditions and functions of a competitive market.

However, this right to choose is not unrestricted but only extends to the point where the connection in the network level requested by the user is reasonable for the network operator under section 17 (2) of the Energy Act (EnWG). In this respect these decisions also define the requirements for the burden of proof and explanation, which are imposed upon the network operator under section 17 (2) of the EnWG.

Contributions to the infrastructure

Since contributions to the infrastructure, requested repeatedly by grid operators, are network connection terms of an economic nature, they were by their nature subject to a review by the Federal Network Agency. These contributions are charges imposed upon the network users in order to control the use of network connection capacity in line with demand. Numerous complaints about contributions to the infrastructure, received by the Agency, criticise that the basis of the amounts calculated by grid operators is not transparent to the user. During special abusive practice proceedings the Agency has therefore decided that the simple statement of an amount in €/kW connection power is in any case not sufficient, if the grid operator aligns the formation of its contributions to the infrastructure in the low voltage network with the costs actually incurred for a supply area. In this case the calculation must be explained by revealing the basis of the calculations, if requested by the user. Furthermore the Federal Network Agency consid-ered it abusive if a grid operator rejects a user's conditional payment of contributions to the infrastructure, made subject to a later review, and grants connection only after unconditional payment. This was ruled by the Agency' relevant ruling chamber on 11 December 2007.

Even for voltage levels outside the scope of the Low Voltage Connection Ordinance (NAV) there is in principle no doubt that the grid operators are entitled to claim contributions to the infrastructure. With regards to the numerous and repeated enquiries and complaints received by the

authority in relation to the claim of contributions to the infrastructure, the Federal Network Agency would welcome a move whereby, in the medium term, such contributions were to be collected as fixed flat rates; the effort involved in their calculation and control should also be appropriate to the revenue generated by the contributions to the infrastructure.

Control energy

After an initial determination for the control energy product "minute reserve" in 2006 the Federal Network Agency in 207 also made fundamental decisions about the tender conditions for the two other types of control energy – primary reserve and secondary reserve – effective 31 August 2007. The subjects of these determinations were the conditions and modalities of procuring the two types of control energy by means of a joint tender via the internet platform www.regelleistung.net.

Until now the primary and secondary reserves were tendered by each TSO responsible for their control area on their own authority, independent of the procurement procedures of all other TSOs. This way the demand by TSOs meets an offer characterised by an oligopolistic structure with very moderate competitive traits. The providers are currently mainly the power plant associates of the four TSOs. Therefore the objective of the determinations was in particular to open up the market for control energy to new providers through standardised and simplified tendering procedures on the one hand and increased transparency on the other hand, as well as to minimise the costs of control energy in the long term by means of intensifying competition. The determinations contained explicit targets for the tender periods and times, the minimum volume offered, the method of allocation and making requests as well as for transparency.

Control energy is required to balance the continuous fluctuations between feed-in and take-off and is vital for maintaining the security of the system. Unlike minute reserves the primary and secondary reserves are automatically produced by the installations producing control energy (eg power plants). According to the principle of solidarity the primary reserve acts for the entire European UCTE group; the secondary reserve serves to maintain the balance of power in each control area and is applied by each TSO on its own authority. 1 December 2007 saw the first tenders carried out under the new regulations.

In addition the Federal Network Agency kept a close eye during 2007 on the development of prices and costs of the minute reserve, after the new terms and conditions for their tender entered into force on 1 December 2006. Initial fears, caused by price peaks in December 2006/January 2007, that the new terms and conditions of tender might have led to significant cost increases, turned out to be unfounded. The initial price peak, caused by a temporary shortage of offered capacity, coupled with some providers experimenting with the scope for setting their prices, was followed by a phase of low prices for minute reserve, which lasted until autumn 2007. Since the price peak of December 2006/January 2007 the prices of the minute reserve have been

guided primarily by the general price trends of the OTC markets or the spot market of the energy exchange EEX. Since then possible price increases in the minute reserve, like the last one during the price peak in the late autumn of 2007, simply reflect the current trend of generally higher electricity prices and are not a feature specific to control energy.

Business procedures for changing electricity suppliers

With effect from 1 August 2007 the Federal Network Agency's determination regarding Standardised Business Procedures and Data Formats for Changing Electricity Suppliers (GPKE) entered into force, followed on 1 October 2007 by a determination about an electronic billing system for system usage, to be used upon request between network operators and network users. This has now set mandatory communication standards for grid operators and suppliers, which will ensure an efficient electronic data exchange.

In the run-up to these stipulations entering into force the Federal Network Agency was involved in clarifying numerous detailed questions that had arisen between market players. Talks with the IT specialists of the grid operators as well as suppliers resulted in satisfactory solutions, which were communicated in order to create implementation certainty in all major areas.

Around eight percent of grid operators have indicated to the Agency that they will not be able to conclude the necessary changeover in time for 1 August 2007. The Agency has, in these cases, assessed the individual reasons for the delay, the existing acceleration potential as well as any obvious effort of the affected parties to implement the determinations as closely as possible to the due date, and has taken all of these into account for their individual decisions of whether or not compulsory measures might be necessary. In three cases the Agency had to employ administrative coercion.

Overall the changeover process was smooth. A number of issues did not become apparent until practical application began; however all market players were very constructive in resolving these problems. Grid operators in particular have used many of their staff and have been very involved in the relevant expert panels in order to make the new procedures work in the best interest of their customers.

The appeals lodged in 2006 against the Agency's determination were, in the mean time, heard in several test cases before the Higher Regional Court (OLG) Düsseldorf. In all cases concluded to date the court decided in favour of the Federal Network Agency. Two of these cases are now continued before the Federal Court of Justice (BGH) due to an appeal on a point of law, lodged by the defeated grid operator. The complainants claim in this case that due to the alleged uncertainty of the circle of addressees and the abstract content, the Federal Network Agency had not been entitled to pass the present decision as an administrative act, despite its underlying authorisation based on the Electricity Network Access Ordinance (StromNZV). Furthermore they state that it was not per-

missible to limit the opportunity provided by section 6 of the decision's operative part, under which the grid operator can allow different forms of communication for associated distributors, until 1 October 2009.

The BGH will hear the appeal on the points of law in this matter in April 2008.

Management of balancing groups

In 2007 the Federal Network Agency worked intensely on a new concept for the management of balancing groups. This includes clarification of important matters regarding the permissible content of balancing group contracts; the result will be a first ever joint standard balancing group contract by all TSOs. Key points of discussion are, in addition to a variety of operative topics, issues such as a demand for security and the forecast duties of the balancing group managers. Furthermore the Agency is working on fundamental questions of balancing group settlement. To do so the Agency is closely cooperating with the market players to draw up a concept which defines for the first time which party has to provide which data by when and in which format, thus providing the basis for a balancing group settlement within the period of two months stipulated in the ordinance.

Meter configuration

In the matter of the number or location of meters, which is important for a realisation of the right to network access under section 20 of the Energy Act (EnWG), the Federal Network Agency decided during special abusive practice proceedings, whether or not the tenants of an apartment building can demand in their entirety to be billed solely via a joint adding counter, while at the same time dispensing with the meters in the individual apartments. The background to this was a plan by the tenants to operate a combined heat and power system in their building; when generating any excess they would feed into the public grid through the adding counter, while at times of a temporary shortage they would take additional power off the public grid. During the decision-making procedure the Agency decided in favour of the tenants. The demand by the grid operator to have meters in each individual apartment would have made the consumption model, which was combined with decentralised power generation, uneconomic and would therefore have contradicted the principle of efficient grid access. Objections by the grid operator on the grounds of unreasonableness – based on the general fear of loosing large amounts of network charges – were not deemed sufficient. With this decision the Federal Network Agency has also made an important contribution to the promotion of decentralised and environmentally friendly power generation.

Direct marketing of power from renewable energy

In a benchmark paper the Federal Network Agency has drawn up and consulted rules for the direct marketing of power from renewable energy (RE). The objective of these rules is to shape the direct marketing of power from renewable energy sources in a way that allows for its integration into the trading and scheduling system as well as the currently existing nationwide equalisa-

tion scheme for renewable energy. From the Agency's perspective it is important to avoid risks to the system security as well as further cost increases for the nationwide equalisation scheme for RE through unregulated forms of direct marketing.

The nationwide equalisation scheme for RE, i.e. the physical transmission of the electricity fed in and remunerated by electricity supply companies supplying the final customer in accordance with the Renewable Energy Sources Act (EEG), was the subject of complex proceedings by the Agency. It was not just a question of how the TSOs, who have an obligation of transmission and conversion into a previously fixed monthly band, can be motivated to organise this so-called wind enhancement more efficiently and transparently. During the reform of the Renewable Energy Sources Act (EEG) proposals were developed on how the overall process of integrating renewable energy into the market could be organised more efficiently overall.

Network expansion

The expansion of the German transmission system continued to be an important issue for the Federal Network Agency in 2007. The TSO's reports on the expansion and condition of their networks in 2006 revealed a significant need for an expansion of the German transmission system. Since delays in the implementation of various line construction projects have already become apparent, the Federal Network Agency has been requesting quarterly reports from the TSOs since the end of 2006, in which the current state of the implementation of network expansion projects is explained. The Agency has provided details for the contents of these quarterly reports. These details include particular information on the current state of implementation, any problems that will cause delays as well as implementation measures for the next six months relating to the network expansion planned in the period between 2006 and 2010.

The Federal Network Agency uses these reports to regularly review the state of expansion of the German transmission system and keeps an eye on reasons for delays. In 2007 the Agency analysed the report content, taking into account its own insights. This analysis is due every two years and was first published on 9 January 2008. A key statement of the current analysis is that the predictable development of the German power generating market over the next few years, which is likely to see both the additional construction of new conventional power plants and the erection of onshore and offshore wind parks, will result in new requirements for an expansion of the transmission system and related planning. Due to the increase in the feed-in of wind energy and the cross-border transit it is no longer possible to exclude the occurrence of temporary or longer-term congestion in the transmission system. Another key result of the analysis is the fact that the construction of new power lines is subject to numerous delays, which inter alia affect all projects included in the EU Commission's "Priority Interconnection Plan". The commissioning dates outlined in this plan cannot be adhered to. The reasons for the delays in implementing the network expansion measures are primarily

related to the long authorisation procedures.

For the reports on the condition and expansion of their networks, which the TSOs had to draw up by 1 February 2008, the Federal Network Agency strives to achieve a further harmonisation and provision of additional information through more specific requests in terms of content, structure and the temporal context of the reports.

Cross-border trade in electricity

The tasks of the Federal Network Agency in the cross-border trade of electricity are defined primarily by Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity. The objective of the legal stipulations is to create a real internal electricity market by intensifying the trade in electricity. Germany is active in four of the seven regions: Central Western Europe (CWE), Central Eastern Europe (CEE), Northern Europe (NE) and Central Southern Europe (CSE). The issues primarily dealt with in 2007 were the further development of the mechanisms for the allocation of capacity at the cross-border coupling points and the increase in transparency. With its workshop on market coupling, held by the Federal Network Agency on 1 February 2007 for the region Central Western Europe, the Agency made an important contribution to the European discussion about the introduction of a more efficient congestion management system. Within the scope of flow-based market coupling the flow generated at the border of all countries involved is calculated more precisely and the energy exchanges are included in the allocation of capacity. The workshop allowed for a first ever supra-regional discussion involving all relevant market players.

On 6 June 2007 the ministries, regulatory authorities, TSOs, market players and energy exchanges in Belgium, France, the Netherlands, Luxemburg and Germany signed a Memorandum of Understanding (MoU) in which they undertook to establish flow-based market coupling by January 2009. The introduction of a system for market coupling is also planned for the German-Danish border. For this another MoU was signed between the exchanges and the TSOs at the end of 2006. In this case the introduction is planned for 3 June 2008.

In the region CEE the introduction of a flow-based capacity allocation model was the main focus of attention. Its introduction is planned for the year 2009. From this point on capacity from short-term and long-term auctions is to be allocated on a flow-base. Another key focus of the discussion was the improvement and harmonisation of the auction rules. In this case a first success was achieved in the region CWE in the area of harmonisation.

Major progress was made during the Regional Initiatives in 2007 in terms of the improvement of market transparency. More specifically the information basis, in particular in terms of the publication of generation data, must be improved. At the same time a comparison of data from individual member states shall be made easier for market players. Starting with the trans-

parency report that was drawn up by the region NE, under the chairmanship of the Federal Network Agency, an approach of standardised definitions and publication details in all regions in which the Agency is involved was adopted. In 2007 the transparency reports for the regions NE and CWE were therefore published. In the region CSE initial discussions about the transparency report have begun, in CEE the transparency report for this region was published at the beginning of February 2008.

European activities in the electricity sector

In 2007 the Federal Network Agency continued its work in various work groups within the European Regulators Group for Electricity and Gas (ERGEG) and the Council of European Energy Regulators (CEER). Within the Security of Supply Task Force various methods were investigated for ensuring sufficient power generation capacity. The objective for 2008 is to draw up recommendations for a standardised method across Europe.

Within the Electricity Regional Initiative Task Force a "Convergence and Coherence Report" was drawn up and submitted for public consultation; the report investigates how a compatible development of regional initiatives can be ensured. Furthermore the progress of the Regional Initiatives is presented in regular reports.

The Electricity Market Task Force drew up a report on compliance with the rules of congestion management guidelines in 2007. In addition, and in cooperation with the European Commission, the content for studies on the market for control energy (Study on interaction and dependencies of Balancing Markets, Intraday Trade and Automatically Activated Reserves) and the retail market was defined. Further topics were energy loss and financial transfer rights.

The Electricity Transmission Network Task Force (ETN TF) has, inter alia, completed the paper "Cross Border Framework for Electricity Transmission Network Infrastructure – An ERGEG Conclusions Paper", which deals with authorisations and permissions for the construction of new lines in different countries, and the differences therein. Based on this paper the ETN TF drew up terms of reference for a study. The study, which deals with investments in infrastructure and possible incentives for increasing investments in cross-border infrastructures, was tendered by the Commission. In connection with the discussion about the third package of directives, the ETN TF dealt with the definition of the EU grid and in particular the structure, the organisation, the role of different market players and their responsibilities. Furthermore work began in 2007 on the "Guidelines on Good Practise on Operational Security".

The Regional Initiatives established by ERGEG in February 2006 dealt primarily with the further development of congestion management procedures in 2007 (cf. page 58)

Quality of supply

Based on the reporting obligation under section 52 of the Energy Act (EnWG), 2007 saw the first collection of data on interruptions of supply for a full calendar year. The analysis of 781 power grid operators revealed that in 2006 a final customer in Germany had an average of 21.53 minutes without power. However, this still means an availability of 99.996 percent. Compared to the rest of Europe the German power grid therefore has the best quality of supply.

In February 2007 the Federal Network Agency published a report on the interruption of supply on 4 November 2006. On this day high voltage lines had been switched off due to the planned transportation of a ship. As a consequence other lines had become overloaded, which resulted in a power failure across Europe.

Transparency requirements

In 2007 the Federal Network Agency drew up guidelines to assist with the standardised, complete and appropriate implementation as well as the textual presentation of the grid operators' obligation to publish data. The analysis of numerous websites of grid operators had revealed that many companies meet the transparency requirements addressed at them only in part or not at all. Furthermore the details stated are difficult to find and compare for potential network users due to different ways of arranging text, different data formats, different units and varying degrees of precision. In the autumn of 2007 the affected business and consumer protection associations were asked to comment on the guidelines. Their comments were analysed and taken into account in the compilation of the guidelines.

Energy loss

The Federal Network Agency has drawn up a concept for transparent, fair and market-oriented procedures for procuring and determining energy loss. In preparation for a possible determination the conceptual work was completed in 2007 and published for consultation in the form of a position paper. Based on the insights thus gained a procedure will be developed which is to result in sinking costs for the procurement of energy loss, thereby positively affecting the network charges and the liquidity of the market for electricity trade.

Liberalisation in the area of metering and measuring

The liberalisation of metering and its implementation was driven ahead in three directions. Within the existing framework conditions, framework agreements and minimum technical requirements for operators of metering points were requested and reviewed in terms of their compliance with the statutory requirements. At the same time the Federal Network Agency accompanied the further liberalisation in the areas of metering and measuring, which had been initiated primarily because of the German government's evaluation report and the so-called 'Meseberg paper' (key elements of an integrated energy and climate programme). This resulted in a draft bill by the German government on a "Gesetz zur Öffnung des Messwesens bei Strom und Gas für den Wettbewerb" [Law on the market opening of electricity and gas meters for the purpose of competition]

(BR-Drs 14/08). In this context the issuer of the ordinance is planning a Metering Access Ordinance (MessZV).

Register according to the ordinance on grid connection of power plants

When the Electricity Production Facilities Connection Ordinance entered into force on 30 June 2007, regulations were passed that aim to achieve a connection of large power plants (≥ 100 MW) to the grid in a fair way, with appropriate and transparent connection terms. In addition the ordinance stipulates a certain time frame for both the grid operators of high and extra high voltage grids and the party requesting connection, to ensure the connection and the construction of the power plant can be accomplished in a timely manner. For the purpose of transparency grid operators are obliged to draw up a joint power plant register for plants ≥ 100 MW. For this purpose the Federal Network Agency has conducted a survey in which all affected grid operators were recorded. Furthermore the content of the register, which is to be drawn up for the first time in early 2008, was agreed upon with the grid operators and the Federal Association of German Energy and Water Industries (BDEW).

Grid connection of offshore wind farms

In 2007 varied questions arose in connection with the integration of offshore wind parks (OWP). After an amendment of the Energy Act (EnWG), which now obliges the TSOs to connect the OWP, numerous talks were held with OWP investors, the offshore forum on wind energy, TSOs and licensing authorities. The objective of the talks was to clarify technical issues of network connection and usage, including the associated network expansion. In addition questions regarding the acceptance and allocation of costs were clarified, which are related to investments arising in connection with the integration of OWPs. This allowed the Federal Network Agency to create legal certainty, so the investments due in 2007 could be made.

ACCESS TO GAS SUPPLY NETWORKS

Model for access to the gas network

The year 2007 saw the introduction of extensive new regulations for access to the gas network. Even the year before the Federal Network Agency had obliged the network operators in the context of a ground-breaking decision to jointly organise network access in close cooperation. This so-called two-contract model provides for much simpler network usage by gas traders, because it allows for the possibility of organising the network access on the basis of only two contracts. In the spring of 2007 the network operators presented an appropriately updated version of the cooperation agreement, which contains concrete details of these simplified terms and conditions. All network access agreements had to be changed over to these new rules by 1 October 2007, which means only the new regulations have been valid since then. The Federal Network Agency accompanied the discussions about the new model for access to the gas network closely and insisted upon the introduction of regulations that were fair and comply with statutory requirements. The new regulations manifest a major progress in the liberalisation of the gas market; many details present the net-

work operators with new challenges. For traders even just the introduction of the new model opened up new major opportunities for participation in the gas trade. Since then transactions have been significantly on the increase.

