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DISCUSSION PAPER

Corporate Strategies in the Telecommunications Sector in an Environment of Continuing Liberalization

Christine Borrmann

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Christine Borrmann

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Abstract

The article refers to the interplay between deregulation resp. liberalization of the telecommunications sector and the market behaviour of TC-firms. In the past monopolization of the sector left the PTTs in a comfortable national monopolistic situation, but substantially confined their scope of action on the international level. So the internationalization strategies of TC-firms played an essential part in realizing the process of deregulation – besides technological developments and the globalization of demand.

Though the new deregulated framework has boosted expansion into new markets, in most countries there still remain some relics of public influence hindering market access on national and international level and impeding the firms´ strategies. The article analyses the main developments of the market behaviour of TC firms, using the new chances and defying the remaining deficiencies of the regulatory system. Finally it raises the question if the emerged market structure, characterized by high and still increasing concentration of power, requires or might in the near future require some correction of the rules.

Zusammenfassung

Der Beitrag behandelt das Wechselspiel zwischen der Deregulierung bzw. Liberalisierung des Telekommunikationssektors und den Unternehmensstrategien. In der Vergangenheit führte die Regulierung des Sektors zwar zu einer komfortablen Monopolstellung des nationalen Champions, gleichzeitig wurde jedoch der unternehmerische Handlungsspielraum stark eingeengt. Die Internationalisierungswünsche der TC-Unternehmen haben – neben der technologischen Entwicklung und einer Globalisierung der Nachfrage – den Deregulierungsprozess stark beeinflusst.

Wenngleich der liberalere Ordnungsrahmen die Expansion in neue Märkte stark gefördert hat, sind immer noch in vielen Ländern Relikte des staatlichen Einflusses erkennbar, die den Marktzutritt auf nationaler und internationaler Ebene und damit die Unternehmensstrategien behindern. Der Beitrag untersucht die wichtigsten Verhaltensmuster von Telekommunikationsunternehmen angesichts dieser Bedingungen und geht der Frage nach, ob die entstehenden, durch wachsende Machtkonzentration gekennzeichneten Marktstrukturen eine Anpassung der Wettbewerbsregeln erforderlich machen.

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INTRODUCTION

There are a number of phases in the interplay between deregulation, or liberalization, and the strategies adopted by companies:

- In the past, the scope for free entrepreneurial action was substantially constrained by the public monopolies in the sector. On the other hand, the liberalization and deregulation of the market was partly influenced and driven forward not only by technological factors but also by the strategies of the businesses operating in the market and the shifting patterns of demand they in turn were faced with.

- The fundamental reforms in the frame conditions have themselves had a deep-seated impact on companies' behaviour, and some part in this is also played by relics of the earlier, regulated system.

- Finally, the shifts in market structure generated by changes in corporate behaviour pose new questions for national and international policy-makers, as to whether the deregulation they have introduced is qualitatively and quantitatively adequate, or other areas of economic policy, such as competition policy, might require further adjustment.

1 Deregulation and Liberalization as Preconditions for National and International Competition in the Telecommunications Sector

Until at least the mid-1980s, the strategies of most European companies in the industry were tightly restrained by regulation on a number of levels. In each incumbent's own domestic market, the overriding feature was its obligation to serve the public: organizational patterns typical of a public authority left little scope for flexibility, and its status as a monopolist normally provided little incentive to be competitive on price, quality or innovation. At the same time, there was little scope to pursue strategies to extend a company's international reach, e.g. via direct investment abroad. Indeed, some countries such as Japan, South Korea and the Federal Republic of Germany[1] actually prohibited

1 Until the second phase of the postal reforms, see *Ruhle* 1996, pp. 73.

their operators from investing in operating activities abroad, and even in countries where this did not happen there was still little economic incentive to cross borders. Foreign markets were normally themselves monopolies and hence closed to other operators, while national incumbents had agreed a set of standardized charges via the ITU which ruled out any strategies based on export growth.

Under these circumstances, telecommunications markets remained remarkably stable for a long period: governments benefited from the substantial revenues they received by controlling their public telecommunications operators (PTOs) (*Clegg* and *Kamall* 1998, p. 47), while the operators themselves and their appointed suppliers reaped monopolists' rents. However, during the mid-80s external influences began to upset the status quo, forcing companies to completely change their behaviour:

- To penalize the country's private-sector monopoly operator, AT&T, for abusing its market power, anti-trust authorities in the United States ordered that the company be broken up into a number of regional suppliers that were forbidden to expand nationally and thus had every incentive to seek international expansion. The British government was next to move, imposing competition by setting up a second fixed-network operator. This pointed up the benefits of competition in the telecoms sector for the economy as a whole.

- In 1988, the EU began to compel its member states to open up their services and equipment markets, primarily for the purpose of creating a single market in these items throughout the Community.

- Europe's national governments were initially rather hesitant to privatize their national carriers, and most of them, while equipping their operators with the same management structures and legal status as private-sector companies, retained total or partial state ownership. The privatization process allowed telephone providers both to behave competitively in their domestic markets and to engage in foreign markets, including the freedom to invest abroad.

- Privatization was followed up by moves to open up the previously protected home markets to competitors from home and abroad; by this time, there was also a growing conviction that, in the new overall environment, liberalization was a vital in-

gredient in upholding the competitiveness of telecommunications as such and of o-ther businesses further downstream.

In addition to the changes in their overall market environment brought about by de-regulation and liberalization, and the emergence of both national and international com-petition, corporate strategies have been shaped by two other major factors, namely tech-nological change and the increasingly international dimension on the demand side.

There has been unprecedented acceleration in the pace of technological change in the telecommunications sector since the 1980s (*Graack* 1997, pp. 32; *Barth* 1998, p. 33; *Mößlang* 1995, p. 224). New challenges to telecommunications companies have come especially from advances in microelectronics, the digitalization of transmission systems, new data-compression techniques and the development of high-performance transmis-sion lines.[2] The challenges are essentially these:

- Capital-expenditure needs are increasing, while investment risks are also growing due to shorter innovation cycles.

- Technologically determined economies of scale mean that companies need to be large enough to exploit these – thus a company with just a small domestic market may be forced to expand abroad.

