

Broadband Services and Local Loop Unbundling in the Netherlands

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ABSTRACT This article describes the availability of broadband services in the Netherlands. This particularly concerns broadband services for the consumer/end user such as access to the Internet. We will first discuss the new telecommunications act before dealing with current market relations and regulation of the telecommunications sector. This is followed by a description of the most significant decisions of the independent supervisory body, the Independent Post and Telecommunications Authority, as related to broadband services.

The Netherlands has always been keen to take the lead in liberalizing the telecommunications sector. Nevertheless, it was not until the end of 1998 that Dutch legislation satisfied all the underlying principles of European telecommunications regulations.

This does not diminish the fact that, in the previous period, important liberalizations had occurred. In 1996–1997 all restrictions to offering telecommunications services — with the exception of voice telephony — were discontinued. Alternative infrastructures were liberalized, and two national “infrastructure licenses” were provided to encourage competition with KPN (the former national PTT). A parliamentary amendment meant that, as of 1 July 1997, competition was also permitted in the context of voice telephony (six months prior to the European deadline of 1 January 1998).

On 15 December 1998, the liberalization process was concluded with the coming into force of a new Telecommunications Act that, to a large extent, incorporated the European telecommunications guidelines. So it is hardly surprising that the act — according to the explanatory notes — primarily aims at giving more scope to new initiatives and market developments while simultaneously intending to guarantee balanced economic development.

Under the old legislation there was one concessionaire (the incumbent telecommunications operator, KPN) with almost unrestricted rights. Competitive bidding, which was subject to a system of licenses, was an exception to this unusual position.

Under the new Telecommunications Act, all providers receive, in principle, equal treatment. A license is only required for the use of frequencies. All other public telecommunications networks and public telecommunications services are based on meeting registration requirements. The registration is bound by no obligations other than those determined by the law. This implies an exceptionally liberal system, and goes further than the European context that, among other things, permits licenses for public telecommunications networks; thus, in the Netherlands anyone is free to construct a telecommunications infrastructure. Moreover, the law grants all providers of public telecommunications networks (including the cable television networks) right of way. In principle, public ground can be dug and prepared for the laying of cables with no further legal restrictions. The sole power of municipalities lies in the coordination of such activities.

In conformance with the European rules, the law determines that special obligations apply to market parties with significant market power. By law, the dominant telecommunications operator, KPN, is designated a party with significant power in the market for a period of two years

(until 15 December 2000). This means that — in accordance with the European directives — KPN has special obligations concerning interconnection and other forms of special access to its network. KPN is also responsible for providing universal service (primarily traditional voice telephony service). On the expiration of the statutorily prescribed period of two years, whether KPN is still in the same position will again need to be established. It is implicitly assumed that the operators of *broadcasting networks* (the legal term for cable television networks) have significant market power regarding the transmission of programming.

The market position of KPN is thus also at issue in regard to the question of whether local differences in rates for public voice telephony and leased lines can be applied. In addition to and (according to some) deviating from the European rules, the Telecommunications Act determines that differences in rates are not permissible unless there is a case of sufficient competition in the market concerned. The rule boils down to the fact that KPN cannot apply lower rates at the local level to undercut the prices of any other competitors active in the same local market.

THE DUTCH TELECOMMUNICATIONS MARKET

To a considerable degree, the Dutch telecommunications market is still dominated by the incumbent, KPN. The position of KPN in the local and interlocal market has remained virtually unassailed to date.

However, the situation in the field of international telephony is different. KPN's market share dropped between 1997 and 1998 from 79 to 70 percent. Volume growth (1997: 6.4 percent; 1998: 4.6 percent) failed to compensate for the price slump (1997: 16.9 percent; 1998: 41.9 percent). The mobile market also serves to illustrate market developments: with some five operators active, it is characterized by fierce competition. Between 1997 and 1998 KPN's market share dropped from 69 to 65 percent. However, the drop in prices (1997: 14.3 percent; 1998: 43.5 percent) was offset by an extremely pronounced rise in the number of subscribers (1997: 42.1 percent; 1998: 73 percent).

The growth of data traffic and broadband applications can be illustrated by two KPN statistics. First, the number of ISDN connections between 1997 and 1998 almost doubled (1997: 810,000; 1998: 1,570,000), where it must be noted that KPN is still the sole provider of integrated services digital network (ISDN) lines to private subscribers (known as ISDN-2). Twenty-one percent of local traffic is data traffic (primarily Internet traffic). That the Internet is considered an important market is clear from the fact that, as a result of recent acquisitions, KPN has become the largest Internet service provider (ISP) in the Netherlands.

