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# Summary

Over the last couple of decades, the importance of transmission capacity for telecommunications has grown. Enough upgraded, it can be used for both telephony, data transmission, cable TV, provision of movies, and a number of other services. For the provision of all these services, it is absolutely essential to have access to a transmission medium. The existing networks are often built up protected by a legal or *de facto* monopoly and have only recently been opened for competition. But the former monopolists can maintain a dominant position using their control of these networks.

A well-known concept in competition law is the doctrine about "essential facilities". An essential facility is a facility, equipment or infrastructure which is controlled by a dominant undertaking and is absolutely necessary for competitors for being able to provide their services. The origin of the doctrine is found in the US, and one of the most quoted tests for an essential facility is given in the American case *MCI v. AT&T* from 1983. According to the court, four elements must be established for applying the doctrine:

1. the essential facility is controlled by a monopolist;
2. the essential facility can not practically or reasonably be duplicated by the competitor;
3. the competitor is denied to use the facility; and
4. the owner could have provided access to the facility.

In EC law, there have been a number of cases regarding *inter alia* harbours and programme listings necessary for the publishing of a TV guide. In two European cases from 1998, *European Night Services* (CFI) and *Bronner* (ECJ), the courts did not apply the doctrine since they did not find the facilities unduplicable. In the latter case, the Court found that there were alternatives, "even though they may be less advantageous".

In both US and the EC, telecommunications laws have been developed towards competition and deregulation. The backgrounds are however different; in the US, AT&T had a regulated private monopoly, while the European telecom sector was characterized by public monopolies, often with both regulatory and service functions.

The breakthrough for competition in the US was the division of AT&T after an agreement in an antitrust case in 1982. AT&T's local exchange carriers (BOCs), were separated from AT&T and were prohibited from providing long-distance services. To promote competition in the local services as well, the Telecommunications Act of 1996 requires local exchange carriers to *inter alia* afford access to some parts of their networks to competitors. If the local exchange carrier is an "incumbent local exchange carrier", it also has to negotiate in good faith with those carriers which want interconnection, provide interconnection "at any technically feasible point", and provide non-discriminatory access to network elements on an unbundled basis.

In a number of directives from the middle of the 1980s up to the present, the EC member states have been required to abolish all special or exclusive rights in the telecom sector. In almost all member states, full competition was introduced in 1998.

Since the enactment of the Telecommunications Act in 1993, Sweden has been further on the road towards an open market compared to most European countries. This lead seems now to have been obliterated.

There are two main opportunities to get transmission access; interconnection and by constructing a network of leased or owned lines. Interconnection means the physical and logical linking of networks which makes it possible to communicate with subscribers of another network. Under European law, telecommunications organizations have a right and an obligation to interconnect with each other. When constructing a network, the bottleneck is the local access network. There are a number of more or less advantageous alternatives to the traditional telecommunications network, the most suitable one is probably the cable TV network. In a directive from 1999, the Commission requires that cable TV networks and telecommunications network owned by a single operator are separate legal entities. The other main alternative for a competitive service provider is to lease the connections from the local switch to the customer and thus take over that customer. In September 1999, the Post and Telecom Agency handed over a proposal for new legislation in Sweden which would require Telia AB to lease out these local connections to rates based on costs.

The Commission has in a notice clarified how it intends to apply the competition rules in the telecom sector. It considers that the concept of essential facilities will be of relevance, and notes that alternative networks like cable TV networks are not satisfactory alternatives yet.

When establishing that an undertaking has a dominant position, the relevant market must be defined. With a very narrow market definition, "provision of services to Mr X", smaller network operators would also be required to give access to their networks. For the customer, there are reasons for that market definition. He could otherwise only subscribe to the network connected to his house.

The Commission's statement that cable TV networks are not satisfactory alternatives yet is not in accordance with the Court's ruling in *Bronner*. Cable TV networks are already used for telephony services, They may be less advantageous for the competitor, but so were Bronner's alternatives as well.

It is in the interest of the whole society that transmission capacity is constructed. It is therefore important that the legislation regarding the use of connections promote investments in new such infrastructure. It is necessary with special rules giving access to the former monopolists' networks on rates based on costs to promote competition, but in the long run it must be possible to make a profit on investments in transmission capacity. Otherwise it will not be built.

# Preface

The creation of this thesis extends over half a year, including the nicest Swedish summer the author ever has spent in front of a computer.

During this time, valuable assistance has been given from the supervisor of this work, professor Hans Henrik Lidgard at the Faculty of Law, Lund.

Olof H Hallström, Tele2, and Viveca Norman, PTS, have helped with facts and comments about the telecom sector.

But, primarily, the author would like to devote his gratitude to William Fothergill Cooke, Charles Wheatstone and Alexander Graham Bell, without which contributions this thesis would not make any sense.

Any errors or omissions are of course the responsibility of the author and the three inventive gentlemen from 19th century above are absolutely innocent.

Viken, 27 September 1999.

# Abbreviations

ADSL	Asymmetrical Digital Subscriber Line
AT&T	American Telephone & Telegraph Co.
BOC	Bell Operating Company
BT	British Telecom
CFI	Court of First Instance
CMLR	Common Market Law Reports
EC	European Community
ECJ	European Court of Justice
ECLR	European Competition Law Review
ECR	European Court Reports
ERT	Europarättslig Tidskrift
ENS	European Night Services Ltd
FCC	Federal Communications Commission
F. 2nd	Federal Reporter 2nd Series
GPRS	General Packet Radio Services
GSM	Global System for Mobile Communications
IP	Internet Protocol
ISDN	Integrated Services Digital Network
kbit/s	kilobit per second
LATA	Local Access and Transport Area
LLUB	Local loop unbundling
LMDS	Local Multipoint Distribution Service
Mbit/s	Megabit per second
NRA	National regulatory authority
OJ	Official Journal of the European Communities
ONP	Open Network Provision
PSDS	Packet-Switched Data Services
PSTN	Public Switched Telephone Network
PTS	Post- och telestyrelsen
RBOC	Regional Bell Operating Company
SFS	Svensk författningssamling
SOU	Statens offentliga utredningar
TO	Telecommunications organization
UK	United Kingdom of Great Britain and Northern Ireland
UMTS	Universal Mobile Telecommunications System
US	United States of America
xDSL	x Digital Subscriber Line

# 1 Introduction

**”this is happening because of one thing and one thing alone: competition.”**

William E. Kennard, chairman of the FCC, about the fast growing American telecom industry<sup>1</sup>

One of the most revolutionary inventions in the history of humanity is the telegraph. For the first time it was possible to send a message over longer distances without someone travelling with the message from the sender to the receiver. Before the telegraph, a message from one continent to another could not go faster than the fastest ship could sail. Later it became possible to transmit ”real-time speech”, for using the wording from the definition of voice telephony in Directive 98/10/EC.<sup>2</sup>

Over the last couple of decades, the importance of these connections has grown. Enough upgraded, they can be used for both telephony, data transmission, cable TV, provision of movies, and a number of other services. One example of this congruence of services is IP telephony, which is telephony transmitted as IP packets. If the Internet is used for the transmission, it is called Internet telephony. The development of IP telephony can also serve as an example of the fast growth in the telecommunications sector.<sup>3</sup>

## 1.1 Statement of the problems

For the provision of all these services, it is absolutely essential to have access to a transmission medium. The existing networks are often built up protected by a legal or *de facto* monopoly and have only recently been opened for competition. But the former monopolists can maintain a dominant position using their control of these networks.

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<sup>1</sup> Kennard, William E., The Telecom Act at Three, Media Law & Policy, Volume VII, Number 2, Spring 1999, Communications Media Center at New York Law School, <http://cmcnys.edu/mlp/kenn0499.html-ssi>.

<sup>2</sup> Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment, O.J. 1998, L 101/24, article 2.2(e).

<sup>3</sup> About the growth in the IP telephony sector: Nätverk & Kommunikation, IP-telefonin växer lavinartat, Nätverk & Kommunikation, 27 May 1999, <http://nyheter.idg.se/display.pl?ID=990527-NOK5>



A well-known concept in competition law is the doctrine about "essential facilities". An essential facility is a facility, equipment or infrastructure which is controlled by a dominant undertaking and is absolutely necessary for competitors for being able to provide their services. Under some circumstances the facility owner has a duty to give access to the facility under non-discriminatory conditions.

The same concept characterizes the telecom legislations after the liberalizations. The purpose of these is to create competition where no such has existed before, and the main means to achieve this is asymmetrical rules which lay a heavier burden on the former monopolist. How the issue of access to transmission facilities is dealt with in legislation and under the essential facilities doctrine is the subject of this thesis.

Access to the local access network has over the past year been a current issue in Sweden. Almost every telephone user has to be a subscriber of Telia AB, even though he may have chosen another provider for his phone calls. In September 1999, the Post and Telecom Agency (PTS) laid a proposal for new legislation which would give other providers access to the local network.

But will it promote investments with an essential facilities concept in a field with a fast technical development? Should a company be allowed to own networks and provide services at the same time? A recently adopted EC directive requires telecommunications networks and cable TV network owned by a single operator to be separate legal entities. Is that sufficient?

There are many questions; the goal of this thesis is to answer them.

## **1.2 Limitations, material and method**

The words "telecom and data transmission" may include a number of services. Which service transmitted is however less interesting. It is the transmission and the use of the line as an essential facility which is the subject of this thesis. This implies that the telecommunications legislations examined are not exhaustively described. They have e.g. a number of social provisions like rights for individuals to basic telephone services. Such and other provisions regarding other aspects of the telecom sector than the access to transmission capacity are not included in the following.

The following is with a few exceptions regarding cable-based transmission. Hence mobile telephony is excluded. The main issues of this thesis do apply to mobile telephony as well, but a complete examination of that would also include a number of other issues like spectrum allocation.

Issues about access to someone else's property do inevitably include questions of economics. Some attention will be drawn to these questions, although they will not be exhaustively scrutinized.

The material used consists primarily of US and EC judgements in essential facility cases, directives and other EC documents, US and Swedish telecommunications legislation, and books and articles regarding the issue. A substantial share of the material is in accordance with the subject taken from the Internet. One reason for that is the fast technical and legislative development in the telecom field. Books which are only a couple of years old are often obsolete.

The doctrine of essential facilities will be examined. Its origin is found in the US, but is now used at least all over the Western world. This thesis will be limited to the US and the EC versions of the doctrine.

Next issue of this thesis is the statutory application of the doctrine in the telecommunications field. Telecommunications laws from the US and the EC will be examined. As an example of the latter, Sweden will be used.

### **1.3 Outline**

Chapter 2 is devoted to explaining the concept of essential facilities. First US and then EC doctrine will be examined, but the purpose is not to exhaustively describe the whole doctrine. Hence the chapter is based on a subjective selection of cases relevant to the issue of the thesis.

Chapter 3 examines in general the telecommunications legislations in the US, EC, and as a subheading of the latter the Swedish one.

Chapter 4 is about the two main opportunities to get transmission access; interconnection and by constructing a network of leased or owned lines. The EC directives regarding both these areas are examined. Alternatives for building a network will be presented for being able to consider whether parts of networks can be considered as essential. The last part of chapter 4 examines PTS' proposal for new legislation regarding Telia's access network in Sweden.

Chapter 5 examines the Commission's "Notice on the application of the competition rules to access agreements in the telecommunications sector" of 1998.

In Chapter 6, there is a discussion about transmission capacity as essential facilities.

Chapter 7, finally, has some conclusions and thoughts about the future.

# 2 The essential facilities doctrine

## 2.1 Introduction

Most products and services are produced in a number of separate processing stages, so it is possible with an essential facility situation in almost any imaginable market. Such a problem arise when one of these stages is controlled by one company which also participate at another level.

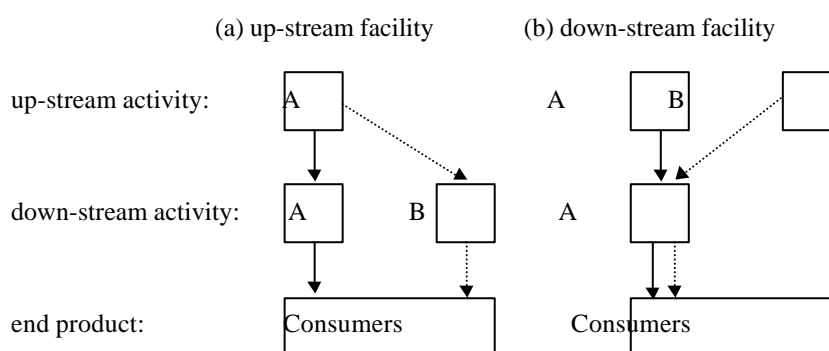


Figure 1<sup>4</sup>

If a manufacturer controls the only supply for a raw material and refuses to supply its competitor or demands an unreasonable high price for it, it may be impossible for the latter manufacturer to continue on the market. In both the US and the EC, the doctrine of essential facilities under some circumstances requires the facility owner to supply its competitor.