- Markets that used to be distinct are now blending together: The boundaries between telecommunications segments such as data and voice transmission, fixed networks and mobile telephony are now becoming blurred, and the telecommunications sector as a whole is becoming increasingly reliant on input from information technology and on media content. The Internet's growing footprint is creating a totally new market that has feedback impacts on many traditional ones.

On the demand side, telecommunications companies face growing customer require-ments. In particular, large companies operating in several countries do not want the in-convenience of having to coordinate a variety of country-specific services, so operators are finding themselves forced to follow these customers into foreign markets and to

2 Fibre-optic technology, in particular, has vastly increased the capacity of the telecommunications infrastructure almost overnight. See Financial Times, 26th April 1999: "Making connection", and 19th May 1999: "Clearer than the Bells".

offer them a seamless network of telecommunications services from a “one-stop shop” (*Paterna* 196, p. 90).

2 New Corporate Strategies in Response to an Altered Operating Environment

For the companies operating in the reformed telecommunications market, the overall entrepreneurial objective of long-term profit maximization boils down to the following main trends. The incumbent former monopolists seek to uphold their market share as best they can while also using their market knowledge and their technical base to assert themselves in the new service areas. Meanwhile, their new competitors seek to carve out their own share of the most lucrative fields in the established market at the dominant operator’s expense, and also to use their flexibility and creativity to occupy new market segments. These objectives give rise to a number of strategic alternatives:

- The first thing a company needs to do is to decide on which levels it wishes to add value. It can act as a network operator, a service provider or both, and each of these two levels offers numerous fields of activity, whether wholesale (carrier-to-carrier) or retail (i.e., through to the end user).

- Then, within a chosen product market, there are again various strategic options a-vailable, which can be summarized within the categories of pricing policy, distribu-tion (using the firm’s own channels or outside distributors), focus on individual or corporate customers, and product positioning and/or differentiation, also including the introduction of new products.[3]

Finally, all companies in the sector need to decide whether they want to expand abroad or to concentrate on their domestic markets, and if they do choose to internationalize, the actual target markets and route of entry are themselves the object of strategic deci-sion-making. Because of their particular importance, especially at the present time, these internationalization strategies will be examined in their own section.

3 On this classification system, see *Gerpott* 1998.

2.1 *Impact of de- or re-regulation on the choices of value-adding level and of product market*

Value-adding level

First and foremost, the choice of which value-adding level to operate at, or the issue of whether and to what extent a new market entrant should – or must – establish its own network, will depend on the company's judgement of the trends in demand[4] and technology.[5] However, the company cannot have such a strategic choice unless the right regulatory environment is in place. Put more specifically, the new entrant will only be able to freely choose on what level it adds value if the incumbent network operator(s) does or do not monopolize the market, or if open access to the network(s) is assured by the facility to lease lines or to interconnect different networks.[6] These choices for or against establishing new networks apply not only to new market entrants but also to companies already operating that wish to diversify their product range.

The network monopoly has now been broken down in virtually all western industrial countries; in Germany's case, the big change was ushered in by the 1996 Telecommunications Act. The establishment of alternative networks which will both complement and compete with those of the incumbent is not only permitted but actually encouraged. Nevertheless, a decision to develop a network is still heavily dependent on the regulatory system.

In all instances, any company wishing to enter the telecommunications market must obtain a licence to do so. In **fixed-line telephony**, this is not a serious obstacle to market entry in most OECD countries, though the formal entry procedures and the speed at which they are carried out will differ from one to another. There are only a few countries – notably Japan, Mexico and Spain – in which restrictive licensing procedures also apply to the fixed-line markets (*Neu* et al. 1999, p. 22; *Ypsilanti* 1999, p. 7). In Germany, licences for fixed transmission lines are issued on application without any re-

4 The growing demand for telecommunications in general and data communications in particular, also substantially fuelled by the explosive growth in Internet use, translates into a growing demand for network capacity, which means both upgrading existing networks and laying new, high-capacity lines in addition to these.

5 Also important is the size of the company: small, regional service providers do not realistically have the option of establishing their own networks.

6 Providers of mobile telephony also need to interconnect with local loops to reach fixed line users, and they use leased lines to transmit calls. See *Langenfürth* 2000, pp. 112-13.

striction; by the end of the first half of 2000, a total of 559 licences had been awarded, of which 19 applied nationwide (Regulierungsbehörde 2000, p. 34).

The situation is quite different in the **mobile telephony** sector: because of the scarcity of frequency spectrum, licences are an essential regulatory instrument to constrain would-be providers. Under the GMS standard that has so far applied to mobile telephone operators in Europe, most licences were awarded using a comparative evaluation method, better known as a "beauty contest". Although successful applicants did not face high licence charges, they **did** need to carry out extensive preparatory work and present business plans, including network roll-out targets, investment targets, usually also partnerships with local companies, and so on (*Ypsilanti* 1999, p. 8). Since the authorities awarding the licences were normally keen to attain blanket coverage by these services as soon as possible, this left small-scale providers virtually without a chance if they bid on their own. This tendency has been severely exacerbated in the process of awarding the UMTS licences for the third generation of mobile telephony. Both for reasons of efficiency and because of the positive impact for government budgets, most countries have now switched to using auctions as the means of allocating scarce spectrum.[7] The record prices recently established for a "3G" mobile network licence[8] combined with the high cost of actually setting up the network virtually bar smaller providers from any access to this market of the future.[9] Established mobile network operators have an additional advantage in that they can reuse parts of their existing networks to keep down both the cost and the time needed to build up a new one. This applies all the more if – as is the case in Germany but not in Britain – there is no law to guarantee new entrants a right to use established operators' networks for a fee during a transition period while they build up their own networks.[10] More than ever, then, the strategic option of acting as a network operator in the mobile telephony market is exclusively reserved for really big companies, or for consortia of several medium-sized ones with strong financial backers. The better route for smaller firms is to act as service providers without their

7 In Europe, Sweden, Finland, Ireland and Portugal have stuck to the original approach of holding "beauty contests", while France, Norway and Italy have adopted a hybrid approach. See Financial Times, 18th August 2000: "A reason to celebrate may be hard to find", and Handelsblatt, 7th June 2000: "Vier UMTS-Lizenzen für Frankreich".

8 In Germany, two out of twelve frequency bands allotted cost approx. €8.45 billion – see Financial Times, 18th August 2000: "A reason to celebrate may be hard to find". The average cost of a similar licence in the UK auction was €7.5 billion. The UMTS licences auctioned in the Netherlands were cheaper by comparison, topping out at €714 million.