Market zones

Further progress was recorded in the endeavoured reduction of gas market zones in Germany. The objective of reducing the gas market zone to fewer than ten has been achieved. Compared with 19 zones beforehand, only eight will remain by 1 October 2008. In doing so the gas network operators follow a basic concern of the Energy Act (EnWG) for as few market zones as possible. The Federal Network Agency has emphasised this demand in order to increase the liquidity of the gas markets, to simplify the procedures for gas transports and to organise the handling of control and balancing energy more rationally. At the start of the new gas industry business year on 1 October 2008 only six market zones will remain for H-gas and two for L-gas. The reduction of market zones in 2007 was performed on the basis of voluntary mergers, which were initially largely intra-corporately. The mergers declared for 2008 are more inter-corporately. This work must be continued; the implementation and realisation of the mergers will require some time, though. The Federal Network Agency attaches importance to additional mergers within the next two to three years.

Control and balancing energy

The definition of an effective system for control and balancing energy was one of the key points of the Federal Network Agency's work in 2007. The existing regulations require substantiation. The related balancing rules also require detailed substantiation. When defining the new access rules this subject has deliberately been left for a later point in time. Consequently more pro-competitive regulations are required, which will result in an appreciable reduction of transaction complexity for network users. In 2006 a comprehensive expert opinion of the basic principles was commissioned, which supported a realignment of the system for balancing and control energy in the gas sector. On the basis of this expert opinion a workshop was held on 1 October 2007, in which the development of new, binding regulations began in co-operation with network operators and associations of network users. The response to this impulse was very positive. The associations of the gas industry had already begun their work in the run-up to the workshop and had converged towards one another in many fundamental questions by the end of the year. In 2008 it will be important to continue the process of concil-iation, which has already begun, and to develop practical and binding regulations.

Business processes for switching gas supplier

Section 20 (1) of the Energy Act (EnWG) in conjunction with section 37 of the Gas Network Access Ordinance (GasNZV) defines the processes for switching gas supplier on the basis of efficient ways suitable for bulk business. On 20 August 2007 the Federal Network Agency set out standardised business processes for switching gas supplier (GeLiGas), which apply across Germany. The

decision provides legally binding procedures which must be enacted in case of a change of gas supplier. Furthermore it regulates the exchange of the required information. For this exchange of data the determination stipulates a largely automatic procedure and a standardised electronic format.

The determination creates framework conditions for a change of supplier, which are suitable for bulk business. The varying changeover processes in each network area were superseded when the GeLiGas was passed, which must be used across the board by all market players in Germany. In this context the exchange of data on the basis of the EDIFACT format allows for a significantly accelerated and simplified change of supplier.

One of the Federal Network Agency's key ideas in the structure of the procedure was to open up to those companies which are active in both the electricity and the gas sector, the highest possible degree of synergy potential when introducing the procedures. The Agency has therefore followed the Business Processes for supplying customers with electricity (GPKE), defined in 2006, when defining the procedures of the GeLi Gas. The transaction rules for both sectors are therefore largely identical.

Revision of the Gas Network Access Ordinance (GasNZV) and release of a Metering Access Ordinance

The evaluation report under section 112 of the Energy Act (EnWG), decided upon by the German government on 26 September 2007, supported the immediate and complete opening of the market for metering and measuring under section 21b EnWG for competition and emphasised the need for clarifying the framework conditions for the feed-in of biogas as quickly as possible. Both subject areas were also part of the "Key elements of an integrated energy and climate programme", which were adopted by the German government in Meseberg in the summer of 2007. With regard to the feed-in of biogas to the natural gas network the Federal Ministry of Economics and Technology (BMWi), supported by the Federal Network Agency and in co-operation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), has drawn up a new part 11a as well as revisions in the Gas Network Charges Ordinance (GasNEV) and the Incentive Regulation Ordinance (ARegV). In order to implement the liberalisation plans for the metering and measuring sector the BMWi has initiated a change of section 21b of the Energy Act (EnWG) and the enactment of an ordinance (MessZV). The Federal Network Agency offered assistance in outlining the corresponding drafts. The government draft of section 21b EnWG and the changes to the ordinance in terms of biogas were adopted by the cabinet in a meeting on 5 December 2007.

European activities in the gas sector

In the gas sector the Federal Network Agency was represented in around twelve task forces in 2007 and assumed leadership responsibilities in one of them. In this case the focus of the work was to draw up guidelines for the application of the regulations contained in article 22 of the acceleration directive 2003/55/EC. The issue at hand was how network operators could apply for exemption from regulation.

Further task forces dealt with issues such as transparency, access to storage systems, the secondary market, the calculation of capacity and the open-season procedure. Furthermore the Federal Network Agency has proactively worked on achieving progress in the cross-border gas trade within the scope of the gas regional initiative North-West and endeavoured in particular to improve the usability of border coupling capacity in Bunde/Oude Statenzijl between Germany and the Netherlands.

Transparency requirements

According to the EnWG, GasNZV, GasNEV and the Low Pressure Connection Ordinance (NDAV) the network operators are legally obliged to publish certain data on the internet. Since many companies have so far only met this obligation in an unsatisfactory manner or not at all, a comprehensive review was initiated in 2007. For this purpose network operators were first contacted in writing and reminded of their statutory obligation. In a second step individual companies were systematically checked by means of internet research in terms of completeness and quality of the data requiring publication. If the published data proves to be unsatisfactory, the Federal Network Agency points out existing flaws to the company and demands that these be rectified.

Transparency in the transmission system

The Federal Network Agency has received applications from transmission system operators under article 6 of regulation (EC) no 1775/2005 on conditions for access to the natural gas transmission networks (Transmission System Regulation).

According to article 6 (4) of this regulation the competent authority decides on the relevant points of a transmission system on which information must be made public. Article 6 (5) of the regulation stipulates that the transmission system operators may seek the authorisation of the competent authorities to limit publication if the TSO considers that it is not entitled for confidentiality reasons to make public all the data required, because the network user has a legitimate interest in the confidenti-ality of this data.

In July 2007 the Federal Network Agency published for consultation the principles for the assessments of applications under section 6 of the EC transmission system regulation. The Agency received comments from network operators and network users. After analysis of the comments the principles for decisions were reviewed and their finalised version published on the internet in December 2007. This is the basis on which applicants are heard and requested to submit any potentially missing documents. The Agency intends to decide on applications in I/2008.

New infrastructures

Under the rules of section 28a of the Energy Act (EnWG) new interconnections, LNG and storage systems can temporarily be exempt from the regulations for access and charges if all the requirements stated in the standard are met. For this purpose the application must, inter alia, provide proof of an improvement of competition und security of supply as well as a particularly high investment risk.

In January 2007 the Federal Network Agency received two applications for exemption from this regulation under section 28a EnWG; both were related to new pipeline projects for an extension of the planned North Stream Pipeline (Baltic Sea pipeline) on German territory. One of the applications was rejected on 27 August 2007 for formal reasons, since the company was not intending to operate the planned infrastructure itself. Only the operators are "affected gas supply companies" in terms of the exemption rules and therefore entitled to submit an application. This decision is final. The other application has not yet been decided upon by the Agency. The company had suspended the application in October 2007 until further notice.

Object networks

For the first time the Federal Network Agency had to decide about an application for an object network in the gas sector under section 110 (4) of the Energy Act. The subject of the proceedings was a gas supply network located on the premises of the airport Hannover-Langenhagen. The positive decision is based on the fact that the network, which serves primarily to supply the take-off points of the network operator itself, fulfils the requirements for a company network under section 110 (1) sentence 1 no. 1 of the Energy Act (EnWG). In making this decision the Agency applied the key points that had been agreed in 2006, when an explanatory note on section 110 EnWG had been drawn up with the state regulatory authorities.

SYSTEM CHARGES (ELECTRICITY)

Approval of general charges

Under section 23a (1) of the Energy Act (EnWG) the charges for access to the system require approval. Operators of electricity supply networks had to submit a first application by 31 October 2006 (section 118 (1b) of the Energy Act). The competent ruling chambers received 256 applications for an approval of use of system charges (electricity) under section 23a of the Energy Act. By the end of 2006 the ruling chamber had issued 75 approvals of charges; the remaining applications were decided upon in 2007. Costs were on average reduced by 13 percent compared with the costs on which the applications were based; this equates to a reduction of approximately €2.4 billion or up to 20 percent. Most of these charges were approved until 31 December 2007.

With regard to the expiry of the first round of approvals the companies had to submit new applications for approval of use of system charges (electricity) under section 23a of the Energy Act (EnWG) by 30 June 2007. In the case of 124 smaller network operators the cost block to be approved has not changed significantly. For these operators the final decisions of the first round of approved charges were extended until 31 December 2008, as per application. In addition to the main aspects reviewed during the first round of approvals (calculated evaluation of fixed assets, calculated returns on equity and calculated corporation tax) the second round of approvals also pays particular attention to the network history, in order to better evaluate the value of the

fixed assets as well as to the operative costs and the prices for measuring and billing.

Determinations

In order to prepare the applications for the second round of approved charges the Federal Network Agency made a determination under section 29 (2) EnWG on 2 May 2007 for companies under federal authority. This determination included stipulations for the requirements concerning the new application for charges as well as the structure and content of the report under section 28 of the Electricity Network Charges Ordinance (Strom NEV) and its appendix, the extent and form of transmission of information, the appropriate level of interest rates under section 11 StromNEV and the guarantee of sound charges in derogation of section 17 (8) StromNEV. Relevant determinations were also made for those companies for whom the Agency is responsible through an official delegation of powers.

In order to prepare for the second round of approved charges the Federal Network Agency made a determination under section 29 (1) of the Energy Act (EnWG) on 17 October 2007 for the companies under federal responsibility – a determination of price indices that are to be applied in order to determine the actual replacement value under section 6 (3) StromNEV. Relevant determinations were also made for those companies for whom the Agency is responsible through an official delegation of powers. Finally the Agency, in proceedings under section 29 (1) EnWG in conjunction with section 32 (1) no. 11 Incentive Regulation Ordinance (ARegV) and section 27 (1) sentence 2 no. 3, 4 ARegV set targets on 22 November 2007 for the collection of data in order to calculate efficiency values among DSOs (electricity) for the first regulation period and for establishing the quality element. With this decision a first formal decision was made in preparation for the launch of incentive regulation in 2009.

On 19 December 2007 an appropriate draft determination for the collection of data from TSOs (electricity) was made available for consultation.

Simplified procedure for incentive regulation

Grid operators with less than 30,000 customers connected directly or indirectly to their electricity distribution system could apply for participation in the simplified procedure under section 24 of the Incentive Regulation Ordinance (ARegV) by 15 December 2007. In December 2007/January 2008 143 such applications under section 24 ARegV were decided upon, with nine rejections due to fact that the number of critical customers had been exceeded.

Approval of individual network charges

In 2007 the competent ruling chamber approved two applications for the approval of individual charges under section 19 (2) sentence 2 of the Electricity Network Charges Ordinance (StromNEV). Under this section grid operators are obliged to offer wholesale customers an individually calculated network charge in derogation of the general principles of calculation, if their consumption data is characterised by a legally defined, particularly even and considerable consumption of electricity. The

intention here is to achieve a fairer allocation of the system charges in accordance with the principle of causation. At the same time this leads to a cost reduction for the preferential users and improves their local conditions. Agreeing the application of individual system charges is subject to approval by the Federal Network Agency.

In case of the applications with a positive decision, the approved individual charges lie between 76.2 and 50.9 percent of the charges levied by the respective operator. These different reductions result from the varying connections of the network customers. Major criteria for delineation were the distance between the customer and the nearest base load power plant and the customer's integration into the network.

Numerous proceedings were discontinued after withdrawal of the applications, since the companies did not meet the requirements for approval.

Special anti-competitive proceedings

On 15 October 2007 the Federal Network Agency further developed its decision policy on the principles of section 19 (3) of the Electricity Network Charges Ordinance (StromNEV) within the scope of a decision in special anti-competitive proceedings under section 31 of the Energy Act (EnWG).

The Federal Network Agency decided that it is not anti-competitive to refuse a network user the status of sole user of all facilities at a particular connection level. In the case in question the end customer was using the lines, via which he was connected to the busbar, exclusively for himself. However, other network users were connected to the busbar. Whether or not the customer was entitled to have third-party lines disconnected did not have to be decided upon, since there was a reason for refusing disconnection of the line under section 17 (2) of the Energy Act (EnWG). Connection to a network can be refused if granting such a connection request is not possible or reasonable for either operational or other technical or economic reasons, taking into account the objectives set out in section 1 EnWG.

Section 1 (2) EnWG stipulates that the regulation of the electricity supply network serves inter alia to "ensure the effective and reliable operation of energy supply networks in the long term." The reliable operation of energy supply networks is ensured by means of the principle of "n-1" security. This states that the failure of a facility will be compensated for by other facilities. For technical reasons this reliable operation of the general medium voltage power grid would no longer be ensured if the lines at the 20 kV busbar, which does not serve to supply the final consumer, were to be disconnected. Furthermore the ruling chamber pointed out that as a rule it is unreasonable to subject a grid operator to anti-competitive proceedings without giving him the opportunity to consider the request of the network user prior to such formal and possibly cost incurring proceedings.

SYSTEM CHARGES (GAS)

Approval of general charges

Under section 23a (1) of the Energy Act the charges for access to the system require approval. Operators of gas supply networks had to submit a first application by 30 January 2006. The Federal Network Agency had already decided upon the majority of applications for charges by the end of 2006 and was therefore able to decide upon the remainder during 2007. Overall 217 gas system operators had applied for approval of their system charges.

The costs on which the applications were based were reduced by up to 32.4 percent. The volume of cost reductions amounts to approximately €450 million, which equates to an average cost reduction of around 12 percent.

Due to special circumstances, such as the establishment of a new network, four applications were submitted at a later stage and have been decided upon by now. The approvals granted during these proceedings are limited until 31 December 2008 and will therefore form the basis of incentive regulation for these companies.

Since the approvals from the first round proceedings were limited until 31 March 2008, the gas network operators had to submit a new application for approval of their charges by 1 October 2007, as set out in section 23a (3) sentence 1 of the Energy Act (EnWG).

Following determinations by the Federal Network Agency dated 2 May 2007 the gas network operators were then notified, which data had to be submitted for their applications for approval. This was based on the questionnaire known from the first round of approvals of charges, which was further developed for the second round, and on the report under section 28 of the Gas Network Charges Ordinance (GasNEV). In addition data was requested about cross-period netting and network history. By 1 October 2007 the Agency had received a total of around 230 applications. Of these around 120 smaller network operators with largely unchanged cost blocks had their final approvals of charges from the first round extended until 31 December 2008, as per application. These extended decisions form the basis of incentive regulation. With regard to the remaining 110 applications (approx.) the cost review has already progressed considerably. The key points of the review were expanded compared to the first round of approvals. While the review in the first round focused primarily on the capital costs (review of depreciation, method of calculating interest etc), this round also examines the operative costs (eg charges for operational management) much more closely.

Simplified procedure for incentive regulation

145 companies applied for participation in the simplified procedure under section 24 of the Incentive Regulation Ordinance (ARegV) by 15 December 2007. The issue under review was whether or not less than 15,000 customers were connected to the gas transmission system of the respective network operator. Overall 134 approvals for participation in the simplified procedure

have already been issued within the four-week-limit stipulated by the issuer of the ordinance. Six companies have withdrawn their applications, one application was refused and four further applications are currently being heard.

Proceedings regarding gas pipeline competition

The Federal Network Agency is currently reviewing the notifications of twelve gas network operators that claim under section 3 (3, 2) of the Gas Network Charges Ordinance (GasNEV) not to be subject to cost-oriented charging. Under this regulation operators of supra-regional transmission systems can calculate their charges for use of the system in accordance with section 19 of the Gas Network Charges Ordinance if their transmission system is, for the most part, exposed to effective existing or potential pipeline competition.

The documents submitted by the applicants were, in the opinion of the Agency, not suitable for proving effective existing or potential pipeline competition. In particular they were not based on a sustainable and testable concept for verifying effective pipeline competition. The Agency has therefore developed a test concept which is suitable for verifying the existence of effective pipeline competition. This concept was presented to all applicants in June 2007 during an oral hearing. In order to implement the concept comprehensive market data was collected from the applicants and further gas network operators. Furthermore the Federal Network Agency questioned a total of 90 market players (independent retailers/suppliers, industrial customers/final consumers, municipal authorities and associated distributors of supra-regional or regional network operators) during October 2007 about their practical experiences of competition at the supra-regional transmission system level.

Based on the results of this review the Federal Network Agency notified one applicant in December 2007 by means of a written warning that it does not consider the requirements of section 3 (3,2) GasNEV to be met and therefore intends to use its authority under section 65 of the Energy Act and oblige the company to calculate its tariffs on a cost-oriented basis. In addition an oral hearing was conducted in these proceedings. The proceedings are to be concluded in 2008.

UNBUNDLING

The Federal Network Agency has continued to accompany the unbundling process in energy supply companies during 2007. Its work focused on the following activities:

- active accompaniment of the unbundling process by 1 July 2007 through consultation with companies and associations as well as talks about unbundling requirements at trade events;
- detailing the statutory unbundling requirements through publication of a joint directive of the federal and the state regulatory authorities for implementation of the unbundling of the use of information under section 9 of the Energy Act (EnWG);
- review of equal treatment reports of the energy supply companies for the report-

ing period 2006 and presentation of the results of this review and future key points of reviews for the reporting period 2007 at an information event of the Federal Network Agency organised for the compliance officers of companies in October 2007;
- review of annual accounts and the attached internal activity reports for the business year 2006;
- collection of market data on the implementation of unbundling;
- participation in the implementation of the legal framework at European level (ERGEG/ CEER).

The review of the equal treatment reports for the reporting period 2006 resulted in many enquiries from the respective energy supply companies, in particular on the organisation and management of the network operation. In several cases preliminary investigations were launched which in some cases led to formal supervisory measures.

Furthermore the Federal Network Agency has initiated a number of formal supervisory measures in this area. The interpretation of the term 'customer', for example, is controversial – a term that is crucial for a decision about whether or not the number of 100,000 connections, which brings with it the obligation for unbundling, has been reached. In addition proceedings were initiated against network operators in order to clarify the issue of when the management of network operations can be considered independent and on the operator's own authority.