## 2.2 US law

In the US the doctrine is based on sections 1 and 2 of the Sherman Act.<sup>5</sup> Although the Court in the first case, *Terminal Railroad*, found a violation of section 1, most essential facility cases are based on section 2.<sup>6</sup>

<sup>4</sup> Figure 1 made after Ridyard, Derek, Essential Facilities and the Obligation to Supply Competitors under UK and EC Competition Law, (1996) 8 ECLR 438, at 439.

<sup>5</sup> Sherman Anti-Trust Act of 1890

<sup>6</sup> "Section 1.

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. (...)

Section 2.

The origin of the doctrine can be found in the *Terminal Railroad* case<sup>7</sup> from 1912. It was not only the first, it can also be seen as the typical essential facility case.

St Louis is surrounded by hills in a way which makes it impossible or very expensive to build a railway to the city from the west in any other way than through a narrow valley. The railway infrastructure in this valley was acquired by Terminal Railroad Association, a company jointly owned by some, but not all, of the railway companies transiting St Louis. The Association offered much more favourable conditions to its members than other companies.

The Supreme Court found that "the inherent conditions are such as to prohibit any other reasonable means of entering the city"<sup>8</sup> and ordered the Association to provide equal and non-discriminatory access to all railway companies.

In the *Otter Tail* case<sup>9</sup>, municipalities wanted to establish their own electricity distribution system. Otter Tail which owned the only transmission lines in the area refused both to sell power at wholesale to the municipalities and to wheel power from other suppliers through its lines.

The Court found that Otter Tail intentionally exploited its monopoly power in the wholesale market to gain a competitive advantage in the retail market. Thus Otter Tail was ordered to either sell its own power or wheel power supplied by other wholesalers through its lines, as long as it did not impair its ability to provide its own customers an adequate service.

In *Hecht v. Pro-Football Inc.*<sup>10</sup> an American Football team demanded access to a stadium which was used by another team. The court found that the use of a stadium was essential for such teams; that a stadium of that size could not easily be duplicated; and that it was possible for the new team to use it without interfering with the old team.

A facility does not need to be indispensable to be essential; it is sufficient that a duplication would be economically unfeasible if a denial of access is a great detriment to potential market entrants.<sup>11</sup> The limits from the opposite side are given in *City of Anaheim v. Southern California Edison Co.*<sup>12</sup> The city demanded the respondent to wheel electricity from another supplier over its lines.

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Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, (...)"

<sup>7</sup> *United States v. Terminal Railroad Association of St Louis*, 224 US 383 (1912).

<sup>8</sup> *Ibid.*, at 409.

<sup>9</sup> *Otter Tail Power Co. v. United States*, 410 US 366 (1973).

<sup>10</sup> *Hecht v. Pro-Football Inc.*, 570 F. 2nd 982 (D.C. Circuit 1977).

<sup>11</sup> Blumenthal, William, quoted by Hedberg, Mattias, [The Essential Facilities Doctrine after Oscar Bronner - is the pendulum swinging?](#), master thesis, Faculty of Law, University of Lund, Lund, Sweden, 1999, p. 11.

<sup>12</sup> *City of Anaheim v. Southern California Edison Co.*, 955 F. 2nd. 1373 (9th Circuit 1992).

(cp. *Otter Tail* above) The Court did however not find that the city had shown that refusal to grant access to the lines was anti-competitive, only that the city might benefit if access was granted. It is thus not enough that access would benefit the competitor, the refusal must be a great detriment to the entrant and concern an exploitation of the facility owner's monopoly power.

One of the landmark cases for the development of the essential facilities doctrine is *MCI v. AT&T*<sup>13</sup>. To being able to provide long-distance telephone services, MCI needed access to the networks of the Bell operating companies (BOCs), which were controlled by the major long-distance provider AT&T. MCI was refused interconnection and charged AT&T for having violated the Sherman Act. The court found that four elements must be established for applying the essential facilities doctrine:

1. the essential facility is controlled by a monopolist;
2. the essential facility can not practically or reasonably be duplicated by the competitor;
3. the competitor is denied to use the facility; and
4. the owner could have provided access to the facility.

All four elements were found established in this case.

## 2.3 European law

The EC essential facility doctrine is based on case-law to Articles 81 and 82<sup>14</sup> in the EC Treaty. Even though the doctrine is based on case-law at the European level, it can be found in legislation as well at the national level. An example of that is the Danish Competition Act.<sup>15</sup>

A substantial part of the essential facilities cases in the EC case-law concerns harbours and airports. One of these is *B & I Line v. Sealink*<sup>16</sup>, where two operators of ferry services between Great Britain and Ireland used a harbour which was owned by one of them. In this case the Commission defines an essential facility as:

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<sup>13</sup> *MCI Communications v. AT&T*, 708 F. 2nd 1081, 464 US 891 (1983).

<sup>14</sup> These articles had the numbers 85 and 86 before the ratification of the Amsterdam Treaty.

<sup>15</sup> "16.- (1) The orders which the competition Council may issue under section 6(4) and section 11(3), in order to bring the detrimental effects of an anti-competitive practice to an end, can i.a. imply:

(...)

4) That access shall be granted to an infrastructure facility which is essential in order to market a product or a service.",

Konkurrenceloven (Competition Act) 1997 (Denmark), quoted after Møllgaard, H. Peter, Access to Essential Facilities and the Danish Competition Act, Working paper 6-97, Copenhagen Business School, København, Denmark, 1997, pp. 1-2.

<sup>16</sup> *B & I Line plc v. Sealink Harbours Ltd and Sealink Stena Ltd*, (1992) 5 CMLR 255.

”A dominant undertaking which both owns or controls and itself uses an essential facility, i. e. a facility or infrastructure without access to which competitors cannot provide services to their customers, and which refuses its competitors access to that facility or grants access to competitors only on terms less favourable than those which it gives its own services, thereby placing the competitors at a competitive disadvantage, infringes Article 86 [Amsterdam article 82], if the other conditions of that Article are met.”<sup>17</sup>

Before establishing that a company has a dominant position in a market, the relevant market must be defined. The Commission defined the relevant market as the ”central corridor” of ferry journeys between Great Britain and Ireland, an area where the actual port was the only available one on the British side. Hence the port constituted an essential facility.

In the second Sealink case<sup>18</sup>, a new operator demanded access to Sealink’s port to make it possible for it to establish a ferry service. The first Sealink case involved two existing competitors. The Commission found that the principle in the first case was applicable on new operators as well.

In the *Magill* case<sup>19</sup> the issue is access to intellectual property. The Court never uses the term ”essential facilities”, and there are different opinions whether it is an essential facilities case or not.

Three TV channels published separate weekly guides for their programmes; the viewers had thus to buy three TV guides to get full cover. Magill intended to publish a comprehensive TV guide, but the TV channels refused access to the programme listings, a service they supplied to daily newspapers. The Court found that;

1. there was no substitute to the programme listings for Magill, they were ”the indispensable raw material” for TV guides;
2. the broadcasters refused the information;
3. there were no justifications for the refusal;
4. the refusal prevented the appearance of a new product for which there was a specific, constant and regular potential demand; and
5. the broadcasters reserved to themselves the secondary market of weekly television guides.<sup>20</sup>

The ownership of an intellectual property right can not in itself constitute a dominant position, but the exercise of a such right may, in exceptional circumstances, involve abusive conduct.<sup>21</sup>

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<sup>17</sup> Ibid., Paragraph 41.

<sup>18</sup> *Sea Containers v. Stena Sealink*, Commission decision 94/19 EC of 21 December 1993, O.J. 1994, L 015/8.

<sup>19</sup> *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v. Commission of the European Communities (Magill case)*, Joined cases C-241/91 P and C-242/91 P, (1995) ECR I-0743.

<sup>20</sup> Ibid., Paragraphs 52-56.

<sup>21</sup> Ibid., Paragraphs 46, 50.

Glasl does not regard *Magill* as an essential facility case since he wants to restrict the use of the doctrine to infrastructure or infrastructure related services.<sup>22</sup>

*European Night Services*<sup>23</sup> seems to be the first case where the essential facilities doctrine expressly has been used on a higher level than Commission decisions. French, Dutch and British railway undertakings formed European Night Services (ENS) to provide passenger railway services through the Channel Tunnel. They agreed to provide ENS with locomotives, train crews and paths, but when the Commission accepted the agreement it required the parent undertakings to supply other international railway undertakings the same services under the same terms as it provided ENS. ENS sought to have the provisions in the Commission's decision annulled and was successful in the proceedings. The CFI found that the locomotives could not be regarded as essential facilities unless ENS's competitors without them "would be unable either to penetrate the relevant market or to continue operating on it."<sup>24</sup> The CFI added that the fact that the undertakings behind ENS had been the first ones to acquire these locomotives did not mean that they were alone in being able to do so.<sup>25</sup>

If the doctrine is widened in *Magill*, it gets more limited in *Oscar Bronner*<sup>26</sup>, the first expressed essential facility case from the ECJ. In Austria there was only one nation-wide system for home-delivering of daily newspapers. It was run by Mediaprint for distribution of mainly its own two leading newspapers with a market share of altogether 46.8 % of the circulation.

Bronner published a smaller daily newspaper and demanded Mediaprint to include it in its home-delivery service against a reasonable payment. Bronner argued that it would be entirely unprofitable for it to organize its own home-delivery service and that postal delivery would not be an equivalent alternative since it generally does not take place until late morning. Hence Mediaprint's delivery system constituted an "essential facility" according to Bronner.

The Court referred to the *Magill* case in its judgement and stated that the refusal of the service must "be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and that such refusal [must] be incapable of being objectively justified" and "that the service in itself [must] be indispensable to carrying on that person's business, inasmuch as there is

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<sup>22</sup> Glasl, Daniel, Essential Facilities Doctrine in EC Anti-trust Law: A Contribution to the Current Debate, (1994) 6 ECLR 306, pp. 308, 311.

<sup>23</sup> *European Night Services Ltd (ENS), Eurostar (UK) Ltd, formerly European Passenger Services Ltd (EPS), Union internationale des chemins de fer (UIC), NV Nederlandse Spoorwegen (NS) and Société nationale des chemins de fer français (SNCF) v. Commission of the European Communities*, Joined cases T-374/94, T-375/94, T-384/94 and T-388/94, (1998) ECR II-3141.

<sup>24</sup> *Ibid.*, Paragraph 212.

<sup>25</sup> *Ibid.*, Paragraph 216.

<sup>26</sup> *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft GmbH & Co. KG and Mediaprint Anzeigengesellschaft GmbH & Co. KG*, Case C-7/97, (1998) ECR I-7791.

no actual or potential substitute in existence for that home-delivery scheme.’<sup>27</sup> But the court found that Bronner had alternatives.

”it is undisputed that other methods of distributing daily newspapers, such as by post and through sale in shops and at kiosks, even though they may be less advantageous for the distribution of certain newspapers, exist and are used by the publishers of those daily newspapers.’<sup>28</sup>

Further, the Court found that it would not be impossible or even unreasonable difficult to establish a second home-delivery scheme, alone or in co-operation with other publishers.

”It should be emphasised in that respect that, in order to demonstrate that the creation of such a system is not a realistic potential alternative and that access to the existing system is therefore indispensable, it is not enough to argue that it is not economically viable by reason of the small circulation of the daily newspaper or newspapers to be distributed.’<sup>29</sup> It must at least be not economically viable to duplicate the system even if the new system would distribute as many newspapers as the existing one.<sup>30</sup>

## 2.4 Comments

Are there any major differences between the American and the European version of the essential facilities doctrine? There are indeed at least one difference between the wording of section 2 of the Sherman Act and Article 82 of the EC Treaty. The former seems to regard the way that firms *acquire* monopoly power, while the latter seems to regard the *exploitation* of monopoly power. Furse<sup>31</sup> identifies that as a clear difference, but is the doctrine, which derives from the legislation, divided into two subdoctrines by the Atlantic?

The small number of cases in the EU, especially from the highest instances, makes it difficult to definitively identify any major differences. But the European version of the doctrine seems to include a consumer perspective. In *Magill*, the Court found that ”the refusal prevented the appearance of a new product for which there was a specific, constant and regular potential demand”. The US version seems to focus on competitors’ interest to provide products, while its European counterpart also pays attention to consumers’ interest to get those products. For the purpose of this thesis, it would however be sufficient to define an essential facility using the test in *MCI v. AT&T*.

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<sup>27</sup> Ibid., Paragraph 41.

<sup>28</sup> Ibid., Paragraph 43.

<sup>29</sup> Ibid., Paragraph 45.

<sup>30</sup> Ibid., Paragraph 46.

<sup>31</sup> Furse, Mark, The ‘Essential Facilities’ Doctrine in Community Law, (1995) 8 ECLR 469, p. 470.



1. the essential facility is controlled by a monopolist;
2. the essential facility can not practically or reasonably be duplicated by the competitor;
3. the competitor is denied to use the facility; and
4. the owner could have provided access to the facility.

