NEXT GENERATION UNIVERSAL SERVICE IN THE FIELD OF ELECTRONIC COMMUNICATIONS?

SOME LESSONS FROM THE DEBATE ON COUNTRY-WIDE BROADBAND SERVICE IN GERMANY

by

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Broadband access is a component of electronic communications services available for the public as a whole at any place in a modern country which should thus be designated as a new universal service enabling important improvements relating to e-commerce as well as to e-government. Would this concept be consistent with EC law, which modifications of the directive of 2002 would be necessary? Moreover, the German Telecommunications Act of 2004 would have to be altered to include an obligation granting broadband access to every customer at an affordable price. Although German Basic Law does also contain a provision requiring the Federation to care about "basic" telecommunications services to be delivered by private operators, those enterprises might be unwilling if they would have to extend their services to the public in a commercially unreasonable way.

Do public interests or "market failure" in fact justify the ways and instruments of German broadband access policy at Federal as well as at State and local levels, and may the German "model" be apt for a transfer to other EC countries where a similar "digital divide" at least seems to arise in the near future?

KEYWORDS

Electronic communications, broadband access, broadband services, universal service, State subsidies, iSociety

1. INTRODUCTION: BROADBAND – WHAT DOES IT MEAN?

Broadband issues may be looked at from two different perspectives: On the one hand, any person searching for better means of information and com-

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munication will ask for (adequate ways of) broadband access. Then we will talk about access to the Internet world (or Cyberspace) which should be based upon higher bandwidth (volumes of data) and swifter data transmission in relation to earlier modes of access to electronic communications services (via mo[dulator]dem[odulator] or I[ntegrated]S[ervices]D[igital]N[etwork]. But such user demand will only exist or even go on growing if there are, on the other hand, enough types of broadband services, i.e. either new or other and more various (content) offers to be delivered via means of electronic communications (and based upon new, packet-switched networks which are commonly said to belong to a "next generation" of those networks, i. e. NGN).[1]

In general, any connection to the customer of 256 kbit/s (0.256 Mbit/s) or greater is termed broadband Internet. The International Telecommunication Union Standardization Sector (ITU-T) recommendation I.113, however, has defined broadband as a transmission capacity that is faster than primary rate ISDN, at 1.5 to 2 Mbit/s. The U.S. F(ederal)C(ommunication) C(ommission)'s definition is 200 kbit/s (0.2 Mbit/s) in one direction, and advanced broadband at least 200 kbit/s in both. The Organization for Economic Cooperation and Development (OECD) has defined broadband as 256 kbit/s in at least one direction, and this bit rate is the most common baseline that is marketed as "broadband" around the world. There is no specific bitrate defined by the industry, however, so "broadband" can mean lower-bitrate transmission methods, too.[2] In Germany, e.g., till the end of 2008, there was a very narrow definition including any electronic data transmission at least equal to 128 kbit/s.[3] This choice was probably made for political reasons because by reducing the content of the term "broad", the relevant map designed by the Federal Ministry of Economics and Technology[4] will show only those (rural) "spots" where even this transmission capacity is not (yet) available.[5]

Today, one may find in most countries various kinds of techniques which are being used for providing broadband services:

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1 Elixmann, D. / Ilic, D. / Neumann, K.-H. / Plückebaum, T. 2008, The Economics of Next Generation Access – Final Report, Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste (wik) Consult, Bad Honnef.

2 http://en.wikipedia.org/wiki/Broadband_Internet_access (visited 14 Jan. 2009).

3 Then changed to 384 kbit/s; Deutsche Presseagentur (dpa) 2008, "Bundesregierung will den Ausbau der Breitbandversorgung vorantreiben" (http://www.heise.de/newsticker/meldung/120326, visited 14 Jan. 2009).

4 http://www.zukunft-breitband.de/BBA/Navigation/breitbandatlas.htm (visited 14 Jan. 2009).

5 Wüpper, T. 2009, „Traum von der Datenautobahn", Frankfurter Rundschau, no. 6, p. 18; Bundesregierung 2008, „Breitbandlücken schließen – Universaldienst einführen", Deutscher Bundestag, Drucksache 16/8517, pp. 1 – 2.

