# Universal Service, a new look at an old concept:

Broadband access as a universal service in Europe

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# Summary<sup>1</sup>

Universal Service would appear to be a dying concept. In most European countries, Universal Service - once a cornerstone of government intervention in the communications sector - has been narrowed down dramatically over the last ten years. A major reason for this is the assumption that Universal Service only serves to support the position of the incumbent and therefore restricts competition. Also, policymakers are convinced that (infrastructure) competition will make maintaining the regulation of Universal Service unnecessary. A final step in the process of diminishing the scope of Universal Service is the recent Universal Service Directive, which limits such service to basic voice telephony (with fax and minimal internet access capabilities).

This paper does not intend to deal extensively with all the relevant aspects of Universal Service, but seeks primarily a regulatory/policy approach. Another limitation is its main focus on broadband internet access (although this indirectly covers several related issues such as convergence). The paper starts by formulating the definition of Universal Service and outlining the changes in the concept of Universal Service from a historical, policy and regulatory perspective. By doing so, a distinction is made between Universal Service in a strict regulatory sense and such service in a policy/public interest sense. The paper reveals that competition arguments have dominated the debate and that the public interest aspects have been relegated to the background. The most relevant driver behind this development is the European Union's involvement with the communications sector. Attention is given to the fact that the EU policy as such has not led to an improvement or extension of Universal Service. Furthermore, owing to the optimistic views on the results of competition, safeguards with regard to Universal Service have been abolished or insufficiently dealt with (quality of service/consumer protection, safety, continuity etc.).

The paper then looks into the possibilities for further developing Universal Service within the present regulatory and policy context. Here, the emphasis is on the limitations of the Universal Services Directive on the one hand, and on European ambitions to have broadband access widely available on the other. Within the present context, the inclusion of broadband internet access as a Universal Service is possible in a policy/public interest sense. However, financing from a Universal Service fund is not permissible. The Universal Service Directive will have to be evaluated in 2005. The paper promotes a revival of the concept of Universal Service and argues that, based on present policies and the development of the market, the Universal Service concept should be extended to broadband internet access. Such an extension would have to be implemented by member states that meet the applicable criteria.

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<sup>1</sup> This paper is a work in progress. A first version was published in Dutch (December 2003). Some thoughts need further explanation. References to existing literature are still limited and some factual data need to be completed.

# **Table of Contents**

Sun	nmary	3		
Table of Contents				
1.	Universal Service	7		
1.1	Definition	7		
1.2	Policy driven choices	8		
2.	European liberalisation of the telecommunications sector	9		
2.1	First liberalisation phase	9		
2.2	National implementation	11		
2.3	The New European framework			
2.4	Implementation of the new framework			
3.	Extension of the Universal Service with broadband	14		
3.1	Increasing awareness	14		
3.2	Market situation	15		
3.3	Other relevant factors	17		
4.	Analysis and conclusions	18		
4.1	Legal versus general interest definition	18		
4.2	Broadband access complies with Universal Service criteria	18		
4.3	Implementation of broadband access as a Universal Service	19		
Literature				

#### 1. Universal Service

The term 'Universal Service' is used not only in the telecommunications sector but also in many other sectors, such as power and water supply. The term can be used in widely differing ways. As far as telecommunications is concerned, four central features can be distinguished that can be translated into applicable rules and regulations. In the case of the Universal Service, this concerns at least a) a *service* which is available b) for *everyone*, c) under *identical conditions* and d) at an *affordable price*.

#### 1.1 Definition

In the first place it is therefore relevant that it concerns the offer of a *service* specified in greater detail and the facilities required for this. These facilities mainly concern infrastructural peripheral conditions such as the availability of a network via which the service can be offered. The service is therefore the goal, while the network is the means to realising it. The classical example is the telephone service made available to end users via a specially configured network – the telephone network.