9 Germany's Mobilcom, a relatively small service provider, is one exception, though it does have the financial muscle of France Télécom to back it up.

10 Handelsblatt, 25th July 2000: "Die Neueinsteiger sind im Nachteil".

own cellular networks. However, even in this market segment the smaller companies are under threat from the network operators' increasing efforts to reach customers directly.[11]

Apart from the terms and the cost of the licences themselves, the main factors determining a company's decision for or against establishing its own network and, if it does so, how extensive it should be, are the terms and conditions on which it could access the existing network.

Most industrial countries (and especially the US, France, the UK and Japan) tend to apply a regulatory model with an infrastructure bias: by stipulating infrastructure requirements when issuing licences or approving interconnections, for example, they create incentives to establish parallel network infrastructures. By way of contrast, the system in Germany is designed more to create competition on prices and services by assuring cost-driven pricing (*Neu* et al. 1999, p.21). If leased lines are relatively cheap, and interconnection charges are also reasonable, coupled with limited requirements on companies to provide their own infrastructure,[12] their incentive to establish such infrastructure is relatively lower.[13] Nevertheless, many providers which, in extreme cases, might have started out with just a single switch into a trunk network, tend as their traffic increases to develop their own network for the sake of assuring service quality, thus developing successively from being a reseller to a genuine network operator.

Choice of product market

A company's product market strategy[14] is largely a function of its assessment of demand and technological trends.[15] Market opportunities in particular, though, are heavily dependent on the regulatory situation:

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11 In Germany, the proportion of mobile users signed up with service providers not operating their own networks had declined from 62% at the end of 1993 to just under 30% by summer 2000 – see Handelsblatt, 4th September 2000: "Der Kampf um Handy-Kunden geht ins Geld".

12 When infrastructure requirements are imposed, prices are usually scaled according to the number of switches the new operator is able to contribute: the more switches are on hand or the larger the network seeking the interconnection, the lower the fee.

13 Germany's interconnection charges are relatively low on an international comparison, as is the required number of switches (23). In 1998, Italy called for at least 33 switches, and Spain 50, before a company could earn classification as a network operator. See *Wilfert* 1999b, p. 207.

14 The choice of product market is not just an issue for market newcomers: company's that are already established also need to currently review their positioning. To take a classic example, one of the major issues that acted as an obstacle to Vodafone's takeover offer for Mannesmann at the end of 1999 was whether it is a good idea to focus entirely on mobile telephony (the Vodafone view) or to take a twin-

- Licences to access the market are generally easy to obtain for fixed lines, and the requirement may go no further than the lodging of a formal application.

- More difficult for the new entrant than gaining market access as such is asserting a position in markets already occupied by an incumbent. The new company's prospects will initially depend on customers' willingness to bear the costs (defined by the regulatory authority) of changing their provider, and on how complex the process of making the change is – especially whether 'phone numbers are "portable" and at what price.

- Another determinant of market opportunity is how much scope the incumbent is allowed in its pricing policy. Is the former monopolist in a position to keep new competitors out of its markets by holding final prices low but access prices high?

In contestable markets offering unrestrained access, not involving sunk costs and with no customer preference for particular providers, the incumbent would not have any chance of succeeding by using the latter tactic, as it would encourage new competitors to try to "hit and run". However, these conditions only pertain in a small number of market situations, such as when customers have free, call-by-call access to service providers. For that reason, even after deregulation the incumbent in most countries is still required to obtain regulatory approval for its prices – either **ex ante** or **ex post**[16] – to improve the chances of new suppliers in the marketplace.

Another factor that can influence the market prospects of new market participants stems from the universal service requirements still stipulated even in liberalized telecommunications markets, largely to serve the needs of regional policy or to encourage equitability in living standards. Such influence will be all the stronger, the more extensive the public-service obligations imposed upon operators[17] (*Langenfurth* 2000, p. 97). If the

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track approach and work towards synthesizing mobile and fixed-line operations (the Mannesmann approach).

15 At the end of the day, it is impossible to separate the strategic product market decisions from those addressing the establishment of networks. On the one hand, the choice of a given product market generates infrastructure requirements while, on the other, once a network is established a company normally goes on to offer appropriate services. Some classes of operator, such as network resellers, are an exception to this rule.

16 In Germany, Deutsche Telekom has so far been required to obtain advance approval for its prices, whereas in Scandinavia the monitoring is done only on an *ex-post* basis. On the precise German requirements, see *Gerpott* 1998, pp. 91.

17 These obligations normally cover voice telephony, a directory enquiries service, telephone books and public telephones. Cf. *Gabelmann* and *Gross* 2000, p. 4.

obligations apply to the former monopolist only, that may offer competitive advantages to newcomers: the incumbent, in a liberalized market, will no longer be able to fund its universal service by cross-subsidizing, because new competitors will move in to “skim off the cream” in the market segments where it used to earn the profits used for subsidizing purposes (*Langenfurth* 2000, pp. 118). If, on the other hand, the obligations apply to all operators, that will place newcomers at a disadvantage if they have less financial muscle and a smaller customer base on which they can build. However, both effects are diluted in most countries by the fact that operators subject to universal service obligations are also entitled to financial compensation.[18]

2.2 Internationalization strategies

2.2.1 Motives for internationalization

Although there is a close association between market liberalization in the telecommunications sector and operators’ expansion abroad, that in itself is not the only factor that has encouraged a more international approach in this market:

- Many companies with international operations, especially the transnational corporations (TNCs) have put quite some effort into integrating their worldwide activities during the last 10-15 years, which has made new demands on telecommunications companies. Customers such as these do not want to be burdened with coordinating the services on offer in all the different countries where they operate: they want all-in service packages from a one-stop shop offering adequate key-account support (*Paterna* 1996, p. 90). A telecommunications operator cannot fulfil these needs from its home base alone, so it is forced to follow its customers into foreign markets.

