

VATM key arguments and key demands for an efficient expansion of broadband infrastructure in Germany

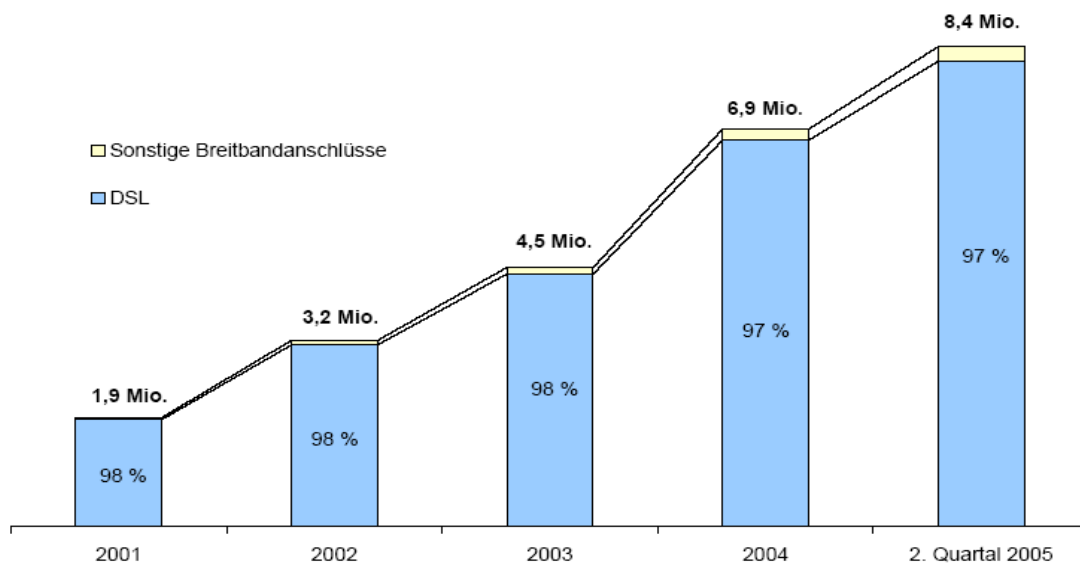
Position Paper on the upgrade of Deutsche Telekom AG's glass fibre network



Broadband Provisioning is an Important Factor for Competition of Market Places

Broadband connections for the use of communications technologies with high data transfer rates are an important economic factor. The quality of broadband provisioning has an effect to the private and commercial sectors for the cities and municipalities competing for business. Moreover, there is a consensus in politics and economy that the international competitiveness of Germany is significantly shaped by the further set-up and roll out of broadband infrastructure.

Table 11: Total broadband connections in total and share of DSL technology



Blue part of the column: DSL
Yellow part of the column: Other broadband connections
Source: DIALOG CONSULT-/VATM Analysis and prognosis, September 2005

In 2005, Regulation Furthering Broadband has Lead to Improved Broadband Provisioning

The quota of broadband provisioning in Germany has significantly grown in 2005. The number of connections has increased from 6.9 million in 2004 to 8.4 million in mid 2005. A further