A second element is that the service is made available to *everyone*. Here, 'everyone' implies in the first place availability under non-discriminatory conditions and with an obligation (on the operator side) to connect. With respect to the telephone service, 'everyone' has attained very broad significance; it is often possible to enforce access down to the level of the individual citizen in the form of a connection that must be realised mandatorily.

The third element comprises the *conditions* under which the service is available to everyone. Again, the point of departure here is that non-discriminatory conditions apply that relate to, among other things, the quality and reliability of the service and the service provision, the way in which the agreement between user and operator is realised, guarantees with regard to supply and repair, and the pricing regime. With respect to the latter, it is usually based on the principle that no regional price differences are permissible. This is one method of expressing the 'solidarity principle': expensive, rural connections subsidise inexpensive connections in urban areas.

The fourth element concerns the *affordable price* of the service. This must be such that there is no financial barrier for end users to subscribe to the service. Should this occur in certain cases, it is not unusual for forms of subsidies to be available (for example by means of a more limited, non-cost-effective variant or financial support to the end user from government via generic or specific support mechanisms). That does not mean that the price should also be cost-oriented.

Obligations to provide a Universal Service generally have a minimum character. This may be a service that must be provided as a minimum in accordance with the four aspects described above, but in a situation in which other services may of course be available.

# 1.2 Policy driven choices

The choice for a Universal Service is prompted primarily by political considerations. It is considered desirable in the general interest for certain services to be available as a Universal Service and therefore not to be exclusively subject to normal market forces. Economic interests also play a role, such as the importance of telecommunications for business, the ability to offer services via a network, but certainly also the desirability of mutual communication and accessibility. Finally, the literature also sees the Universal Service as a means to protect the position of the dominant provider (it is this aspect that has predominated in the European context since the nineteen-eighties). These interests and other comparable interests are weighed up against free market forces. This need not preclude Universal Services being realised de facto via market forces, although (additional) safety mechanisms (a 'safety net') are applied in order to safeguard the general interest.

## 2. European liberalisation of the telecommunications sector

This part of the paper summarises the development of the concept of Universal Services within Europe from a regulatory and policy perspective. To this end, a recent cut-off point in the history of telecommunications was chosen as the point of departure, i.e. involvement in the telecommunications sector at a European level. The development of this involvement is outlined along with its impact on national regulatory measures.

## 2.1 First liberalisation phase

European involvement in telecommunications started, roughly speaking, with the publication in 1987 of the 'Green Paper on the development of the common market for telecommunications service and telecommunications equipment'. The Green Paper does not yet mention the term 'Universal Service.' It does discuss the ability to maintain exclusive or special rights with respect to the provider of a limited number of basic services (also described as reserved services). In view of the interests of competition, a restrictive approach should be taken as the basis here. It should also be noted that there is no generally accepted definition of basic services within the Union or at an international level.<sup>3</sup> Here, 'basic services' mainly concerns the supply side and little or no attention is paid to the interests of end users. This is not entirely inexplicable in view of the fact that liberalisation focuses primarily on creating a greater offering and the provider of basic services is seen as a possible way of maintaining the financial means (read: the monopoly) of the incumbents. In line with this, the 1990 Services Directive prescribes that all telecommunications services must be liberalised with the exception of voice telephony. <sup>4</sup> The exception was made for voice telephony to safeguard the financial stability of the incumbent provider. The perspective of general interest is also mentioned.

The publication of the ONP lease-lines directive in 1992 was actually the first time a form of Universal Service was added to the European annals.<sup>5</sup> The directive obliges member states to ensure that there are at least several types of lease lines that are described in greater detail. With respect to this service, the directive also indicates the other components of the Universal Service. Leased lines must in principle be available to everyone under transparent conditions and at a regulated price. While leased lines do have the character of a Universal Service, this paper does not discuss them further.

<sup>2</sup> European Commission, Towards a Dynamic European Economy, Green Paper on the development of the common market for telecommunications sector services and equipment, COM(87) 290, June 1987.

<sup>3</sup> Ditto, p. 42.