The principal disadvantage with the doctrine, which most authors identify, is the risk that it may reduce the incentives to invest. Why should those with the vision to see the importance of a particular asset be forced to share it with others who lacked that foresight?<sup>32</sup>

”a loose essential facilities analysis would penalize entrepreneurs who create their own technologies that, once successful, would be required to share their assets with late-arriving, would-be competitors. The doctrine would then become entirely counterproductive in terms of economic efficiency by deterring entrepreneurs from maximizing their competitive efforts and from creating such ”essential” assets in the first place.”<sup>33</sup>

Ridyard criticizes a British case, *Southern Vectis*, where a new bus operator got access to the dominant bus operator’s bus station with the motivation that ”passengers are likely to assume that all available bus services start and end at the bus station”. It was of course not impossible to construct a new bus station and Ridyard points out the risk that the intervention ”might well preclude the possibility that [the newcomer] could, if left to find its own way into the market, have developed a better bus terminal location than the one owned by the incumbent.”<sup>34</sup>

It looks like there are reasons to limit the application of the doctrine to areas where there is no technical progress, where it is impossible to create something better than the existing facility. Mains for gas or electricity are obvious examples. It is economically impossible to duplicate them, but if that would happen, the new mains would not differ from the old ones.

Another field where the doctrine has advantages is in areas where the control of the facility is not created by someone’s foresight, but is the rest of a legal monopoly. Then the doctrine may create competition where there has not been any before. Ridyard wants to limit the application of the doctrine to ”circumstances where competition does not and cannot be expected to operate,

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<sup>32</sup> The question is taken from Behr, David, Learning How to Share: The Essential Facilities Doctrine Revisited, <http://www.columbia.edu/~dmb69/complaw.html>, 25/4/1999.

<sup>33</sup> Kezsbom, Allen & Goldman, Alan V., No Shortcut to Antitrust Analysis: The Twisted Journey of the ”Essential Facilities” Doctrine, *Columbia Business Law Review*, Vol. 1996 1:1, <http://www.ffhsj.com/firmpage/cmemos/0112041.htm>, 25 April 1999.

<sup>34</sup> Ridyard, Derek, Essential Facilities and the Obligation to Supply Competitors under UK and EC Competition Law, (1996) 8 ECLR 438, pp. 443-444.

and with assets that cannot reasonably be subject to effective competition.”<sup>35</sup>  
Because of the position acquired by the former monopolist through the monopoly, competition may need some help from the doctrine.

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<sup>35</sup> Ibid., p. 452.

# 3 Telecommunications law

## 3.1 American telecom law

### 3.1.1 Before the break-up of AT&T; the regulated private monopoly<sup>36</sup>

The patenting of the telephone by Alexander Graham Bell in 1876 was followed by a number of court battles before the patents were secured by American Bell Telephone (the forerunner to AT&T). When these patents expired in 1893, a large number of competitors entered the market and in 1907 the independent (non-AT&T) companies held a market share of 50 percent. The competing telephone companies refused to interconnect with each other, so subscribers in the same area could not call each other if they were not customers of the same network. This gave some obvious practical problems, so in 1921 telephone companies under the Willis-Graham Act were granted an exemption from the antitrust legislation and were allowed to "unify their services" by merging competing telephone exchanges. In the first years, technology only allowed the establishment of local networks. The technical breakthrough of long-distance telephony reshaped the American telephone market. When AT&T constructed the first long-distance network and refused interconnection with other companies, these lost customers and were forced to merge with AT&T. By 1932 AT&T had gained a market share of 80 % and had agreements with its still existing more or less independent "competitors".

The telephone network was more or less seen as a natural monopoly and became rather regulated, at the federal level by the Federal Communications Commission (FCC), which was established by the Communications Act of 1934. AT&T aroused however soon competition authorities' interest. The rates of downstream telephone services were regulated, but by artificially raising the prices of telecommunications equipment sold to AT&T by its manufacturing arm Western Electric, it could increase its profitability. An antitrust suit by the US Department of Justice in 1949 ended up with a consent decree in 1956, in which AT&T could keep its monopoly but had to accept some restrictions.

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<sup>36</sup> Facts about the early years from:

Kaserman, David L. & Mayo, John W., Government and Business. The Economics of Antitrust and Regulation, The Dryden Press, Harcourt Brace College Publishers, Orlando, Florida, USA, 1995, pp. 595-597.

Monopolkommission, Die Rolle der Deutschen Bundespost im Fernmeldewesen, 1st ed., Sondergutachten der Monopolkommission; vol. 9, Nomos Verlagsgesellschaft, Baden-Baden, Germany, 1981, pp. 77-80.

Stehmann, Oliver, Network competition for European telecommunications, Oxford University Press, New York, USA, 1995, pp. 123-125.

### 3.1.2 The break-up of AT&T<sup>37</sup>

In a number of decisions from 1956 and onwards, the FCC loosened the formal monopoly of AT&T. New competitors arose in the market for long-distance services, but were worse off than AT&T since the latter controlled the local exchange services by its Bell Operating Companies (BOCs). In 1974 the US Department of Justice filed an antitrust suit against AT&T, Western Electric, Bell Telephone Laboratories, and, as co-conspirators, the BOCs. The Department of Justice still saw local services as a natural monopoly, but argued that AT&T with that monopoly could obtain or maintain a monopoly over the potentially competitive markets of equipment and long-distance services. The defendants were charged of having violated Section 2 of the Sherman Act by attempting to "prevent, restrict, and eliminate competition". But before a final decision had been made, AT&T and the Department of Justice settled the case in an agreement in 1982. The settlement required AT&T to divest itself from the BOCs and forbade the former to acquire the stocks or assets of the later.

The BOCs were on their side permitted to engage in any economic activity they choose, except (1) interexchange (long-distance) services, (2) the provision of information services, and (3) the manufacture of telecommunications products or customer premises equipment. They were also required to provide non-discriminatory access to the local exchange for all long-distance carriers and information service providers.

In the divestiture, the twenty-two BOCs formed seven Regional Bell Operating Companies (RBOCs), "Baby Bells", each of them with a part of the US as its market for local exchange services.<sup>38</sup>

US was divided into 160 Local Access and Transport Areas (LATAs), generally areas centered upon a city of reasonable size. BOCs were prohibited from providing interLATA services, these could be provided by any long-distance carrier, e.g. AT&T, but were free to provide intraLATA services. Intrastate intraLATA services was an issue for state regulation, but in a majority of states long-distance intraLATA services were open for competition. Local telephone services were however still under conditions of monopoly.

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<sup>37</sup> Facts about the break-up from:

Davies, Andrew, Telecommunications and Politics. The Decentralised Alternative, Pinter Publishers Ltd, London, UK, 1994, pp. 156-165.

Kaserman, David L. & Mayo, John W., Government and Business. The Economics of Antitrust and Regulation, The Dryden Press, Harcourt Brace College Publishers, Orlando, Florida, USA, 1995, pp. 598-607.

Stehmann, Oliver, Network competition for European telecommunications, Oxford University Press, New York, USA, 1995, pp. 126-132.

<sup>38</sup> Kaserman/Mayo uses the term BOC for the 22 companies before the AT&T break-up and RBOC for the seven new companies the break-up created.

Stehmann uses the term RBOC for the pre-break-up companies and RHC (Regional Holding Companies) for the seven new companies.

Alexander uses the term BOC for the seven new companies.

In this thesis Kaserman/Mayo's terminology is used.

It has been argued that this "balkanised" system of LATAs is artificial and will be growing even more artificial with the convergence of telecommunications and computerized technology.<sup>39</sup>

### **3.1.3 Telecommunications Act 1996**

The Telecommunications Act of 1996 was signed into law by the President on February 8, 1996. It is mainly an amendment to the Communications Act of 1934 which also deals with other communications services like broadcasting of radio and television.

The supervision of the telecommunications market is divided between the FCC and the State Commissions. There is also a Joint Board consisting of three FCC commissioners and four state commissioners from the states affected by the actual case.<sup>40</sup>

The main concepts behind the act are competition and deregulation. "No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."<sup>41</sup>

#### **3.1.3.1 Interconnection and other duties on telecommunications carriers to promote competition**

To provide competition, each telecommunications carrier has under section 251 the duty to interconnect directly or indirectly with other carriers' facilities and equipment and to not install network features, functions, or capabilities that do not comply with the guidelines and standards established pursuant to the act.

Agreements on interconnection shall be submitted to the State commission for approval.<sup>42</sup>

Telecommunications carriers which are engaged in the provision of telephone exchange service or exchange access are called "local exchange carriers" and have as well the following duties:

- (1) to not prohibit, or impose unreasonable or discriminatory conditions or limitations on, the resale of their telecommunications services.
- (2) to provide number portability. (the possibility for the customer to keep the same telephone number when changing provider)

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<sup>39</sup> Huntley, John A. K. & Pitt Douglas C., Dead-Ends, Bottlenecks and Gridlock: Regulatory Confusion on the US Telecommunications Superhighway, in Scott, Colin & Audéoud, Olivier (eds.), The Future of EC Telecommunications Law, (Series of Publications by the Academy of European Law in Trier; Vol. 19), Bundesanzeiger Verlagsges. mbH, Köln, Germany, 1996, pp. 65-66.

<sup>40</sup> Communications Act of 1934, as amended by Telecommunications Act of 1996, subsection 410 (c).

<sup>41</sup> Ibid., subsection 253 (a).

<sup>42</sup> Ibid., subsection 252 (e).

- (3) to provide dialling parity. (the phone call will automatically be routed to a pre-selected service provider without the use of a special code)
- (4) to afford access to the poles, ducts, conduits, and rights-of-way of such carrier to competing providers of telecommunications services.
- (5) to establish reciprocal compensation arrangements for transport and termination of telecommunications.<sup>43</sup>

A local exchange carrier can be an "incumbent local exchange carrier" in a specific area. That is a carrier which on the date of enactment of the Telecommunications Act provided telephone exchange service in the area and was deemed to be a member of the exchange carrier association or is a successor or assign of a such member. FCC can also decide to treat a local exchange carrier as an incumbent such if the carrier's position makes that reasonable.<sup>44</sup> As an incumbent local exchange carrier it also *inter alia* has the following duties:

- (6) to negotiate in good faith with those carriers which want interconnection.
- (7) to provide interconnection with the local exchange carrier's network on reasonable and non-discriminatory terms for any requesting telecommunications carrier, "at any technically feasible point within the carrier's network". The service must be equal in quality to the one provided to other carriers, including itself.
- (8) to provide non-discriminatory access to network elements on an unbundled basis at any technically feasible point.<sup>45</sup>

The rates for interconnection services and the use of network elements shall be based on costs, be non-discriminatory and may include a reasonable profit.<sup>46</sup>

### **3.1.3.2 Special provisions concerning Bell operating companies**

The BOCs were given a monopoly over the local exchange in the consent decree<sup>47</sup>, but got restrictions to prevent them from using their position to gain advantages in other markets. (see 4.1.2 above) In the 1996 Act, they lost their local monopoly but are still under some restrictions. Under section 271, a BOC is free to provide interLATA services which originate outside its own area<sup>48</sup> and can get permission from the FCC to provide such services from its own region too if the BOC

- (a) has entered into one or more binding agreements about "providing access and interconnection to its network facilities for the network facilities of one or more unaffiliated competing providers of telephone exchange service", or
- (b) has not received any requests for access and interconnection in ten months after the Telecommunications Act was enacted, and the State commission has

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<sup>43</sup> Ibid., subsection 251 (b).

<sup>44</sup> Ibid., subsection 251 (h).

<sup>45</sup> Ibid., subsection 251 (c).

<sup>46</sup> Ibid., paragraph 252 (d) (1).

<sup>47</sup> *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982).

<sup>48</sup> Communications Act of 1934, as amended by Telecommunications Act of 1996, paragraph 271 (b) (2).

approved a statement of those terms and conditions the company generally offers to provide such access and interconnection.<sup>49</sup>

To be approved by the State, such a statement must involve:

- (1) Interconnection.
- (2) Non-discriminatory access to network elements.
- (3) Non-discriminatory access to the poles, ducts, conduits, and rights-of-way owned or controlled by the BOC at just and reasonable rates.
- (4) Local loop transmission from the central office to the customer's premises, unbundled from local switching or other services.
- (5) Local transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services.
- (6) Local switching unbundled from transport, local loop transmission, or other services.
- (7) Non-discriminatory access to some information and services like directory assistance services to allow the other carrier's customers to obtain telephone numbers.<sup>50</sup>

If the BOC is an Incumbent Local Exchange Carrier, it must however provide the interLATA services which originate from its own region through an affiliate which must be held on arm's length distance. The affiliate must operate independently from the BOC, keep separate books, have separate officers and employees and is not allowed to obtain credit in a manner which would give the creditor recourse to the BOC in case of default. The BOC must not discriminate between its affiliate and other companies.<sup>51</sup>

### 3.1.3.3 Recent development

FCC issued in 1996 its *Local Competition Order* with federal standards for pricing and provisions of interconnection services. These standards were challenged for having violated the authority of the states, but were upheld by the Supreme Court.<sup>52</sup>

The Baby Bells have had difficulties to fulfil the requirements for providing long distance services, but a number of them will probably do it in a near future.<sup>53</sup>

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<sup>49</sup> Ibid., paragraphs 271 (b) (1), (c) (1).