- Technological developments have led, and continue to lead, to increasing convergence between markets that used to be independent of each other. The classic telecommunications sector not only has a blurred boundary with the information-technology sector, but also with the media businesses. These trends give rise to new

18 In Germany, the current regulatory view is that the public’s basic service needs have already been met, and that there is no need for a universal service obligation. However, the 1996 Telecommunications Act includes a provision for such obligations to be applied should the need arise, in return for financial compensation, to companies in a dominant market position, or to those holding a share of more than 33% in a product or regional market concerned. See *Gerpott* 1998, p. 68.

rivalries between suppliers and draw more heavily on their expertise. Given that e-ven universal providers will not be able to provide all services from inside their own organization or to source them in their domestic markets, the process of “asset see-king” is another factor that may motivate companies to buy in technological experti-se by taking over, merging with or cooperating with other businesses from abroad.

- Once a substantial volume of mergers have taken place in a particular market, the process soon tends to compound its own momentum. Smaller companies grow anxi-ous that they may become the victim of a hostile takeover, and respond by making takeovers of their own, thus making themselves more expensive and probably a less attractive prize. In a parallel development, because the cost of takeovers in such a market will rise over time any company that hesitates for too long is liable to find the choice of affordable bid targets quickly depleting.[19]

A very substantial factor – if indeed not the crucial one – influencing internationaliza-tion has been the deep-seated change in the competitive framework brought about by deregulation of the telecommunications market. While full regulation was still in place, the public service obligation stipulated by the government applied only to the home country, while international communications links were established by the collaboration of national network operators (*Langenfurth* 2000, p. 143), and foreign markets were largely closed off to outsiders. In the new situation, we have a combination of new con-straints and new opportunities:

- Now that national markets have been opened up to competitors both from home and abroad, the incumbent has generally lost market share and prices have fallen.[20] This heightens the incentive to expand into foreign markets in the hope of achieving scale effects and being able to source globally. The principle applies not only to the high-growth markets in the emerging economies of Asia and Eastern Europe, but also to specific markets such as mobile telephony and the Internet in the established indus-trial countries.

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19 Apart from these aspects, more general factors also influence decisions to internationalize, such as tax burdens and incentives, the protection afforded to investments, the general legal framework, relative exchange rates, convertibility inflation rates, etc.

20 In Germany, for example, new competitors accounted for an overall market share of 14.4% in daily call minutes in 1999, and a market share in the trunk-call market of 28.6% (*Stumpf et al.* 1999, p. 10).

- Privatization of state-owned enterprises in many countries coupled with open market access offers new opportunities to engage in foreign markets.[21] Around the world, a total of 46 telecommunications companies were wholly or partly privatized between 1984 and 1996. About one third of the revenue raised, totalling some $159 billion, was contributed by investors from outside the countries where the newly privatized firms are domiciled (*Langenfurth* 2000, p. 197). By selling some of their equity to foreign companies, governments hope their national operators may gain access to technological expertise and improved links into international networks. For the foreign investors, such transactions are especially attractive if, as in a number of Eastern European countries, the former state-run enterprise continues to hold monopoly rights for a given transitional period (*Ruhle* 1996, p. 200).

- The fact that industrial countries opened up their markets at different times has proved particularly advantageous for US and British telecommunications companies. On the other hand, the companies in countries that were later to liberalize, such as Germany, France and Japan, now find themselves forced to act quickly in expanding abroad if they do not want to suffer sustained losses in market share.

- The privatized PTOs are in a better position to finance foreign expansion, whether by issuing new stock to raise cash, or by using their own stock as a takeover currency.

2.2.2 Forms of internationalization

In recent years, these various determinants have created a flurry of internationalization, taking a wide variety of forms that can roughly be classified into the categories of trade, direct investment (especially mergers and acquisitions), and alliances.

2.2.2.1 Expansion of international trade

Progress in telecommunications technology and cost reductions have eased the constraints on the tradability of telecommunications services, giving a boost to this path

21 A list of the state-owned telecommunications enterprises partly or wholly privatized in the late 1980s and early ’90s together with their new domestic and foreign owners appears in the ITU’s World Telecommunication Development Report 1997, pp. 50.

towards greater international reach. The manner in which telecommunications services cross borders is, of course, less directly physical than that of traded goods in that it involves establishing connections with a network in another country and purchasing the right to use it (*Langenfurth* 2000, p. 190). Traditionally, the network in a country "importing" a telephone call belonged to that country's own monopoly telecommunications service, and the call was billed using the Accounting Rate system. More recently, though, this system has been riddled with holes by such facilities as call-back services, direct international links, the use of mobile satellite systems, or international roaming by mobile users.

International trade in telecommunications services has increased since deregulation[22] and cross-border traffic has grown substantially faster in recent years than the number of domestic calls has done (*Knorr* 1999, p. 276). However, to tap a foreign market more effectively a company needs to establish a real presence in it. That normally entails building up its own infrastructure or taking a stake in another company based in the host country that has the infrastructure already to hand. This explains the growing significance of mergers, acquisitions and alliances in the sector.

2.2.2.2 Direct investment

Direct investment occurs in a number of forms, though the distinctions between them tend to be blurred. These are green-field investments (possibly as a joint venture with a domestic company), equity participation in existing companies, or mergers and takeovers.

Green-field investment has so far been relatively rare in the telecommunications sector, with the exception of infrastructure investment. Major companies in the industry have been reticent about making investment of this type either because they are often required for political reasons to enter into joint ventures with local companies or, more importantly, because low rates of market penetration offer little economic incentive to engage in large-scale capital expenditure. However, as economic development forges

22 International traffic in telephony increased from 33.5 billion MiTT (minutes of telecommunications traffic) in 1990 to 106.0 billion MiTT in 1999. The figure is projected to grow further to just short of 200 billion by 2005. However, the growth is not primarily attributable to liberalization in the telecommunications sector but to the burgeoning use of the Internet and the increasing volume of data transfer by multinational corporations. See Siemens 2000, p. 10.

ahead countries where this is the case today will also grow increasingly attractive for inward investment in future.

The area in which cross-border green-field investment is most common at present is that of network infrastructure, especially fibre-optic backbones. These backbones used to be built and operated exclusively by national PTOs. However, liberalization later opened a gap in the value-added chain and new suppliers came into the market. Some examples include the US companies Global Crossing, Qwest, MCI WorldCom, Viatel and Level 3, together with Colt Telecom of the UK; these companies are establishing worldwide or pan-European fibre-optic loops, or linking metropolitan areas together.[23] In the first instance, the networks are usually leased to other carriers, either as “dark fibre” without any other equipment,[24] or including other switchgear. Later on, companies often also use their networks themselves, so the infrastructure investment leads on to an entry into the market for telecommunications services. The first step they take is normally to offer these to large corporate clients, but there are also some examples of companies such as WorldCom and Global Crossing that have developed from network operators into all-round providers of telephony and data communications services.