The standard technologies in many areas are D(igital)S(ubscriber)L(ine), i.e. digital data transmission over copper wires usually used in the local loop of a telephone network, and cable modems designed to modulate a data signal over cable television infrastructure.[6] Newer technologies in use include V(ery High Speed)D(igital)S(ubscriber)L(ine)[7] and optical fiber connections which are being pushed closer to the customer in both telephone and cable plants. Fiber-optic communication, being used in fiber to the premises (building/home) and fiber to the curb schemes (FTTx),[8] has in fact played a crucial role in enabling broadband Internet access by making transmission of information over larger distances much more cost-effective than the traditional copper wire technology.[9] Since 2006, also broadband mobile Internet access has become available at the consumer level in some countries, using, e.g., H(igh-)S(peed)D(ownlink)P(acket)A(ccess) technologies.[10] The most recent technology being deployed for mobile and stationary broadband access is Worldwide Interoperability for Microwave Access (WiMAX), a standards-based wireless technology that provides high-throughput broadband connections over long distances.[11] Finally, broadband services may be offered via satellite (mobile) communications network, and over lines (broadband over powerlines, "BPL"), which were originally destined for transmission of electric energy but also usable for (other) data transmission (so-called "powerline").

Frequencies for B(roadband) W(ireless) A(ccess) in the band 3400 to 3600 MHz (in some places up to 4000 MHz)[12] are going to be assigned by the German Federal Network Agency (Bundesnetzagentur)[13] implementing a Commission Decision on the harmonization of this band for terrestrial systems

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6 „Arnsberg – Breitband via Kabel-TV" (http://www.kommune21.de, visited 14 Jan. 2009).

7 EU Commission 2005, "Telecommunications: Commission approves decision of the German regulator to open up broadband markets, including very high-speed internet access (VDSL)", (IP/05/1708).

8 Neumann, K.-H. 2007, „Warum gibt es in Deutschland kein FTTx?", wik Newsletter, no. 67, pp. 1 – 2; Krempl, S. 2008, „Bundesnetzagentur peilt Glasfaser bis ins Haus an" (http://www.heise.de/newsticker/meldung/121629, visited 14 Jan. 2009).

9 Neumann, K.-H. 2008, „Next Generation Access oder wie bringen wir die Glasfaser ins Haus", wik Newsletter, no. 72, pp. 1 – 3.

10 „E-Plus testet Breitband über TV-Frequenzen an der Müritz" (http://www.heise.de/newsticker/meldung/121295, visited 14 Jan. 2009).

11 „Niedersachsen – Schnelles Web per Funk" (http://www.kommune21.de, visited 14 Jan. 2009).

12 „Zusätzliche Frequenzen für Funk-Internet freigegeben" (http://www.heise.de/newsticker/meldung/95185, visited 14 Jan. 2009).

13 Bundesnetzagentur 2008, „Entwurf eines Frequenzzuteilungsverfahrens und der Nutzungsbedingungen für Frequenzen im Bereich 3600 bis 3800 MHz zur Realisierung von breitbandigen drahtlosen Netzzugängen (Broadband Wireless Access, BWA)", Amtsblatt (Official Journal), no. 21, pp. 3441 – 3446.

capable of providing electronic communications services in the European Community for fixed, nomadic and mobile applications.[14]

Political discussions are nowadays mainly focusing - at the national as well as at international levels – upon the "digital divide" phenomenon. Closing the gap (or "Breitbandschere") between urban and rural areas by extinguishing so called "white spots" as far as possible,[15] but also – seen from a global perspective - between centre and periphery, i.e. between the industrial and the developing world, will be one of the great challenges for human society in the next years.[16]