KPN does not offer speeds faster than ISDN to the consumer market (given the costs of using leased lines, this is restricted to the business sector in practice). However, a test is currently underway with asymmetrical digital subscriber line

(ADSL) in Amsterdam (known as *Snelnet*). Around 1000 users have been provided with modems which can receive data at speeds of 2–8 Mb/s. The current copper network is used as the main underlying transport network. There is no information regarding when KPN will launch the commercial introduction of ADSL.

In the field of telecommunications infrastructure, the Netherlands is exceptional because it is one of the countries with the highest penetration of cable television. Second only to Belgium, the Netherlands is the most densely cabled country in Europe. Eighty-nine percent of households (5.9 million subscribers) are connected to a CATV network. Alternative reception options include direct ether reception and reception via satellite. In the Netherlands there is a satellite dish penetration of 5.3 percent, which, with the exception of only one other country, is the lowest in Western Europe (Vecai, *De Nederlandse kabelsector in beeld*, September 1998). The number of CATV operators has plummeted considerably in recent years due to concentration. The top 15 operators control 90.5 percent of the connections. The largest operator is UPC, which owns, among other things, A2000 (the CATV operator of Amsterdam and surroundings) and is full owner of UTH (another top five operator), which together means that it has 1.5 million connections. The second largest operator is Casema with around 1.1 million connections. Casema was a KPN subsidiary but was sold to France Telecom, which also operates a mobile DCS-1800-network in the Netherlands (under the name Dutchtone) and recently took over one of the largest Internet providers (Euronet).

The most important function of CATV networks is still the transmission of broadcasting programs, generating average revenues of EURO 9–10/mo. Only in Amsterdam is there any serious competition in the area of traditional telecommunications services because the cable operator A2000 offers voice telephony and has around 20,000 clients (as of March 1999). A2000 aims at realizing a market share of more than 25 percent of the residential market and 15 percent of the business market by 2003. The voice telephony activities of other cable operators are as yet too limited in size or are still in the startup phase.

The offer of Internet access by CATV networks is more developed than voice telephony. Subscribers of almost all the large cable operators are in a position to enjoy access to the Internet depending on whether the part of the network to which they are connected has already been upgraded. At the start of 1998 there were only about a dozen operators offering this service, of which 4100 subscribers took advantage. As of 1 January 1999 1.8 million households were already able to opt for an Internet connection via the cable network, and the cable operators had 56,000 Internet subscribers, a penetration of 3 percent (data: Vecai, 1999). The cable operator of Amsterdam alone already has more than 10,000 subscribers. In April 1999 Casema claimed to have connected some 20,000 subscribers to the Internet. The rates for Internet access range between EURO 30 and 50/month. One element of the subscription structure is often the option of gaining unlimited access (*flat* or *fixed fee* access) or allowing the fee to depend on actual data traffic. With hardly any exceptions, the cable operator also acts as (exclusive) ISP (costs are included in the fee). In practice, uploading and downloading speeds of about 256 kb/s and 1.5 Mb/s, respectively, are offered (A2000 in Amsterdam).

SUPERVISION OF THE TELECOMMUNICATIONS SECTOR

Since mid-1997, an independent supervisory body has been active in the Post and Telecommunications sector in the

Netherlands. The installation of the Independent Post and Telecommunications Authority (OPTA) was not only accelerated under pressure from Parliament but was, moreover, granted a clear independent power. The granting of an independent position was not only prompted by, for instance, the European legislative context, but also by the fact that the Dutch state was (and still is) the largest shareholder in KPN with an interest of around 43 percent. Moreover, the state has a “golden share,” on the basis of which major decisions within KPN must have the consent of the state.

OPTA is responsible for supervising almost the entire telecommunications sector with the exception of issuing frequencies and topics that, for example, are in the field of national security (e.g., phone tapping and public order). That OPTA has no (partial) powers concerning issuing frequencies can be seen as a clear shortfall in a market where fixed and mobile networks and services are increasingly converging. OPTA now has around 120 staff members under the management of a three-man board. That the intention was to install a politically independent supervisory body is clear from the fact that not only has the chair (Prof. Dr. J. C. Arnbak) no particular political background, he is also of Danish nationality!

Because of the timely founding of OPTA, there were relatively few transitional problems when, on 1 January 1998, full liberalization on the grounds of the European Guidelines Framework entered into force. OPTA had been able to get off to a flying start, in contrast to the new supervisory bodies in a number of other European countries who only commenced their activities on 1 January 1998.

LIBERALIZATION IN PRACTICE

In the meantime, OPTA has made a large number of decisions, also in the field of broadband services. In a general sense, it can be said that OPTA went to work with great energy and has realized groundbreaking work in reaching a more liberalized environment. The speed with which this has been attempted is clearly greater than the supervision previously exercised by the minister in question and the corresponding desired realization of a more competitive market.