<sup>4</sup> Commission Directive of 28 June 1990 on competition in the markets for telecommunications services (90/388/EEC; OJ L192/10, 24.07.1990), as amended by Commission Directives 94/46/EC, 95/51/EC, 96/2/EC, 96/19/EC and 1999/64/EC.

<sup>5</sup> Council Directive 92/44/EEC of 5 June 1992 on the application of open network provision to leased lines, OJ 1992 L 165/27-36 (19.06.1992). N.B. rectification in OJ 1993 L 96/35; amended by Directive 97/51/EC.

In 1994 the Council passed a resolution ordering the European Commission to conduct an investigation into the definition of Universal Services and associated financing.<sup>6</sup> In its resolution the Council indicates what the crux of a Universal Service is. This includes the necessary network, the telephone service, price and quality of service provision, provision of information, settlement of disputes, access to directory information, public telephone facilities, emergency numbers and facilities for the disabled. A subsequent Green Paper on the liberalisation of telecommunications infrastructure set the tone further.<sup>7</sup> Maintenance of the Universal Service is not seen as problematical and the experience of countries with a liberalised telecommunications infrastructure has demonstrated that universal-service objectives are better achieved and developed in a more competitive environment.

On 30 December 1995, the Directive titled 'on the application of the 'Open Network Provision' (ONP) to voice telephony appeared in the Official Journal.<sup>8</sup> This directive laid the foundation for the Universal Service within Europe. The preamble emphasizes the importance of voice telephony from a social and economic perspective. Everyone must have the right to subscribe to the fixed telephone service under non-discriminatory conditions. The latter concerns the availability of the connection, the tariffs, the quality of the service, terms of supply, distribution of any capacity shortages, repair times and the availability of information. The directive and associated appendixes set out the various aspects in detail. Other services than voice telephony are not covered by comparable terms and conditions for the Universal Service.

Three years later the first voice telephony directive was replaced by a new one. This directive actually uses the term 'Universal Service' and the affordability criterion is expressly mentioned in Article 3 of the directive. The crux of the Universal Service is the right to a connection to the fixed public telephone network on a fixed location and access to fixed public telephone services. The service must offer, among other things, opportunities for voice, fax and/or data communications (Article 5). Another new element is the obligation to designate at least one operator who must supply the described Universal Service. Rules were also included regarding the financing of the Universal Service. If financing is not possible on a commercial basis, member states may make finance arrangements, such as cross-charging the costs to different providers and setting up a specific fund to finance the Universal Service. Any expansion of the Universal Service is placed with the member states, as seen from consideration 15 of the directive ('Whereas issues related to the affordability, quality of service and future scope of the universal service should be the subject of consultation at national level with all interested parties...'). The considerations also keep the possibility open that, during a future review, mobile telephone services may also be accommodated within the Universal Service. 10

<sup>6</sup> Resolution 94/C48/01 of 7 February 1994 ('On universal service principles in the telecommunications sector'), OJ 48/1(16.02.1994).

<sup>7</sup> European Commission, Green paper on the liberalisation of telecommunications infrastructure and cable television networks: part one, principle and timetable, COM(94) 440, dated 25/10/1994.

<sup>8</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, OJ 1995 L 321/6-24 (30.12.1995)

<sup>9</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 (incl. Annex I-V), OJ 1998 L 101/24-47 (01.04.1998) 10 Consideration 17: 'Whereas, in view of the forecast convergence of fixed and mobile telephone services, the extent to which this Directive applies to mobile services should be re-examined when the Directive is reviewed;...'

## 2.2 National implementation

The European framework was implemented with varying degrees of enthusiasm. In many countries it was decided to gradually dismantle the incumbent system (largely a monopoly or a situation in which there was a closed system of exclusive rights). The Universal Service was gradually reduced from a comprehensive package to a slimmed down form of service provision. The following, among other things, belonged to the original package (with differences between the various member states):

- fixed and mobile voice telephony (including directories and public telephones)
- telex
- telegraphy
- paging
- special facilities for the disabled
- data transport.