<sup>50</sup> Ibid., subparagraph 271 (c) (2) (B).

<sup>51</sup> Ibid., section 272.

<sup>52</sup> Communications Media Center at New York Law School, Supreme Court Upholds FCC's Authority Regarding Some Local Telephone Market Issues, 25 January 1999, <http://cmcnys.edu/bulletins/scufccal.html-ssi>.

<sup>53</sup> Communications Media Center at New York Law School, BellSouth's Bid to Provide Long-distance to Louisiana Customers is Rejected, 15 October 1998, <http://cmcnys.edu/bulletins/bsbldslr.htm>.

Communications Media Center at New York Law School, Bell Atlantic Closer to Entering New York Long Distance Telephone Market, 12 April 1999, <http://cmcnys.edu/bulletins/bacenyld.html-ssi>

## 3.2 European telecom law

### 3.2.1 European Community law

#### 3.2.1.1 Introduction

Unlike the US, the European telecommunications sector was characterized by public monopolies, often with both regulatory and service functions. In a number of countries the TO was a part of the post organization, as e.g. the German Deutsche Bundespost. In 1985, the Court recognized in the *British Telecom* case<sup>54</sup> that the competition rules of the Treaty apply to telecommunications administrations.

In 1987 the Commission published its Green Paper on Telecommunications<sup>55</sup> with a policy for liberalization of the markets for telecommunications services and equipment. Its main principles were:

1. The *de jure* network monopolies in some member states were tolerated, but a standard for interconnection and network access for competitive service providers would be adopted ("Open Network Provision", ONP).
2. The *de jure* service monopolies would be restricted; only voice telephony could be provided with exclusive rights.
3. The *de jure* terminal equipment monopolies of the TOs would be abolished.

A directive for ensuring competition in the markets for terminal equipment came the following year.<sup>56</sup> Its main purpose was to create a European market for equipment and required the member states to *inter alia* abolish monopolies for importation and marketing.

The liberalization of the telecommunications market is mainly based on Article 86<sup>57</sup> Directives issued by the Commission. These are completed with Council Directives under Article 95<sup>58</sup> to create an EU-wide telecom market.

The Commission's right to issue directives under Article 86(3) requiring the member states to abolish certain special or exclusive rights granted to their telecommunications bodies was challenged but upheld by the Court.<sup>59</sup>

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<sup>54</sup> *Italian Republic v. Commission of the European Communities (British Telecom case)*, Case 41/83, (1985) ECR 873.

<sup>55</sup> Green Paper on the development of the Common market for telecommunications services and equipment. COM (87) 290, 1987.

<sup>56</sup> Commission Directive 88/301/EEC of 27 May 1988 on competition in the markets for telecommunications terminal equipment, O.J. 1988, L 131/73.

<sup>57</sup> This article had the number 90 before the ratification of the Amsterdam Treaty.

<sup>58</sup> This article had the number 100a before the ratification of the Amsterdam Treaty.

<sup>59</sup> *French Republic v. Commission of the European Communities*, Case 202/88, (1991) ECR I-1259, (terminal equipment), and



To make its decisions more transparent, the Commission in 1991 issued its "Guidelines on the application of EEC competition rules in the telecommunications sector"<sup>60</sup>.

### 3.2.1.2 The Telecommunications Services Directive

The objective of directive 90/388/EEC<sup>61</sup> was to open up the telecom market to competition. It requires the member states to abolish all special or exclusive rights granted to TOs for supply of telecom services. In its original version, voice telephony was excluded. Those member states which maintained special or exclusive rights for the network provision were required to ensure that these were objective, non-discriminatory and published. The member states were further required to separate the regulatory functions from the TO. An independent body would be responsible for granting operating licences, controlling type approval and technical specifications, allocation of frequencies and surveillance of usage conditions.

By an amendment in 1994, special or exclusive rights in connections with satellite services were abolished as well.<sup>62</sup>

Directive 90/388/EEC was substantially amended by directive 96/19/EC<sup>63</sup>, which removed the exception for voice telephony and required the member states to introduce full competition from 1 January 1998. Some states with less developed or small networks were granted a longer transition period.

The Service Directive has been amended twice to make it possible to use cable television networks for transmission of telecom services.<sup>64</sup>

Directive 97/13/EC gives a framework for general authorizations and individual licences for telecommunications services. General authorizations or the absence of authorization requirements are preferred. Individual licences may only be issued

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*Kingdom of Spain, Kingdom of Belgium and Republic of Italy v. Commission of the European Communities*, Joined cases 271/90, 281/90 and 289/90, (1992) ECR I-5883, (telecommunications services).

<sup>60</sup> Guidelines on the application of EEC competition rules in the telecommunications sector, O.J. 1991, C 233/2.

<sup>61</sup> Commission Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services, O.J. 1990, L 192/10.

<sup>62</sup> Commission Directive 94/46/EC of 13 October 1994 amending Directive 88/301/EEC and Directive 90/388/EEC in particular with regard to satellite communications, O.J. 1994, L 268/15.

<sup>63</sup> Commission Directive 96/19/EC of 13 March 1996 amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets, O.J. 1996, L 074/13.

<sup>64</sup> Commission Directive 95/51/EC of 18 October 1995 amending Directive 90/388/EEC with regard to the abolition of the restrictions on the use of cable television networks for the provision of already liberalized telecommunications services, O.J. 1995, L 256/49; and Commission Directive 1999/64/EC of 23 June 1999 amending Directive 90/388/EEC in order to ensure that telecommunications networks and cable TV networks owned by a single operator are separate legal entities, O.J. 1999, L 175/39.

where the holder is given access to scarce resources or has particular obligations or rights. Conditions must under all circumstances be objectively justified in relation to the service concerned, non-discriminatory, proportionate and transparent.<sup>65</sup> The Commission is supposed to work for a "one-stop-shopping" procedure, where it is possible to obtain individual licences or get general authorizations notified at a single location in co-ordinated procedures.<sup>66</sup>

### 3.2.1.3 The Open Network Provision Directives

The purpose of the ONP Framework Directive<sup>67</sup> is to harmonize conditions for open and efficient access to and use of the public telecommunications network. Such conditions must be based on objective criteria, be transparent and appropriately published, guarantee equality of access and be non-discriminatory in accordance with Community law.<sup>68</sup> Restrictions on access can be made for reasons based on essential requirements, which means security of network operations and similar reasons.<sup>69</sup>

The ONP Framework directive identified areas for specific applications of ONP. The first of these ONP area directives was directive 92/44/EEC about leased lines.<sup>70</sup> "Lines" means in this context "the telecommunications facilities which provide for transparent transmission capacity between network termination points" and the leasing does not include on-demand switching.<sup>71</sup>

The directive required the member states to ensure:

1. that information regarding offerings on technical characteristics, tariffs, supply and usage conditions, licensing and declaration requirements, and conditions for the attachment of terminal equipment is published;

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<sup>65</sup> Directive 97/13/EC of the European Parliament and of the Council of 10 April 1997 on a common framework for general authorizations and individual licences in the field of telecommunications services, O.J. 1997, L 117/15, article 3(2-3).

<sup>66</sup> Ibid., article 13.

<sup>67</sup> Council Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, O.J. 1990, L 192/1.

<sup>68</sup> Ibid., article 3(1).

<sup>69</sup> Council Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, O.J. 1990, L 192/1; as amended by Directive 97/51/EC of the European Parliament and of the Council of 6 October 1997 amending Council Directives 90/387/EEC and 92/44/EEC for the purpose of adaptation to a competitive environment in telecommunications, O.J. 1997, L 295/23, article 3(2).

<sup>70</sup> Council Directive 92/44/EEC of 5 June 1992 on the application of open network provision to leased lines, O.J. 1992, L 165/27.

<sup>71</sup> Council Directive 92/44/EEC of 5 June 1992 on the application of open network provision to leased lines, O.J. 1992, L 165/27; as amended by Directive 97/51/EC of the European Parliament and of the Council of 6 October 1997 amending Council Directives 90/387/EEC and 92/44/EEC for the purpose of adaptation to a competitive environment in telecommunications, O.J. 1997, L 295/23, article 2(2).

2. that when access to and use of leased lines is restricted in accordance with Community law those restrictions are imposed by the national regulatory authorities through regulatory means;
3. that a minimum set of leased lines is provided in order to guarantee a harmonized offering throughout the Community;
4. that TOs do not discriminate against other service providers; and
5. that tariffs for leased lines follow the basic principles of cost orientation and transparency.<sup>72</sup>

The second ONP area directive was 95/62/EC about voice telephony<sup>73</sup>, which later became replaced by directive 98/10/EC<sup>74</sup>. The latter directive requires that TOs with significant market power deals with reasonable requests from service providers for access to the PSTN (the existing telecom network) at other network termination points than the commonly provided ones.<sup>75</sup>

Two ONP Council Recommendations have also been issued regarding PSDS and ISDN services.<sup>76</sup>

Directive 97/33/EC about interconnection<sup>77</sup> will be examined under paragraph 4.1.

Number portability is required in directive 98/61/EC. The NRAs shall "encourage the earliest possible introduction" of it, it must however be available at latest by 1 January 2000 for those countries which had not been granted a longer transition period until full liberalization. Telecommunications organizations with significant market power shall be required to install facilities "which allow the subscriber to choose these services by means of pre-selection with a facility to override any pre-selected choice on a call-by-call basis by dialling a short prefix."<sup>78</sup>

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<sup>72</sup> Ibid., articles 3-10;

<sup>73</sup> Directive 95/62/EC of the European Parliament and of the Council of 13 December 1995 on the application of open network provision (ONP) to voice telephony, O.J. 1995, L 321/6.

<sup>74</sup> Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment, O.J. 1998, L 101/24.

<sup>75</sup> Ibid., article 16.

<sup>76</sup> Council Recommendation on the harmonized provision of a minimum set of packet-switched data services (PSDS) in accordance with ONP principles, O.J. 1992, L 200/1; and Council Recommendation on the provision of harmonized integrated services network (ISDN) access arrangements and a minimum set of ISDN offerings in accordance with ONP principles, O.J. 1992, L 200/10.

<sup>77</sup> Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), O.J. 1997, L 199/32.

<sup>78</sup> Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), O.J. 1997, L 199/32, as amended by directive 98/61/EC, O.J. 1998, L 268/37, article 12(5), (7).

Deferment of these obligations may be requested if the concerned state can prove that they would impose an excessive burden on certain organizations or classes of organizations.<sup>79</sup>

### 3.2.2 Sweden

#### 3.2.2.1 Introduction<sup>80</sup>

Unlike most European countries, Sweden has never had a *de jure* telecom monopoly. In the beginning of the twentieth century, private companies owned the networks in the larger cities. Stockholm had two networks, that of Telegrafverket (the state) and that of Stockholms Allmänna Telefonaktiebolag. The competition was sometimes so intensive that they refused interconnection with each other. In 1918, Telegrafverket bought its competitor and became almost single service provider, but not until the 1950s the Swedish government (through its TO, "Televerket") had acquired the whole network. Anyone was still permitted to construct his own network, but Televerket had a connection monopoly to its public network which gave it a *de facto* monopoly regarding equipment and services. Since 1980, this monopoly has been phased out and in two steps, taken in 1989 and 1992, Televerket lost its regulatory functions to a regulatory board, from 1994 called the Post and Telecom Agency (Post- och telestyrelsen, PTS).

#### 3.2.2.2 Telecommunications Act 1993

The Swedish telecom market became liberalized by the Telecommunications Act of 1993. Sweden has thus been further on the road towards an open market compared with the rest of the European Union, United Kingdom excepted. The European Economic Area Agreement only implied some technical adjustments to the Swedish legislation.<sup>81</sup> The directives issued after the Swedish act came into force have implied some changes to the act, but the main principles are unchanged. One of these principles is that the goal of ensuring access to efficient telecommunications is supposed to be achieved through competition within all parts of the sector.<sup>82</sup> But according to a report from BT in June 1999, Sweden is now behind comparable countries in Europe.<sup>83</sup> The criteria of the examination

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<sup>79</sup> Ibid., article 20(2).

<sup>80</sup> Historical background from Trägård, Lars / Boström, Karoline / Camitz, Marianne / Eriksson, Margaretha, Telelagstiftningen, Norstedts Juridik AB, Stockholm, Sweden, 1996, pp. 36-38; and

Telelag (SOU 1992:70), Report from the Telecommunications Law Commission, pp. 127-128.