In the context of this article, three topics on which OPTA can be judged will be further elucidated. The first is that of interconnection, which is an important condition for the offer of competing (broadband) services. This will be followed by outlining the rebalancing of retail prices. The rebalancing considerably improved the starting position of the competitors. Finally, the unbundling of the local loop is dealt with. Unbundled access to the local loop offers extra opportunities to provide broadband services to end users.

INTERCONNECTION

In 1997 the minister intervened on the grounds of his then supervisory powers. For the first time, KPN's interconnection rates were adjusted down to a limited degree by a ministerial decree [1] whereby a distinction was made between terminating access and originating access. For originating access, primarily focused on retrieving traffic from the local net to deal with it in an alternative fashion (e.g., carrier selection), higher rates could be charged than for terminating access. Terminating access is primarily concerned with the costs linked to dealing with calls from another network (in order to realize interoperability). The most important argument for the distinction was the premise that higher rates could/should be charged for originating access because consumers of the relevant services did not have a local network of their own. The “tariff differentiation” thus also attempted to encourage the development of a competitive infrastructure as well as passing on the costs of the local loop. A cost model with a strongly historical streak was

| | Basic call | | Call plus | |
|-------------------|------------|---------|-----------|---------|
| | Old | New | Old | New |
| Regional off peak | 1.26 ct | 1.16 ct | 0.97 ct | 0.97 ct |
| Regional standard | 2.51 ct | 2.32 ct | 2.51 ct | 2.32 ct |
| National off peak | 3.86 ct | 2.8 ct | 2.9 ct | 2.1 ct |
| National standard | 7.81 ct | 5.6 ct | 7.73 ct | 5.6 ct |

■ **Table 1.** *Rebalancing retail rates (ct: cents).*

used to calculate the rates. As a safeguard, the minister's decision received a provisional predicate. Within a year, new definitive rates for interconnection were to be established.

Which was in fact the case. OPTA (after becoming the new supervisor) published a consultation document [2] on interconnection and — partly with regard to a running dispute — established new rules in July 1998 concerning the interconnection rates [3]. The compensation for originating access introduced earlier by the minister was rejected by OPTA. An Embedded Direct Costs (EDC) model was maintained for cost calculations. According to OPTA, KPN should deploy lower rates.

These rates were partly fixed so as to have retroactive force which implied that the KPN would have to pay refunds. For the period after 1 July 1999, OPTA will fix new rates. At the time of completing this article a decision in this regard had yet to be made.

Of course, the lower interconnection rates are attractive for KPN's competitors, but actual capacity must be available. However, this appeared not to be the case. Because of various circumstances (including such matters as an inaccurate estimate of the expected growth by KPN and, according to KPN, the limited willingness of rivals to build their own infrastructure) there was a lack of capacity in 1998–1999. KPN could not meet earlier commitments. The result was that new operators could not offer services, and the quality of existing services dropped (engaged tone during carrier selection connections and higher dropout of connections).

Subsequently, OPTA allowed an investigation to be conducted, after which it still obligated KPN to supply capacity in accordance with its statutory obligation to deliver. KPN, which claimed force majeure and further claimed that the problem would be resolved by increasingly expanding capacity, was given three options. First, it would be able to draw on new capacity. Second, KPN could buy in capacity from its competitors. Third, OPTA reached the creative solution that KPN should process the interconnection traffic of third parties through its own network (a sort of "virtual interconnection"). For the last situation, extra carrier selection numbers were even made available.

REBALANCING THE RETAIL PRICES

As is commonly done, in the Netherlands as well as elsewhere, local rates — comprising subscription and call charges — were characterized by cross-subsidization: subscription rates were kept low and compensated by higher call charges. This probably originally had a noble social aim, but is not in accordance with striving toward a more competitive market. After all, on one hand, competitors have more difficult access to the local market when services are offered at lower prices, and are obstructed on the other hand when they have to contribute to paying — directly or indirectly — for cross-subsidization (e.g., by setting off the rates passed onto them for originating access).

OPTA, however, stated that the costs of the local infrastructure should be entirely financed by subscriptions, that is, by a rebalancing of the rates. In an unmodified situation this could mean that unaltered subscription rates could result in a

substantial drop in revenue for KPN since cross-subsidization could no longer be set off in the call charges. KPN then requested consent to increase subscription rates. OPTA agreed to a budget-neutral increase on a provisional basis. The consequence was that the two most popular rates rose from EURO 10.51 to EURO 13.37 (basic calls) and from EURO 12.83 to 15.68, while at the same time call charges dropped slightly (Table 1).

This rebalancing was separate from a decision to be made by OPTA on the cost orientation of the local rates.