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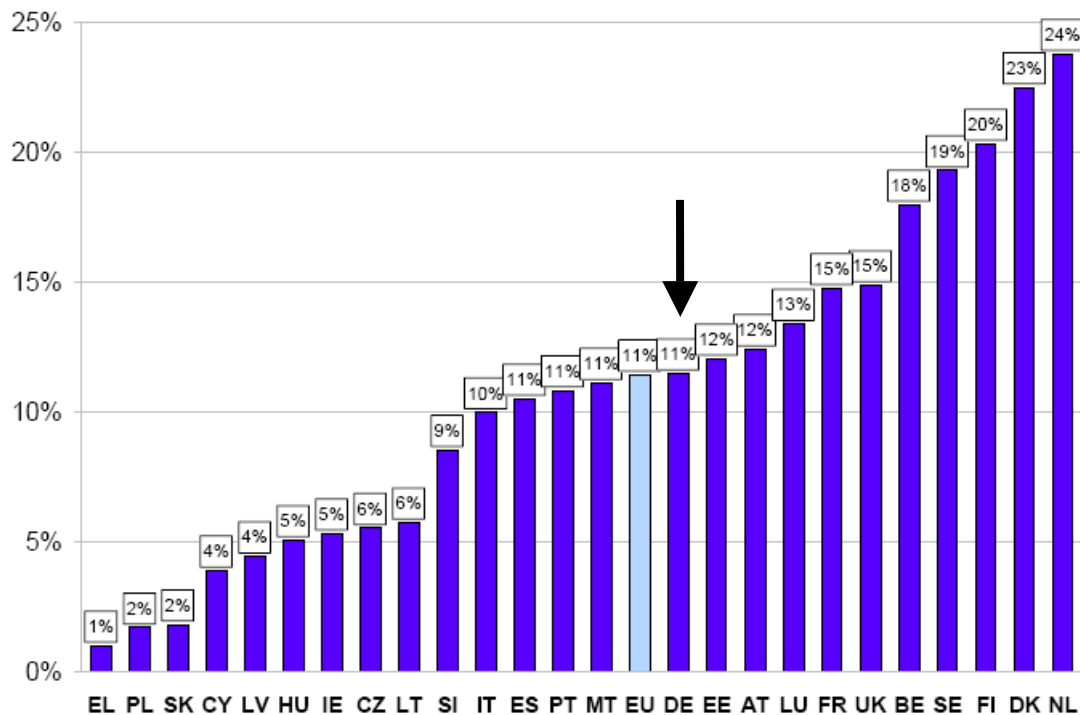


increase to up to 10.2 million connections by the end of 2005 has been projected – due to an improved regulatory framework that furthers competition.

Germany must catch up with the top nations that are competing internationally for the best places to invest

In spite of this generally positive development, Germany must still catch up significantly with other EU countries. As it demonstrated by the current EU benchmark figures, Germany's rate of broadband connections per 100 inhabitants has tumbled within one year from the average of the 15 ("old") EU Member States down to the average of the 25 (including the "new") EU Member States and is ranking far behind the other large industrial nations.

EU Broadband penetration rate, 1 October 2005



Source: Commission services based on COCOM data

“EU” = EU 25 ; the value for EU 15 is 13%
 Broadband connections per 100 inhabitants
 DE = Germany

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Economy and politics have both declared that catching up in this area is a key goal so that Germany makes it back to the top of the European industrialized nations. This requires a legal and regulatory framework that strengthens competition in this market. It is a fact that in countries where regulatory authorities closely follow the goal of enhancing competition in the telecommunications sector, there are more investments for the expansion of broadband infrastructure.

Competitors have pushed investments forward

Since 2000 competitors in the telecommunications markets have invested far more than € 10 billion in the area of fixed networks alone. Provided that a regulatory framework furthering competition will be maintained, one can expect additional investments with a volume of approximately € 8 billion until 2010 as projected from the current investment level.

Reacting to the investments of the competitors and the massive expansion of broadband networks by the competitors going along with it, Deutsche Telekom AG ("DTAG") has announced a build-out of its glass fiber network with an investment volume of more than € 3 billion over the next few years. DTAG aims at expanding the glass fiber network in the 50 largest urban and metropolitan areas beyond the Main Distribution Frames (MDF) down to the level of the branch nodes (KVz) –moving it significantly closer to the end users. Due to the shorter copper part in the line, DTAG will be able to reach transmission rates of 50Mbit/s while deploying so-called VDSL technology. As "consideration" for these investments, DTAG, which has been and remains market dominant, demands that politics refrain from regulating these network parts.