<sup>81</sup> Scott, Colin, Current Issues in EC Telecommunications Law, in Scott, Colin & Audéoud, Olivier (eds.), The Future of EC Telecommunications Law, (Series of Publications by the Academy of European Law in Trier; Vol. 19), Bundesanzeiger Verlagsges. mbH, Köln, Germany, 1996, p. 37.

<sup>82</sup> Telelag (Telecommunications Act) (1993:597), reprinted SFS 1997:397, amended 1995:465, 1995:1368, 1996:416, 1997:397, 1998:486, 1998:728, 1998:1569, 1999:577 and 1999:578. English version from [www.pts.se/lagar/teleact.htm](http://www.pts.se/lagar/teleact.htm), section 3.

<sup>83</sup> TeleAffärer, Sveriges telemarknad fortsätter att halka efter i avregleringen, TeleAffärer, 15 June 1999, <http://nyheter.idg.se/display.pl?ID=990615-TA1>

were efficient regulation, fair interconnection, access to the market, and non-discrimination. Sweden came as number nine of ten compared countries, but the introduction of dialling parity and number portability by an amendment<sup>84</sup> to the Act in 1999 is seen as an important progress.

### 3.2.2.2.1 Notifications and licences

If the PTS has not made an exemption, providers are required to notify the authority before providing within a public telecommunications network:

1. telephony services to a fixed termination point
2. mobile telecommunications services
3. other telecommunications services requiring allocation of capacity from the numbering plan for telephony
4. network capacity.<sup>85</sup>

If the activity is of a considerable extent, the provider requires a licence. PTS may however grant an exemption if there are special reasons for that.<sup>86</sup>

A licence will normally be granted on application; a licence "shall be granted unless the applicant is not capable of pursuing the activity on a permanent basis and with adequate capacity and quality."<sup>87</sup>

If the activity is pursued in direct violation of the Act or conditions issued under it, the PTS may revoke a licence.<sup>88</sup>

A licence may be subject to conditions concerning obligations for the licence-holder to *inter alia*:

1. provide on certain conditions telephony services to a fixed termination point to anyone requesting such service.
2. provide, having regard to available capacity and on certain conditions, network capacity to anyone so requesting.
3. conduct the activity permanently and with good capacity and quality.
4. publish on reasonable conditions in its own telephone directory information about subscriptions that is not confidential.
5. without special compensation, maintain automatic telephones, to the extent which as regards number and geographical coverage satisfies public needs.<sup>89</sup>

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<sup>84</sup> Telelag (Telecommunications Act) (1993:597), reprinted SFS 1997:397, amended 1995:465, 1995:1368, 1996:416, 1997:397, 1998:486, 1998:728, 1998:1569, 1999:577 and 1999:578. English version from [www.pts.se/lagar/teleact.htm](http://www.pts.se/lagar/teleact.htm), sections 37-42.

<sup>85</sup> Ibid., section 5, combined with

Teleförordning (Telecommunications Ordinance) (1997:399), sections 2, 4.

<sup>86</sup> Telelag (Telecommunications Act) (1993:597), reprinted SFS 1997:397, amended 1995:465, 1995:1368, 1996:416, 1997:397, 1998:486, 1998:728, 1998:1569, 1999:577 and 1999:578. English version from [www.pts.se/lagar/teleact.htm](http://www.pts.se/lagar/teleact.htm), sections 7, 10.

<sup>87</sup> Ibid., section 13.

<sup>88</sup> Ibid., section 12.

The tariffs of a dominant licence-holder for provision of network capacity or telephony services between fixed termination points shall be based on costs, but the Government may prescribe that tariffs for the latter must not exceed a certain level.<sup>90</sup>

#### **3.2.2.2 Interconnection**

A provider which is subject to the obligation of notification or is a considerable provider of other services within a public telecommunications network, is "liable on request to facilitate interconnection" with any other notified provider. In exceptional cases, an exemption from the obligation to interconnect may be granted by the PTS. The compensation for interconnection of telephony services shall be fair and reasonable in relation to the performance costs. For non-telephony services the compensation may be under market terms.<sup>91</sup>

### **3.3 Comments**

From different backgrounds, the regulated private monopoly respectively the public monopoly, both US and Europe have seen a development towards competition and deregulation. The American concept of creating full competition in long-distance services by separating the provision of them from the former local monopolists has no equivalent in Europe where the dominating TOs are free to provide a full range of services. The American legislator has chosen to use a carrot; if the BOCs make agreements about giving access to their networks in an unbundled manner, they can enter the profitable long-distance market. This concept of negotiation implies that the stage of competition may differ between the states. The main impression is however that the US is further on the road. Some of the requirements which were introduced in the US by the legislation of 1996 came into force in the EU with the introduction of full competition 1 January 1998. Others, like number portability and dialling parity, will be required later. The opening of the public local network has not been the subject of any EC directives yet. Nevertheless some member states have more far-reaching requirements on their dominant TOs.

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<sup>89</sup> Ibid., section 15.

<sup>90</sup> Ibid., sections 28, 31.

<sup>91</sup> Ibid., section 32.

# 4 Access to the transmission network in Europe

Telecommunications can be routed from one service provider through another one's network by interconnection. The second, and more obvious way to get access to a network is to build it of leased or self-constructed connections. These two means of getting access to a network are examined in this chapter. Regarding the latter, this statement will concentrate on the local access network. According to the PTS, there will be relatively good conditions for competition over the long-distance network in Sweden in the future.<sup>92</sup> Transmission capacity is at the moment provided by *inter alia* Telia AB, Banverket, Svenska Kraftnät and Teracom. But many operators still consider that the competition in Sweden is not entirely satisfactory, since the number of network providers is low and those who can provide connections in the whole country are even fewer.<sup>93</sup>

## 4.1 Interconnection services

Without interconnection agreements it would not be possible to make a phone call to someone who is a customer of another network. The significance of it is obvious, especially for service providers with smaller networks and their subscribers. According to the European definition,

”‘interconnection’ means the physical and logical linking of telecommunications networks used by the same or a different organization in order to allow the users of one organization to communicate with users of the same or another organization, or to access services provided by another organization. Services may be provided by the parties involved or other parties who have access to the network”<sup>94</sup>.

The concept of interconnection did not arise from the liberalization. The national TOs have had interconnection agreements with each other regarding international calls as long as such calls have been possible.

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<sup>92</sup> Post- och telestyrelsen, Förslag till ändring i telelagen (1993:597), Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accessforslag10.pdf](http://www.pts.se/Aktuellt/accessforslag10.pdf), p. 1.

<sup>93</sup> Öhrlings PricewaterhouseCoopers, Den svenska marknaden för telekommunikation 1998. En analys utförd på uppdrag av Post och Telestyrelsen, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/telemark1998.pdf](http://www.pts.se/Aktuellt/telemark1998.pdf), p. 62.

<sup>94</sup> Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), O.J. 1997, L 199/32, article 2.1(a).

### 4.1.1 The duty to interconnect in European law

Article 3 in the 97/33/EC directive requires the member states to remove any restrictions preventing TOs from negotiating interconnection agreements with each other.

TOs which are authorized to provide public telecommunications networks and/or publicly available telecommunications services "shall have a right and, when requested by organizations in that category, an obligation to negotiate interconnection with each other for the purpose of providing the services in question, in order to ensure provision of these networks and services throughout the Community". The NRA can temporarily limit the obligation on a case-by-case basis under some circumstances.

If the TO has a significant market power, it "shall meet all reasonable requests for access to the network including access at points other than the network termination points offered to the majority of end-users". The TO is presumed to have a significant market power if it has a share of more than 25 % in the area where it is authorized to operate. The NRA can both determine that TOs with less than 25 % has significant market power and that TOs with more are not.<sup>95</sup> Those TOs with significant market power shall "apply similar conditions in similar circumstances to interconnected organizations providing similar services", and provide interconnection facilities to others under the same conditions as for their own services. All necessary information must be available on request and interconnection agreements must be communicated to the relevant NRAs.<sup>96</sup>

Agreements on interconnection may not interfere with the security of network operations, the maintenance of network integrity, interoperability of services, or protection of confidential data (essential requirements). But the need to meet the requirement of security of network is not a valid reason for refusal to negotiate terms for interconnection and the conditions must be proportionate and non-discriminatory in nature and based on objective criteria identified in advance.<sup>97</sup>

TOs with significant market power shall be required to "keep separate accounts for, on the one hand, their activities related to interconnection - covering both interconnection services provided internally and interconnection services provided to others - and, on the other hand, other activities, so as to identify all elements of cost and revenue, with the basis of their calculation and the detailed attribution methods used, related to their interconnection activity, including an itemized breakdown of fixed asset and structural costs."<sup>98</sup>

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<sup>95</sup> Ibid., article 4.

<sup>96</sup> Ibid., article 6.

<sup>97</sup> Ibid., article 10.

<sup>98</sup> Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), O.J. 1997, L 199/32, article 8(2); and



### 4.1.2 Charges for interconnection

Organizations operating the public telecommunications networks and TOs with a significant market power are required to follow the principles of transparency and cost orientation when charging for interconnection services. The burden of proof that charges are derived from actual costs including a reasonable rate of return on investment lies with the organization providing interconnection to its facilities. The NRA may request the facility operator to provide full justification for its interconnection charges and can adjust them if required.<sup>99</sup>

Interconnection charges must be sufficiently unbundled so the operator which uses the interconnection services does not have to pay for anything else than the requested service.<sup>100</sup>

The NRAs shall ensure the publication of a reference interconnection offer.<sup>101</sup> The Commission has also given some recommendations on pricing to the NRAs with recommended maximum interconnection charges.<sup>102</sup>

## 4.2 The local access network

Competition is considered to have given new services and in some cases lower prices. Fixed local telephony is however in Sweden an exception and that is considered to be a consequence of the former monopolist's control of the access network.<sup>103</sup> Competitors' possibility to provide local telephony is dependent of the level of Telia's interconnection rates. These have declined over the recent years<sup>104</sup>, but Telia's control of the access network is still considered to be an obstacle.

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98/322/EC: Commission Recommendation of 8 April 1998 on interconnection in a liberalised telecommunications market (Part 2 - Accounting separation and cost accounting), O.J. 1998, L 141/6.

<sup>99</sup> Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), O.J. 1997, L 199/32, article 7(1-2).

<sup>100</sup> Ibid., article 7 (4).

<sup>101</sup> Ibid., article 7 (3), paragraph 1.

<sup>102</sup> 98/195/EC: Commission Recommendation of 8 January 1998 on interconnection in a liberalised telecommunications market (Part 1 - Interconnection pricing), O.J. 1998, L 073/42, amended by 98/511/EC: Commission Recommendation of 29 July 1998 amending Recommendation 98/195/EC on interconnection in a liberalised telecommunications market (Part 1 - Interconnection pricing), O.J. 1998, L 228/30.

<sup>103</sup> Post- och telestyrelsen, Publik konsultation avseende konkurrenssituationen inom accessnätet, Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accesskonkurrens.pdf](http://www.pts.se/Aktuellt/accesskonkurrens.pdf), p. 1.

<sup>104</sup> Öhrlings PricewaterhouseCoopers, Den svenska marknaden för telekommunikation 1998. En analys utförd på uppdrag av Post och Telestyrelsen, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/telemark1998.pdf](http://www.pts.se/Aktuellt/telemark1998.pdf), p. 75.

Access to an access network is especially important for the providing of services like local telephony, subscription, ISDN and broadband access. The importance of mobile telephony over the GSM network as an alternative for fixed voice telephony may increase if the rates decline, but the speed of the mobile network has so far been too low to be an alternative for data communication. There are three alternatives for a competitive service provider to get local access; constructing a new network, using existing alternative networks, or getting access to the existing access network.

## **4.2.1 The service provider constructs an alternative access network**

### **4.2.1.1 Cable-based local network**

It would be rather expensive for a competitive service provider to duplicate Telia's access network. In the 1980s, efforts were made in the UK to create a second network by a policy of duopoly. Mercury was granted a network license which gave it a special right to construct the second network after BT's. In 1991 the duopoly policy was brought to an end and in 1994 the telecommunications market was fully liberalized.<sup>105</sup>

Demands for connections different from the existing ones may make a new network profitable. A private company plans to construct broadband connections to a substantial share of Swedish homes. These connections are planned to be used for telephony, TV, radio and Internet.<sup>106</sup> Telia has similar plans.<sup>107</sup>

### **4.2.1.2 Wireless local loop**

A less expensive alternative than constructing a cable network is to replace it with a wireless connection between the customer and the switch. Telenordia plans to provide access in Sweden by a radio technology called LMDS (Local Multipoint Distribution Service) from the second half of 1999. The connection can be used for both telephony and internet access, the latter with a speed of 1 Mbit/s, and in the future for distribution of digital television.<sup>108</sup>

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<sup>105</sup> Öhrlings PricewaterhouseCoopers, Kartläggning av tele- och IT-infrastruktur, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/infrastruktur.pdf](http://www.pts.se/Aktuellt/infrastruktur.pdf), p. 72.