There were specific criteria for these services that entirely or partially match the abovementioned definition of the Universal Service (services on offer must be technologically 'up to date', offer a certain quality, be offered at regulated tariffs at a largely national level, etc.).

In several countries (ie. Belgium, Netherlands, Germany) where cable television networks were being developed, regulation was moreover in place that gives the availability of cable television networks the aspects of the Universal Service. Licences for cable television networks were issued with direct or indirect tariff restrictions, obligations with respect to supply and regulations governing the roll out. A comprehensive discussion of this aspect falls outside the scope of this paper. Cable television networks are raised here in particular owing to their subsequent importance for broadband internet access.

We observed the clearest examples of the dismantlement of the Universal Service in particular at the beginning of the nineteen-nineties. The introduction of competition in the mobile telephone network has largely resulted in the reduction of the obligation to provide the Universal Service in this area. The opening up of the data transport market is having comparable consequences. The implementation of previously mentioned revised ONP Voice Directive obliges member states to look expressly at the Universal Service and leads to a more delineated description thereof. It also offers the opportunity to impose obligations to contribute to a fund, which is designed to safeguard the Universal Service. However, this option is hardly ever used. Privatisation procedures of cable television networks are being implemented because they are in the hands of the national PTTs and such a combination is not considered desirable for the competition. Advancing liberalisation is also being used to sell government-owned cable networks, where appropriate, to commercial market players.

## 2.3 The New European framework

A process was set in train in 1998 to replace the existing European directives by an entirely new regulatory framework. Based on a European Commission Green Paper, new lines were plotted for the Universal Service.<sup>11</sup> The Commission's point of departure in the Green Paper

<sup>11</sup>*Towards a new framework for Electronic Communications infrastructure and associated services; The 1999 Communications Review.* Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee for the Regions. COM (1999) 539. Also:

is that the Universal Service '...is a dynamic and evolving concept. It is an important policy tool in seeking to guarantee public access to the Information Society,...'12 The Commission sets great store by broadband access: 13 'It could help ensure that people were not excluded from the developing opportunities that high speed Internet access might offer. Furthermore, it could lead to better information, better-educated and more skilled workforce. Nevertheless, the Green Paper also mentions some downsides, in particular regarding the issue of (cross) financing: 'Universal service relies on a cross-subsidy from one group of users to another. The current framework has ensured that a basic level of telephony is available to all, by obliging the Universal Service provider to ensure that consumers who would be counted as uneconomic (e.g. those on low incomes or who live in remote areas), have access to a basic set of telecommunications services at an affordable price. For basic telephony, such a crosssubsidy does not constitute an undue burden because the infrastructure already exists and most people already have a telephone. So the number of people that need to be crosssubsidised is quite small'. A second restriction relates to the roll out and connected public access to broad band: 'By contrast, only a small minority of consumers currently has access to broadband services. Including such services within the scope of Universal Service is likely to be problematic. The only means of doing so would be by subsidising broadband service provision for certain users via a cross-subsidy from consumers of basic telephony to higher bandwidth users. But to implement Universal Service in this way could have unfair consequences for telephone users on lower incomes. Including broadband Internet services within the scope of Universal Service at the present time would mean that the activities of the few (often wealthy "early adopters") would be subsidised by the rest of the population. In view of the costs of rolling out broadband networks, such a subsidy could add substantial amounts to all consumers' bills. Since the extra amount would not be based on ability to pay, it could be argued to constitute a regressive tax. Thirdly, the Commission emphasizes complications when financial broadband through a Universal Service fund because it would raise the entry barrier for newcomers. Finally the Commission mentions the fact that broadband is still a rather new technology. For all these reason, there is not yet a reason to make broadband part of a Universal Service obligation. But the Commission also states that member states have there own responsibility: 'This does not in any way impede Member States from taking their own initiatives to finance the roll-out of broadband services through mechanisms other than Universal Service funding.'