After all, on the grounds of European and national regulations, users' rates must meet the basic premises of open network provision (ONP). In its investigation, OPTA concluded that KPN's rates were too high. OPTA stated that there was still a question of insufficiently cost-oriented rates and imposed a price cap that led to KPN's proposing further rate modifications [4]. Despite the fact that the rates (Table 1) were not substantially lower, considerably lower off-peak hourly rates were offered. On the weekend and at night, calls can be made at 0.9 cents a minute. KPN claimed that this should particularly lead to reducing costs for Internet users. Furthermore, reductions were introduced in the form of special rate packages (family and friends' numbers), discount schemes, and amendments to rates for, for instance, new connections. Rates for ISDN do not in principle deviate from rates for analog telephony.

At the same time as establishing the revision of local rates via maximizing the profits to be made on the regulated services, OPTA indicated its intention to make the transition to a price cap mechanism in the future. The market is currently being consulted on this point. The aim is to introduce the price cap system on 1 July 1999.

UNBUNDLING THE LOCAL LOOP

One of the disputes that had to be evaluated by OPTA concerned the demand that KPN should also offer access to its network at the lowest possible level, namely the local loop. OPTA honored the demand but gave it no further immediate elaboration. This was effected with the publication of "Guidelines on access to the unbundled local loop" ("MDF-access") in March 1999 [5]. On the basis of the guidelines, access can be gained to the KPN network at the level of the main distribution frame (MDF). With this, other providers of telecommunications services are no longer dependent on the options offered by the KPN network, but can themselves — in direct relation with the consumer — offer advanced services. By way of illustration, OPTA mentions video on demand and the offering of high-speed Internet access. On the other hand, unbundling the local loop in this way should also encourage new competition for the cable operators (already or not yet offering high-speed Internet access and other local loop services via their CATV network). Under the guidelines, only reasonable requests for access are considered. Such is the case when access is essential for the requesting party to be able to compete in the telecommunications market. Other restrictions are the availability of alternatives and sufficient capacity. Moreover, rates for unbundled access will only be reasonable in the beginning. After five years, rates will rise to a level far above the subscription rate. OPTA takes this measure to thus encourage the development of an alternative infrastructure. Therefore, taking advantage of KPN's cheap rate infrastructure won't be possible for long. With the restrictions, OPTA endeavors to prevent unbundled access being used as an alternative for competitors creating their own infrastructure. Until now, the competitors of KPN have yet to take advantage of the guidelines.

BROADBAND ACCESS VIA CABLE TELEVISION NETWORKS

In the above, we outlined developments regarding the traditional fixed infrastructure. We also stated that the Netherlands benefits from a good alternative network in the form of the CATV networks. These networks are regulated as far as their traditional task is concerned — broadcasting programs (OPTA judges disputes on access between content providers and cable operators). There is barely any special legislation governing other (telecommunication) activities using the CATV infrastructure.

The option of high-speed Internet access via CATV appears to depend on market demand. But certain friction has emerged. A number of independent ISPs are keen to provide services via the CATV network — in competition with the services offered by the cable operators. Current telecommunication legislation does not appear to provide the possibility of enforcing access. The cable operator is not a party with significant market power in the field of telecommunications (unless broadband Internet access is defined as an independent market) and is thus not required to allow competition (if the notion of significant market power applies at all). It is in theory defensible that, for a certain period, cable operators should have exclusivity with regard to offering Internet services (and other telecommunications services) via their own networks. This offers the potential, for instance, of recovering their investments. On the other hand, competition often acts as a stimulus to better and more advanced service provisioning. Another possible difficulty concerns the issues connected with conditional access. Portals and other conditioned selection systems influence — perceptibly or not — the choices made by end users. There are only limited possibilities in the existing regulatory infrastructure to deal with this relatively new category of issues.

CONCLUSION

The new Telecommunications Act means that in the Netherlands, wholly in accordance with European regulations, there are no longer any obstacles to offering broadband services or constructing an infrastructure. In some respects the Dutch regime is even more liberal than required by the European regulations. Important incentives for more competition are rooted in OPTA, the new independent supervisory body which in the last two years has set out a clear direction for telecommunications. Interconnection with the network of the incumbent KPN has been simplified despite the fact that the requisite legal procedures are still pending. On one hand, OPTA has intervened regarding interconnection rates, while on the other there is strict supervision to ensure that interconnection capacity is actually offered. On the demand side, the rebalancing of retail prices has also resulted in reducing call rates. In combination with the unbundling of the local loop, together with a small number of other member states, the Netherlands is clearly a pioneer in this regard, and there should now be sufficient basis for actual competition. Whether or not this materializes will specifically hinge on the behavior of the market parties themselves. They will have to determine whether it is sufficiently lucrative to offer broadband services via an unbundled local loop. With respect to broadband services, the Netherlands holds an important extra ace. The fact that 89 percent of households are connected to CATV networks offers interesting prospects. The sharp rise in the number of users seems to indicate that offering high-speed Internet access is set to develop into one of the most successful and competitive services in the near future.

REFERENCES

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BIOGRAPHY

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