<sup>106</sup> Sydsvenska Dagbladet, Uppstickare lockar med gratis telefoni, Sydsvenska Dagbladet, 25 August 1999, Malmö, Sweden, p. A15.

<sup>107</sup> Sydsvenska Dagbladet, Telia satsar miljard på bredband, Sydsvenska Dagbladet, 27 August 1999, Malmö, Sweden, p. A18.

<sup>108</sup> Telenordia testar radioanslutning i Malmö, Computer Sweden, 22 June 1999, [nyheter.idg.se/display.pl?ID=990622-CS11](http://nyheter.idg.se/display.pl?ID=990622-CS11).

## 4.2.2 Existing alternative access networks

### 4.2.2.1 The cable television network

Given the high costs of building an alternative local network, one of the most realistic alternatives is to use an upgraded cable TV network. BT's market share was e.g. reduced far quicker by the arrival of the cable companies than the previous (primarily Mercury's) challenges had achieved.<sup>109</sup>

The cable TV network can provide a capacity of 256 kbit/s-10 Mbit/s<sup>110</sup>, and Öhrlings PricewaterhouseCoopers predicts that it will be a common form of access in those areas which already have such networks, provided that the grade of the cable is sufficient.<sup>111</sup>

The Commission has adopted two directives for making it possible and easier to use the cable TV network for telecommunications. The first one, 95/51/EC<sup>112</sup>, *inter alia* required the member states to (1) abolish restrictions on the use of cable TV networks for the provision of telecommunications services, (2) ensure that interconnection between cable TV networks and the public telecommunications network is authorized for such purpose, (3) ensure accounting transparency and non-discrimination, and (4) that operators with exclusive rights keep the financial accounts of their telecommunications network infrastructure and cable TV network infrastructure separated.

The two main purposes are to increase competition in the local access market and give the operators incentives to upgrade their networks so they can use them for a wider range of services. Tariffs for transmission are stated to be ten times higher in the European Union than for equivalent services in the US.

The Commission found, however, this to be insufficient and in its second directive, 99/64/EC<sup>113</sup>, it requires that cable TV networks and telecommunications network

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<sup>109</sup> Commission communication concerning the review under competition rules of the joint provision of telecommunications and cable TV networks by a single operator and the abolition of restrictions on the provision of cable TV capacity over telecommunications networks, O.J. 1998 C 071/4, paragraph 34.

<sup>110</sup> Öhrlings PricewaterhouseCoopers, Den svenska marknaden för telekommunikation 1998. En analys utförd på uppdrag av Post och Telestyrelsen, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/telemark1998.pdf](http://www.pts.se/Aktuellt/telemark1998.pdf), p. 69.

<sup>111</sup> Öhrlings PricewaterhouseCoopers, Kartläggning av tele- och IT-infrastruktur, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/infrastruktur.pdf](http://www.pts.se/Aktuellt/infrastruktur.pdf), p. 50.

<sup>112</sup> Commission Directive 95/51/EC of 18 October 1995 amending Directive 90/388/EEC with regard to the abolition of the restrictions on the use of cable television networks for the provision of already liberalized telecommunications services, O.J. 1995, L 256/49.

<sup>113</sup> Commission Directive 1999/64/EC of 23 June 1999 amending Directive 90/388/EEC in order to ensure that telecommunications networks and cable TV networks owned by a single operator are separate legal entities, O.J. 1999, L 175/39.

owned by a single operator are separate legal entities. The requirement is complied with if the cable TV operations are transformed to a fully-owned subsidiary. One of the reasons for the directive is two studies which showed that "the joint ownership of telecommunications networks and cable TV networks by a single enterprise, without a high degree of competition in the local access markets, slows down the development towards a full multimedia infrastructure".<sup>114</sup> There are, according to the Commission, no incentives for upgrading networks since a substantial improvement in either network may lead to a loss of business for the other.

In the US, local telephony over the cable TV network will be provided from the end of 1999.<sup>115</sup>

#### 4.2.2.2 Electricity lines

Öhrlings PricewaterhouseCoopers predicts that the use of electric mains for internet and telecom access will mainly be on the experimental stage during the next years.<sup>116</sup> In tests in Malmö and Stockholm they are used for internet access, initially with a speed of 1 Mbit/s in each direction. Users connected to the same

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Each Member State shall ensure that no telecommunications organisation operates its cable TV network using the same legal entity as it uses for its public telecommunications network, when such organisation:

- (a) is controlled by that Member State or benefits from special rights; and
- (b) is dominant in a substantial part of the common market in the provision of public telecommunications network and public voice telephony services; and
- (c) operates a cable TV network established under special or exclusive right in the same geographic area."

Bartosch pointed out, after the publishing of the draft to the 1999 Directive, that there may be uncertainty whether the Commission is entitled to adopt a such directive under article 86(3) (pre-Amsterdam 90(3)). This article gives the Commission power to enact directives regarding "public undertakings and undertakings to which Member States grant special or exclusive rights". According to Bartosch, there are no exclusive rights since the liberalization of the telecommunications markets January 1, 1998, and the Court has never given any definition of the concept "special rights".

Bartosch, Andreas, E.C. Telecommunications Law: The New Draft Directive on the Legal Separation of Networks, (1998) 8 ECLR 514.

In the recital to the Directive, the Commission argues that whilst the Community law provides for the withdrawal of exclusive rights in the telecom market, the former monopolists still benefit from certain special rights. Recital (7).

<sup>114</sup> Commission Directive 1999/64/EC of 23 June 1999 amending Directive 90/388/EEC in order to ensure that telecommunications networks and cable TV networks owned by a single operator are separate legal entities, O.J. 1999, L 175/39, recital (4).

<sup>115</sup> Communications Media Center at New York Law School, AT&T Moves Further into Local Phone Service with Two New Deals, 5 February 1999, <http://cmcnys.edu/bulletins/attlptwi.html-ssi>.

<sup>116</sup> Öhrlings PricewaterhouseCoopers, Kartläggning av tele- och IT-infrastruktur, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/infrastruktur.pdf](http://www.pts.se/Aktuellt/infrastruktur.pdf), p. 50.

electric station share this capacity. In Stockholm the internet services are provided by Tele2.<sup>117</sup>

#### **4.2.2.3 Digital broadcasting of television**

A network for broadcasting of digital television can be used for data transmission. The return channel from the user is planned to use an ordinary modem or GSM.<sup>118</sup>

#### **4.2.3 Access to the public switched telephone network**

Another alternative for a new operator to avoid the costs of constructing new infrastructure is to get access to the existing access network, the public switched telephone network (PSTN). Using digital technologies like ISDN (Integrated Services Digital Network) or xDSL (x Digital Subscriber Line), a higher capacity can be achieved in the existing copper access network. The signals are transmitted in another form which requires upgraded exchanges and new equipment but not necessarily new cables. One of the xDSL technologies, ADSL (Asymmetrical Digital Subscriber Line), allocates the transmission capacity in an asymmetrical manner, so the capacity for receiving is higher than the one for sending. An ordinary Internet user downloads much more information than he sends. In Sweden Telia AB is testing ADSL with a capacity of 150 kbit/s for sending and 2 Mbit/s for receiving.<sup>119</sup> Öhrlings PricewaterhouseCoopers predicts that ADSL will be the dominant form of broadband access (more than 1 Mbit/s) in urban areas in the next five years.<sup>120</sup> (The normal definition of "broadband" is more than 2 Mbit/s.) To sum up, access to the traditional network is still valuable.

With Local loop unbundling (LLUB) the competitive TO leases the connection from the local switch to the customer and thus takes over that customer. There are two types of LLUB; access to the transmission medium in the local loop and bitstream access. With the former, the new service provider takes over the physical transmission medium (the cable) and therefore can connect its own equipment at both sides of it; with the latter, the new service provider takes over transmission capacity (bitstream).<sup>121</sup>

The local loop will be fully unbundled in the Netherlands from next year. But while the rates initially will be based on costs, they will gradually rise to allow the former

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<sup>117</sup> Internet via två välbekanta hål i väggen, MikroDatorn, 4 May 1999, [nyheter.idg.se/display.pl?ID=990504-MD4](http://nyheter.idg.se/display.pl?ID=990504-MD4).

<sup>118</sup> Öhrlings PricewaterhouseCoopers, Kartläggning av tele- och IT-infrastruktur, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/infrastruktur.pdf](http://www.pts.se/Aktuellt/infrastruktur.pdf), p. 47.

<sup>119</sup> Ibid., p. 33.

<sup>120</sup> Ibid., p. 50.

<sup>121</sup> Post- och telestyrelsen, Teknisk beskrivning av sammankoppling i accessnät, Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accessteknik.pdf](http://www.pts.se/Aktuellt/accessteknik.pdf), pp. 2-3.

monopolist TO to make a profit on the service by 2004. This model is supposed to encourage alternative carriers to build their own infrastructure.<sup>122</sup> Other European countries with more or less unbundled access networks are Denmark and Germany.

#### 4.2.3.1 Local loop unbundling in Sweden

In the middle of 1999, the most common opinion is that no alternative network is estimated to be able to compete with Telia's access network in the foreseeable future.<sup>123</sup>

According to PTS, the current Swedish legislation does not require LLUB.<sup>124</sup>

By the definition of interconnection in the Telecommunications Act, it means "the physical and logical connection of telecommunications networks"<sup>125</sup>. LLUB does imply physical but not logical connection.

Since January 1999, Telia is leasing out parts of its access network, but the rates are based on market prices and not costs.<sup>126</sup> Some changes have however been announced in order to convince the Commission to approve the Telia-Telenor merger.<sup>127</sup>

PTS identifies a number of disadvantages with LLUB; these are *inter alia*: less incentives to build alternative infrastructure; elimination of already constructed alternative networks; and difficulties for Telia to modernize its network if parts of it are leased out to others. With bitstream access, the latter problem is avoided since Telia then would keep total control over the network.<sup>128</sup>

On 16 September 1999, PTS handed over a proposal for new legislation to the Swedish Government.<sup>129</sup> PTS proposes that a licence to pursue telecommunications activities may be subject to conditions concerning obligations for the licence-holder to, if the TO is notified to the Commission as having significant market power in Sweden, on reasonable request and under equivalent terms give access to access network to telecommunications operator which

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<sup>122</sup> DataCommunications, Dutch Become First to Break Unbundling Barrier, DataCommunications, 25 March 1999, <http://data.com/story/DCM19990325S0001>.

<sup>123</sup> Post- och telestyrelsen, Förslag till ändring i telelagen (1993:597), Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accessforslag10.pdf](http://www.pts.se/Aktuellt/accessforslag10.pdf), p. 3.

<sup>124</sup> Post- och telestyrelsen, Publik konsultation avseende konkurrenssituationen inom accessnätet, Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accesskonkurrens.pdf](http://www.pts.se/Aktuellt/accesskonkurrens.pdf), p. 6.

<sup>125</sup> Telelag (Telecommunications Act) (1993:597), reprinted SFS 1997:397, amended 1995:465, 1995:1368, 1996:416, 1997:397, 1998:486, 1998:728, 1998:1569, 1999:577 and 1999:578. English version from [www.pts.se/lagar/teleact.htm](http://www.pts.se/lagar/teleact.htm), section 1.

<sup>126</sup> Bredband för tillväxt i hela landet (SOU 1999:85), Report from the IT Infrastructure Commission, p. 78.

<sup>127</sup> Svenska Dagbladet, Telia/Telenor söker blidka EU, Svenska Dagbladet, 15 June 1999, Stockholm, Sweden, p. 35.

<sup>128</sup> Post- och telestyrelsen, Publik konsultation avseende konkurrenssituationen inom accessnätet, Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accesskonkurrens.pdf](http://www.pts.se/Aktuellt/accesskonkurrens.pdf), pp. 7-8.

<sup>129</sup> Post- och telestyrelsen, Förslag till ändring i telelagen (1993:597), Post- och telestyrelsen, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/accessforslag10.pdf](http://www.pts.se/Aktuellt/accessforslag10.pdf)

provides telecommunications services within a public telecommunications network.<sup>130</sup>

This implies that only Telia would be obligated to give access to its access network. PTS considers that other operators should not have to onerous obligations before they have attained a significant market power within a relevant market. Otherwise their will to invest in new networks might be influenced.<sup>131</sup>

With "reasonable request", PTS means that it must be reasonable from economical and technical points of view that the network owner undertakes the provision.<sup>132</sup>

This obligation would include both access to the transmission medium and bitstream access.<sup>133</sup>

The rates for the access are proposed to be based on costs. The intention is to promote service competition, but not remove incentives to invest in new infrastructure.<sup>134</sup>

The competitive service provider would be permitted to locate its equipment in the network provider's premises. The compensation must be fair and reasonable with regard to the costs. If an agreement has not been possible to reach on a voluntary basis, PTS would decide over the enjoyment and the conditions for it.<sup>135</sup>

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<sup>130</sup> Ibid., p. 10.