The Commission's largely unchanged views are reflected in the Universal Service Directive of March 2002. <sup>14</sup> Unlike the old regulation, which had more of a minimum character, the Universal Service is restricted in the new directive to access at a fixed location to the public telephone network/service. This then concerns one single narrowband-network connection. <sup>15</sup>

European Commission, Communication to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: Universal service for telecommunications in the perspective of a fully liberalised environment – an essential element of the Information Society, (COM(96) 73 final, Brussels, 1996.

<sup>12</sup> Ditto, p. 38 ff.

<sup>13</sup> The European Commission has given an unequivocal description of what is meant by broadband. It is assumed here that broadband includes at least internet access comprising the ADSL offering via telecommunications networks and broadband access via cable. In both cases, speeds can be attained that are higher than ISDN (which is seen as the top end of 'narrowband' internet access).

<sup>14</sup>Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)

OJ L 108/51 (24.04.2002).

<sup>15</sup> Consideration 8 of the preamble explains that this in general means a data rate of 56 kbit/s. This is a speed that classical analogue modems can attain.

However, 'connections to the public telephone network at a fixed location should be capable of supporting speech and data communications at rates sufficient for access to online services such as those provided via the public internet'. The other relevant aspects of the Universal Service (availability, non-discriminatory conditions, affordability) remain unchanged. <sup>16</sup> A new feature is the obligation for member states to ensure that the Universal Service is provided in a cost-effective manner. The Universal Service may be offered by several companies, but member states are obliged to ensure that at least one company complies with the obligation. The Universal Service may moreover be divided, both with respect to the service itself and with respect to the service area. <sup>17</sup> The Universal Service can be financed via a fund or from public resources. 18 This can only concern the net costs (by using the term 'net costs', account can be taken of, among other things, immaterial/additional advantages deriving from the provision of the Universal Service, such as greater brand recognition and possibly advantages of scale). If a fund structure is used for the remuneration, various conditions apply for cross-charging to market players. Finally, Article 15 of the Universal Service Directive determines that the Commission will evaluate the Universal Service at set times, in particular with a view to a possible adjustment thereof. The first evaluation will take place before 25 July 2005 and will be held every three years thereafter.<sup>19</sup>

## 2.4 Implementation of the new framework

The implementation of the new European framework is relatively simple as far as the Universal Service is concerned. After all, the size of the Universal Service has been restricted. This is why we have hardly observed any differences between member states as far as the size of the service is concerned. Certain differences are discernable, however, with respect to supporting conditions. A discussion of these conditions falls outside the scope of this paper.

<sup>16</sup> Article 3, Section 1, and Article 9-11 Universal Service Directive.

<sup>17</sup> Article 8 Universal Service Directive

<sup>18</sup> Articles 12-14 Universal Service Directive.

<sup>19</sup> Appendix 5 to the directive sets out the procedural rules for the evaluation.

## 3. Extension of the Universal Service with broadband

So in a historical perspective we see that the Universal Service has been reduced as a consequence of European influence. The main reason for this is the strongly market-oriented reasoning, which has caused the coherence with the social context to come under pressure. The advent of the 'information society' and the importance assigned to this in Europe has initiated a rebalance. Market developments also have a role to play in this. And this means there are prospects for expanding the Universal Service with the addition of broadband access.

## 3.1 Increasing awareness

There are clear signals that greater social value is given to the availability of broadband internet access. <sup>20</sup> This is not only the case in the European Commission, as already indicated in the discussion of the 1999 Green Paper. Within the framework of the 'information society', the European Council of Ministers has also stated that everyone in the European Union must have broadband access available and the Council determined that the use of broadband must be generalised at a faster pace. In that connection, the member states have been urged to set up national broadband / high-speed internet strategies by the end of 2003 and to aim to achieve a considerable increase in the volume of high-speed internet connections no later than 2005. <sup>21</sup> Most member states have since published their respective strategies.