LAW ON RENEWABLE ENERGIES

After the amended Renewable Energy Sources Act (EEG) entered into force on 1 December 2006 and provided the Federal Network Agency with powers of implementation, the Agency performed its monitoring duties in 2007, as set out in section 19a (1) EEG. The Agency monitors, inter alia, the passing on of costs caused by the EEG by checking that the electricity supply companies only receive remunerations pursuant to section 5 (2) EEG, minus the network charges that were avoided.

Around 900 DSOs and approximately 1,000 electricity supply companies were obliged under section 14a (8) EEG to submit their final accounts for the year 2006 to the Federal Network Agency in electronic format by the end of April 2007. For the data transmission the Agency's website provided questionnaires with explanations. The filled-in questionnaires were encrypted by the companies and transmitted electronically to the Agency via the system operator portal. The TSOs had to transmit their data to the Agency by 30 September 2007. All data was checked and compared with each other. Where implausbilities were identified the affected market player was requested to justify these and if necessary correct individual data about the amount of energy and their payment flow.

THE FEDERAL NETWORK AGENCY'S SYSTEM OPERATOR PORTAL

Many data collections in the area of energy regulations are performed via the "Federal

Network Agency's system operator portal". This is a protected individual area on the Agency's website where companies can electronically transmit data to the Agency, track the status and history of their data transmission and systematically contact the Agency. The system operator portal was set up in the autumn of 2005 for the Agency's first data collections; since then its functionality has been continuously increased. This is the only way to perform data collection on a large scale in a timely manner. At present approximately 1,700 operators of gas and electricity networks can use this application to electronically transmit their data. In 2007 this application was also opened up to approximately 1,000 energy supply companies.

In 2007 the system operator portal was used, inter alia, to collect data on the proceedings for the approval of gas and electricity charges and to review the nationwide equalisation scheme under the Renewable Sources Energy Act (EEG). In December 2007 the collection of data on loads, structure and sales was launched in order to implement incentive regulation for the TSOs (electricity).

COOPERATION WITH THE STATE REGULATORY AUTHORITIES

Responsibility for the regulation of energy supply networks (gas and electricity) in the Federal Republic of Germany is included in the remit of the Federal Network Agency and/or the respective state regulatory authority, depending on the number of customers and the supply area of the operator.

The committee of federal state representatives set up at the Agency under section 60a of the Energy Act, is tasked with ensuring unified and standardised regulation processes and proceedings across Germany. In 2007 this committee convened for a total of eight sessions. Issues addressed were both matters of the current proceedings for approving charges as well as methods and procedures for implementing incentive regulation. To complement the meetings by the committee of federal state representatives there is a continuous and intense contact at working level, which is supported by working groups on issues such as network charges, unbundling and incentive regulation as well as legal matters. Furthermore the Federal Network Agency and the state regulatory authorities regularly exchange information on pending proceedings of both the state regulatory authorities and the Federal Network Agency.

COOPERATION WITH THE FEDERAL CARTEL OFFICE

The Federal Network Agency works very closely with the Federal Cartel Office in all areas of energy regulation. In accordance with statutory provisions set out in section 58 (1) of the Energy Act there is a steady mutual exchange of information and consultation processes regarding pending proceedings; where intended by the legislator, agreement is brought about. Under section 58 (3) of the Energy Act both authorities strive for a standardised interpretation of the terms for the gas and electricity network operators in line with the Law against

Restraints of Competition (GWB). The benchmark report, which the Federal Network Agency must draw up annually until 2009 and thereafter every two years for presentation to the European Commission, was discussed and agreed with the Federal Cartel Office as required by the Energy Act.

Court proceedings

In 2007 the Higher Regional Court in Düsseldorf passed a number of first instance decisions. The positions of the Federal Network Agency regarding the approval of charges for the electricity and gas sector under section 23 (a) of the Energy Act (EnWG) were largely confirmed.

In the year 2007 over 400 main proceedings and two summary proceedings were initiated against decisions by the Federal Network Agency in matters of energy regulation. Of the 400+ appeal proceedings in the main matter approximately 80 proceedings were directed against determinations regarding the charges set for the electricity and gas sector. Throughout Germany a total of approximately 100 appeals were filed in this regard. All appeals are largely identical in their subject matter. Some of them were even filed by companies that had received notices of extension for the second round of approved charges and were therefore not even required to submit applications for approval of their rates. Approximately 200 appeals were directed against determinations regarding the price indices for the electricity and gas sector.

At present twelve appeals against decisions by the Federal Network Agency have been referred to the Federal Court of Justice (BGH). Three of these concern a determination by the Agency regarding business processes and data formats in the electricity sector, while one appeal on a point of law concerns an abusive practices order. Furthermore one appeal on a point of law deals with the issue of the local jurisdiction of the Higher Regional Court (OLG) in the case of decisions made by the Federal Network Agency through an official delegation of powers; seven appeals focus on rate approvals for the electricity and gas sector, made by the Agency under section 23 (a) of the Energy Act (EnWG).

A total of 133 appeals were filed in 2007 against rate approvals under section 23 (a) of the Energy Act (EnWG). Meanwhile 65 of these appeals have been settled. 53 settlements were due to withdrawal of the appeal. Twelve appeals have, in the mean time, been decided in the matter by the competent Higher Regional Court (OLG) Düsseldorf.

In its first instance decisions passed to date, the OLG Düsseldorf largely confirmed the positions represented by the Federal Network Agency regarding the approval of charges. Details of these positions were as follows:

- budget costs
  - base year to be applied,
  - existence of safe findings based on reason and amount at the time of application (VI-3 Kart 16/07 (V)) – (findings affirmed);

- estimated theoretical depreciation
  - no short-term depreciation,
  - indexation in connection with the calculation of actual replacement values,
  - determination of residual value: applicability of section 32 (3) of the Electricity Network Charges Ordinance (StromNEV) (VI-3 Kart 3/07 (V), VI-3 Kart 39/07 (V), VI-3 Kart 27/07 (V)),
  - no admissibility of costs to offset inflation, because of a violation of the prohibition of below zero depreciation;

- return on equity
  - non-chargeability of deposits paid or investments in construction,
  - non-consideration of accrued and deferred items,
  - reduction of current assets (not from the perspective of being required for operations but on the basis of an efficiency comparison, which has so far resulted in confirmation of the lawfulness of the Agency's decisions),
  - reduction of the capital items deducted from total (no consideration of marketing grants for lack of affiliation with network operations),
  - limitation of equity ratio to 40 percent,
  - determination of interest rate,
  - interest rate of the proprietary interest in excess of the equity ratio – no consideration of a risk mark-up;

- estimated theoretical corporation tax
  - corporation tax is estimated on a theoretical basis,
  - deductibility of corporation tax in own accounts must be taken into account,
  - no consideration of apparent profits or apparent losses,
  - no consideration of cutbacks and supplements for the calculation of estimated theoretical corporation tax.

The Federal Network Agency's position on skimming off additional receipts, on the valuation of plots of land at purchasing costs and on non-consideration of the last annual segment for estimated theoretical depreciation was not confirmed.

The Federal Court of Justice (BGH) will make final decisions on the issues raised by the appeals on points of law (KVR 39/07, KVR 68/07, KVR 71/07, EnVR 76/07, EnVR 77/07, EnVR 81/07, EnVR 79/07). The first hearings before the BGH will take place in the summer of 2008.

In connection with the revision of the Electricity Network Charges Ordinance (StromNEV) and the Gas Network Charges Ordinance (GasNEV) (BR-Drs. 417/1/07) the issuer of the ordinance has in the mean time clarified a number of issues that were subject to controversy in the court proceedings. One such clarification is that, for the purpose of cost calculation, plots of land

must be valued at the purchasing price. In addition sections 7 (1) sentence 2 no. 4 of the StromNEV and GasNEV were amended to now include the constituent fact of being required for operations.

COURT PROCEEDINGS AGAINST DETERMINATIONS FOR THE SECOND ROUND OF APPROVING CHARGES

The first hearings before the Higher Regional Court (OLG) Düsseldorf took place in February 2008. As a result the appeals were rejected. This had already been preceded by first decisions of the Higher Regional Court Naumburg. The latter had also confirmed the lawfulness of a largely identical determination by the national regulatory authority of Saxony-Anhalt regarding stipulations for the applications for network charges (1 W 23/07 (EnWG), 1 W 27/07 (EnWG), 1 W 28/07 (EnWG)).

BUSINESS PROCESSES AND DATA FORMATS

Electricity

The Higher Regional Court (OLG) Düsseldorf has so far rejected three appeals against the Federal Network Agency's determination regarding business processes and data formats in the electricity sector (VI-3 Kart 294/06 (V), VI-3 Kart 358/06 (V), VI-3 Kart 408/06 (V)). It confirmed the Agency's legal opinion in all points. In all three proceedings, appeals on a point of law were filed at the Federal Court of Justice (BGH). The BGH will decide about these appeals at the end of April 2008.

The OLG Düsseldorf bases its decisions primarily on the assumption that the determination in dispute was passed as an administrative act in the form of a general order. Furthermore it corroborates that the Federal Network Agency is entitled to regulate the internal exchange of data and in this context also to prevent potential discrimination. The Higher Regional Court denied any lack of commensurability or the violation of procedural law.

Gas

Four appeals have been filed at the OLG Düsseldorf against a determination of standardised business processes and data formats for a change of gas supplier. The Federal Network Agency has so far been advised of the reasons for appeal in one of these proceedings.

COURT PROCEEDINGS AGAINST ABUSIVE PRACTICES ORDERS

In connection with the court's review of a decision in abusive practice proceedings the Higher Regional Court (OLG) Düsseldorf reviewed, for the first time, the criteria for the existence of a supra-regional transmission system under section 2 sentence 1 no. 3 of the Gas Network Charges Ordinance (GasNEV). The competent senate decided on 28 November 2007 that the term "supra-regional transmission system" was conclusively defined in section 2 sentence 2 no. 3 of the Gas NEV. In this case the complainant was unable to set its charges for use of the transmission system in accordance with section 19 of the Gas Network Charges Ordinance (GasNEV). The lawfulness of the Agency's abusive practices decision was upheld by the Higher Regional Court (OLG) Düsseldorf (VI-3 Kart441/06

(V)). This decision was appealed on a point of law at the Federal Court of Justice (BGH).

At present two further appeal proceedings against the Agency's abusive practices orders for refusal to grant network access are pending at the OLG Düsseldorf.

JURISDICTION OF THE LOCAL HIGHER REGIONAL COURT IN CASE OF DECISIONS MADE BY THE FEDERAL NETWORK AGENCY THROUGH AN OFFICIAL DELEGATION OF POWERS

In a decision dated 28 March 2007 the OLG Düsseldorf decided that according to the division of jurisdiction under section 75 (4) sentence 1 of the Energy Act (EnWG) the OLG Düsseldorf has jurisdiction for decisions of the Federal Network Agency, which the Agency makes through an official delegation of powers (VI-3 Kart 2/07 (V)). In order to determine which local court has jurisdiction, the registered office of the Federal Network Agency is authoritative. The regulatory authority's registered office is therefore also in Bonn when decisions made by the Agency through an official delegation of powers are concerned. This decision by the OLG Düsseldorf was appealed and referred to the Federal Court of Justice (BGH) (KVR 30/07). The opinion of the Higher Regional Court (OLG) Düsseldorf was confirmed by the decision of the OLG Celle dated 18 October 2007. Another appeal procedure at the OLG Rostock is currently suspended until the issue of local jurisdiction can finally be settled by the BGH. Further proceedings, which also relate to the issue of local jurisdiction, are pending at the OLG Schleswig-Holstein. The Federal Court of Justice will be hearing the matter of local jurisdiction in early March 2008.

INVOLVEMENT OF THE FEDERAL NETWORK AGENCY IN COURT PROCEEDINGS AGAINST THE NATIONAL REGULATORY AUTHORITIES UNDER SECTION 79 (2) OF THE ENERGY ACT (EnWG)

The Federal Court of Justice held a hearing about this legal issue in November 2007. The Federal Network Agency had filed an appeal on a point of law against two decisions by the Higher Regional Court (OLG) Naumburg, in which the Agency had solely reprimanded its non-involvement in the appeal proceedings there. Consequently the BGH set aside the decisions of the OLG Naumburg and referred them back for a new hearing.

The BGH confirmed that the Energy Act (EnWG) stipulates the creation of comparable rights of involvement for the Federal Network Agency as the ones in existence for the Federal Cartel Office in the Law against Restraints of Competition (GWB). The Agency is therefore involved in administrative proceedings before the national regulatory authorities (section 66 (3) EnWG) as well as the court appeal proceedings (section 79 (2) EnWG) by act of law. In consequence this means that the Agency can also have the decisions of a national regulatory authority reviewed by a court (section 88 (1) of the Energy Act. This right of involvement allows the Federal Network Agency to have decisions of the national regulatory authorities, which are not in line with its own opinion, reviewed by a

court in order to work towards a standardised enforcement of the law. In this context the BGH grants the Federal Network Agency the right to decide on an individual basis whether or not to make use of its right to be actively involved. The Agency has full discretion to decide if and when to become involved in proceedings of the national regulatory authorities. This also makes it possible (rather than excluding the possibility by having forfeited it) for the Federal Network Agency to get involved as late as at the appeal on a point of law, in order to have decisions by a Higher Regional Court (OLG), which might be diverging or wrong, reviewed by the Federal Court of Justice (BGH).

All OLGs are therefore called to make provisions for the Federal Network Agency's right to involvement in appeal proceedings filed with them. This promotes the standardised application of the Energy Act (EnWG) and its ordinances.

The Land Baden-Württemberg has proposed to the Bundesrat an amendment to the draft bill for the promotion of combined heat and power production (BR-Drs 12/08). With this proposal Baden-Württemberg seeks to have section 79 (2) EnWG deleted in order to counteract the ruling by the Federal Court of Justice .

Railway


416III

Market watch

Growing competition has generated record figures in rail freight transport. Nonetheless, Deutsche Bahn AG continues to dominate the railway transport market.

MAIN MARKET TRENDS

In rail freight transport, the Federal Statistical Office expects to see a growth in transport services of 6.5 percent for 2007. This means rail freight transport will expect to generate a new record result in transport services with rail freight transport accounting for around 114 billion tonne kilometres.

The Federal Statistical Office predicts a slight growth of 6.5 percent for 2007 in local rail passenger transport. By contrast, transport performance in the area of long-distance rail passenger transport in 2007 is expected to fall behind last year's performance by 0.5 percent. This decline results exclusively from the results achieved in the fourth quarter of 2007 which were characterised by collective bargaining between the Gewerkschaft Deutscher Lokomotivführer (GDL) (Trade Union of German Railroad Engineers) and Deutsche Bahn AG (DBAG). In long-distance rail passenger transport, DBAG has a market share of almost 100 percent and the lack of intramodal competition partially explains why the collective bargaining has had such a major impact on the operating results of the railway sector.

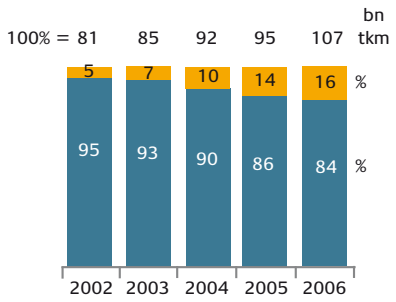
Growing Europeanisation of the railway market and demand led to growing travel and transport distances and to sharp growth rates in cross-border transport. Railway undertakings responded to this trend in 2007, inter alia, by launching new cross-border high-speed rail services and by undertaking transnational acquisitions.

DEVELOPMENT OF COMPETITION IN THE RAILWAY TRANSPORT MARKET

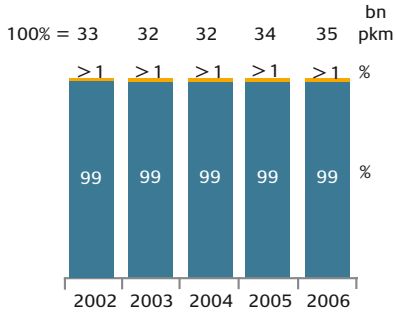
The market share of railway transport services provided by DBAG's competitors rose again in 2006 in both rail freight transport and in long-distance rail passenger transport – following the trends of the previous years. A large number of competitors managed to gain a firm foothold in these markets. In long-distance rail passenger

Development of competition in the rail transport markets

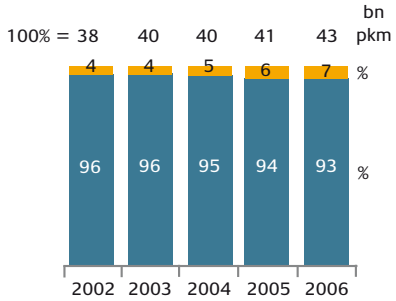
Freight transport
Total in billion tkm



Long-distance passenger transport
Total in billion pkm



Local passenger transport
Total in billion pkm



Competitors' share

DBAG's share

pkm – passenger kilometres
tkm – tonne kilometres

Source: DBAG, Federal Ministry of Transport, Building and Urban Development Federal Network Agency

transport, service is provided almost exclusively by DBAG.

In rail freight transport, it is mainly the increase in transport services provided by DBAG's competitors that has led to record figures in recent years. Despite this dynamic trend, the rail freight transport market is still heavily dominated by Railion (DBAG). In 2006, competitors only accounted for a market share of 16 percent.

In the long-distance rail passenger transport there continues to be a lack of competition in Germany. This result is all the more regrettable because other European countries have a far better track record in terms of competition (eg Great Britain and Sweden). It is hoped that the opening up of cross-border rail passenger transport to competition in the EU envisaged for 2010 will give the much-needed impetus.

Competition in local rail passenger transport is dependent on the ordering patterns of federal authorities (who order local trains). They have just begun to open up frequently used routes to competition. The share of DBAG's competitors in transport services accounted for just under 7 percent in terms of person kilometres in 2006. If the competitors' market share is measured in train kilometres, it rises to around 15 percent as the competitors are usually awarded contracts for less frequented routes, i.e. routes not usually catered for by rail transport.