2. WHO WANTS; WHO NEEDS BROADBAND? DEMAND FOR AND POTENTIAL USER OF BROADBAND SERVICES

Talking about "broadband" in the context of (a new) "universal service", the main components of this basic conception must at first be looked at more closely. Services may be designated to be "universal ones" if they are available for every interested person in the whole territory of a State (or another political community). Evidently, also different user demands should be taken into account as far as possible when the concept will be described more precisely. A consequence of this latter aspect could be that it might be also be appropriate to distinguish between national, regional or local areas not only in regard of the various means of transmission and their relevant scope but also in respect of the content of (broadband) services. Moreover, the spectrum and quality of services available might not be the same or it may vary between different places within the whole space of a (national) territory because some services will or even can be provided only in land areas or at or near specific places, as, for example, in the case of (most) mobile broadband services. Thus, it seems to be the best way to use a rather narrow and formal concept of defining "universal" service: Whereas it should not exclude any specific (electronic communications) service, the "universality" criterion would only be aiming at – first - persons and – second - territories, but not include quality standards like securing each (technically) available service "everywhere for everyone" since there might be important political and economic reasons to restrict or modify the scope

[14] EU Commission 2008, Decision (2008/411/EC, Official Journal of the EU, part L, no. 144, pp. 77 – 81); Büllingen, F. /Gries, C.-I. /Stamm, P. 2008, Geschäftsmodelle und aktuelle Entwicklungen im Markt für Broadband Wireless Access-Dienste, Bad Honnef, wik Diskussionsbeitrag, no. 307.

[15] Sonnberger, H. 2008, „Breitband in Deutschland: Von weißen und grauen Flecken" (http:/www.heise.de/newsticker/meldung/120331 , visited 14 Jan. 2009).

[16] EC Commission 2006, Communication on Bridging the Broadband Gap, COM(2006) 129 final, pp. 3 – 10: OECD 2008, Broadband Growth and Policies in OECD Countries, OECD, Paris, pp. 7 – 18.

of services enterprises would be forced to offer. So the obligation to provide is not absolute but might be made dependent upon general and basic needs within a modern (information) society. But if according to legal prescriptions any services would have to be provided for at this minimum level only, they would then anyway have to be available for "all" relevant persons within a destined area, independent of their nationality, domicile or seat. This performance requirement stems from the legal obligation for every service provider to conclude a contract relating to the delivery of one or more services of such a "universal" character with any customer within the framework of general conditions established by law (including adequate, moderate remuneration).

But on the other hand, there is no duty for those enterprises to build new or improve or extend existing fixed and mobile communications networks. To impose such an obligation upon any private player, would evidently raise the question whether and under which conditions commercial undertakings will be actually able and ready to perform it. If there would be a public interest or even a public need for more, broader and better universal services, the general public should also take an adequate burden in respect of financing this improvement as it is benefiting society as a whole. In other words: If enterprises able to provide such "value-added" services would call for subsidization of their relevant activities by money from public budgets, this demand would at least in principle be legitimate.[17]

3. PROVIDERS OF BROADBAND SERVICES

At least in Germany, alternatives for subsiding private service providers by public means, i.e. forcing public enterprises to take care of providing adequate (broadband) universal services, seem not at hand, because only private commercial firms ("privatwirtschaftliche" Unternehmen) are permitted to provide telecommunication services, whether acting alone or in concert. Neither the Federation („Bund") nor any other public body is authorized to step in and do the job itself (according to a constitutional prohibition, laid down in art. 87f par. 2 of the Basic Law ["Grundgesetz"] since 1994, when the former State monopoly in regard to the telecommunications sector was abolished). But even as long as there was a license requirement for some (telecommunication) network operators and service providers (till the reform of the "old" – and first - Telecommunications Act [of 1996] in

[17] Hencsey, M. /Reymond, O. / Riedl, A. / Santamato, S. / Westerhof, J.G. 2006, State aid rules and public funding of broadband, Competition Policy Newsletter, no. 1, pp. 8 – 15; EC Commission 2004, Communication on Connecting Europe at High Speed: National Broadband Strategies, COM(2004) 369 final, pp. 5 – 7; Bundesregierung 2007, "Breitbandversorgung flächendeckend sicherstellen", Deutscher Bundestag, Drucksache 16/7291, pp. 6 – 10.