To give greater substance to the policy, use can be made of subsidies to promote the availability of broadband internet access. The European Commission published directives and criteria for the use of structural funds to support the electronic communication sector. <sup>22</sup> The adjusted guidelines for the allocation of monies from the structural funds focus in particular on the distribution of broadband in the countryside and in thinly-populated areas. The funds are in principle available only for infrastructure; open access must be safeguarded; public tendering procedures must be used and the positions of the dominant market players may not be enhanced. Moreover, there must be a 'technology-neutral' approach.

Recently a Green Paper has been published on services of general interest.<sup>23</sup> The Green Paper sets out the contours for a new framework within which services of general interest can be positioned. Such aspects as Universal Service, affordability and availability are discussed. The points of departure can be easily applied to the telecommunications sector and broadband internet access.

<sup>23</sup> European Commission 2003a

14

<sup>&</sup>lt;sup>20</sup> See: http://europa.eu.int/information\_society/eeurope/2005/all\_about/broadband/index\_en.htm

<sup>21</sup> European Council, Conclusions of the Presidency, 20 and 21 March 2003, DOC/03/02, dated 21 March 2003.

<sup>22</sup> European Commission, Guidelines on criteria and modalities of implementation of structural funds in support of electronic communications, SEC(2003)895, dated 28/7/2003.

### 3.2 Market situation

The opportunities for broadband access in the European Union are increasing all the time. The public telephone network is being adapted in member states to enable broadband access via forms of Digital Subscriber (in particular ADSL, Asynchronous Digital Subscriber Line). In countries where there are cable television networks, broadband access is being offered, causing cable television networks to compete with the incumbants. The developments are tumultuous, both with respect to the rollout and the numbers of subscribers. There is, however, a clear North-South divide within Europe. The number of dwellings with the service in the Scandinavian countries, the Netherlands, Germany, Belgium and the United Kingdom has already exceeded 50% (Homes passed). By way of illustration:

#### United Kingdom a)

BT has announced that they will be able to provide ADSL to 99.6% of all households in the summer of 2005.<sup>24</sup> The British cable operators will also be reaching a situation soon in which all subscribers can be provided with broadband access.

#### b)The Netherlands

In the Netherlands, KPN has announced that it anticipates being able to provide 90% of the Dutch population with broadband internet access (ADSL) this year. <sup>25</sup> A plan drawn up by cable operators' lobby VECAI (the Dutch Federation of Cable Operators) indicates that 85% of cable subscribers can have cable internet access following an investment of €300 million in 2005. <sup>26</sup> Cable television networks reach approximately 93% of the households.

#### Germany c)

74% of the househoulds has access to ADSL through the telepony-network. Broadband by cable television networks is still limited (covering 22% of the households)<sup>27</sup>

In countries further south (Portugal, Spain, Italy, Greece), the construction of broadband is still at a substantially lower level.<sup>28</sup>

The number of households that actually use broadband is also steadily increasing in the European Union, as indicated by the overviews below:

<sup>28</sup> It should be noted that comprehensive data are scarce on the actual availability of broadband.

<sup>&</sup>lt;sup>24</sup> Ofcom, The Ofcom internet and broadband update, May 2004: <a href="http://www.ofcom.org.uk/research/">http://www.ofcom.org.uk/research/</a> consumer\_audience\_research/telecoms/int\_bband\_updt/may2004/int\_bband\_upd.pdf 25 KPN press release KPN, 21/05/2003 (ADSL availability increasing all the time [ADSL-bereik steeds

<sup>26</sup> Vecai memo, 15 April 2002 (The cable glass plan [Het Kabel Glasplan]).