<sup>131</sup> Ibid., p. 5.

<sup>132</sup> Ibid., p. 9.

<sup>133</sup> Ibid., p. 6.

<sup>134</sup> Ibid., pp. 10-11.

<sup>135</sup> Ibid., pp. 13-14.

# 5 Application of competition rules in the telecom sector

In its Notice<sup>136</sup>, the Commission clarifies how it intends to apply the competition rules to access agreements. In this chapter, the notice will be examined while the author of this thesis will make some comments to it in chapter 6.

The Commission points out that a number of competition rules also exists in the ONP framework and a proper application of these often avoid the need for the application of the general ones.<sup>137</sup> But it also points out that the competition rules still apply and that "it is obvious that Community acts adopted in the telecommunications sector are to be interpreted in a way consistent with competition rules".<sup>138</sup>

## 5.1 Essential facilities

The Commission considers with a reference to the cases in the transport sector that the concept of essential facilities will be of relevance in many cases concerning the duties of dominant TOs, and that a company controlling an essential facility enjoys a dominant position within the meaning of Article 82.<sup>139</sup> When determining whether access should be ordered under the competition rules, the Commission intends to consider if the dominant company has not fulfilled its duty to not discriminate, or the following essential facility test is met:<sup>140</sup>

- (a) **access to the facility in question is generally essential in order for companies to compete on that related market;**  
It is not sufficient that the access would be more advantageous, refusal of it must lead to the proposed activities being made either impossible or seriously and unavoidably uneconomic. (cp. with *Bronner* above.)  
Alternative networks like cable TV networks are however not yet considered to be a satisfactory alternative.
- (b) **there is sufficient capacity available to provide access;**
- (c) **the facility owner fails to satisfy demand on an existing service or product market, blocks the emergence of a potential new service or product, or impedes competition on an existing or potential service or product market;**

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<sup>136</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector - framework, relevant markets and principles, O.J. 1998, C 265/2.

<sup>137</sup> Ibid., paragraph 58.

<sup>138</sup> Ibid., paragraph 57.

<sup>139</sup> Ibid., paragraphs 68-69, 88.

<sup>140</sup> Ibid., paragraph 91.



- (d) **the company seeking access is prepared to pay the reasonable and non-discriminatory price and will otherwise in all respects accept non-discriminatory access terms and conditions;**
- (e) **there is no objective justification for refusing to provide access.**

Objective justifications could include an overriding difficulty of providing access, the need for a facility owner to have sufficient time to introduce a new product on the market for which the investment was made, or technical unfeasibility to grant access at the requested point. Access must otherwise be granted at the most suitable point for the requesting party.<sup>141</sup>

## **5.2 Dominant position (Article 82<sup>142</sup>)**

The Commission notices that the incumbent TOs will remain dominant for some time after the liberalisation since they control the PSTN. Therefore, dominance stemming from control of facilities is considered to be the most relevant to the Commission's appraisal of access agreements.<sup>143</sup> The existence of other networks, but also potential competition is supposed to be examined when determining whether an undertaking has a dominant position or not.<sup>144</sup>

### **5.2.1 Joint dominant position**

The Commission considers that the words in Article 82 "one or more undertakings of a dominant position" mean that a dominant position could be shared.<sup>145</sup>

"For two or more companies to be in a joint dominant position, they must together have substantially the same position vis-à-vis their customers and competitors as a single company has if it is in a dominant position. With specific reference to the telecommunications sector, joint dominance could be attained by two telecommunications infrastructure operators covering the same geographic market."<sup>146</sup>

It is considered that for two or more companies to be jointly dominant, it is necessary, though not sufficient, for there to be no effective competition between the companies on the relevant market. According to the Commission, it is not necessary that this is due to agreements, it is a sufficient economic link if there is

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<sup>141</sup> Ibid., paragraph 96.

<sup>142</sup> This article had the number 86 before the ratification of the Amsterdam Treaty.

<sup>143</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector - framework, relevant markets and principles, O.J. 1998, C 265/2, paragraph 63.

<sup>144</sup> Ibid., paragraphs 41, 73.

<sup>145</sup> Ibid., paragraphs 76-77.

<sup>146</sup> Ibid., paragraph 78.

the kind of interdependence which often comes about in oligopolistic situations.<sup>147</sup>  
The Commission consider that a situation of joint dominance may occur if access to the local loop is controlled by two operators, the incumbent TO and a cable TV operator. To provide services, access to one of the two networks is necessary.<sup>148</sup>

Behaviour by one of several jointly dominant companies may be abusive even if others' behaviour are not.<sup>149</sup>

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<sup>147</sup> Ibid., paragraph 79.

<sup>148</sup> Ibid., paragraph 80.

<sup>149</sup> Ibid., paragraph 129.

# 6 Essential facilities for telecom?

## 6.1 The essential facility test applied on the telecom market

### 6.1.1 The facility is controlled by a monopolist

The *MCI v. AT&T* test quoted above uses the word "monopolist", while the EC law has the concept of "a dominant undertaking" (Article 82 and *B & I Line v. Sealink* above). There is probably no major difference, as a monopolist on the up-stream market, the undertaking is dominant on the down-stream market.

An interesting idea is the concept of "joint dominance". That two or more companies in an oligopolistic situation may be jointly dominant if there is no effective competition between them. With an agreement between them about sharing the market it would have been an abuse of Article 81, but the Commission does not find that necessary for "joint dominance".

There is a number of cases concerning mergers dealing with a concept of "collective dominance". In the *Kali und Salz* case, the Court uses the concept, but did not find it established since "the cluster of structural links between [the two dominant undertakings] (...) is not in the end as tight or as conclusive as the Commission sought to make out".<sup>150</sup> Neither was it shown that there was no effective competitive counterweight to them.<sup>151</sup> Ysewyn & Caffarra points out that from an economic point of view, "there is no basis for a rule that the existence of "structural links" is a necessary condition for co-ordination between firms".<sup>152</sup> In *Gencor Ltd v. Commission of the European Communities*, the CFI found that "the concentration would have led to the creation of a dominant duopoly"<sup>153</sup> and noted that "[a] concentration which creates or strengthens a dominant position on the part of the parties to the concentration with an entity not involved in the concentration is liable to prove incompatible with the system of undistorted

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<sup>150</sup> *French Republic, Société Commerciale des Potasses et de l'Azote (SCPA) and Entreprise Minière et Chimique (EMC), v. Commission of the European Communities (Kali und Salz case)*, Joined cases C-68/94 and C-30/95, (1998) ECR I-1375, Paragraph 232.

<sup>151</sup> *Ibid.*, Paragraph 248.

<sup>152</sup> Ysewyn, Johan & Caffarra Cristina, *Two's Company, Three's a Crowd: The Future of Collective Dominance After the Kali & Salz Judgment*, (1998) 7 ECLR 468, at 470.

<sup>153</sup> *Gencor Ltd v. Commission of the European Communities*, Case T-102/96, (1999) 4 CMLR 971, Paragraph 297.

competition laid down by the Treaty”.<sup>154</sup> Pitt regards however the whole concept of joint dominance as ”an artificial construct”.<sup>155</sup>

When establishing that an undertaking has a dominant position, the relevant market first must be defined. The Commission uses the expression ”covering the same geographic market”.<sup>156</sup> If such a geographic market is a country, some parts of the local network would not be essential for the competitor. The competitor can survive on the national market without having access to the facilities in a particular town.

In a near future we may see local networks owned by competitive network providers. Since broadband lines can carry both data, telephony and cable TV, it is likely that there will only be one connection to each house. The possibility of competition between the telecom and the cable TV networks may therefore disappear in the long-run.

With a very narrow market definition, ”provision of services to Mr X”, this single connection will be essential, even though it may be owned by a company without significant market power on the national or local level. For Mr X, there are reasons for this narrow market definition. He can only subscribe to the network connected to his house. For the competitive service provider, it is probably not essential to have Mr X as customer as long as it has connections to a reasonable share of homes or enterprises. With this narrow market definition, the connection between the switch and the point at a real property where the public network ends would always be regarded as an essential facility as long as the other conditions below are met.

The proposal from PTS for new legislation would only regard access networks owned by licence-holders notified to the Commission as having significant market power in Sweden. But if the narrow market definition above would be accepted, general competition rules would unbundle smaller networks as well.

Westin considers that the essential facility must have been built up protected by a legal monopoly or been paid for by public funds, and not by an operator which has been able to create a strong position by commercial risk-taking on an competitive market.<sup>157</sup> There are reasons for this, without incentives to construct networks, there may not be any. One of the main issues if small networks were essential facilities would then be the rates for the access. The Commission talks

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<sup>154</sup> Ibid., Paragraph 151.

<sup>155</sup> Pitt, Edward, Telecommunications Regulation: Is it Realistic to Rely on Competition Law?, (1999) 4 ECLR 245, at 247.

<sup>156</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector - framework, relevant markets and principles, O.J. 1998, C 265/2, paragraph 78.

<sup>157</sup> Westin, Jacob, Access till telenätet - om begreppet nödvändiga faciliteter och liberaliseringen av den europeiska telekommunikationsmarknaden, ERT 1999 p 305, at 314.

about "the reasonable and non-discriminatory price".<sup>158</sup> For an independent network created on a competitive market, that should include a reasonable profit.<sup>159</sup>

Pitt criticizes the whole use of the general competition rules in Articles 81 and 82 for the telecommunications sector. In particular he criticizes attempts to describe parts of the networks as an essential facility to which it would be an abuse to refuse others access. "It is (...) very artificial to say that the operator of any local loop is "dominant", in competition law terms, in controlling access to its customers."<sup>160</sup>

### **6.1.2 The facility can not practically or reasonably be duplicated**

In both US (*City of Anaheim v. Southern California Edison Co.*) and EC (*Bronner*) law, it is not enough that access would benefit the competitor, there must be no economically feasible alternatives so the refusal would eliminate all competition in the actual market. In the telecom market there are alternatives. Both cable TV network and wireless access are already used for telephony services. Less advantageous for the competitor, but so were Bronner's alternatives as well. The Commission does however not regard these alternatives as satisfactory yet.<sup>161</sup> There are reasons for opening the existing network for everyone; it is built under a monopoly situation with public funding. But there are doubts whether it is correct to motivate it with a lack of alternatives without violating the principles in the *Bronner* case. In a number of member states, the access network is or may become more or less unbundled under national legislation, but how would the EC courts rule if the issue was if general competition rules can enforce access to the local network?

### **6.1.3 The competitor is denied to use the facility**

The Commission gives three scenarios for denial, refusal to grant access to a service another operator has been granted (discrimination), refusal to grant access to a service which no other operator has been granted, and withdrawal of an

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<sup>158</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector - framework, relevant markets and principles, O.J. 1998, C 265/2, paragraph 91.

<sup>159</sup> Cp. with the US Communications Act of 1934, as amended by Telecommunications Act of 1996, paragraph 252 (d) (1).

<sup>160</sup> Pitt, Edward, Telecommunications Regulation: Is it Realistic to Rely on Competition Law?, (1999) 4 ECLR 245, at 247.

<sup>161</sup> Notice on the application of the competition rules to access agreements in the telecommunications sector - framework, relevant markets and principles, O.J. 1998, C 265/2, paragraph 91.

existing access.<sup>162</sup> The rates for the service may also be unreasonable high, in that case the service provider is denied access to a reasonable price.

#### **6.1.4 The owner could have provided access**

Sufficient capacity must be available and there must be no objective justifications. There is probably nothing controversial in this. Technical unfeasibility may however be used as a reason for not providing access if the NRA is not supervising the market carefully.

### **6.2 New technology as essential facilities; enough incentives for inventions and investments?**

It is in the interest of the whole society that transmission capacity is constructed. A modern infrastructure is important for other industries' opportunities to compete on the world market.

It is therefore important that the legislation regarding the use of connections promote investments in new such infrastructure. If an investor can expect that others will have access to his network as soon as it will be profitable, will that investor build that network?

This is of course an issue for all discussions about the use of the essential facility doctrine, but unwillingness to invest is especially dangerous in fields with a fast technical progress. There are reasons for such concerns, the low interconnection rates in Germany are considered to have involved decreased incentives for new network operators to construct their own networks.<sup>163</sup>

It is nevertheless necessary with special rules giving access to the former monopolies' networks to promote competition. They have not achieved their advantage through foresight or capability of innovation, it is a rest of their former positions as public monopolies. But, on the other hand, it is in the public interest that they will invest in new technologies too, not only the new operators.

There are advantages with the Dutch model. The rates for access to the local network will gradually rise making the owner able to make a profit in a couple of years. These asymmetrical conditions may reduce the "unfair" advantage of the old monopoly, but may promote new investments as well. The competitors have a right to access, but after the transition period they will have to pay a price which

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<sup>162</sup> Ibid., paragraph 84.