Apart from such direct new investment in network infrastructure, the preferred route used by telecommunications companies to enter foreign markets is that of **equity participation**, whether in the form of a minority or majority stake, a complete takeover (friendly or hostile) or a joint venture. It is beyond the scope of this article to provide a comprehensive account of all the equity stakes acquired in the wake of telecommunications liberalization; the purpose here is simply to sketch out the key features of internationalization and the corporate strategies underlying these.

Equity participation in the fixed-line market

Particularly in the United States, the motives for taking over other operators have been strongly influenced by the regulatory system. When AT&T was broken up in 1984, the market was divided into a competitive area (long-distance networks and the production of telecommunications equipment) and a number of natural monopolies (the local net-

23 By the end of 2000, for example, Global Crossing aims to connect up 25 European metropolises with a total cable length of 11,000 kilometres.

24 “Dark fibre” is normally leased long-term for 15-25 years. Agreements usually involve a large up-front payment followed by annual lease rentals, thus allowing the supplier of the lines to recoup a substantial portion of its investment at an early stage. See Neue Zürcher Zeitung, 6th June 2000: “Hohe Investitionen in die Telekom-Backbones in Europa”.

works).[25] Although the 1996 Telecommunications Act formally did away with this bisection of the marketplace, in practice it continued in existence to begin with, allowing the companies time to reposition themselves and thus benefit from the new, open markets. A profusion of mergers and equity acquisitions followed. The long-distance market leader AT&T, though it was again permitted to enter local markets, no longer had access to local loops and hence to end-users. Because this would have raised anti-trust objections, the company was not permitted to buy back any Regional Bell Operating Companies (*Pitz* 1999, p. 100), so as a way out of this dilemma AT&T chose the strategy of buying up cable TV companies (TCI and Media One) to open up an alternative route into end-users' homes and businesses. As the markets for television, data communications and telephony continued to converge, the newly constituted group had the prospect of upgrading TV cables to also provide, at some future time, telephone services and rapid Internet links. The second largest long-distance fixed-line operator, MCI, was bought up in 1997 by WorldCom, which in the space of just a few years had almost caught up with the market leaders thanks to a skilful series of acquisitions, both vertical and horizontal.[26] However, MCI WorldCom's attempted takeover of Sprint, the third largest long-distance operator, was thwarted by the US anti-trust and EU competition authorities. Meanwhile, the RBOCs responded to having their previously protected markets opened up to competition by engaging in a wave of mergers, so within a few years the seven "Baby Bells" originally spun off from AT&T had been whittled down to just four: Ameritech and Pacific Telesis joined forces with SBC, Nynex merged with Bell Atlantic,[27] and US West was taken over by Qwest, leaving Bell South as the only original RBOC still independent (*Pospischil* 1998, p. 24 and *Pitz* 1999, pp. 96).

As US telecommunications companies initially concentrated on the terms and impacts of the Telecommunications Act, they devoted less attention to activities abroad. However, as the new subdivision of the American market beds down these companies are likely to again take a greater interest in international markets.

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25 Local networks were run by a total of 22 "Bell Operating Companies" (BOCs), which in turn were grouped into seven Regional Bell Operating Companies (RBOCs).

26 See *Peltzel* 1999, pp. 22-23 for details of these acquisitions.

27 GTE which, though its operations could not be categorized as belonging to a specific region, was nevertheless of similar significance to the RBOCs, also merged with Bell Atlantic.

In other countries, too, the process of internationalization via direct investment has – with the exception of the stakes purchased by foreign investors at the time of privatization[28] – got off to a relatively slow start:

- Particularly in fixed-line telephony, the incumbents still had a huge customer base left over from their time as monopolists, together with their acquired reputation for soundness and reliability; it was difficult for new competitors, whether from home or abroad, to close that image gap.

- This being so, foreign investment in the equity of new competitors was initially relatively rare (the main exceptions being AT&T's stake in Mannesmann Arcor, that of Mannesmann in Infostrada, and of Swisscom in Tesion); as things moved on, foreign firms showed a preference for investing in providers that had managed to build up and maintain a good market position (e.g. France Télécom's stake in Mobilcom and that of World Access in Teldafax).

- Because they lacked financial resources, the new operators themselves were not in a position to invest abroad.

- The main obstacles to taking over incumbents were the size of remaining government holdings, which in some cases are still large, and the sheer size of these companies. Telecom Italia is the only one to have been taken over to date, and its purchaser was a compatriot company, Olivetti. Nevertheless, the former nationalized carriers (e.g. British Telecom)[29] are also increasingly being discussed as possible takeover candidates.

- Planned mergers between large national fixed-line operators (Telefónica/KPN, Telenor/Telia) have so far been thwarted by national sensitivities.

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28 Many countries are particularly attractive for their fixed-line markets, as this is where the work in developing the infrastructure is focused. Examples of such countries are Brazil, Chile, Colombia, the Czech Republic, Hungary, India, Poland, and Taiwan. In another list of countries, the focus is primarily on growth in mobile telephony, e.g. in Australia, Austria, Denmark, Finland, France, Hong Kong, Israel, Italy, Japan, Malaysia, the Netherlands, Portugal, Singapore, South Korea and Spain. Then there are the countries where the growth is balanced between the two, e.g. Argentina, China, Estonia, Ireland, Switzerland, the UK and the USA. See *Richter* et al. 2000, p. 117.

29 See, e.g., Handelsblatt, 22nd February 2000: "British Telecom ist ein Kaufkandidat". Given their size, both France Télécom and Deutsche Telekom are expected to maintain their independence.

- Companies have found that other internationalization strategies, particularly strategic alliances, offer an easier way of attaining their desired global presence.

- Finally, the fixed-line market, especially that of the traditional "POTS",[30] is less dynamic than the new telecommunications markets, so many find it more lucrative to internationalize in the mobile telephony and Internet markets.