MARKET STRUCTURE IN THE RAILWAY INFRASTRUCTURE MARKET

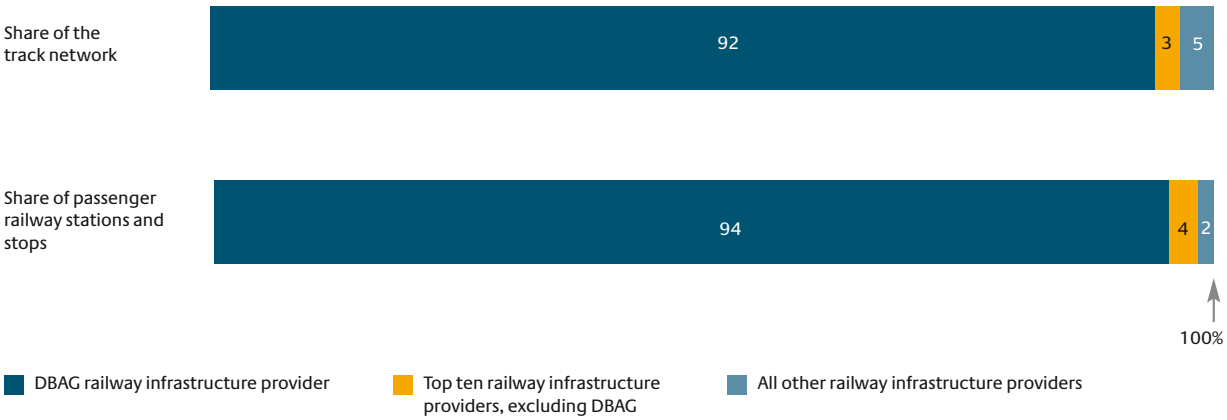
DBAG is by far the largest operator in the railway infrastructure sector in Germany. DB Netz AG operates tracks covering a total of over 64,000 km (with a route length of 34,100 km), whereas the track network of the next biggest company is far smaller, covering under 700 km. DBAG's railway infrastructure companies operate over 5,700 passenger railway stations (over 5,400 of which are run by DB Station & Service AG), whereas the largest company that is not part of DBAG operates fewer than 100 railway stations. In both market segments, more than 95 percent of the infrastructure is operated by the ten largest service providers (top 10 railway infrastructure companies, including DBAG).

Despite this high market concentration, there are several hundred railway infrastructure companies in Germany, most of which are very small, that have to grant access to their rail network.

There is a considerable need among railway undertakings to use infrastructure they do not operate themselves. 80 percent of the railway networks used by railway undertakings that do not belong to DBAG, for instance, use rail networks they do not operate themselves. Likewise, these companies use mainly passenger railway stations that do not belong to their own corporate group. This demonstrates that non-discriminatory and smooth access to railway infrastructures plays a key role in promoting competition in the rail transport market.

By contrast, DBAG itself almost completely covers the needs of its own railway undertakings for rail and station infrastructure (with a share of 99 percent respectively). Approximately one third of railroads not operated by DBAG are used by external companies whereas the share of external companies using DBAG's railroad is less than 15 percent.

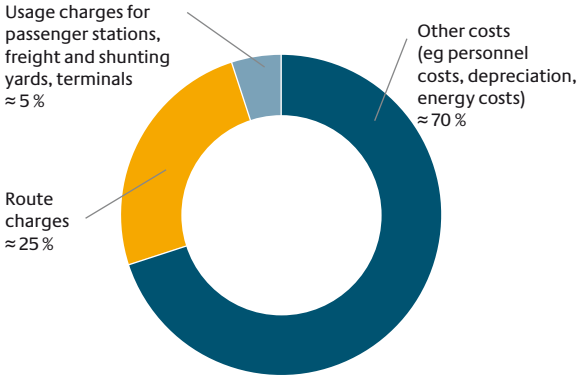
Concentration of railway infrastructure providers – tracks and passenger railway stations, 2006
Figures in percent



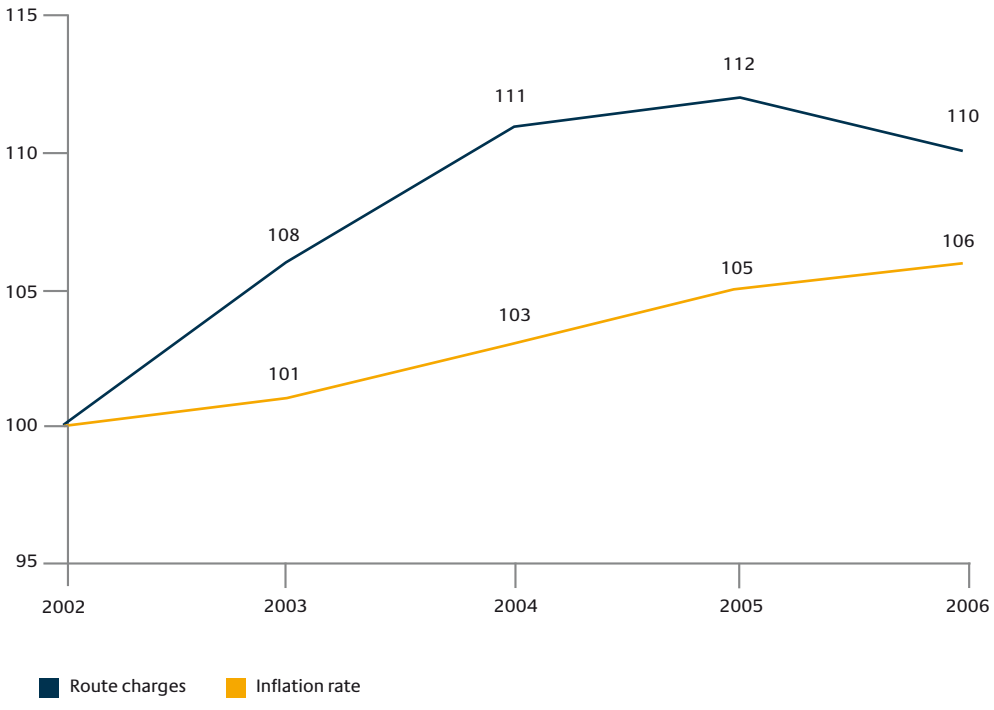
USER FEES FOR THE INFRASTRUCTURE

The fees charged for usage of the railway infrastructure represent a significant cost factor for railway undertakings. Expenditure for use of railroads (route charges) account on average for approx. 25 percent of railway undertakings' total expenditure. On average, railway undertakings were required to pay around €3.60 per train kilometre in 2006. Yet the level of fees charged for use of railroads in some cases clearly deviates from the average depending on what mode of transport is used (eg rail freight transport, long-distance rail passenger transport, local rail passenger transport). Passenger transport generally incurs additional costs for use of passenger railway stations and railway stops. The average fee charged here was €4.20 per stop. Rates for the use of other service facilities (freight and shunting yards or terminals) play a less important role. No separate fees are charged for use of the infrastructure for some service facilities (eg fuelling facilities or service facilities) but are included in the service.

Charges for infrastructure use as a percentage of the total costs incurred by railway undertakings in 2006
Percentage of total costs



Trends in respect of route charges levied by DB Netz AG
Indexed, 2002 = 100



Due to the significance of railroad fees, in particular, the level of development in fees charged for use of the infrastructure are of paramount importance to railway undertakings and the public transport authorities for local rail passenger transport. At DB Netz AG, the largest railroad operator, the average railroad fee (calculated as a quotient of total railroad revenue and train kilometres travelled on the railroad) rose sharply comparing the years 2002 to 2004. All in all, railroad prices rose by 10 percent between 2002 and 2006, and the rate of inflation for this period was around ten percent. The specific railroad fees which railroad companies pay to DB Netz AG are expected to rise sharply once again in 2007.

IMPLEMENTATION OF NEW RAILWAY REGULATIONS

The Third Act Amending Railway Regulations (drittes Gesetz zur Änderung eisenbahnrechtlicher Vorschriften) of mid-2005 imposed new obligations on market players in Germany, but also offered new options for using external railway infrastructures. The latest market monitoring evaluation shows that even after two years the new regulations have only been partially implemented in some areas. The railway infrastructure companies, for instance, which are obliged by virtue of Section 14 of the General Railway Act (Allgemeines Eisenbahngesetz) (AEG) to grant access, are normally required to publish terms and conditions of use for the routes and facilities they operate. Up to now, a large number of railway infrastructure companies, which tend to be small infrastructure operators, have failed to meet this requirement.

By the same token, not all of the railway infrastructure companies that are obliged to grant access have published a list of their rates. In many cases, the companies are not explicitly aware of their own infrastructure costs that are needed to calculate rates in accordance with the law. Railway infrastructure companies tend not to levy rates separately, but integrate their rates into overall packages. In individual cases, only certain railway undertakings are charged rates.

Another reason for this inconsistent situation in the market is, inter alia, the fact that many of the railway infrastructure companies that are obliged by law to grant access have not registered any demand from other railway undertakings up to now.

Since 2005, public transport authorities in the local rail passenger transport sector and companies domiciled in Germany that wish to have goods transported by railway undertakings have also had a right to access railroad infrastructure. Up to now, this right has not been availed of, with very few exceptions.

Activities and proceedings

The key task of the Federal Network Agency in the railway sector is to regulate access to railroads and service facilities, including rates. To this end, companies are required to draw up terms and conditions of use and lists of rates that may be examined by the Federal Network Agency both ex post and ex ante – in addition to its supervisory tasks in individual cases.

ACCESS TO RAILROAD NETWORKS AND SERVICE FACILITIES

Railway infrastructure companies are obliged to publish the terms and conditions of use of their infrastructure. The Federal Network Agency examines these terms and conditions of use to ensure they are compatible with railway regulations, particularly in relation to non-discriminatory access. According to the provisions set forth in the General Railway Act and in the Ordinance on the Use of the Rail Infrastructure (Eisenbahninfrastruktur-Benutzungsverordnung) (EIBV), the operators of railroads and service facilities are obliged to notify the Federal Network Agency of any intended revision or amendments to the terms of use for service facilities. The Federal Network Agency is entitled to object to the intended revision or amendments to the terms of use for service facilities within four weeks, thereby preventing the regulations from entering into force. In individual cases, the Federal Network Agency may issue a revised version of the regulation in order to prevent terms of use from being incomplete and non-transparent. It is also possible for the Federal Network Agency to examine the terms of use at any time after they have entered into force.

In addition to examining the terms of use, the Federal Network Agency can also take action if there are specific grounds for suspicion and if parties entitled to access file a complaint in order to prevent or rule out abuse and discrimination in respect of access to the railway infrastructure.

In 2007, the Federal Network Agency not only audited the companies belonging to DBAG, it also audited a large number of non-state-owned railway infrastructure companies in accordance with its mandate of symmetrical regulation.

EXAMINING THE TERMS OF USE FOR THE RAILWAY NETWORK

In 2007, the Federal Network Agency filed an objection to the envisaged amendments to the Terms of Use for the Railway Network (Schienennetz-Benutzungsbedingungen) (SNB) of DB Bahn AG. This year, following a proposal made by the Federal Network Agency, DB Netz AG for the first time submitted not only comprehensive amendments to its terms of use but also parts of its operational-technical regulations. The latter describe in detail the interfaces between railway infrastructure companies and railway undertakings and provide an important basis for smooth and non-discriminatory cooperation in railway operations.

The Federal Network Agency objected mainly to breaches of the transparency requirement under the General Railway Act. Many of the amendments to the Terms of Use for the Railway Network submitted as part of the preliminary review process were not worded clearly enough. They were unclear, ambiguous and incomplete. For instance, there was no detailed description of the new ETCS (European Train Control System) despite the fact that it is of paramount importance for railway undertakings to have early and detailed information about the introduction of new technology.

Arrangements associated with the drawing up of the network schedule were also flawed. DB Netz AG, for instance, failed to provide the Federal Network Agency with details in relation to notification obligations in rejecting route orders. It is obliged to notify the Federal Network Agency of all envisaged route rejections. If the Federal Network Agency comes to the conclusion that the route rejections represent a breach of the General Railway Act, the railway undertaking must take a decision on the route order in accordance with conditions imposed by the Federal Network Agency.

A hearing was also held this year to which all parties with a right of access were invited. Many parties with a right of access contributed their ideas and provided important impetus to the opinion-forming process at the Federal Network Agency.

If the Federal Network Agency decides during the preliminary review process to object to the envisaged amendments to the Terms of Use for the Railway Network, they will not enter into force. In addition to filing an objection, the Federal Network Agency stipulated for clauses that were indispensable for the corpus of legislation submitted that the regulations be enhanced in accordance with its requirements. Furthermore, it stated that DB Netz AG is obliged to publish its complete Terms of Use for the Railway Network within a specific timeframe.

Some parts of the above-mentioned decisions by the Federal Network Agency, containing objections to a number of amendments to the Terms of Use for the Railway Network of DB Netz AG, are in dispute (cf. page 200 “Deutsche Bahn AG – fast-track proceedings in relation to the Terms of Use for Railway Facilities and the Terms of Use for the Railway Network 2008/2009).

REVIEW OF THE TERMS OF USE FOR RAILWAY FACILITIES

2007 was the first time DB Netz AG did not issue a completely new version of its Terms of Use for Railway Facilities but submitted comprehensive amendments instead. The Federal Network Agency criticised the fact that they were unclear and that numerous envisaged regulations were contradictory and requested DB Netz AG to rephrase and to publish the regulations it had objected to, bearing its legal opinion in mind. DB Netz AG responded to this, in particular, by considerably enhancing its description of the introduction of the digital radio standard in service facilities. It has begun converting its service facilities gradually to the digital radio standard. As the railway undertakings concerned have to convert their vehicles to this radio standard at huge expense and these vehicles cannot be used while they are being converted, it is of paramount importance for the railway undertakings to be able to rely on a binding and clear sequence of deadlines.

Furthermore, DB Netz AG followed instructions given by the Federal Network Agency to publish the opening times of all railway control centres which the use of service facilities depends on. This is very important for railway undertakings regarding the use of service facilities as it is the only way they can detect whether this use is associated with the additional burden of having to employ and pay staff outside these opening hours.

The Federal Network Agency examined the terms of use of a major terminal operator, Deutsche Umschlaggesellschaft Schiene – Straße mbH (DUSS), for the first time in 2007. DUSS operates combined transport terminals and transhipment centres in Germany and DBAG has a majority stake in the company. According to statutory provisions, the terminals and transhipment centres are service facilities of railways which are obliged to issue terms of use in accordance with the General Railway Act. In 2007, the Federal Network Agency objected to the envisaged new version of the Terms of Use for Service Facilities issued by DUSS as a large number of individual terms did not comply with provisions set forth in the General Railway Act concerning non-discriminatory access to the railway infrastructure.

Both of the above-mentioned decisions (DB Netz AG, DUSS) are still in dispute (cf. page 200 “Deutsche Bahn AG – fast-track proceedings in relation to the Terms of Use for Service Facilities and the Terms of Use for the Railway Network 2008/2009”).

The Federal Network Agency also objected to parts of the envisaged Terms of Use for Service Facilities of Stadtwerke Essen AG for Essen Port Authority in 2007. Essen Port Authority is also a service facility within the meaning of the General Railway Act. The Federal Network Agency determined that the envisaged new version of the Terms of Use for Service Facilities contained, in particular, clauses granting the infrastructure operator unconditional decision-making scope. However, this type of unconditional decision-making scope harbours considerable potential for discrimination because parties with the right

of access can neither foresee nor check its subsequent application. Stadtwerke Essen AG was instructed to amend the clauses to which the Federal Network Agency had objected, accordingly.

The Federal Network Agency also examined the envisaged Terms of Use of Passenger Railway Stations of Usedomer Bäderbahn GmbH (UBB) and objected to a number of the provisions. On the basis of these objections, the provisions were amended, particularly in terms of transparency.

In two decisions, the Federal Network Agency instructed Rurtalbahn GmbH to publish immediately the Terms of Use for Service Facilities and the Terms of Use for the Railway Network which they had submitted and to apply them equally to all parties with the right of access. As a result of previous discussions, Rurtalbahn adapted the Terms of Use to regulatory requirements and made their pricing principles more transparent. The Federal Network Agency also examined the Terms of Use for Service Facilities of other operators of service facilities.

FURTHER PROCEEDINGS

Conclusion of general agreements

In accordance with the statutory duty of notification, DB Netz AG notified the Federal Network Agency in 2007 of its plans to conclude three general agreements. As the notifications did not contain all the important features and information about the general agreements to be concluded, the Federal Network Agency prohibited DB Netz AG from concluding the three general agreements submitted with the relevant railway undertakings until due notification had been given. The Administrative Court of Cologne dismissed the fast-track petition filed by DB Netz AG in objection to the notification. The appeal brought before the Higher Administrative Court of Münster was cancelled before a ruling was handed down as DB Netz AG had provided the Federal Network Agency with the missing documents and information in the meantime. The three general agreements between DB Netz AG and the railway undertakings were concluded after the proceedings instituted by the Federal Network Agency had been concluded.

Capacity

The capacity of the railway network is crucial for the future role railways will play on competitive markets. The Federal Network Agency is hence focusing on the current capacity that is being influenced by construction measures and on the long-term development of capacity that frequently develops in a negative way due to dismantling measures. Owing to complex operational processes, railway capacity is very hard to define in terms of absolute figures, a fact that was confirmed by experts at an international workshop. It is easier to define the term of railroad congestion when the capacity available is unable to meet market requirements. This has prompted the Federal Network Agency to define criteria in cooperation with the Federal Railway Authority (Eisenbahn-Bundesamt), indicating at what point DB Netz AG, in particular, must meet its statutory obligation to declare congestion of railways so that concrete capacity analyses and schedules

aimed at increasing railway capacities can be drawn up. The bottlenecks that obviously exist in the railway network, which tend to manifest themselves mainly in freight and occasional transport, have not yet prompted DBAG, which combines infrastructure and transport under one umbrella, to declare that its railways are congested. The effects manifest themselves in changes in routes and rejections of route applications without notifying the Federal Network Agency and are causing specific capacity problems, particularly in relation to construction measures. To make matters worse, construction sites incur excessive costs for energy, transport and personnel for market players if they are not notified of route closures for construction purposes in time and unless alternatives can be coordinated to the satisfaction of all parties.

Construction measures

The Federal Network Agency also handed down a decision in which it objected to DB Netz AG's conduct in connection with the planning and implementation of construction measures. The decision stemmed from a particular case in which the Federal Network Agency ascertained that the provisions in the Terms of Use for the Railway Network relating to the description of information about construction measures and the associated coordination procedure with parties that have a right of access were insufficient. For this reason, the Federal Network Agency instructed DB Netz AG to amend these clauses. In this regard, it is a matter of ensuring that the railway companies are notified far enough in advance of envisaged construction measures so that any objections they raise regarding the time and way in which construction measures are to be carried out can be taken into consideration. In the proceedings, it was also established that the scheduling procedure would have to be amended for routes on which construction work was being carried out. At present, only the section up to the end of the construction site is covered by scheduling and the rest of the trip can be freely scheduled. Parties with a right of access therefore do not know when they will reach their destination. An appeal has been filed against this decision and a ruling on this appeal is due to be made in 2008. The Federal Network Agency has suspended execution of the decision until then.