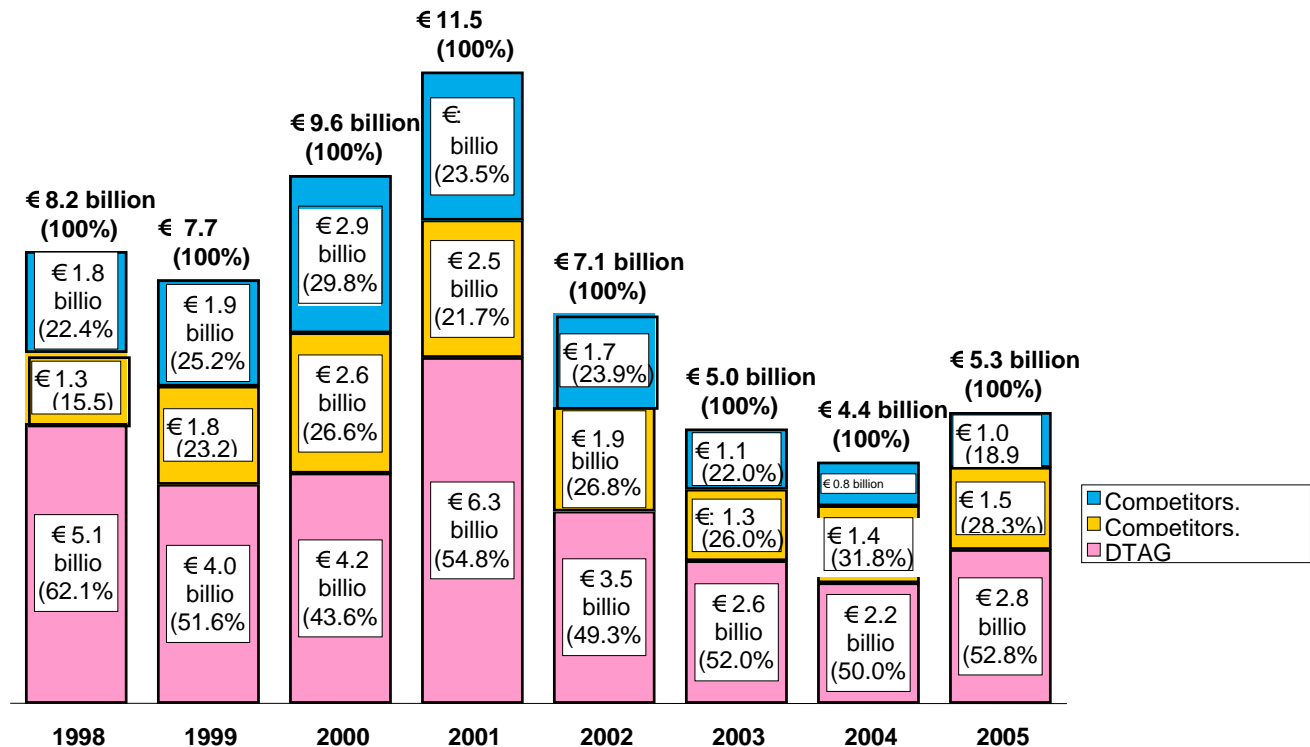
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Investments in fixed assets increased again in 2005 for the first time in four years – with the competitors and Deutsche Telekom each accounting for one half of the total.

Table 4 - Investment in assets:



Source: DIALONG Consult – VATM analysis and prognosis, Cologne 09/26/05

Prevent a Re-monopolization of the Broadband Market

If regulation were lifted, a re-monopolization of the broadband market would be an unavoidable consequence. The reason is that unlike the competitors DTAG can rely on monopoly structures that it has developed over decades for expanding its glass fiber network. Unless the competitors have appropriate access to these monopoly structures – of course for a fair fee ensuring a profit margin for DTAG – the competitors won't be able to offer their own competitive services to the market.