Equity participation in the mobile market

From the outset, mobile telephony has been a market much less regulated by governments, and also with much less state ownership, except for the mobile telephone operations of the PTOs. Accordingly, the deregulation effect has been a comparatively weaker, and the expansive development of the market a comparatively much stronger force driving a more international approach to direct portfolio investment. In most cases, new markets have first been entered when consortia were formed to bid for frequency-spectrum licences. When Germany's "D" and "E" licences were awarded, apart from Deutsche Telekom's subsidiary T-Mobil all of the bidding consortia were international ones;[31] so foreign companies were using a "piggyback" strategy to gain entry into the market at low risk. More recently, however, a strategy shift appears to have occurred, away from minority stakes and towards fully-fledged takeovers providing complete control. Apart from T-Mobil, for example, none of Germany's mobile telephone operators is now controlled by a German parent.[32] This was in evidence in the changed picture when the auction took place for the third generation UMTS licences: not only were purely national bidders now in a minority,[33] but the consortia were no longer necessarily led by domestic companies, and foreign ones participated as bidders without domestic partners.

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30 "Plain old telephone services".

31 The Mannesmann consortium which obtained the D2 licence in 1990 also included non-German participation by Pacific Telesis (26%), Cable & Wireless (10%) and Lyonnaise des Eaux (2.5%). The third ("E-Plus") licence went to a Thyssen-led consortium in 1993, in which Vodafone and Bell South held 16% and 21% respectively. The losing consortium, known as "E-Star" also had one third of its capital contributed from abroad, namely from US West (16%) and GTE (16%). The country's fourth cellular telephone network, E2, was licensed in 1997, and the winning VIAG consortium involved a majority of foreign equity, from British Telecom (45%) and Telenor International (10%). See *Gerpott* and *Knüfermann* 1998, p. 140.

32 D2 belongs to Vodafone, E-Plus is owned by KPN and Bell South, and from the start of 2001 Viag Intercom passes into 90% control by British Telecom.

33 When Italy held its UMTS auction, the Telecom Italia subsidiary TIM was the only bidder without international partners.

The objective of these equity investments and takeovers is to build up as global, or at least as pan-European, a presence as possible. This provides economies of scale for the service provider, and benefits users via falling prices and uniform billing systems, while also freeing both sides from the roaming agreements that had previously been the usual practice for cross-border mobile telephony. However, the mobile telephony market is very fiercely contested, and the hoped-for profits will not begin to flow for some years, especially if the equity investments are also associated with the acquisition of UMTS licences and the establishment of a network. Vodafone is the company that has so far gone furthest down the international road, having concentrated entirely on mobile telephony;[34] following its takeover of Mannesmann, Vodafone has a presence in all major European markets, while its Airtouch acquisition and the joint venture with Bell Atlantic also ensure it has a leading position in the US market. France Télécom and Deutsche Telekom are also aiming in the same direction by acquiring operations in all major European countries, primarily in mobile telephony.[35] Although British Telecom's strategy has been similar, it has so far largely been content to purchase only minority stakes.[36] Telefónica stands apart from its European counterparts in as far as nearly all the equity interests it has acquired have been in South America,[37] and it is only recently that it has endeavoured to step up its presence in Europe by acquiring UMTS licences.

Trans-sectoral equity participation

Upstream or downstream mergers and acquisitions are normally a matter of strategic asset-seeking, i.e. they form part of an endeavour to develop expertise in areas in which a firm has previously lacked it, to boost its competitiveness both nationally and internationally. In the past, vertical integration has been a much-practiced strategy among manufacturers of telecommunications equipment. European companies in the industry, for example, have recently made a point of acquiring small, efficient US companies to round out their product ranges or to modernize their manufacturing capabilities. Upstream integration among telecommunications service providers, on the other hand, has been rather unusual. Under the old, regulated systems, most countries' governments

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34 Since October 2000 there are, however, signs of a first departure from this principle: the company is joining forces with Atlantic Telecom of the US to launch an attack on BT's fixed-line market, thus pursuing the strategy used by Mannesmann in the German market.

35 Deutsche Telekom has also reached for a slice of the US market by bidding for the mobile operator VoiceStream and for Powertel.

36 Its acquisition of 90% of Viag Intercom is likely to mark a turning-point in BT's equity investment strategy.

37 These investments cover mobile and fixed-line telephony alike. Telefónica, too, is now endeavouring to turn its minority stakes into controlling majority interests.

liked to see the national PTO maintain very close relations with the country's major telecommunications equipment supplier(s) – often referred to as "suppliers to the royal court"[38] – but following the advent of competition the "national champions" shifted their preferences towards engaging the technological leaders and/or the most economical suppliers for their network investments. Indeed, in some cases existing vertically integrated operations were spun off: AT&T, traditionally highly integrated vertically, voluntarily disposed of the information technology company NCR in 1996, having only acquired it in 1990, and it later spun off its telecommunications equipment operations to become Lucent Technologies, which has since made a name for itself as an independent company (*Pospischil* 1998, p. 9).

Telecommunications companies have shown a much stronger interest in **down**stream integration, especially in Internet and content fields. The main driving factor is the convergence of the telecommunications, IT and media industries referred to earlier, but market strategies also play their part. One of Europe's strongest proponents of vertical integration is Telefónica, which for some years has pursued a multimedia strategy aiming to unite telecommunications, Internet and content all under one umbrella. The Telefónica Group now includes a major commercial TV station, a satellite TV platform, an interest in the UK-based Pearson media group, and the Dutch TV and film production company Endemol. The mobile telephony market, too, is typified by the convergence of telecommunications, the Internet and content. The high-capacity Internet access which third-generation mobile phones will soon be able to provide acts as an incentive to mobile service providers to engage in alliances with or to purchase stakes in Internet and content providers, thus joining in the vertical-integration trend that has been in evidence for some time in the fixed-line Internet field.[39] The classic recent example of asset-seeking has been the AOL/Time Warner merger.[40] This merger will create the industry´s largest vertically integrated company to date.

38 The "court suppliers" in Germany were Siemens and Bosch, whereas in France it was Alcatel and in Japan NEC.

39 Apart from that, a wave of mergers among Internet providers themselves now appears to be gathering: T-Online of Germany has taken over the Spanish Ya.com, World-Online and Tiscali have joined forces and Terra (part of the Telefónica group) is seeking to take over the US Internet portal Lycos. See Handelsblatt, 8th September 2000: "Internetprovider müssen sich für den Wettbewerb in Europa neu aufstellen", and Handelsblatt, 17th May 2000: "Ein globaler Internetgigant entsteht".