<sup>163</sup> Öhrlings PricewaterhouseCoopers, Kartläggning av tele- och IT-infrastruktur, Öhrlings PricewaterhouseCoopers, Stockholm, Sweden, 1999, [www.pts.se/Aktuellt/infrastruktur.pdf](http://www.pts.se/Aktuellt/infrastruktur.pdf), p. 79.

makes the network management profitable. In the long run, that is probably necessary. To make the consumer able to choose service provider, access should be open to all networks, but the rates for it must promote investments.

There are a number of models for stipulating a fair rate for access, but the one used should probably include more than the costs.

## 7 Conclusions and thoughts about the future

In both US and the EC, a sector specific telecommunications legislation has been used instead of relying on general competition rules. New Zealand has chosen the other way, but the Kiwi experience regarding interconnection is considered to show that the ordinary competition law is insufficient to grant access to new competitors.<sup>164</sup> The special conditions in the telecom market, with dominant undertakings which have got their positions in a monopoly situation, make special asymmetrical rules necessary. In the long run, all operators should however be treated in the same way. The fast technical progress, where the value of old connections may be limited, may accelerate the process towards a working competitive market. New operators which invest in broadband connections may achieve a substantial share of the market. But to see these investments, it is necessary that they can be profitable.

In the future, we will probably see more of the congruence between markets which traditionally are separated. On the American market, there has been a number of mergers between telecom and cable TV companies in the latest years.<sup>165</sup> The same process will probably take place in Europe, even though it has just started on this continent. One of the Commission's requirements for approving the Telia-Telenor merger is that the cable TV affiliates will be sold. The future may give us a number of interesting cases regarding mergers in the telecom sector.

Should a company be allowed to own infrastructure and provide services at the same time? If not, there are of course more or less far-reaching ways to realize it. The IT Infrastructure Commission considers that Telia's access network should form a separate company within the group.<sup>166</sup> Directive 1999/64/EC requires it for cable TV networks. A separation would make the supervision easier, but it is also a question of proportionality. Are there less far-reaching alternatives to achieve the goal of non-discriminatory access to transmission capacity?

The present situation on the telecom market is that a number of former monopolists still have advantages achieved during the years of monopolies. To

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<sup>164</sup>Scott, Colin, Current Issues in EC Telecommunications Law, in Scott, Colin & Audéoud, Olivier (eds.), The Future of EC Telecommunications Law, (Series of Publications by the Academy of European Law in Trier; Vol. 19), Bundesanzeiger Verlagsges. mbH, Köln, Germany, 1996, p. 25.

<sup>165</sup> about the American market in Carleheden, Sten-Åke, Telemonopolens strategier. En studie av telekommunikationsmonopolens strategiska beteende vid liberalisering av teleoperatörsbranschen, Lund University Press, Lund, Sweden, 1999, pp. 111-112.

<sup>166</sup> Bredband för tillväxt i hela landet (SOU 1999:85), Report from the IT Infrastructure Commission, p. 135.



create a working competitive market, it is probably necessary to reduce these advantages by restricting these undertakings' freedom of action. The cable TV directive of 1999 is therefore valuable, but it is not possible to conclude yet whether it is sufficient or not. But to go as far as prohibiting service providers from owning infrastructure is probably incompatible with the principle of proportionality. One disadvantage with such a solution is that technologies may be unmodern and there are no reasons for prohibiting companies from owning unmodern equipment.

The entrance of new technologies may change the application of the essential facilities doctrine in the telecom sector. A facility which one year may be regarded as essential and unduplicable may not be it next year. The capacity of the mobile networks can be increased with GPRS (General Packet Radio Services) or UMTS (Universal Mobile Telecommunications System) and they may therefore be regarded as a feasible alternative to the fixed network.

The essentiality of a facility may change over time. 150 years ago, "Göta kanal" could have been regarded as an essential facility for transports in the East-West direction in Sweden. With the entrance of railways and more decent roads, the canal became less important. The same thing may happen with the old telephony network. It may therefore be unnecessary to separate it from the provision of services.

After all, it is possible to construct new networks. Maybe the most essential facility is not the network, but the customers. If telecom operators were not obliged to interconnect with each other under reasonable conditions, users could only communicate with other subscribers of the same network. Without the possibility to call the 98% of the Swedish households which are subscribers at Telia, it would be impossible for competitive operators to sell their services.

# Supplement - extract from US Telecommunications Act of 1996

## SEC. 251. [47 U.S.C. 251] INTERCONNECTION.

(a) GENERAL DUTY OF TELECOMMUNICATIONS CARRIERS.--Each telecommunications carrier has the duty--

- (1) to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers; and
- (2) not to install network features, functions, or capabilities that do not comply with the guidelines and standards established pursuant to section 255 or 256.

(b) OBLIGATIONS OF ALL LOCAL EXCHANGE CARRIERS.--Each local exchange carrier has the following duties:

- (1) RESALE.--The duty not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on, the resale of its telecommunications services.
- (2) NUMBER PORTABILITY.--The duty to provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission.
- (3) DIALING PARITY.--The duty to provide dialing parity to competing providers of telephone exchange service and telephone toll service, and the duty to permit all such providers to have nondiscriminatory access to telephone numbers, operator services, directory assistance, and directory listing, with no unreasonable dialing delays.
- (4) ACCESS TO RIGHTS-OF-WAY.--The duty to afford access to the poles, ducts, conduits, and rights-of-way of such carrier to competing providers of telecommunications services on rates, terms, and conditions that are consistent with section 224.
- (5) RECIPROCAL COMPENSATION.--The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications.

(c) ADDITIONAL OBLIGATIONS OF INCUMBENT LOCAL EXCHANGE CARRIERS.--In addition to the duties contained in subsection (b), each incumbent local exchange carrier has the following duties:

- (1) DUTY TO NEGOTIATE.--The duty to negotiate in good faith in accordance with section 252 the particular terms and conditions of agreements to fulfill the duties described in paragraphs (1) through (5) of subsection (b) and this subsection. The requesting telecommunications carrier also has the duty to negotiate in good faith the terms and conditions of such agreements.
- (2) INTERCONNECTION.--The duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network--
  - (A) for the transmission and routing of telephone exchange service and exchange access;
  - (B) at any technically feasible point within the carrier's network;
  - (C) that is at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection; and
  - (D) on rates, terms, and conditions that are just, reasonable, and

nondiscriminatory, in accordance with the terms and conditions of the agreement and the requirements of this section and section 252.

(3) UNBUNDLED ACCESS.--The duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252. An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service.

(4) RESALE.--The duty--

(A) to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers; and

(B) not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on, the resale of such telecommunications service, except that a State commission may, consistent with regulations prescribed by the Commission under this section, prohibit a reseller that obtains at wholesale rates a telecommunications service that is available at retail only to a category of subscribers from offering such service to a different category of subscribers.

category

(5) NOTICE OF CHANGES.--The duty to provide reasonable public notice of changes in the information necessary for the transmission and routing of services using that local exchange carrier's facilities or networks, as well as of any other changes that would affect the interoperability of those facilities and networks.

(6) COLLOCATION.--The duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations.

(d) IMPLEMENTATION.--

(1) IN GENERAL.--Within 6 months after the date of enactment of the Telecommunications Act of 1996, the Commission shall complete all actions necessary to establish regulations to implement the requirements of this section.

(2) ACCESS STANDARDS.--In determining what network elements should be made available for purposes of subsection (c)(3), the Commission shall consider, at a minimum, whether--

(A) access to such network elements as are proprietary in nature is necessary; and

(B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.

(3) PRESERVATION OF STATE ACCESS REGULATIONS.--In prescribing and enforcing regulations to implement the requirements of this section, the Commission shall not preclude the enforcement of any regulation, order, or policy of a State commission that--

(A) establishes access and interconnection obligations of local exchange carriers;

(B) is consistent with the requirements of this section; and

(C) does not substantially prevent implementation of the requirements of this section and the purposes of this part.

(e) NUMBERING ADMINISTRATION.--

- (1) COMMISSION AUTHORITY AND JURISDICTION.--The Commission shall create or designate one or more impartial entities to administer telecommunications numbering and to make such numbers available on an equitable basis. The Commission shall have exclusive jurisdiction over those portions of the North American Numbering Plan that pertain to the United States. Nothing in this paragraph shall preclude the Commission from delegating to State commissions or other entities all or any portion of such jurisdiction.
- (2) COSTS.--The cost of establishing telecommunications numbering administration arrangements and number portability shall be borne by all telecommunications carriers on a competitively neutral basis as determined by the Commission.

(f) EXEMPTIONS, SUSPENSIONS, AND MODIFICATIONS.--

(1) EXEMPTION FOR CERTAIN RURAL TELEPHONE COMPANIES.--

(A) EXEMPTION.--Subsection (c) of this section shall not apply to a rural telephone company until (i) such company has received a bona fide request for interconnection, services, or network elements, and (ii) the State commission determines (under subparagraph (B)) that such request is not unduly economically burdensome, is technically feasible, and is consistent with section 254 (other than subsections (b)(7) and (c)(1)(D) thereof).

(B) STATE TERMINATION OF EXEMPTION AND

IMPLEMENTATION SCHEDULE.--The party making a bona fide request of a rural telephone company for interconnection, services, or network elements shall submit a notice of its request to the State commission. The State commission shall conduct an inquiry for the purpose of determining whether to terminate the exemption under subparagraph (A). Within 120 days after the State commission receives notice of the request, the State commission shall terminate the exemption if the request is not unduly economically burdensome, is technically feasible, and is consistent with section 254 (other than subsections (b)(7) and (c)(1)(D) thereof). Upon termination of the exemption, a State commission shall establish an implementation schedule for compliance with the request that is consistent in time and manner with Commission regulations.

(C) LIMITATION ON EXEMPTION.--The exemption provided by this paragraph shall not apply with respect to a request under subsection (c) from a cable operator providing video programming, and seeking to provide any telecommunications service, in the area in which the rural telephone company provides video programming. The limitation contained in this subparagraph shall not apply to a rural telephone company that is providing video programming on the date of enactment of the Telecommunications Act of 1996.

(2) SUSPENSIONS AND MODIFICATIONS FOR RURAL CARRIERS.--A

local exchange carrier with fewer than 2 percent of the Nation's subscriber lines installed in the aggregate nationwide may petition a State commission for a suspension or modification of the application of a requirement or requirements of subsection (b) or (c) to telephone exchange service facilities specified in such petition. The State commission shall grant such petition to the extent that, and for such duration as, the State commission determines that such suspension or modification--

(A) is necessary--

- (i) to avoid a significant adverse economic impact on users of telecommunications services generally;
  - (ii) to avoid imposing a requirement that is unduly economically burdensome; or
  - (iii) to avoid imposing a requirement that is technically infeasible;
- and

(B) is consistent with the public interest, convenience, and necessity.

The State commission shall act upon any petition filed under this paragraph within 180 days after receiving such petition. Pending such action, the State commission may suspend enforcement of the requirement or requirements to which the petition applies with respect to the petitioning carrier or carriers.

(g) CONTINUED ENFORCEMENT OF EXCHANGE ACCESS AND

INTERCONNECTION REQUIREMENTS.--On and after the date of enactment of the Telecommunications Act of 1996, each local exchange carrier, to the extent that it provides wireline services, shall provide exchange access, information access, and exchange services for such access to interexchange carriers and information service providers in accordance with the same equal access and nondiscriminatory interconnection restrictions and obligations (including receipt of compensation) that apply to such carrier on the date immediately preceding the date of enactment of the Telecommunications Act of 1996 under any court order, consent decree, or regulation, order, or policy of the Commission, until such restrictions and obligations are explicitly superseded by regulations prescribed by the Commission after such date of enactment. During the period beginning on such date of enactment and until such restrictions and obligations are so superseded, such restrictions and obligations shall be enforceable in the same manner as regulations of the Commission.

(h) DEFINITION OF INCUMBENT LOCAL EXCHANGE CARRIER.--

(1) DEFINITION.--For purposes of this section, the term "incumbent local exchange carrier" means, with respect to an area, the local exchange carrier that--

(A) on the date of enactment of the Telecommunications Act of 1996, provided telephone exchange service in such area; and

(B)(i) on such date of enactment, was deemed to be a member of the exchange carrier association pursuant to section 69.601(b) of the Commission's regulations (47 C.F.R. 69.601(b)); or

(ii) is a person or entity that, on or after such date of enactment, became a successor or assign of a member described in clause (i).

(2) TREATMENT OF COMPARABLE CARRIERS AS INCUMBENTS.-- The Commission may, by rule, provide for the treatment of a local exchange carrier (or class or category thereof) as an incumbent local exchange carrier for purposes of this section if--

(A) such carrier occupies a position in the market for telephone exchange service within an area that is comparable to the position occupied by a carrier described in paragraph (1);

(B) such carrier has substantially replaced an incumbent local exchange carrier described in paragraph (1); and

(C) such treatment is consistent with the public interest, convenience, and necessity and the purposes of this section.

(i) SAVINGS PROVISION.--Nothing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201.

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