Bad Schandau Railway Station

As part of the modernisation of Bad Schandau Railway Station, DB Netz AG was planning to dismantle nearly all of the sidings even though they had leased them to a railway undertaking on a long-term contract. The Federal Network Agency instituted proceedings when an objection was filed by this railway undertaking, establishing that the envisaged dismantling constituted a violation of the provisions set forth in the General Railway Act governing access to the railway infrastructure. The Federal Network Agency instructed DB Netz AG to grant the relevant railway undertaking access to this track or to arrange the use of alternative sidings.

OTHER ACTIVITIES

In 2007, the Federal Network Agency launched a procedure to review the rules for scheduling of trains on DB Netz AG's

network. The rules currently included in the Terms of Use for the Railway Network are unclear and give the competent staff at DB Netz AG the greatest possible decision-making scope for eliminating disruptions. The aim of planning when faults occur is, inter alia, to restore the normal schedule as soon as possible and to ensure all trains arrive and depart on time. In 2008, it will be the Federal Network Agency's job to strike a balance between the need to provide maximum decision-making scope in terms of planning and the ability to trace and review those decisions. In 2007, the Federal Network Agency requested DB Netz AG to post a clear description of the service facilities it operates on the Internet. DB Netz AG refined this list over the course of the year as part of an ongoing dialogue with the Federal Network Agency. On the basis of a number of proposals and random checks carried out by the Federal Network Agency, the list has been further improved both in terms of its completeness and in terms of details of opening hours, the length of tracks that can be used and other service features. Parties with a right of access can now obtain the information they need at any time in a user-friendly presentation.

RATES AND FEES

Review of rates

The Federal Network Agency has pressed ahead with its endeavours in the area of the regulation of rates. The prime goal is to meet the need that all users with a right of access to the railway infrastructure in Germany have in terms of fair and transparent pricing.

The process of reviewing the charges levied for loading areas has been successfully completed. DB Netz AG's announcement that it would be significantly increasing the rates charged for the use of this service facility in connection with a reorganisation of the pricing system was met with incredulity on the part of various railway undertakings. The latter feared, for instance, that the transportation of timber by rail, which made commercial and environmental sense, might be put at risk. The Federal Network Agency's intervention enabled the envisaged rate increase to be averted. The services provided by DB Netz AG are now being offered at rates that have been reduced by approximately 50 percent. In addition, DB Netz AG has distanced itself from its original plan to demand a high cleaning fee after every use.

Passenger railway stations are regarded as one of the most important service facilities for the transportation of passengers. Within the DBAG Group, the subsidiary DB Station & Service AG operates approximately 5,400 railway stations, which are used by both Group-owned and private railway undertakings. The Federal Network Agency has, since August 2007, been subjecting the charges levied for this service to a comprehensive review, which is still ongoing at the present time. The first step in this process is to take a look at the company's cost situation with a view, inter alia, to examining the distribution of its overhead costs. The price differences between the Federal Länder will also be the subject of review. In this regard, the Federal Network Agency is liaising closely with the public transport authorities in the local rail

passenger transport sector that indirectly bear the railway station charges for local trains as they handle the organisation and financing of local rail passenger transport in line with the relevant Federal Länder legislation. The price increases of the past few years have brought a critical response and led to complaints from public transport authorities and railway undertakings alike.

The system of charges used by the Hamburg Port Authority (HPA), which operates the port railway in Hamburg, has also been in the spotlight. At the beginning of the year, the HPA announced that it intended to radically overhaul its system of charges. Owing to the major importance that the port of Hamburg and the associated railway infrastructure have in terms of transport, the HPA and the Federal Network Agency initially agreed that the Federal Network Agency would play an advisory role in developing the new system of charges. As part of this agreed process, the first drafts of the pricing system were reviewed in terms of their compatibility with the provisions of railway legislation relating to access to the railway infrastructure. The breaches and discrimination which the Federal Network Agency identified in its review were able to be resolved by the end of the year in consultation with the HPA. For instance, unlawful provisions relating to discounts were deleted after the Federal Network Agency had raised an objection. For the steadily increasing rail traffic on the port railway lines, which are already congested as it is, the HPA has, for the first time, found a fee structure which can contribute to increasing the efficiency of the infrastructure. For instance, additional charges for exceeding wagon standing times now offer an incentive to vacate the tracks in a timely manner and make them available to other users. The new system of charges came into effect on 1 January 2008. A further exchange of experience between the Federal Network Agency and the HPA is planned for 2008.

Incentive regulation in the railway sector

Since the spring of 2007, the Federal Network Agency has been looking into the possible introduction of incentive regulation for the railway infrastructure sector. Applying the principle of incentive regulation could lead to a regulatory cap on the prices charged by an infrastructure operator with a view to setting incentives for more efficient management of infrastructural monopolies. The basis for the Federal Network Agency's activities is a joint statement to the minutes issued by the Federal Ministry of Transport, Building and Urban Development, the Federal Ministry of Economics and Technology and the Federal Ministry of Finance. According to this statement, there is agreement at ministerial level that the tariff provisions in the General Railway Act need to be amended in favour of an economic performance-based tariff benchmark. At the initiative of the Federal Ministry of Transport, Building and Urban Development, the Federal Network Agency set up a Working Group for the purpose of developing tariffs, which met a total of seven times between June and October 2007. The Working Group comprised representatives of the Federal Ministry of Transport, Building and Urban Development, the Federal Ministry of

Economics and Technology, the Federal Ministry of Finance, the Federal Cartel Office, the Ministries of Transport of the Federal Länder, DBAG, Netzwerk Privatbahnen (Railway Associations and Agencies), the Association of German Transport Companies and other institutions.

Based on the discussions held by the Working Group, and with the scientific assistance of the Technical University of Berlin and the IGES Institute (research and consultancy institute), the Federal Network Agency produced an initial, in-depth report on the introduction of incentive regulation in the railway sector, including a proposal that price cap-oriented tariff regulation be introduced. Unlike profit cap regulation, setting price caps is, in particular, intended to create incentives for increasing the utilisation of railway infrastructure capacity, thereby boosting competition in the railway sector. This implicitly also supports the Federal Government's goal of switching more traffic to rail. A price cap, compliance with which will be mandatory, will be calculated for each product basket and for each company. It will be necessary to amend the General Railway Act and the Ordinance on the Use of the Rail Infrastructure in order to implement the Federal Network Agency's concept. Details on incentive regulation would need to be set out in an ordinance, in respect of which the General Railway Act would require an enabling provision.

OTHER ACTIVITIES

In 2007, there was also an ongoing, open dialogue with market participants, associations and other interested parties. The Federal Network Agency was represented at major national and international events last year.

The symposium entitled "Current Problems in Railway Law", a joint event organised by Eberhard Karls University, Tübingen, the Federal Railway Authority and the Federal Network Agency, deserves special mention. It was the thirteenth time that the symposium was held. This year, the organisers were again able to find topical issues relating to railway regulation and offered the participants an excellent forum for exchanging views. The Federal Network Agency contributed to an overview of current trends in railway law with presentations on the development of tariff regulation, on the incentive system, planning permission and self-commitment through access agreements and on the interpretation of the grey legal concepts of capacity and congestion of the railway infrastructure. These were rounded off with a presentation on the year's regulatory decisions. Once again, the response among experts was so great that the event will definitely be repeated in the coming year.

Court proceedings

The Federal Network Agency looks back on positive main and fast-track administrative court proceedings.

DEUTSCHE BAHN AG – Terms of Use for the Railway Network 2007/2008

DB Netz AG submitted its Terms of Use for the Railway Network for 2008 to the Federal Network Agency for review in October 2006. The Federal Network Agency objected to numerous clauses in the Terms of Use for the Railway Network, deeming them to be incompatible with railway law. At the heart of the objections were breaches of the rule of non-discriminatory access to the network as well as breaches of transparency. Subsequent to the administrative decision which the Federal Network Agency then handed down in November 2006, DB Netz AG requested joint discussions. The content that was elaborated during the latter lead to the vast majority of the clauses to which objections had initially been raised being amended to comply with the Federal Network Agency's specifications, with the result that the set of rules was able to enter into force in good time and in accordance with the law. However, DB Netz AG initially made the required adjustments "without acknowledging a legal obligation". DB Netz AG instituted fast-track proceedings against two contentious clauses in the decision, and it lodged an objection with the Federal Network Agency against the decision as a whole. In its objection, DB Netz AG criticised the interpretation of the concept of discrimination as being too broad and the Federal Network Agency's review criteria as being too high. The authority dismissed the objection in its entirety, whereupon DB Netz AG filed legal proceedings. The Administrative Court of Cologne will now be ruling on the legality of the decision rendered by the Federal Network Agency in November 2006 and on the associated legal issues. The ruling is of major importance to the Federal Network Agency and to competitors as the court is expected, in these proceedings, to make pronouncements on important fundamental points of railway law, such as the scope of non-discrimination and of the requirement of non-discriminatory access to the network in railway law.

DEUTSCHE BAHN AG – SURCHARGE FOR SPECIAL ROUTES

In its ruling of 31 August 2007, the Higher Administrative Court of Münster confirmed the Federal Network Agency's view on the so-called "surcharge for special routes" levied by DB Netz AG. DB Netz AG's practices during the period 2004 to 2005 were held to be illegal. With its ruling, the Higher Administrative Court of Münster is following a ruling made by the Administrative Court of Cologne, which, in October 2006, found that DB Netz AG must desist from levying a 10 percent surcharge for special routes.

The Higher Administrative Court of Münster held that levying the special surcharge constituted unlawful discrimination against the railway undertakings affected by the surcharge, which restricts competition. It found that levying the surcharge for special routes was anti-competitive exploitation of existing market strength. The Higher Administrative Court of Münster stated that DB Netz AG, as a company with a strong market position, had taken advantage of its competitors' predicament without any substantive or justifying reason for doing so.

The basis for the ruling was DB Netz AG's practice, ever since the timetable change on 12 December 2004, of levying a 10 percent higher charge for special routes on some railway undertakings. The parties affected were those who ordered routes which it was not possible to register for the annual timetable and which were to be used no more than thirty times during the timetable year. The Regulatory Authority viewed this as unlawful discrimination and obliged DB Netz AG to desist from levying these special surcharges. DB Netz AG did not accept this decision and brought an action against it before the Administrative Court of Cologne and subsequently before the Higher Administrative Court of Münster. Both courts effectively confirmed the illegality of this special surcharge and dismissed DB Netz AG's applications.

DEUTSCHE BAHN AG – FAST-TRACK PROCEEDINGS IN RELATION TO THE TERMS OF USE FOR RAILWAY FACILITIES AND THE TERMS OF USE FOR THE RAILWAY NETWORK 2008/2009

DB Netz AG, DUSS and UBB have each filed an objection against the administrative decisions requiring them to adjust their intended versions of their terms and conditions of use. With a view to seeking suspensive effect for their objections, the companies each filed applications with the Administrative Court of Cologne in temporary relief proceedings shortly before the expiry of the deadline for compliance.

The Administrative Court of Cologne did not grant any of the applications. On the one hand, the applications were rejected because the court cast doubt on the urgency of the decision as the companies did not apply for court protection until shortly before the expiry of the deadline for compliance that had been granted, even though there had been sufficient lead-up time. On the other hand, the court acknowledged, following a summary examination, that the requirement of transpar-

ency was an essential component of non-discriminatory access to the railway infrastructure. In the view of the Administrative Court of Cologne, there were significant reasons that also supported the legality of the administrative decision regarding DB Netz AG's Terms of Use for the Railway Network. In particular, the obligation expressed therein to give a proper account of the point in time at which the Federal Network Agency was notified of the intention to refuse route orders was appropriate.

In each case, an appeal was lodged with the Higher Administrative Court of Münster against the ruling handed down by the Administrative Court of Cologne. Rulings have already been handed down in respect of the appeals lodged by DB Netz AG and DUSS. The Higher Administrative Court of Münster granted suspensive effect to the appeal lodged by DUSS. The appeals lodged by DB Netz AG, on the other hand, were only partially successful. In this case, suspensive effect was only granted in respect of some of the clauses which the Federal Network Agency had objected to. In all other respects, the appeals lodged by DB Netz AG were dismissed. The rulings essentially relate to issues regarding the scope of the Federal Network Agency's investigations. The respective principal proceedings remain subject to final clarification.

Agency's functions, structure and core tasks

Functions and structure

The Federal Network Agency, originally called the Regulatory Authority for Telecommunications and Post, or RegTP, was set up on 1 January 1998 as a higher federal authority within the scope of business of the Federal Ministry of Economics and Technology (BMWi). It took over the responsibilities of the former Federal Ministry of Post and Telecommunications (BMPT) and the Federal Office for Post and Telecommunications (BAPT). When it was assigned functions from the new Energy Act and the amended General Railway Act it was renamed Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (Federal Network Agency) in 2005.

First and foremost, the Agency's remit is, through regulation, to promote competition in the telecoms, postal and energy markets and in the rail sector, to ensure the provision of appropriate and adequate services across the country, to guarantee non-discriminatory network access, to provide frequency regulation and numbering arrangements. These responsibilities are detailed in the Telecommunications Act (TKG), the Postal Act (PostG), the Energy Act (EnWG) and the General Railway Act (AEG), and are regulated additionally in ordinances and other implementing provisions.

Further tasks of the Federal Network Agency flow from various other specialist laws such as the Radio Equipment and Telecommunications Terminal Equipment Act (FTEG), the Amateur Radio Act (AFuG) and the Electromagnetic Compatibility Act (EMVG). The Agency is the competent authority under the Electronic Signatures Act (SigG) and as such is tasked with setting up and monitoring a secure and reliable electronic signatures infrastructure.

The Agency's tasks and workflows are complex and wide in scope. They range from cases addressed in quasi-judicial proceedings in economic regulation areas right

down to its nationwide presence for technical trouble-shooting.

Its task-oriented organisation, enabling the Agency to deal with these tasks efficiently, is described in the following.

In the telecoms sector the Ruling Chambers deal with ex ante and ex post rates regulation, the control of anti-competitive practices and special network access, including interconnection issues. In the postal sector the Ruling Chamber responsible also focuses on ex ante and ex post rates regulation and the sector-specific control of anti-competitive practices, including the regulation of access to the postal network. In the energy sector the Ruling Chambers are responsible for all decisions which the Agency is required to take in the gas and electricity sectors under the Energy Act and the implementing ordinances, including checking the use of system charges. The President's Chamber takes decisions on, in particular, award proceedings for scarce radio spectrum resources and the imposition of universal services.

The departments perform specialised and central administrative functions. These include economic and legal policy issues of telecoms and postal regulation and technical aspects of frequencies, standardisation and numbering. The Agency is active in international bodies, cooperating on drafting standards for the development of new generation networks and radio systems. A major departmental function is to give Ruling Chambers specialist assistance in their decision-making.

Combating abuse of premium rate services continues to be a great challenge. Another field of tasks is connected with the database of transmitter sites. Of particular importance as direct services for the public is the dispute resolution procedure under section 47a of the Telecommunications Act and section 10 of the Postal Services Ordinance (PDLV), and consumer protection.

The Energy Act provides for the gas and electricity markets to be organised in a way that has a regulatory effect. The Agency's legal function under the Act is to create, through unbundling and regulation of the networks, the basis for well-functioning competition in the upstream and downstream markets. The aim is to secure non-discriminatory network access and to set the use of system charges levied by the companies. The Agency can draw on its experience of regulating the telecoms and postal markets to achieve lean and practicable regulatory practices. The year under review was also notable for the preparations to introduce incentive regulation and for greater engagement at European level.

Since the First Act Amending the Renewable Energy Sources Act took effect on

1 December 2006, the Agency has been discharging executive functions. These include monitoring the distribution, across the country, of renewable energy volumes and compensation payments. Also monitored is the notification of differential costs and compliance with statutory duties.

On 1 January 2006 the Agency also assumed responsibility for monitoring compliance with the legislation on access to rail infrastructure. Its activities were extended, in essence, to cover all infrastructure managers (symmetric regulation). A principal task is to secure the non-discriminatory use of rail infrastructure for the infrastructure managers and other access beneficiaries. Rail infrastructure covers both the infrastructure itself and services connected with tracks and service facilities (eg stations, freight terminals). Preventive, or ex ante, regulation is also in place besides ex post regulation, under tight time limits. Access regulation also encompasses the level and structure of infrastructure and other charges, so that price regulation is also prominent.

To emphasise more strongly the uniform structure of the Agency, there is a special department for the regional offices, the contact point with consumers and the industry across the country.

The regional offices are responsible mainly for technical matters. They provide advice, for instance, on compliance with the Telecommunications Act, on electromagnetic compatibility provisions and the electromagnetic compatibility of apparatus. They are also responsible for frequency assignment, eg for mobile radio and PMR systems. Another important area is the processing and resolution of radio interference using state of the art measuring equipment, monitoring compliance with regulations generally and carrying out radio monitoring and inspection orders. The regional offices' responsibilities also cover monitoring compliance with the terms and conditions of licences, eg postal licences. As a result of certain tasks (such as processing travel expenses for some of the staff, processing medical allowances for all the staff, call centres) being transferred to the regional offices, the headquarters can focus on its core tasks and local staff of the regional offices are meaningfully employed.

Human resources

A modern staff management system is a top priority at the Agency. Amid ever greater constraints on staffing levels, it is essential to deploy existing staff optimally as well as to recruit qualified new staff. This is only possible when human resources planning takes account of work requirements and staff skills and preferences equally. Only with a combination of proactive staff deployment planning and motivated staff can the Agency perform its tasks efficiently and cost-effectively at times of tight budgets.

The Agency has succeeded in recruiting outstanding staff from a large number of candidates at all levels in the new energy and rail regulation areas. In doing so, it has continued its practice of requiring not only excellent specialist knowledge but also conceptual ability and team skills, backed up by a feel for the practical requirements of the markets and their mechanisms.

The Agency employs a total of 2,500 specialists from a wide range of backgrounds for its highly interdisciplinary fields of activity. These include law, economics, engineering, mathematics, information technology, administration, etc.

The Agency has provided training since 1999. In 2007, a total of 10 young people began as office communication trainees at the headquarters in Bonn and Mainz. Under the traineeships in electronic equipment and systems offered since 2003, 16 places for trainees have been created, available at Göttingen, Bremen and Magdeburg. Thus in 2007 (as of 31 December 2007), a total of 81 young men and women received training in these two occupations.

Budget

The Agency's income and expenditure is budgeted for in section 09, chapter 0910 of the federal budget.

The table below shows the income for the years 2007 (target and performance) and 2008 (budget).