27 http://europa.eu.int/information\_society/eeurope/2005/doc/all\_about/broadband/com\_broadband\_de.doc

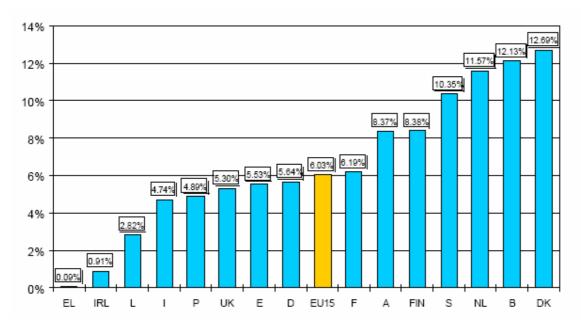


figure 1: broadband penetration in the EU, source: European Commission, January 2004

				RETAIL ACCESS					
Total broadband connections 22885321				Penetration rate (% of population)			6,1%		
of which PSTN Other means			17086549 5798772						
	s broadband connection	ns	13043354	Incumbents broad	dband connect	ions by other	means		
of which	DSL over PSTN	55,04%	12597202	WLL	54	0,00%	3G	0	0,00
	Other means	1,95%	446152	Cable	424128	1,85%	FTTH	243	0,00
				Leased Lines	12516	0,05%	Satellite	9211	0,04
				Other	0	0,00%	PLC	0	0,00
New entran	nts broadband connect	ions	New entrants br	padband connec	ctions: DSL				
of which	DSL over PSTN	19,62%	9841967 4489347	Full ULL	822631	3,59%		18,32%	
	Other means	23,39%	5352620	Shared access	530269	2,32%		11,81%	
				Bitstream access	1151528	5,03%		25,65%	
				Resale	1984919	8,67%		44,21%	
				New entrants broadband connections by other means					
				WLL	17141	0,07%	3G	357400	1,56
				Cable	4451161	19,45%	FTTH	365216	1,60
				Leased Lines	17168	0,08%	Satellite	134339	0,59
				Other	975	0,00%	PLC	9220	0,04
				MARKET SHARE					
					Incumbent		New entra	nts	
	Total broadband con	nections			56,99% 43,01%				
	DSL lines			73,73% 26,27%					
	Broadband lines by o	ther means		7,69%			92,31%		
					DSL		Other mea		
					DSL		Other mea	IIIS	

56,99%

T4,66%

Incumbent New entrants

figure 2: Broadband in Europe. Source: European Commission, 2004

## **3.3** Other relevant factors

There are at least three other issues that come into play when looking at an extension of the Universal Service. They are only mentioned very briefly here.

First of all, regulation nowadays seems to offer sufficient safeguards against potential abuse by incumbents of Universal Service. The new Universal Service Directive gives more detailed interpretations of what is allowed and what the restrictions are when offering Universal Service (see par. 2.3). Also, anti-competition policies have been strengthened on both the European and national level. Furthermore, member states have installed sector specific regulators for the communications sector.

Secondly, the position of telecommunications sector has changed substantially. Once feared for their strength, most incumbents have become more vulnerable because of the economic environment. Huge investments didn't pay off and profitability has become more and more important due to the fact that most incumbents have become public companies. This implies that the traditional complex of 'checks and balances' for Universal Service needs to be reviewed.

Thirdly, the diminishing importance of fixed voice telephony (being replaced by mobile telephony and some form of broadband access) is undermining the existing Universal Service and its financial basis.

## 4. Analysis and conclusions

The Universal Service in the telecommunications sector has been increasingly restricted in size, as set out previously in this paper. Whereas it all started with voice telephony, the circle is closed: the only regulated Universal Service left is fixed voice telephony. This development was initiated in part on a national scale, but was ultimately determined through European intervention, with the interim tailpiece being the new European directive framework of 2002 that only permits fixed voice telephony as a Universal Service on the basis of the Universal Service Directive. However, the story shouldn't end here.