2004), a lot of (mostly) local public entities nonetheless established private companies which were (and are till now) totally or at least primarily controlled by their public shareholders, and all these quasi public firms got a license if they applied for it.[18] Since German communal laws do only restrict but do not prohibit economic activities of cities or counties – in particular relating to matters of infrastructure[19] - and these have often been concentrated within one single (private) corporation formally independent from the local public entity, the Federal as well as the State governments have not been capable (and were also not ready) to react to this development. So many of the "newcomers" in the German telecommunications sector are (semi-)public enterprises in a broader sense, and nobody seems to care about this keen interpretation of legal rules since the mere existence of these enterprises will normally enhance competition and might therefore lead to decreasing prices for both business and private customers.

Whereas the term "universal service" has not been included within the wording of the German Basic Law, art. 87f par. 1 obliges the Federation to ensure that adequate and sufficient (postal and) telecommunications services will be provided for all over the country. The legislative history shows that the sole reason why the catch word was not inserted was the intention to ensure more flexibility.[20] Details must be prescribed by an act of Parliament, and the relevant legislative decision of the Federal Diet will come into force only if it has been approved by the second chamber ("Bundesrat"). According to this procedural requirement, each State ("Land") has the chance to take part in the political decision-making process and it may thus influence the territorial dimension of basic services deemed appropriate for its own specific situation.

The relevant legislation was already included into the Telecommunications Act of 1996 (sec. 17 et seq.). It was only marginally modified by the reform law of 2004, primarily because of the need to adapt its provisions to the requirements of the EC Universal Services Directive of 2002. So, the national and European policies for a modern universal service are implemented at first by sec. 78 et seqs. of the new Telecommunications Act and then - within the framework set up by law – by regulatory measures (performed by an independent public body, the "Bundesnetzagentur"). The actual legal framework states that on the one hand, there is a general normative obligation laid down for each domestic enterprise capable to take part in provid-

[18] Schütz, R. 2000, in Beck'scher TKG-Kommentar, eds. Büchner, W. et al., 2nd ed., Verlag C. H. Beck, München, p. 186. A famous example is NetCologne (http://www.netcologne.de) domiciled at Cologne (Köln).

[19] Ziekow, J. 2007, Öffentliches Wirtschaftsrecht, Verlag C. H. Beck, München, pp. 119 – 126.

[20] Schütz, R. 2000, in Beck'scher Kommentar (fn. 18), p. 288.

ing universal service, i.e. building and improving telecommunications networks as well as creating and maintaining some basic (electronic communications) services. In cases of market failure, i.e. whenever private enterprises, in particular the incumbent Deutsche Telekom AG, will no longer deliver services which meet the criteria "adequate", "sufficient" and "country-wide", the German national regulatory authority is authorized to force one or more of those enterprises to fulfill one or more certain specific universal service obligations (concerning any modes, places or prices of such service which are deemed to be less than satisfactory). Because the scope and quality of telecommunications services offered in Germany has till now always been above the (rather low) minimum standard required by (national) law (as well as by the relevant EC directive), there has also never been any real test whether the "play or pay" mechanism laid down on secs. 78 et sec. of the Act would be working properly.[21]

Further aspects relevant for broadband services are addressed only – and somewhat reluctantly - in chapter 1 of the Telecommunications Act of 2004, in the first two provisions dealing with purposes and aims of the law: This act is explicitly intended to promote the creation of a high-quality infrastructure within the telecommunications sector (sec. 1), and this main purpose is then repeated among the list of regulatory tasks (sec. 2 par. 2 no. 4), and according to no. 6 of this paragraph, also telecommunications services at public institutions should be improved although there is no explanation how to do that.[22] But nonetheless, there is thus an additional need for (public) planning and coordination in the telecommunications sector relating to particular as well as complementary activities of specific communication partners, especially of or between citizens, business enterprises and public administrations bridging the distance between those different persons (or entities): by regulating and supervising (private) enterprises in order to ensure that those firms operate efficient as well as effective (electronic communications) networks ("data highways") so that they are thereby enabling optimal communication between users at both ends of the lines.