Type of income	2007 target €'000	2007 performance €'000	2008 target €'000
Telecoms fees, contributions and other charges	172,635	53,896	66,457
Fees and other charges under the Postal Act	111	79	109
Fees and expenses under the Federal Rail Transport Administration Act	254	93	576
Charges and contributions under the Energy Act	500	351	6,218
Other administrative income, rents, disposals	1,106	2,148	1,164
Administrative income	**174,606**	**56,567**	**74,524**
Other income	4	2	1
Total income	**174,610**	**56,569**	**74,525**

The discrepancy between target and performance income for 2007 is attributable to the reimbursement of contributions for the protection of interference-free frequency usage for the years 1999 to 2005 and the suspended collection of these contributions for 2006 and 2007 as a result of court rulings. The contributions will be collected subsequently – if legally permissible – following an amendment of the legal basis in 2008.

The chart below shows the expenditure for 2007 (target and performance) and 2008 (budget).

Type of expenditure	2007 target €'000	2007 performance €'000	2008 target €'000
Staff costs	102,679	100,703	103,518
General administrative expenditure and appropriations	35,084	34,688	34,578
Investments	9,787	12,027	10,879
Total expenditure	**147,550**	**147,418**	**148,975**

Mission statement

Operating successfully for ten years now, the Federal Network Agency has won acclaim in business and political circles and amongst consumers. Its excellent reputation was a determining factor in being assigned new tasks in the energy and rail sectors and is based on the high levels of commitment and performance of its staff. We now want to publicise this multi-faceted, exceptionally good work, both internally and externally, and have a number of instruments with which to do so.

One such – proven – instrument is the mission statement, with which public authorities, industry associations and companies, for instance, give a succinct account of themselves. After the Agency took the policy decision of a mission statement, it then considered the nature and the scale of the statement at a closed-door conference of senior management. These considerations were then incorporated in an internal draft to which all the staff were invited to respond. The General Staff Council was also part of the process and provided valuable input for the discussions. This led to the creation of the mission statement set out below, which was informed by the proposals and responses received.

The mission statement is a reliable guide to the Agency's tasks and the aims and values of its staff. It strengthens staff motivation and identification with the Agency, and provides fresh impulse for the future. The mission statement is a public representation of the Agency and of the thinking and doing of its staff. For the statement to find resonance with the public and to continue to be put into practice, it is essential that the management and the staff live by what it says. Only thus can this ongoing process be continued and invigorated with creativity.

OUR DUTY

is to create and secure fair and effective competition in the networked business sectors

- electricity
- gas
- telecommunications
- post, and
- rail.

Our aims are

- to promote the development of the European single market
- to safeguard universal services through efficient infrastructures and competitive companies
- to protect the consumer and the environment, and
- to encourage innovation.

We pursue these aims by

- open, objective and transparent dialogue with all stakeholders
- consistent, technology-neutral decisions based on sustainable strategies
- creating a sound basis for planning through efficient procedures and predictable frameworks
- giving preference to voluntary agreements, given equivalent outcomes
- interdisciplinary use of knowledge and experience
- a customer and market-driven approach, as a result of reconciling different interests
- European and international cooperation, and
- continuous quality of service controls.

We count on highly motivated staff to achieve these aims, and attach particular importance to

- respect for the individual and the work s/he does
- expecting high standards of our staff, but providing development opportunities too
- trust and cooperation in our dealings with one another
- an ability to give and receive criticism as an opportunity for improvement
- confronting problems and learning from mistakes
- interdisciplinary work, and
- cross-departmental participation in decisions.

Strategic plan 2008

The Federal Network Agency is required under section 122(2) of the Telecommunications Act (TKG) to include a strategic plan in its Annual Report, listing matters of legal and economic policy in telecommunications to be addressed by the Agency in the current year. In addition, the Agency is reporting on all its main projects in all its fields of activity in which issues of fundamental importance are expected in 2008. Following a public consultation on the draft strategic plan, evaluation of the responses received and input from the Advisory Council[1] at its meeting on 11 February 2008, the strategic plan 2008 set out below has been adopted.

TELECOMMUNICATIONS

Market definition and market analysis procedures, regulatory orders

Member states, when defining and analysing markets, are required to take the utmost account of the European Commission's new relevant markets recommendation following its publication in the Official Journal of the European Communities. The number of markets recommended for ex ante regulation is now seven, instead of the former 18. The amended recommendation means that the Agency is now called upon, under section 14(1) TKG, to review its market definitions and analyses and the regulatory orders based on them. The experience gained since introduction of the procedures in sections 10 to 13 TKG shows that a concurrent review of all the existing market analyses and regulatory orders is not possible. The markets specified by the Commission have all been studied and, depending on the outcomes, made subject to regulatory orders. For some markets, a review of the outcome is scheduled anyway because the two-year period referred to in section 14(2) TKG is close to expiry.

The Agency is therefore beginning with these markets, and has already initiated action. In the coming year, the first to receive attention will be the wholesale markets for interconnection services and the fixed retail markets. Wide-ranging information on both has been requested, on the basis of which the draft decision from the President's Chamber will be drawn up. Finally, a survey and assessment of the conditions in

1 cf Advisory Council Decision of 11 February 2008, available for download at www.bundesnetzagentur.de

the mobile voice call termination market and the wholesale broadband access (bitstream) market is planned.

Basic rates regulation and consistency issues

Given the importance of consistent charging for a competitive environment in which companies with different network and service strategies can compete fairly, the Agency will further refine the principles for consistent rates regulation. This concerns, first and foremost, the individual Ruling Chamber decisions on charges, details of which cannot be anticipated here, however. Flanking these decisions will be conceptual and basic positions on central aspects of the consistency requirement to give market players a high degree of planning certainty and to facilitate dialogue with them in a context that is not related just to specific decisions.

In this connection, explanatory notes on price-cost squeeze have recently been published. The notes can be conceptually refined, if necessary, to reflect new developments whose relevance was not clear at the time they were drawn up and commented on. While the explanatory notes address the relation between wholesale and retail charges, attention will be drawn in the next stage to the relation between and among various wholesale charges themselves. Mindful of the regulatory aim of securing fair competition and encouraging efficient investment in infrastructure, we are looking to shape the relation of the wholesale prices along the value chain in such a way that the providers operating at different levels of the chain can be successful with their own particular business model.

Also, past rates regulation cases have shown that, as regards the costs of efficient service provision, better documentation is needed of how non-infrastructure-based costs (operating costs, rentals, common costs) are identified. In the rates proposals the proportion of costs that cannot be directly allocated is very high, and also fluctuates considerably. Thus the Agency has examined the level of non-infrastructure-based costs and mark-up rates, constructing a telecommunications process model (common costs model) that has already been applied in rates regulation cases.

The Agency will also need to decide on application of the common costs model to the mobile market. It will also review the criteria for fixing interest rates in the mobile and the fixed network, possibly looking at the larger canvas to consider what economic criteria could also be applied in the energy and rail sectors. Also, in light of the upcoming decision of the Federal Administrative Court, we should again think about whether to commission a cost model in view of the need for further regulation in the mobile market (see also the comments on this in the strategic plan for 2007).

Regulatory implications of the development towards NGN core and access networks

As shown in the strategic plan for 2007, the migration from conventional PSTN networks to NGN IP-based core and access networks throws up a host of regulatory challenges. To take account of emerging changes in the network and also to continue to provide a level playing field, the Agency, early on, initiated a series of discussions at national level (local loop consultation, within the advisory project group "Framework conditions for IP-based networks"), took decisions and engaged at European level in the IRG/ERG debate (ERG Report on Interconnection, ERG Opinion on Regulatory Principles of NGA). These activities must be continued and concretised in 2008.

The changed network structures may make it necessary to adapt today's wholesale products. We must also look at the extent to which NGNs may affect market definitions and findings of significant market power, new regulatory orders and rates approval procedures. In this connection we will also have to consider how the infrastructure costs of a multi-service network should be allocated to the various wholesale products. The transition to NGNs may be accompanied, for instance, by changes in economies of scale and scope, and in access requirements, too. Given the bottleneck nature of access and originating networks, access to this infrastructure continues to be a significant issue for competition in the broadband service markets.

Specifically, we will need to consider the effects of migration to NGN/NGA, in particular, on the market analysis procedures and regulatory orders based on them. Rates cases for interconnect services and bitstream access are also on the agenda.

Given the diverse implications, regulatory challenges and adaptation imperatives, we must continue to widen our NGN structure and costs information base.

This migration from the traditional networks (fixed, mobile and broadband cable) to converging NGN core and access networks presents us with a raft of technical challenges with regulatory consequences and implications for the telecoms industry. In its work in the various standardisation bodies, for instance in the ITU, ETSI/3GPP and ETSI/TISPAN, the Agency will push for transparent procedures and open interfaces, the inclusion of security concerns and service interoperability.

Consumer protection issues

Consumer protection is, essentially, an ongoing task. Nevertheless, the following activities merit special mention.

- Ascertaining the extent of a text and video relay service for the hearing impaired. Hosting discussions on voluntary commitment by the telecoms industry to continue the pilot project.
- Further implementation of the new consumer protection arrangements (notably itemised billing, publication duties and technical checks) in the Telecommunications Legislation Amendment Act.

- Monitoring compliance with the amended consumer protection arrangements of sections 66a ff TKG. Watching the market for any new misuse scenarios, say in the form of rules for payment systems bypassing diallers, and, if appropriate, introduction of measures under section 67 TKG. Special attention will be paid to achieving high levels of price transparency.
- Monitoring the arrangements on price indication, price messages, price ceilings, cutting the connection and the right to receive information, extended to additional kinds of service and hence to additional subranges. The amended regulations are expected to increase our work to combat abuse.

Spectrum management

The ever greater mobility of the communications society is accompanied by growing demand for radio-based applications. However, this demand can be satisfied only if enough spectrum is available. Technological progress, with its ever shorter innovation cycles, also needs a flexible framework if suitable spectrum is to be made available in timely manner.

These technology and market-driven trends pose great challenges for the regulators. On the one hand, regulators are supposed to provide spectrum in accordance with demand, ie with minimum delay, in appropriate quantities and, as far as possible, for multiple applications. On the other, they must see that spectrum is used efficiently and does not cause interference, and must secure fair competition and promote sustainable competition in markets. And the interests of professional, scientific, military and safety-related radio services must not be forgotten.

Important spectrum management tasks are on the agenda for 2008, often as the prelude to conceptual or concrete projects, at international and European level.

Concrete award projects

- Drafting a decision on the award conditions and the design of the auction for spectrum in the bands at 1.8 GHz, 2 GHz and 2.6 GHz for digital cellular mobile radio. Translating the auction rules into appropriate auction software, organisational preparations for the auction.
- Drafting a decision on the rules for awarding further spectrum for Broadband Wireless Access, Package D of the 3.4 to 3.5 GHz band. Study of the 3.6 to 3.8 GHz band with a view to future use for BWA.
- Provision of fixed link frequencies as part of digitisation for public safety organisations.
- Opening the bands at 71 to 76 GHz and 81 to 86 GHz for fixed link use.

Conceptual projects

- Updating the Agency's Frequency Usage Plan to incorporate the results and resolutions of the 2007 World Radiocommunication Conference (WRC-2007) and amending the Frequency Band Allocation Ordinance accordingly; updating the subplans in response to urgent national requirements.
- Implementing simplified spectrum award for all broadcasting applications. Meeting coverage requirements.

- Drawing up an Administered Incentive Pricing scheme as an instrument of spectrum management.
- Further implementation of regulatory and technical criteria and framework conditions to improve flexible spectrum use, eg as part of Wireless Access Policy for Electronic Communication Services (WAPECS).
- Fresh concept for non-public radio applications, particularly with a view to the introduction of new digital mobile radio (DMR).
- Drawing up and implementing a concept for future frequency assignment proceedings for narrowband trunked radio (410 to 430 MHz band).
- Drawing up a concept on the availability of spectrum for wireless microphones.

European and international projects

- Opening new frequency bands for innovative radio applications within CEPT and the European Union, eg for ultra wideband (UWB) applications, for the development of intelligent transport systems (ITS) and for mobile satellite communications systems with terrestrial components.
- Engaging in the European debate on the digital dividend.
- Helping to progress the ERO Frequency Information System (EFIS) to promote transparency for market players. Provision of information on the interface requirements applicable as from 2008.

Standardisation

Before frequencies can be used nationally, international coordination, agreements and the provision of European and/or global technical standards are required on technical grounds. The Agency plays an active part in the standardisation of new technologies and reconfigurable radio systems, contributing to both national (WIGWAM, EASY-C) and international research projects (E2R). One of its aims in doing so is the early introduction of regulatory requirements for specific equipment in conjunction with the industry to provide timely introduction of new technology concepts and early innovation. A global approach is envisaged for the introduction of new technologies, for the above reasons.

The following conceptual activities scheduled for 2008 should be mentioned in particular.

- Setting up an ETSI Technical Committee (TC) for ITS and for Software Defined Radio (SDR)/Cognitive Radio (CR) to define relevant technical concepts and requirements and to describe them in appropriate specifications.
- Developing a concept for flexible spectrum use for cognitive wireless systems in conjunction with industry partners in the new EU E3 research project (End to End Efficiency).
- Developing, in this connection, a flexible certification concept for the R&TTE Directive for reconfigurable systems.
- Incorporation of the relevant research results in standardisation (eg ETSI, ITU).
- Request by TCAM to the European Commission for ETSI to be given a mandate to draw up a harmonised standard for SDR/CR for application under the R&TTE Directive.

- Supporting the ITU in drafting a report on CR.

ETSI was busy in 2007 with a number of RFID activities, most notably UHF-RFID. These included a new system reference document to CEPT and a feasibility study. The harmonised standard was then adapted, technical specifications provided on RFID installation and RFID readers synchronised. ETSI field test results support this approach and the technology is now available in the market, sufficiently mature and with sufficient quality levels, for a number of implementations. 2008 will see the introduction of further equipment requirements, also reflecting the convergence of mobile radio and RFID technology.

Electromagnetic fields

In the context of activities to protect persons exposed to electromagnetic fields, we should mention the following, in particular.

Online site certificate application

A comprehensive specification has now been drawn up, as planned, to make it possible for operators to apply for safety certificates online. Online application is to be offered in 2008 as an additional service and to reduce administration.

Assessment of amateur radio equipment

In Germany, every transmitter operator has been required since 1 July 1992 to apply for a safety certificate for transmitters that have an eirp of 10 W or more. Operation of the transmitter is possible only when the Agency has determined compliance with the limits to protect persons exposed to electromagnetic fields and evidenced this in a safety certificate.

The Agency intends to commission a study in 2008 to assess fixed amateur radio transmitters. Taking into account the special features of amateur radio, the study is to look at the possibilities for incorporating this equipment in the assessment procedures.

Progressing controls procedures

Planned for 2008 is work to update the EMF Controls Ordinance (BEMFV). International standardisation activities are to be included to a greater extent, in the interests of harmonisation.

Environmental Code

The new Environmental Code (UGB), in particular the draft Book IV (Non-ionising radiation) and the ordinance referred to in section 6 UGB IV (draft), makes participation by the Agency necessary in respect of changes to the EMF Controls Ordinance that its implementation will make necessary.

Technical emergency calls directive

Section 108 of the TKG 2004 describes the essential requirements for emergency calls, modified by the Amending Act of February 2007. The Federal Economics Ministry is currently agreeing with other federal ministries and network operators details of the ordinance referred to in section 108(2) TKG on emergency calls, which will then be submitted to the German Bundesrat for consent.

The Agency is required to draw up a technical directive based on the TKG and the emergency calls ordinance to replace Deutsche Telekom's now obsolete technical directive. New providers have entered the market as a result of the move from line switched to packed switched technology and other access technologies such as broadband and voice offers based on VoIP, as a result of which it has become a matter of urgency to revise the technical rules in order to secure continued provision of emergency calling for everyone. Current plans envisage gradual implementation, to accommodate technological advance. One of the first steps will be planning for the administration and allocation of technical numbers needed to reach the emergency centres.

Electromagnetic compatibility

Technical standardisation

Section 13(2) para 6 of the new Electromagnetic Compatibility Act (EMVG) requires the Agency to cooperate on matters of technical standardisation in national and international standardisation bodies and to act in a supporting role for other federal authorities. This is particularly important in light of the complex European debate and national discussions with the Federal Interior, Defence and Transport Ministries and the Federal Criminal Police Office (protection of safety-related radiocommunication services). Our national interests in this area can be safeguarded at European level only when the Agency is proactive in the work of the relevant bodies.

Market surveillance

Section 13(2) paras 1 ff list our market surveillance tasks, in particular:

- conformity assessment continuing to shift to the manufacturer's declaration,
- transferring Regulation 339/93/EEC on checks for conformity with the rules on product safety in the case of products imported from third countries,
- closer cooperation with the customs authorities with the aim of including the applicable regulations on product safety in the Regulation on a common regulatory framework for the marketing of products, as all the other essential requirements of the EMC and the R&TTE Directive besides product safety must be taken into account, and
- supporting the Commission's current efforts to achieve more efficiency and balance in market surveillance and to strengthen CE marking as a European "quality mark".

Enforcement of the order to protect public telecommunications networks and radio equipment operated for safety purposes

A new task for the Agency is enforcement of the statutory order referred to in section 6(3) of the EMC Act for the protection of public telecommunications networks and radio equipment operated for safety purposes. This will involve preventive action in the shape of random checks, across the country, of unwanted emissions from wire-based telecommunications systems and networks, and taking any necessary action as a result.

Transmitters and receivers that need special protection for reasons of public safety will be monitored by the Agency in consultation with the federal authorities responsible. Those affected will be included by way of participation in two working groups (WG Random Checks, WG Monitoring).

Numbering

One of the aims of regulation, set out in section 2(2) para 8 TKG, is to secure efficient use of numbering resources.

Section 2 sentence 1 of the Telecommunications Numbering Ordinance (TNV) requires the Agency, following a public consultation, to publish an annual numbering concept reflecting developments in the telecommunications market and their implications for the numbering plan. The concept should show, as stated in the analysis of the draft ordinance, how the numbering plan is expected to progress, in order to provide maximum transparency and a sound basis for planning. It will place individual measures in their overall context and provide an instrument with which regulatory aims can be achieved by amending existing arrangements with the involvement of all the stakeholders. The numbering concept, as stated in section 2 sentence 2 of the Numbering Ordinance, will contain an overview of the degree of occu pancy and the development of demand in all numbering spaces, numbering ranges and subranges used, identifying those spaces, ranges and subranges where resources are expected to become scarce in the next five years.

Automated information procedure

The Agency's automated information procedure as per section 112 TKG represents an important contribution to public safety. The Agency is currently involved in drawing up the new ordinance required by section 112(3) TKG. This will be followed by a technical directive, essential for the design of the automated procedure in light, particularly, of the rapid pace of development in innovative services such as VoIP, drawn up in conjunction with the industry associations and authorised bodies.