## 4.1 Legal versus general interest definition

Today, the distinction between the 'social' and 'legal' aspects of the Universal Service is inadequate. Where the Universal Service Directive refers to the Universal Service, it is mainly talking about that service in a legal sense. This comprises only fixed telephony (and some associated services) because the financing of the Universal Service has been linked to this phenomenon (only the Universal Service in a legal sense may be financed by means of a Universal Service fund). Tying up the Universal Service in legal knots (and, among other things, placing the emphasis on market forces) has meant that social importance has been relegated to the background. The result of this means that only one thing is now certain for end users, i.e. that they have a claim to a fixed telephone connection and that there is an obligation to deliver this. At the same time, it can be observed that enormous technological and economic developments have taken place in the telecommunications sector and in society with respect to the use of the means of communications. The emphasis has moved from classical fixed telephony to the mobile and broadband usage. Broadband access is increasingly becoming a necessity for participating in the 'information society'. It could be claimed that with respect to its function, broadband access has come to replace the classical telephone service. None of this has resulted in an adjustment – read: expansion – of the Universal Service. This means, for example, that there are no guarantees that might be compared with those in fixed telephony for mobile telephony, fixed or mobile data traffic (the internet) or the broadcasting of radio and television programmes. There is no legal safety net, while the great social (and economic) importance of broadband. An interest that is translated into the ubiquitous availability of broadband access at affordable prices, and with a specified reliability and quality.

## 4.2 Broadband access complies with Universal Service criteria

At the same time, it can be observed that more and more countries are complying with the point of departure to make broadband internet access a Universal Service, as stated in the Telecommunications Review of 1999:

- a) limited cross-financing costs
- b) adequate availability
- c) any fund to finance the Universal Service should not be charged too heavily
- d) sufficient level of technological development.

## 4.3 Implementation of broadband access as a Universal Service

This should imply that the member states in question within the present regulatory limitations should be able to aspire to have broadband as a Universal Service (and are, to some extent, under a moral obligation to do so). It is also important that the regulatory framework necessary for this be realised at the European level.

There are no problems associated with expanding the Universal Service in a social sense within the present regulatory limitations. It has been indicated that broadband internet access can be a Universal Service provided the financing is not sought in the form of a Universal Service fund. Some member states have a national strategy that is more or less oriented at this, prompted in part by the European intentions in this respect.<sup>29</sup> Within the present regulatory frameworks, government intervention may comprise making general resources available, claiming a portion of the newly available European resources or taking regulatory measures that are permissible. This might even involve the partial sanctioning of (additional) investments in broadband within a framework yet to be defined, by parties with significant market power (the telco incumbents and in some countries the cable television operators). In the first place, intervention should focus on making the broadband internet service available for everyone. Two aspects are associated with this, i.e. stimulating the availability in those areas in which the incumbent providers have indicated that they are economically unrewarding ('the final 10-20%') and the possible acceleration of the rollout by incumbent providers. It goes without saying that the other aspects of the Universal Service must also be put in place.<sup>30</sup> With respect to the realisation of broadband as a Universal Service, use might also be made of the systematics that have already been implemented in various national regulations for providing the Universal Service by issuing a tender for uneconomic areas or for accelerating the rollout. Incumbent and new market players will then be able to bid for a government contract to install broadband. The government will make good any shortcomings from the general financial resources. As far as affordability is concerned, use might also be made of existing classical instruments such as fiscal measures and subsidies for groups in society for whom access is problematic due to financial barriers.

The Universal Service will be evaluated at a European level in 2005. If the previous points of departure are still relevant at a European level (as set out in the 1999 Review and in the Universal Service Directive), there will be no alternative than to make broadband internet access a Universal Service in the European Union, at least in the member states that meet the criteria. This will make it possible to create more permanent safety mechanisms with respect to availability, affordability, and conditions relating to quality and reliability.

 $\underline{\text{http://europa.eu.int/information society/eeurope/2005/}} \\ \text{doc/all\_about/broadband/staff\_working\_paper\_final.} \\ \text{doc}$ 

<sup>&</sup>lt;sup>29</sup> European Commission, Commission Staff Working Paper, Connecting Europe at High Speed: National Broadband Strategy – Annexes, Brussels, 05/05/2004, See:

<sup>30</sup> Specific support to end users for realising broadband access would appear to be less and less necessary now that a broad package of tariff options for both ADSL and cable access and in view of the fact that the threshold to access is not much higher than for telephony.

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