Rely on Tested Principles

A re-monopolization of the broadband market would have far-reaching macroeconomic effects for the economy and for the consumers. The investments made by the competitors throughout the last years would be stripped of their value and future investments in the billions to expand broadband infrastructure (an additional € 8 billion until 2020) would be prevented. This would significantly undermine the trust of national and international investors in Germany as a place for doing business.

Moreover, lifting the regulation in favor of a company that is still dominant in the market would mean turning away from well-established economic and political principles: the goal of the liberalization has always been and still is the opening a telecommunications monopoly that has existed for many decades and that has been hostile to innovation, to increase efficiencies and to lower the prices for individual communications services that are tailored to the needs of the consumer. It would be absurd and run afoul with all reliable political principles furthering investments to get rid of old monopolies with the support of regulatory authorities throughout Europe, while at the same time leaving new monopolies in innovative new markets untouched.

In this sense, the Scientific Working Panel for Regulatory Questions (*Wissenschaftlicher Arbeitskreis für Regulierungsfragen –WAR*) advising the Federal Network Agency (Bundesnetzagentur) states beyond all reasonable doubt in its “Position Paper regarding the project glass fiber expansion of the access network by Deutsche Telekom”, dated December 14, 2005, that the planned glass fiber expansion must be regulated from its beginning (*ex ante*) for economic and legal reasons to enable and strengthen competition in the areas of infrastructure and services.

Ensuring a framework that favors investments for all market participants

A positive development of Germany as a place that welcomes investment and the expansion of broadband networks that is needed to reach this goal calls for a regulatory regime that

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encourages and promotes investments of all market participants, sets incentives for innovations and ensures non-discriminatory prices in favor of the consumers.

Key Statements and Key Demands to Ensure an Efficient Expansion of Broadband Infrastructure in Germany

- The competitors in the telecommunications market favor a speedy expansion of broadband infrastructure.
- The competitors continue to be prepared to invest in an expansion of broadband infrastructure. However, this requires a framework of conditions that does not unilaterally shield investments of a single company from regulatory interference at the detriment of the other market participants. It is in particular crucial in this context that the planned VDSL expansion does not interfere with the ability and the service quality for access at the MDF.
- Technology-neutral access to all network components that base on monopoly structures and cannot be mirrored by competitors economically must be safeguarded.
- Given that business models of the competitors vary significantly, it is essential that the various access methods (access to the branch node, to cable shafts and ducts, to glass fiber, bit stream access, resale) be safeguarded cumulatively. If the access charges for each carrier product are balanced and cost-oriented and include a rate of return that is in line with the risk of DTAG, DTAG's demand for sufficient planning and investment certainty will be accommodated. In total, the creation of a leveled playing field for competition will be beneficial to the infrastructure investments of *all* market participants. Only this approach will boost broadband provisioning in Germany, compared to other EU countries, attract more investment, more innovation and more consumer-friendly products.
- Access to essential facilities is demanded. It is crucial in this context that all rates and charges for wholesale products for VDSL offers are consistently balanced, to ensure an equal playing field for competition:

1. Investment in access to monopoly structures and to glass fiber

Ensuring that the competitors have access to the DTAG infrastructure that stems from the time when DTAG was a monopolist for their own investments is a crucial demand. In addition to the access right that competitors currently already have “at” the branch node (“KVz”-- the node that connects the Main Distribution Frame with the Subscriber Distribution Interface), they must also be allowed to obtain access “in” the KVz because this also means access to an essential facility that, for factual reasons and due to its costs structure, forms part of a natural monopoly.

Specifically, DTAG should be obliged to grant access to the KVz in order to gain access to the unbundled loop. This must include an expansion of the existing KVz so that it can connect with a KVz access cable, and it must host the active technical equipment that the competitors need to gain this access. This necessitates that DTAG be obliged to build-out its KVz to create collocation space at the KVz for the competitors.