Technical implementation of intercepts

The Agency's work on the technical implementation of intercepts is another important public safety contribution. Most notably, the technical directive as per section 110(3) TKG provides the basis for the implementations of the telecommunications companies, the manufacturers and the security authorities. The directive must be adapted constantly to accommodate new communications technologies.

The arrangements on Internet access (DSL, cable and WLAN) in the December 2006 directive have been taken forward. Work has progressed on the studies of WLAN market players and business models. Following completion of the VoIP standardisation activities, a new technical directive was drawn up in mid-2007 that covers VoIP communication for the most part. It entered into force in early 2008; companies must implement its amendments by the end of 2008. Further studies on this segment of the market are under consideration for 2008 to allow full coverage of VoIP communication. Work will then

begin in the second half of 2008 to incorporate the findings in the directive.

Arrangements for the secure electronic transmission of judicial intercept orders are also to be included in the directive in 2008.

On 1 January 2008 the Telecommunications Interception and Other Undercover Investigation Measures Reform and Transposition of Directive 2006/24/EC Act took effect. The Agency is already involved in international standardisation activities in light of the data retention and information duties set out in the Act. Amendments to the Interception Ordinance and the technical directive are likely in 2008 on this basis, to define uniform transmission methods. The Agency will provide technical advice on this to the Economics Ministry, in charge of the amendments to the Ordinance.

ELECTRONIC SIGNATURE

Qualified electronic signature, after a lengthy trial and consolidation phase, is now on the verge of breakthrough in Germany on a wide front.

In the business and public service environments there are now applications that can be handled electronically from start to finish as an alternative to the traditional paper-based processes (eg electronic inbox for the courts, electronic entry in the commercial register) and even ones that, by law, must be handled electronically (eg advance turnover tax notifications, emissions trading).

The issue of so-called signature-prepared cards – some 24 million "rechargeable" bank cards have been issued to savings bank customers alone – has created the basis for the widespread use of qualified signatures in the private sphere (eg for home banking). We assume that the home banking application, in particular, will boost the spread of qualified electronic signatures among savings banks and other financial institutions.

In light of this most welcome breakthrough, the Agency is called upon particularly to provide input and to push for further success.

The Agency expects that 2008 will bring a large number of new product certifications and manufacturer declarations for publication. The main reason for this is that the manufacturers of qualified electronic signature products must now, since the end of 2007, incorporate algorithms with longer keys and other hash functions in their products or develop new products if they are to guarantee the security levels required.

Processes are now under development to provide secure archiving for documents with a qualified signature and will soon be commercially available. When algorithm suitability ends, the procedure set out in the Electronic Signatures Ordinance for long-term data storage will become relevant. The newly developed technical specifications for signature renewals are currently being translated into products. Signature renewals will also be needed for the qualified certificates of the root and the trust centres.

The Agency will provide input for the forthcoming revision of the Electronic Signatures Act and the Electronic Signatures Ordinance. It aims mainly to incorporate past experience while maintaining the high degree of legal certainty. This will be another marker of the success of qualified electronic signatures.

Yet national success can be sustained only if it is embedded in the right European and international environment. Achieving and underpinning this with its expertise will be another central concern for the Agency alongside its priority national projects.

Harmonisation of technical equipment at European and international level will be further progressed by the European Commission in a new standardisation initiative. Given the growing spread of qualified electronic signatures in other countries, another challenge will be to develop procedures to put foreign signatures on an equal footing and to determine equivalent security for foreign products. At European level, talks on the cross-border recognition of products and processes will be stepped up at the Forum of European Supervisory Authorities for Electronic Signatures (FESA).

New technical developments surrounding qualified signatures are also expected in 2008. For instance, a list of trust centres will be specified at European level, available to users of qualified signatures; new protection profiles for secure signature creation devices will likewise be defined at European level to make it easier for product manufacturers to evaluate their chipcards according to the common criteria. These developments must be fostered nationally.

We plan to continue our international consulting as far as possible. Advising foreign governments on qualified electronic signature issues is starting to bear fruit; thus a consortium of German companies is setting up the infrastructure with a root CA at the Information Technology Industry Development Agency (ITIDA) in Cairo. Four accredited certification service providers will operate below the root, one at the Finance Ministry, covering the entire public authority environment (administration PKI).

The German Electronic Signatures Act is thus showing many other countries the way. Its high degree of acceptance underscores the suitability of Germany as a place to do business.

POST

The postal markets are facing major change with expiry of the exclusive licence held by Deutsche Post AG (DPAG). The Agency will follow this process closely in its role as regulator.

Consumer protection in a multi-provider environment

In future, consumers will have a choice of provider in respect of services previously reserved for DPAG under its exclusive licence. This also holds good for many universal services.

This new situation will pose problems above all at the recipient's end, eg in con-

nection with redirecting and storing mail. As the addressee does not usually have any influence on the sender's choice of mail provider, he does not know which provider he should request redirection or storage services from.

Providers' statutory right to access to change of address information from dominant licence holders (currently only DPAG) is not enough to safeguard consumer interests: the addressee does not know whether the provider chosen by the sender actually exercises this right.

The Agency will work out proposals for practicable solutions and the rules needed for their implementation.

Soliciting bids for universal services

If universal services cannot be provided adequately, bids will be solicited, under certain circumstances. The Postal Act (section 14(4) sentence 2) requires the Agency to set objective, comprehensible and non-discriminatory rules for any such bidding.

No bidding proceedings are planned at the moment. The relevant arrangements of the Postal Act were suspended for the period of the exclusive licence, but will become applicable again as from 1 January 2008. Thus one of the Agency's tasks in 2008 will be to determine the bidding rules.

Analysis of the courier, express and parcel services markets

The Agency is planning a detailed analysis of the courier, express and parcel services markets in 2008, looking in particular at the interrelations between the individual segments. Linkage with the traditional letters market will also be examined in light of the existence of diverse organisational, financial and staffing links and the development of cross-market products.

As regards the methodology, various tools will be used; traditional participant surveys, secondary analysis, recourse to available data and studies collected and conducted by the Agency in the past, and input from industry associations and institutions. The analysis is intended to provide base material that can be used to respond to short-term regulatory requirements and to underpin any further studies that might prove necessary.

Effects of licensing on competition in the letters market

DPAG's licence extension in 2002 for another five years was followed by a number of market exits and insolvencies as well as a fall in the number of licence applications. The number of active licence holders has also been in decline for some time now. A main reason for this trend was seen in the extension of the monopoly and its repercussions on the Agency's licensing practice; yet there was no firm evidence of this.

The Agency therefore plans to investigate the effects of licensing practice on competition in the letters market following expiry of the exclusive licence. The investigation will focus on developments among the market players and in competition itself in the letters market in order to reliably document the reasons for any changes.

Effects of VAT arrangements on demand for postal services and on choice of provider

The VAT system in Germany has many classification and exemption options, in both the private and the public sector.

The fact that a market player is subject – or not – to VAT affects the market price and can therefore be an influencing factor on demand. So that we may clarify the question of whether, and if so, to what extent, demand for postal services and choice of provider is influenced by VAT issues, we aim to carry out a specific survey of end customers.

Postal service coverage – use of a geodatabase

The Agency is currently setting up a geodatabase to provide information on postal infrastructure and the services offered by mail companies in Germany. As an adjunct, the Agency will investigate how the geodatabase can be used as a tool to safeguard postal service provision, amongst other things for the early recognition of gaps and disruptions in a multi-provider environment.

A further step will be to extend the functionality of the system in line with the requirements of the e-government initiative (BundOnline) and to offer all the Internet-capable functions online.

GAS AND ELECTRICITY

Unbundling

Unbundling continued steadily in 2007. Distribution system operators (DSOs) with more than 100,000 customers were required to have completed legal unbundling by 1 July 2007. The Agency will continue its supervisory activity in 2008, particularly as regards operational and information unbundling. We also plan to look, across the country, at the specific implementations of legal unbundling. At European level, the Agency will engage in the current unbundling debate taking place under the European Union's third energy package by actively participating in the relevant CEER/ERGEG unbundling working groups.

Incentive regulation

Now that the Incentive Regulation Ordinance (ARegV) has taken effect, its implementation, scheduled for 1 January 2009, will be one of the Agency's main work items in 2008.

The Agency will calculate the revenue caps for the first regulatory period, taking account of efficiency requirements, the retail price index, a sectoral productivity factor of 1.25 percent and any further elements such as a quality element or a flat rate investment markup, issuing operators a notice detailing their specific revenue path. This means that use of system charges can be set on 1 January 2009 for the first time by way of incentive regulation.

The foundation for incentive regulation is a broad, reliable database. That is why a plausibility examination of the data submitted by the operators in late 2007 /early 2008 is so important. The data exchanges with the regulatory authorities of the federal states must also take place smoothly and to schedule.

Based on the data received, we will determine the starting point and the individual elements of the formula for companies' specific revenue path. The revenue caps will start out from the costs examined in the approval proceedings.

A main element of the formula for determining the revenue path is the efficiency requirement, set as a result of benchmarking. European benchmarking is also planned, the coordination of which has been assumed by the Agency in a European regulatory authorities working group, to determine the efficiency requirements for the electricity transmission system operators (TSOs). In parallel, reference network analyses are being prepared for the gas and electricity TSOs for use when the international benchmarking for the electricity TSOs or the national/international benchmarking for the gas TSOs fails to deliver reliable results on account of inadequate data from the above methods.

Another major work item will be to determine the non-controllable costs and, in particular, the regulated costs. Relevant here, for instance, is balancing energy, transmission loss and the process for the TSOs of turning the main intermittent generation from renewable sources (mainly wind) into a constant monthly profile for the suppliers. For some operators, these components make up more than 50 percent of their costs. Considerable efforts will be needed here to decide when we can talk about effective and full procedures regulation, when such regulation is meaningful, then to implement it and to make sure that we talk about effective regulation only when network operators are given sufficient incentives to minimise the costs that arise.

Additionally, the Agency will consider whether the data basis is sufficient to take account of a quality element in the revenue cap in the very first regulatory period.

And finally, preparatory work is necessary in respect of the processes involved in any adjustment of the revenue cap within a regulatory period. Annual adjustment of the revenue cap is possible when there is a change in the cost shares that cannot be controlled on a lasting basis, and – upon application – in the case of unreasonable hardship as a result of unforeseeable events. For DSOs, a long-term change in the services they provide can be reflected by an expansion factor. An incentive regulation account must also be opened, showing the annual difference between target and real revenues and the net balance at the end of the period.

Access to the electricity grid

Market coupling

Market coupling is concerned with congestion management and allocates capacity jointly to several cross-border interconnectors. It is currently planned to introduce market coupling for the German-Danish border and for the region comprising Belgium, France, the Netherlands, Luxembourg and Germany. The first project is set to begin on 3 June 2008, and the second on 1 January 2009. The Agency is actively involved in the work to establish the projects. Besides the many technical issues that still need clarification, the anti-

trust requirements, in particular, must be met. The Agency is therefore working closely with the Federal Cartel Office to this end. Any new aspects or findings are discussed with the TSOs concerned, the power exchanges and the market players.

The congestion management study group set up at the Agency will also act as an information and discussion forum for the German parties during the introduction of the projects.

Internal congestion management

Under section 15 of the Electricity Network Access Ordinance, TSOs are required to manage congestion, the emergence of which could not be avoided within financially reasonable limits, by means of market-oriented, transparent and non-discriminatory procedures. In early 2007 the Agency commissioned a study on the methods for managing internal congestion in the transmission system, which was completed in December. The study compares the different congestion management methods available. It also discusses the issues involved in introducing a system of congestion management, most notably how it should be embedded in the existing framework. The study concludes that structural congestion, in the normal course of events, should be eliminated as rapidly as possible by expanding the network and should be managed until then using a system of cost-based redispatch. At the same time, however, the redispatch effort should be constantly monitored so that, if particular thresholds are exceeded, it will be possible to move in time to preventive congestion management, such as market splitting. The Agency will therefore devise a system of monitoring so that it can find out the extent and the cost of the redispatch effort from every TSO. Surveyed then, in particular, will be the time and duration of redispatch measures, congestion levels and payments incurred.

Monitoring introduction of the congestion management guidelines

The Agency will also take a strong stance in 2008 on improving transparency in the European electricity wholesale markets. In 2007, the Agency was primarily concerned with drawing up the report on transparency in the regional electricity markets with German participation. Now in 2008, with reference to these transparency reports, the Agency will monitor implementation of the transparency rules in the guidelines that took effect in December 2006 on the management and allocation of available transmission capacity on lines between national networks. Implementation of the transparency rules means that in 2008, for the first time, harmonised data will be available on electricity generation and, in particular, on scheduled and unscheduled interruptions to generating units. The Agency will help steer this process and provide support if any obstacles arise. In Europe the Agency will focus its attention on seeing that the relevant data are published in all the regions involved in a harmonised manner.

Connection and access to electricity supply networks

In connection with questions of access to distribution systems, the Agency will propose a market-oriented procedure for ten-

dering for the loss energy needed. Under section 10(1) of the Electricity Network Access Ordinance, operators of supply networks must procure energy loss (transmission loss) in accordance with transparent, non-discriminatory and market-oriented procedures, unless fewer than 100,000 customers are connected to their distribution system. This will be done by tendering, provided there are no fundamental reasons for not doing so.

Following the preparation of and consultation on the publication duties presentation guidelines, work was completed on examining the responses and the guidelines were then published on 29 January 2008. The next step is to monitor the quality levels.

Much of the Agency's work will focus on examining the system status and system development planning reports according to section 14(1) in conjunction with section 12(3a) of the Energy Act (EnWG). Amid the ever increasing number of decentralised generation units, capacity requirements and the risk of congestion in the distribution network, too, are growing. The network operators will report on this in 2008 for the second time. A more comprehensive look is planned with the operators being given advance guidance on structuring the content of the reports. This brings the reports into line with those required from the TSOs. For the rest, securing expansion of the network so that it can respond efficiently to the growing transport requirements of the German electricity grid will be one of the main tasks in the coming year.

Another work item for the Agency will be to address issues of smart grid and smart metering development and integration. Amid the growing demands of energy efficiency, economic efficiency (reasonably priced energy supply) and environmental sustainability, intelligent solutions are needed for matters such as optimised operations to increase capacity and a system of smart metering and measuring. The Agency is involved in the introduction of metering and measuring liberalisation and the development of integrated smart grid concepts.

In this area, it will be possible to set priorities other than the determinations on procedures regulation we have already mentioned – in essence, matters of access regulation – only to a limited extent. That said, we may expect to be approached, as a matter of urgency, with questions of connecting power generating plant to different network levels, of the terms and conditions for connecting offshore wind turbines, in particular, and of standardising and simplifying the practice of collecting infrastructure contributions.

Access to gas networks

Reducing the number of market areas

Reducing the number of market areas will be another important work item in 2008. Section 20(1b) of the Energy Act requires the network operators, in the interests of promoting easy and efficient access, to reduce their market areas to a minimum. This will counter fragmentation and increase the zones in which market players can freely trade gas amongst themselves. The expectation is greater liquidity in the

gas trading markets. So far it has been possible, chiefly as a result of internal concentration, to achieve a clear reduction in the number of market areas. By the end of 2007 the number had been reduced voluntarily to eight. The Agency will continue to follow the process closely, stepping in to guide it where necessary. Further improvements will definitely require cross-company cooperation in the market areas. If voluntary reduction does not appear possible within the envisaged time, the Agency will have to take a decision on whether to achieve its goal by means of official procedures.

Control and balancing energy

Another important area in 2008 is control and balancing energy. The aim here is to flesh out the framework of section 22 of the Energy Act. A transparent, efficient and pro-competitive control and balancing system for the gas sector is to be created in agreement with the gas industry user and operator associations. Once we have clarified the main theoretical basis for the new control energy system, we will turn our attention to a practical implementation concept for its procurement, provision and billing. Then, when the new model structures are implemented, we will follow the stages voluntarily implemented by the companies, eg by way of amendments to the general cooperation agreement. We will also clarify whether, and if so, to what extent, official determinations are needed over and above this for a legally sound design of the control energy system.

Access to biogas distribution networks

New regulations on biogas feed-in are likely to take effect in the first quarter of 2008 as part of the implementation of the goals agreed by the federal cabinet in Meseberg. These new regulations will bring major changes to the legal framework, particularly as far as the arrangements for connection, accounting and avoided use of system charges are concerned. For the market players, putting these new regulations into practice will involve a greater need for discussion and consultation on the interpretation of the arrangements. The Agency expects that it might also need to play an advisory role in this.

Switching supplier

The Agency on 20 August 2007 issued a decision on uniform business processes, across the country, for changing gas supplier. This means that the rules by which a change of gas supplier is effected are now binding. Accordingly, the process is to be automated as far as possible and based on a uniform electronic data format.

The processes described (change of supplier, end of supply, beginning of new supply, etc) and the EDIFACT data format with the message types specified in the ruling are to be used as from 1 August 2008. The market players are thus required to develop and implement standardised EDP processes based on the detailed descriptions. Responsibility for timely provision of the data format rests with the network operators, who will need to coordinate this with support from the industry associations. Implementation will be supervised by the Agency,

which will step in to provide advice and support where necessary.

International affairs

On issues of gas market regulation, the Agency will be represented in the coming year too in the ERGEG and CEER working groups as chair and participant respectively.

Thus the Agency, in conjunction with the French regulatory authority CRE, will again chair the Gas Investment Framework Task Force. Work will focus particularly on updating the report on application of Article 22 of EU Directive 2003/55/EC (gas acceleration directive) in the individual member states.

Another focus of the Agency's work will be the Gas Capacity Task Force, which will be chaired jointly by the Agency and the Belgian regulatory authority CREG. Here, the Agency will be responsible chiefly for capacity allocation and congestion management.

The Agency will also provide input for the Gas Market Monitoring Task Force, the Gas Transmission Tariffs Task Force, the Gas Storage Task Force and the Liquefied Natural Gas Task Force.

Besides these activities for CEER and ERGEG, continuation of its work in the Gas Regional Initiatives has high priority. The Regional Initiatives aim to dismantle trade and transport barriers between the EU states initially at regional level, in order to facilitate the creation of a single market. Germany is a member of the North West regional gas market, along with the UK, France, Belgium, the Netherlands, Denmark, Sweden and Ireland. In matters of primary cross-border capacity the Agency is in charge of a sub-project which looks in detail at capacity-related processes at the Bunde/Oude Statenzijl (Germany – Netherlands) crossing point, with a view to their improvement.

In the European regulatory bodies, too, the Agency will provide specialist input for the Commission's proposed third energy package.