40 AOL's takeover of Time Warner was originally intended to be supplemented by a merger between Time Warner and EMI, but the latter deal has, for the time being at least, been thwarted by the Brussels competition authorities.

2.2.2.3 Alliances

Alongside mergers and acquisitions, alliances also played a major part in the largest telecommunications companies' internationalization strategies during the 1990s. Not only were the alliances themselves a product of deregulation and liberalization, but they also gave a substantial further boost to these processes. Before granting its permission to set up the Global One and Uniworld alliances, the EU Commission was able to use this as a lever to apply pressure on the German, French and Spanish governments to bring forward the dates when they proposed to open up their domestic telecommunications markets to competition.[41] The alliances were born of a variety of entrepreneurial objectives:

- The foremost objective was to join forces to satisfy the needs of multinational clients by offering seamless services without having to resort to other companies' services and networks;

- then there was the opportunity to cut costs by way of global sourcing, resource-sharing and co-selling;

- finally, the alliance agreements also included certain features of cartels, particularly the agreement that alliance partners would not encroach on a member's home market (*Richter* et al. 2000, pp. 11).

In the second half of the 1990s, four of the world's five largest telecommunications companies were participants in alliances,[42] accounting for some two thirds of international telephone traffic.[43] So the world of international telephony was pretty well divided up between the following four major alliances:[44]

- Global One, formed in 1996 when Atlas, the joint venture between Deutsche Telekom and France Télécom dating back to 1993, joined forces with Sprint, the US long-distance operator,

41 See Communications Week International, 24th June 1996: "Commission puts alliances on hold" (website http://www.totaltele.com/cwi/167news.2html) and *Clegg* 1998, p. 51.

42 Those with alliance partners are AT&T, Deutsche Telekom, France Télécom and British Telecom; the one without is Japan's NTT.

43 Not including Cable & Wireless with its various international holdings. Siemens 1998, p. 9.

44 Supplemented by numerous other local partners, so as to ensure as worldwide a presence as possible.

- Concert, a joint venture between British Telecom and MCI,
- AT&T/World Partners, consisting of AT&T, KDD (Japan), Telstra (Australia) and Unitel (Canada)
- and Unisource, an alliance between Telia (Sweden), Swiss Telecom, KPN (the Netherlands), Telefónica (Spain), in which AT&T also held a 20% stake.[45]

However, by the end of the 1990s most of these alliances had outlived their usefulness:

- In the wake of a falling-out between France Télécom and Deutsche Telekom, and also the planned takeover of Sprint by MCI WorldCom, sole responsibility for Global One was eventually assumed by France Télécom;
- AT&T and BT left their former partnerships and established a new joint venture;
- World Partners and Unisource, both now without AT&T, diminished in importance and turned into regional alliances, with some subsidiary companies sold off.

Evidently, there is a trend away from the rather loose alliances of the past in favour of equity stakes, mergers and acquisitions. Companies strive for direct control over their operations in foreign markets (*Richter* et al. 2000, p. 12); alliances to not offer them enough of the access they want, because different corporate objectives and strategies give rise to long-winded liaison procedures, and these can be a severe competitive handicap in the dynamic telecommunications market which calls for swift decision-making (*Pelzel* 1999, p. 33). Alliances now tend to be seen as worthwhile only in more marginal, non-core operations.[46]

There are exceptions to the increasing movement away from alliances, however. For example, AT&T and British Telecom plan to intensify their Concert joint venture established in 1998 to serve their international key accounts, expanding its coverage to take in mobile telephony.[47] On closer examination, though, BT and AT&T are not so very far removed from the overall trend, as Concert in future will be less of a loose alli-

45 Owing to AT&T's former membership in both the World Partners and Unisource alliances, these are frequently referred to as one large, single alliance.
46 See Handelsblatt, 7th June 2000: "Telekommanager mögen keine Allianzen".
47 See Financial Times, 19th September 2000: "Concert looks for closer harmony".

ance and will to some extent entail a bundle of partial mergers, bowing to the sure knowledge that a total merger of the two companies would not be accepted by the competition authorities. Moreover, there are now some new incentives to engage in alliances in the mobile telecommunications field: the high price of the UMTS “3G” licences and the subsequent cost of establishing the networks have forced even large providers to cooperate with others, as they are unable to finance a simultaneous presence in all key markets.[48] So we appear to be witnessing a renaissance of alliances at the moment in mobile telephony, though in parallel with takeovers of large and small operators alike.

3 Summary Assessment of Corporate Strategies in the Telecommunications Sector

The major telecommunications providers, at least, clearly have much in common in terms of the strategic objectives underlying their entrepreneurial behaviour. The most prominent of these objectives, which often also overlap, are the following:

- Volume growth, leading to economies of scale
- tapping international markets, especially bringing new key customers on board
- fending off hostile takeovers
- adjusting to technological advances
- diversifying the product range, aiming to reduce the relative importance of POTS in favour of more dynamic markets.

However, as the analysis has shown, the manner in which these strategic objectives are converted into concrete action tends to vary greatly. Admittedly, in a gross over-simplification there are a number of underlying trends that can be identified as lowest common denominators, such as:

- that the choice of market access and of the level on which to add value in the domestic market substantially depend on the regulatory environment

48 Swisscom, for example, looked for a financially strong strategic partner to back its participation in Switzerland’s UMTS auction in November 2000.

- and that, when taking an international perspective, expanding cross-border trade is not the dominant strategy. Rather, companies aim to build up direct equity holdings abroad and to take over other operators. In core operations, alliances have now fallen away into the background.

But of course, the specific decisions taken by specific companies are quite different, being based on differing assessments of future developments. Among the most difficult of these to forecast are technological changes, the response of users to new technologies and innovative offerings (particularly their willingness to pay a premium for them), the success of mergers in view of differences in corporate culture, and the reaction of competition authorities to newly announced merger plans.[49]

In light of this, two questions arise:

- Whether the companies really are largely free to act as they feel is appropriate, or the relics of government regulation and of fenced-off national markets continue to restrain their strategic choices even to this day

- and whether the numerous large-scale mergers, in particular, have given rise to any discernible negative macroeconomic side-effects, or may give rise to such effects in future.