Alternatively, the competitors should also be allowed to install their own KVz that could be used for collocation. Furthermore, competitors should be allowed to use the electrical supply (AC or DC) for all access modes.

Competitors should also be able to connect the KVz with their network nodes. For this purpose, they also need access to the DTAG cable shafts and ducts (to install their own cables) or to already existing glass fiber - on equal terms, under non-discriminatory conditions and based on the cost of efficient provisioning of the service. The cable shafts and ducts of DTAG are part of the infrastructure that comes from the time when DTAG was a monopoly – its replication does not make economic sense and, in any case, it is not possible that competitors mirror this infrastructure under economic conditions. Creating this access to cable shafts, ducts and fiber in the KVz would consequently extrapolate today’s already existing rules to cover DTAG’s new network configuration and would ensure access to newly emerging hybrid loops. The regulatory situation is therefore very similar to the

regulatory environment during the 1990s in areas in Germany with “ISIS-OPAL” glass fiber.

2. Investment in Access via Bitstream Access

The draft notification of the Federal Network Agency “BNetzA” regarding Market 12 has been revised, due to a Serious Doubts Letter of the European Commission to ensure that VDSL is now part of Market 12, provided that the VDSL-based services can be substituted by ADSL, ADSL2+ and SDSL. If BNetzA comes to the conclusion that VDSL cannot be substituted by other xDSL variations, the consequence cannot be that VDSL is not covered by regulation at all. Rather, this classification must lead to a review of the current market definition.

Calling for a revised market definition can be deduced from the generally accepted definition of Bitstream Access. The definition of Bitstream Access by the European Regulators Group (ERG) and the definition used by BNetzA clearly confirm that VDSL end customer services fall under Market 12. A revised market definition and market separation from the resale markets, in case that there is no substitutability, could be as follows: In addition to the xDSL mass market products and xDSL products with guaranteed quality parameters, one could establish another resale sub-market for VDSL services with very high bandwidth and quality (a High-end-DSL Resale Market). The definition of such a third sub-market would also have the advantage that T-Com, the subsidiary of DTAG, as the market dominant entity could profit from the allocation of a fair risk premium for its VDSL investments. This premium would be reflected by higher resale rates in connection with the charges that are fixed *ex ante*.

In order to further competition in infrastructure, it is necessary to provide for the following access points: at the MDF, at the concentrator network (at the ATM concentrator network and at the IP concentrator network).

In addition, competitors should have access to DTAG'S DSLAMs. A possible solution could be, for instance, that competitors operate a card within DTAG's DSLAM and share the costs of the infrastructure that they use *pro rata*.

To sum up, resale products for bitstream access must accommodate the demands and must be offered early enough so that the competitors can bring their end customer products to the market at the same time as DTAG offers its own service. For instance, if DTAG determines to set up decentralized or regional server structures for IPTV or for Video on Demand services, the competitors must also be granted non-discriminatory access to these servers and concepts so that they can develop their own competitive services.

3. Resale Offers Accommodating the Requests

It is necessary that DTAG offers its competitors resale products from the start that mirror the competitors' requests, including the products that are necessary to bring the traffic to the access points. The resale product must enable the competitors to resell VDSL connections and the services that base on such connections under their own names, on a non-discriminatory basis, and at the same time as T-Online, DTAG's subsidiary. These services must include, in particular, the necessary transport services. If DTAG or T-Online use, for instance, regional content platforms, in order to save costs and to ensure the necessary quality of service, a resale of these services must be possible on a non-discriminatory basis at the same time.

Resellers must also obtain a resale rebate for these services; the resale rebate must be high enough to cover the reseller's own costs and must ensure a proportionate return of investment for the reseller. Any margin squeezing between DTAG's/T-Online's end

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customer rates and the resale rebates must strictly be avoided. At the same time, the resale conditions must be consistent in reflecting the terms and conditions that infrastructure-based providers offer for their carrier services, which will level the playing field between the infrastructure-based providers and the resellers.

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