Duties arising from the Renewable Energy Sources Act

The First Act Amending the Renewable Energy Sources Act (EEG) gave the Agency new duties as from 1 December 2006. Accordingly, section 19a(1) calls for supervision of payments for electricity fed in from renewable sources (redistribution mechanism), supervision of publication duties and notification of the difference between payments for energy from renewable sources based on the Act and the average costs for purchasing electricity.

Connected with supervision of the redistribution mechanism is the duty incumbent on the electricity supply companies, DSOs and TSOs to provide comprehensive data to the Agency. In 2008 data will be requested, widening the 2007 survey, on 275,000 plants for the first time. This will make it possible to check the working of the redistribution mechanism.

Gas and electricity tariff regulation

Regulation by the Agency of the use of system charges is designed to promote effi-

cient service provision by the operators. Now that the charges approved in the first round expired as a rule at the end of 2007 in the electricity sector and at the end of March 2008 in the gas sector, the Agency is currently scrutinising the operators' new proposed charges in a second round of approvals. Charges will be approved until the end of 2008, ie until the introduction of incentive regulation. Any increases before that time must be applied for by the operators and approved by the Agency.

The publication duties set out in section 27 of the Electricity Network Charges Ordinance (StromNEV) and Gas Network Charges Ordinance (GasNEV) are intended to bring greater transparency to the energy market. Monitoring compliance with these duties is thus an ongoing task for the Agency.

Gas pipeline competition

The Agency is currently examining the notices from twelve operators stating that, under section 3(3) of the Gas Network Charges Ordinance, they are not required to set their use of system charges on a cost-oriented basis. The precondition for this is that the operators are exposed, for the most part, to effective or potential pipeline competition. It was not possible to complete the cases in 2007 as originally planned, due to the complex economic and legal checks required and the need to gather more information and market data. Completion is now scheduled for 2008.

RAIL

With regard to regulating access to rail infrastructure, the Agency will continue the work it began when it assumed responsibility on 1 January 2006. Following the consultations on partial privatisation of Deutsche Bahn AG (DBAG), the Agency has drawn up a number of proposals on how the existing legal instruments could be made more specific and how details could be changed. There is currently uncertainty about how matters will proceed, so that regulatory action will continue to be taken for the time being on the basis of prevailing law.

Tariff regulation

The pricing of rail infrastructure use is a central element of non-discriminatory access. Charges that are discriminatory, too high or that have a prohibitive effect may make the exercise of statutory access rights much more difficult, or encourage anti-competitive practices. The Agency therefore commissioned a legal opinion to clarify the charging issues in the General Railway Act (AEG) and the Rail Infrastructure Usage Regulations (EIBV). Its findings are the basis for an extensive review of the pricing components, enabling the Agency to monitor compliance with the criteria for pricing levels and to identify any discrimination.

Tariff regulation cases

Here, the Agency will be taking a close look at DB Station&Service's station pricing system and the path pricing system.

Investigation of these cases will also include the following:

- looking at compliance with the full cost benchmark (establishing the costs that have actually arisen, taking into consideration cost coverage by public subsidy),
- allocation of common costs,
- taking account of head office charges and internal prices in group companies,
- reviewing individual components and markups, regional factors in particular, and
- looking at service facilities environments.

Incentive regulation scheme

The legal opinion on charging also found considerably fewer price regulation arrangements in the rail sector than in other regulated areas, and proposed that the pricing regulations should be taken forward. At the proposal of the Federal Transport Ministry, the Agency thus set up a working group in mid-2007 comprising representatives of the Finance Ministry, the Transport Ministry, the Economics Ministry, the federal state ministries, DBAG, the Netzwerk Privatbahnen (Network Private Rail), the Verband deutscher Verkehrsunternehmen (Association of German Transport Undertakings, or VDV) and the Federal Cartel Office. The result of the group's work is a regulatory concept for future efficiency-oriented tariff regulation.

In it, the Agency recommends application of the price cap model. Taking account of the rate of price increases, the development of productivity, state subsidies and any other parameters, it sets a cap on the development of the regulated company's prices (incentive path) in the particular regulation period (three to five years) that stimulates efficiency and delivers suitable returns. If the company manages to reduce costs to a greater extent than specified, it can keep this efficiency gain. Price cap regulation also provides an incentive to sell more services and thus promotes the aim of getting more traffic on to the rail.

It is recommended that baskets of products be created, each with its own cap, eg one for paths and one for service facilities by traffic services in local passenger traffic, long distance passenger traffic and freight.

The Agency intends to take this concept forward, independently of the progress of DBAG's partial privatisation, under its symmetrical regulation, in order to provide the lawmakers with conceptual proposals. Responses to the final reports will need close attention in 2008.

The experience gained in the energy sector from introducing an incentive regulation scheme will feed into this process.

Incentives to lessen disruptions

Under section 21(1) first sentence of the Rail Infrastructure Usage Regulations, rail network operators must charge for their mandatory services in such a way that they offer railway undertakings and rail network operators incentives, through performance-related components, to lessen disruptions and enhance rail network efficiency.

DB Netz AG as the biggest rail infrastructure operator, introduced such an incentive

scheme on 10 December 2006, with its timetable change. Under the system, every delay longer than two minutes is registered by the infrastructure manager's service providers, along with particulars of the causing company and a delay code, and an incentive charge of €0.10 per minute of delay is paid by the causing company to the party concerned. A number of causes of delay stemming from the rail network (construction measures) are excluded. The category "no responsibility on the part of any party" is detrimental to the incentive scheme and runs counter to the intended effect of more efficient infrastructure use. Meanwhile, we have initial experience of the scheme, which we now need to assess. There are question marks in particular over how delays and their cause should be established, over concrete charging and how objections should be dealt with.

The Agency will help to refine such systems and to develop alternative models, if appropriate. Every track and service facilities operator is required by law to introduce incentives (section 24(1) of the Rail Infrastructure Usage Regulations).

Network and service facilities statements

Fundamental to access regulation is the preliminary examination of the network statement (SNB) and the service facilities statement (NBS) as part of preventive regulation.

The Agency in 2007 made a number of checks and raised various objections to the statements. As the statements are constantly being taken forward and are linked with operational and technical regulations, we will need to make further checks in future. New insights and conclusions from current court cases will inform the process.

Implications of construction measures for competitors

The Agency will step up its efforts to find out how users are informed about construction measures undertaken by the infrastructure manager before applying for train paths and how users' concerns are taken into account in planning. Just the extent of the construction measures planned for 2008 and subsequent years can have major implications for the competitive position of the users.

Infrastructure managers' European planning

As the rail networks in Europe become more integrated and cross-border traffic increases, national infrastructure managers are stepping up their efforts to implement cross-border train path allocation mechanisms and capacity planning. Along with the other national regulatory bodies, the Agency has the unchanged task of securing infrastructure access rights, notwithstanding these developments. In consultation with the European Commission it is seeking maximum transparency in all moves to realise and facilitate cross-border train path rights.

List of abbreviations

A

ACER
Agency for the Cooperation of Energy Regulators

ACTA
Allensbacher Computer- und Technik-Analyse

ADSL
Asymmetric Digital Subscriber Line

AEG
General Railway Act

AFuG
Amateur Radio Act

AGB
General terms and conditions

AGCOM
Italian communications regulatory authority

ARegV
Incentive Regulation Ordinance

ATM
Asynchronous Transfer Mode

B

BAFA
Federal Office of Economics and Export Control

BAPT
Federal Post and Telecommunications Office

BDEW
Federal Association of German Energy and Water Industries

BEMFV
Ordinance concerning the Controls for the Limitation of Electromagnetic Fields

BGBl
Federal Law Gazette

BGH
Federal Court of Justice

BKZ
Network costs contribution

BMAS
Federal Ministry of Labour and Social Affairs

BMF
Federal Ministry of Finance

BMI
Federal Ministry of the Interior

BMPT
Federal Ministry of Post and Telecommunications

BMU
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

BMVBS
Federal Ministry of Transport, Building and Urban Affairs

BMWi
Federal Ministry of Economics and Technology

BOS
Emergency organisations

BTOEltV
Federal Tariff Code for Electricity

BVerfG
Federal Constitutional Court

BVerwG
Federal Administrative Court

BWA
Broadband Wireless Access

BWFA
Broadband Wireless Fixed Access

BZA
Outbound mail sorting centre

BZE
Inbound mail sorting centre

C

CEE
Central Eastern Europe

CEER
Council of European Energy Regulators

CEN
European Committee for Standardization

CEPT
European Conference of Postal and Telecommunications Administrations

CERP
European Committee for Postal Regulation

CNSA
Contact Network of Spam Authorities

CP
Common Position

CR
Cognitive Radio

CRE
French energy regulatory authority

CREG
Belgian electricity and gas regulatory authority

CSE
Central Southern Europe

CUB TF
Competition and Unbundling Task Force

CWE
Central Western Europe

D

DBAG
Deutsche Bahn AG

DECT
Digital enhanced cordless telephone

DG
German Society for Deaf and Hearing-impaired Persons

DMR
Digital Modular Radio
Digital Mobile Radio

DPAG
Deutsche Post AG

DPIHS
Deutsche Post In Haus Service GmbH

DSL
Digital Subscriber Line

DTAG
Deutsche Telekom AG

DUSS
Deutsche Umschlaggesellschaft Schiene-Straße mbH

DVB
Digital Video Broadcasting

DVB-H
Digital Video Broadcasting-Handheld

DVB-T
Digital Video Broadcasting-Terrestrial

E

e
expected

EBC
Element based charging

ECC
Electronic Communications Committee

EDIFACT
Electronic Data Interchange For Administration, Commerce and Transport

EECMA
European Electronic Communications Market Authority

EEG
Renewable Energy Sources Act

EEX
European Energy Exchange

EFIS
ERO Frequency Information System

EG
European Community

EIBV
Rail Infrastructure Usage Regulations

EIU
(Rail) Infrastructure Manager

EMC
Electromagnetic compatibility

EMVG
Electromagnetic Compatibility Act

EMV-RL
Electromagnetic Compatibility Directive

EMVU
EMC and the environment

EnWG
Energy Act

EQS TF
Electricity Quality of Supply Task Force

ERG
European Regulators Group

ERGEG
European Regulators Group for Electricity and Gas

ETSI
European Telecommunications Standards Institute

ETSO
European Transmission System Operators

EU
European Union

EuGH
European Court of Justice

Eurostat
Statistical Office of the European Communities

EVU
Railway undertaking

F

FESA
Forum of European Supervisory Authorities

FreqBZPV
Frequency Band Allocation Ordinance

FTEG
Radio Equipment and Telecommunications Terminal Equipment Act

G

GasGVV
Basic Supply Ordinance for Gas

GasNE
Gas Network Charges Ordinance

GasNZV
Gas Network Access Ordinance

GDL
German engine drivers' trade union

GeLi Gas
Business processes for switching gas supplier

GHz
gigahertz

GIE
Gas Infrastructure Europe

GKG
Court Costs Act

GPKE
Business processes for supplying customers with electricity

GPRS
General Packet Radio Service

GSM
Global System for Mobile Communications

GSMR
Global System for Mobile Communications – Rail

GW
gigawatt

GWB
Competition Act

GWh
gigawatt hour

H

HDTV
High Definition Television

H-Gas
High Calorific Value Gas

HGB
Commercial Code

HGK
Häfen- und Güterverkehr Köln AG

HPA
Hamburg Port Authority

HSDPA
High Speed Downlink Packet Access

HSUPA
High Speed Uplink Packet Access

HVt
Main distributor

I

ICAO
International Civil Aviation Organisation

ICP
Interconnection Partner

ICT
Information and Communications Technology

IEB TF
Information Exchange und Benchmarking Task Force

IEC CISPR
International Electrotechnical Commission

IMT-2000
International Mobile Telecommunications-2000

IP
Internet Protocol

IPR
Intellectual Property Rights

IPRI
International Performance Research Institute

IPTV
Internet Protocol Television

IQ-C
International Group for Improving the Quality of Rail Transport in the North-South Corridor

IRG
Independent Regulators Group

ISDN
Integrated Services Digital Network

ISDN-PMX
Primary rate ISDN lines

ISO/IEC
International Organization for Standardization

ISP
Internet Service Provider

IT
Information technology

ITS
Intelligent Transport System

ITU
International Telecommunication Union

K

KeL
Costs of efficient service provision

KEP
Courier, express, parcel

kHz
kilohertz

KOM
European Commission

KraftNAV
Electricity Production Facilities Connection Ordinance

kV
kilovolt

KVz
Cable distributor

kW
kilowatt

kWh
kilowatt hour

KWK
Combined heat and power system

L

L-Gas
Low Calorific Value Gas

LNG
Liquefied Natural Gas

M

MessZV
Metering Access Ordinance

MHz
megahertz

MMS
Multimedia Messaging Service

MoU
Memorandum of Understanding

MRA
Mutual Recognition Agreement

MW
megawatt

MWh
megawatt hour

N

NAV
Low Voltage Connection Ordinance

NBS
Service Facilities Statement

NCAH
National Communications Authority Hungary

NDAV
Low Pressure Connection Ordinance

NE
Northern Europe

NGA
Next Generation Access

NGN
Next Generation Network

NotrufV
Emergency Services Access Ordinance

NRB
National Regulatory Authority

O

OLG
Higher regional court

OTC
Over the counter

OVG
Higher administrative court

OWP
Offshore windpark

P

PDLV
Postal Services Ordinance

PKI
Public Key Infrastructure

PMD
Radio monitoring and inspection service

PMR
Private Mobile Radio

PostG
Postal Act

PSTN
Public Switched Telephone Network

PUDLV
Postal Universal Service Ordinance

PZA
Service of documents

Q

QES
Qualified electronic signature

R

Reg TP
Regulatory Authority for Telecommunications and Post

RFID
Radio Frequency Identification

RL
Directive

RNE
Rail Net Europe

RRC-06
Regional Radio Conference 2006

RRL
Framework directive

RSC
Radio Spectrum Committee

RSPG
Radio Spectrum Policy Group

R&TTE
Radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity

S

SAR
Specific absorption rate

SDR
Software Defined Radio

SES
Société Européenne des Satellites

SGV
Rail freight traffic or transport

SigG
Electronic Signatures Act

SigV
Electronic Signatures Ordinance

SLP
Standard profile

SMS
Short Messaging Service

SNB
Network Statement

SPFV
Long-distance passenger rail services

SPNV
Regional passenger rail services

SRD
Short Range Device

SSB
Interface specification

StPO
Code of Criminal Procedure

StromGVV
Basic Supply Ordinance for Electricity

StromNEV
Electricity Network Charges Ordinance

StromNZV
Electricity Network Access Ordinance

T

TAL
Local loop

TC
Technical Committee

TCAM
Telecommunications Conformity Assessment and Market Surveillance Committee

TCB
Telecommunication Certification Body

T-DAB
Terrestrial Digital Audio Broadcasting

TF
Task Force

TKÄndG
Telecommunications Legislation Amendment Act

TKEE
Radio equipment and telecommunications terminal equipment

TKG
Telecommunications Act

TKV
Telecommunications Customer Protection Ordinance

TNV
Telecommunications Numbering Ordinance

TPS
Train path pricing

TR TKÜ
Telecommunications Interception Technical Directive

TW
terawatt

TWh
terawatt hour

U

UBB
Usedomer Bäderbahn GmbH

UCTE
Union for the Coordination of Transmission of Electricity

UGB
Environmental Code

UIC
International Union of Railways

UKW
Very High Frequency (VHF)

UMTS
Universal Mobile Telecommunications System

UN
United Nations

ÜNB
Transmission system operator

UPU
Universal Postal Union

URB TF
Unbundling, Reporting and Benchmarking Task Force

URL
Universal Service Directive

UWB
Ultra Wide Band

UWG
Unfair Competition Act

V

VDSL
Very High Speed Digital Subscriber Line

VDV
Association of German Transport Undertakings

VfOSchli
Amended rules of procedure

VG
Administrative court

VKU
Association of Local Utilities

VO Funk
Radio Regulations

VoIP
Voice over Internet Protocol

VwGO
Code of Administrative Court Procedure

VwVfG
Administrative Procedures Act

W

WAPECS
Wireless Access Policy for Electronic Communication Services

WAR
Specialist group for regulatory issues

WIK
Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste (consultancy)

WIMAX
Worldwide Interoperability for Microwave Access

WLAN
Wireless Local Area Network

WPV
Universal Postal Union

WRC-07
World Radio Conference 2007

Z

ZDA
Certification service provider

Contact points

Practical information and help for those seeking advice

Please use the contact points below for queries on the following:

General questions on telecommunications, post and rail
Tel: +49 30 22480-500
Fax: +49 30 22480-515
verbraucherservice@bnetza.de

General questions on gas and electricity
Tel: +49 30 22480-500
Fax: +49 30 22480-515
verbraucherservice-energie@bnetza.de

Number misuse, diallers and telephone spam
Tel: +49 291 9955-206
Fax: +49 6321 934-111
rufnummernmissbrauch@bnetza.de

Number management
Tel: 0180 3 686637*
nummernverwaltung@bnetza.de

Number information rights
Queries on 0137 and 118 numbers
Fax: +49 6131 18-5637
E-mail for 0137 numbers:
nummernauskunft-137@bnetza.de
E-mail for 118 numbers:
nummernauskunft-118@bnetza.de
Queries on 0180 numbers
Fax: +49 5231 913-180
E-mail for 0180 numbers:
nummernauskunft-180@bnetza.de

Radio interference
Tel: 0180 3 232323*

Publications dispatch
Tel: +49 361 7398-272
Fax: +49 361 7398-184
druckschriften.versand@bnetza.de

*9ct/min from the fixed network; other prices possible for calls from mobile networks

Published by
Federal Network Agency for Electricity, Gas,
Telecommunications, Post and Railway
Press and Public Relations
Tulpenfeld 4, 53113 Bonn
Tel: +49 228 14-9921
Fax: +49 228 14-8975
pressestelle@bnetza.de
www.bundesnetzagentur.de

Responsible within the meaning of press law
Rudolf Boll

Edited by
Renate Hichert
Linda Sydow
Ulrike Weller

Layout
heimbüchel pr, Berlin/Cologne

Printed by
B.o.s.s Druck und Medien GmbH, Goch

Date of going to press
29. February 2008

Images
Bundesnetzagentur/Christian Dalchow;
istockphoto.com/Jacob Wackerhausen;
PantherMedia/Ludger B., Alfred N.,Viktor W.;
Sarbach Fotografie; Suk-Heui Park; ullstein bild/
Imagebroker.net

Agency's Annual Report 2007 under
section 122 of the Telecommunications Act

**Federal Network Agency for Electricity, Gas,
Telecommunications, Post and Railway**

Tulpenfeld 4
53113 Bonn
Tel: +49 228 14-0
Fax: +49 228 14-8872