There can be no denying that even after the signing of the WTO Basic Telecom Agreement in 1998 there are still various hurdles and barriers restricting market entry in the real world.[50] And indeed, the largest industrial countries are no exception to this: the United States has long protested that Japan charges excessive fees for the right to use its domestic telephone network,[51] and has also complained about protectionist procedures in the EU, which for its part has listed numerous restrictions on access to the US telecommunications market (EU Commission 2000, pp. 56). Within the EU itself, the differences from country to country in how key EU directives have been implemented nationally also influence corporate decision-making. Of the deficiencies that are still present in particular national telecommunications regimes, a complete list of which cannot

49 Spectacular recent cases have included the blocking of MCI WorldCom's planned merger with Sprint, and Time Warner and EMI's withdrawal of their planned union, so as not to jeopardize approval of the AOL/Time Warner merger.

50 For a list of all OECD countries' foreign ownership restrictions in telecommunications, see OECD 1999, pp. 38.

51 See Handelsblatt, 20th July 2000: "Japan öffnet seinen Telekom-Markt".

be provided here, the problem areas most likely to have strategic implications for telecommunications companies are those of access to local loops and of the continuing influence exerted upon them by governments.

In many EU countries, access to the local loop is one of the fields in which the incumbent is normally in a very strong position, either because it is not obliged to offer unbundled access to private households or because it is able to charge an excessive price for such access relative to the costs it incurs. For practical purposes, this means that competitors from both home and abroad can only gain market access by establishing alternative networks or developing alternative technologies, so companies find their room for manoeuvre substantially restricted. The EU has now recognized this weak point in the deregulation process, and is working on a joint approach to ensure that local markets really are effectively opened up.

Even following privatization and their new status as independent companies, incumbents may still be subject to governmental influence, which can affect the strategies not only of the companies themselves but also of their competitors in a number of ways:

- If the state still owns a large portion of the equity – which, among the large incumbents, particularly applies to NTT (Japan), France Télécom, Deutsche Telekom, Swisscom and KPN (NL) – this may get in the way of their taking over foreign companies if the host country objects for legal or political reasons. Deutsche Telekom found this when it was negotiating to take over Sprint, and when it made its final offer for VoiceStream: its plans aroused dogged opposition from a number of US senators who invoked the 1934 Communications Act, containing an outright ban on foreign governments owning American spectrum licences. The senators initiated a bill which would have made it impossible for the FCC to exercise any waiver of this ban. Although the bill ultimately failed, the situation nevertheless remains rather uncertain for any state-owned companies wishing to merge with American firms.

- A large government holding in the company restrains its ability to use its own shares as a currency in large mergers or acquisitions; since stock-based bids have been the preferred method in recent large mergers, this restrains the company's scope for expansion and internationalization.

- On the other hand, if the state still owns a majority of the company this does offer protection against hostile takeovers from elsewhere, assuming that the government supports the management's position.

- As far as potential merger partners are concerned, if a company is majority-owned by its own state the only possibility open to them is to acquire a minority holding.

- Governments may still exert their influence even when they cease to hold the majority of a company; if the country's law permits, it is sufficient for the government to hold a single "golden share" and it will be able to interfere in key corporate decisions. The Spanish government deployed its golden share to prevent Telefónica merging with KPN of the Netherlands, because the latter government still held a large holding in KPN. Similarly, the Italian government used its golden share to block Deutsche Telekom's intended acquisition of Telecom Italia.

Deregulation and liberalization, then, may well have been the factors that actually allowed today's companies the freedom to pursue their own strategies, yet at the same time the processes involved have had a great influence on corporate behaviour, and relics of the old state-monopoly systems persist in many industrial countries that make it difficult for competitors, especially foreign ones, to enter the market.

Turning now to the macroeconomic impact, the pronounced changes in corporate strategies in recent years – to give them a much more international or sometimes even global dimension – raise the issue of whether existing national and international arrangements are adequate to the task of avoiding inefficiencies or misallocations, or whether new systems ought to be established to allow greater supranational monitoring of the companies in this sector. Apart from the differing sector-specific arrangements from country to country and the particular problems associated with accounting for international trade flows, to which separate contributions have been devoted in this book, the main macroeconomic consequence of the corporate strategies discussed here is that they are liable to increase concentration and market power, ultimately diminishing competition and leading to efficiency losses. Whenever mergers, joint ventures or cooperative alliances are planned, the necessary applications increasingly fall within the scope of more than one state's or region's jurisdiction. Problems may arise in terms of competition policy if the impact of the proposed combination differs, or is judged differently, from one country to another. And for the companies involved, which need to acquire several approv-

als, the multiplicity of jurisdictions means greater uncertainty as to the legality of the merger. All of which makes the transaction more expensive and more time-consuming.

Does this complex of problems, now under discussion for some years, need to be seen in a different light in the telecommunications sector, or can developments in this sector offer any useful insights for other service industries? Up to now, there are no visible signs that the pronounced merger activity has led to any restraints on competition that the current system of monitoring instruments could not cope with. The approvals recently refused (MCI/Sprint and Time Warner/EMI) and the stricter conditions now being laid down by competition authorities suggest that they have become more vigilant in this field; no disputes over jurisdiction or other differences of opinion between different national authorities have yet come to light. Moreover, in contrast to more traditional service industries, the telecommunications sector has regularly seen competition enlivened by new providers, some of which have relatively quickly attained a significant market position (e.g. WorldCom, Global Crossing, Qwest, and Mobilcom in Germany). Indeed, probably the key characteristic of this sector is that, certainly going by experience to date, technological change has the effect of jeopardizing monopolistic positions more rapidly than elsewhere. To cite some examples: the copper-wired fixed-line networks of the incumbents have been threatened by fibre-optic networks, wireless local loops or upgraded television cables, while conventional voice telephony now faces competition from Internet telephony, and the Internet itself will in future be increasingly accessed by mobile users via UMTS or via today's GSM cellular networks upgraded using GPRS[52] or HSCSD[53] technologies. There is currently no end to these technological innovations in sight, so it is unlikely that market structures will become firmly encrusted in the foreseeable future. Nevertheless, one cannot rule out the possibility that – given the national and regional differences in competition rules and divergent national interests – corporate strategies may in future create competition problems that it will be impossible to resolve by mutual consent.

52 General Packet Radio Service.
53 High-Speed Circuit-Switched Data.

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Abbreviation note: WIK = Wissenschaftliches Institut für Kommunikationsdienste

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