In order to increase volume and speed of transmission, a new, better frequency allocation would be another important precondition. There could be, e.g., a "reframing" of frequency assignments between licensees, e.g., in the sectors destined for U(niversal)M(obile) T(elecommunication)S(ervices),

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[21] Schuster, F. 2000, in Beck'scher Kommentar (fn. 18), p. 1537; Holznagel, B. / Enaux, C. / Nienhaus, C. 2008 Telekommunikationsrecht, 2nd ed., Verlag C. H. Beck, München, p. 244.

[22] Scheurle, K. D. 2008, in Telekommunikationsgesetz – Kommentar, eds. Scheurle, K. D./ Mayen, T., 2nd ed., Verlag C. H. Beck, München, p. 82.

for the purpose of modifying time period and other terms and conditions[23], but this improvement of efficiency could only take place if all relevant operators would agree. So, a better way might be a more economic allocation of frequencies which have been made available because of the "earnings" from the "digital dividend":[24] The modification of transmission techniques due to digitalization of information did not totally abolish the scarcity of frequency spectrum but it surely created far broader possibilities for its use.

Thus, especially at the federal level, in Germany, the State will play a dual role in the telecommunications sector. On the one hand, it acts as a rule-maker and as (administrative or) regulatory body, on the other hand, it already is – and surely will not stop to be - an important user of broadband services itself (for various public purposes and/or in the public interest). But any governmental intervention intended at forcing or influencing (at least certain) enterprises to provide universal (broadband) services is restricted to legislating and/or regulating in respect of these firms. Moreover, EC (secondary) as well as German (constitutional) law will not allow that such enterprises (mostly "incumbents", i.e. former State monopolies) would be "misused" as mere instruments of their dominant public shareholder by initiating decisions within corporate bodies for other than autonomous commercial reasons.[25] Finally, the German Basic Law prohibits that any (Federal) governmental entities is acting as a network operator or service provider itself (although there is no EC rule requiring such a self-restraint). Since – at least in German practice – telecommunications services are not only asked for, but also offered at lower levels of State organization by semi-public institutions, the need for an overall governmental planning and coordination at all levels (from national to local) can thus hardly be denied in order to reduce conflicting interests of different actors.

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[23] Bundesnetzagentur 2008, „Flexibilisierung der Frequenznutzungsrechte in den Bereichen 900 MHz und 1800 MHz", Amtsblatt.(Official Journal), no. 22, pp. 3649 – 3661.

[24] EU Commission 2007, Communication on Reaping the full benefits of the digital dividend in Europe, COM(2007) 700 final, pp. 3 – 7; Neumann, K.-H.2007, „Die Digitale Dividende – Oder können wir zugunsten des Rundfunks auf Wirtschaftswachstum verzichten", wik Newsletter no. 69, pp. 1 - 2; „Zank um Rundfunkfrequenzen für Breitband-Internet" (http://www.heise.de/newsticker/meldung/115571, visited 14 Jan. 2009); Lessmann, P. 2008, „Die Digitale Dividende: Breitband soll in die Fläche kommen" (http://www.heise.de/newsticker/meldung/117454); Krempl, S. 2008, „ITGipfel: ‚Digitale Dividende' für mobile Breitband-Versorgung" (http://www.heise.de/newsticker/meldung/119207, visited 14 Jan. 2009); „Wittstock/Dosse – Internet über Rundfunk" (http://www.kommune21.de, visited 14 Jan. 2009).

[25] Mayen, T. 2008 in Scheurle, K.D. / Mayen, T. (fn. 22), p. 900.

4. WHY GOVERNMENTAL ACTION RELATING TO BROADBAND SERVICES?

The primary purpose of government at national and international, in particular at European level is to serve (various) public interests. If public bodies will not only ask for specific telecommunications services offered by private market participants, but if they are ready to act as network operators and/or service providers, these activities cannot be justified from commercial reasons solely. There must be some other rational motives to legitimize such policy. The most important reason why public entities should step in is a rather simple one. There will be situations where basic needs of a greater part of the public are not met – or at least there is an imminent danger that such a situation will come true - because those people cannot (afford to) buy certain goods or services from private sellers or providers although they cannot live without them. Seen from this perspective, the traditional universal service is only another mode of respecting core requirements of humanity by making available just those means a human person needs for physical and mental survival. But that first and preliminary result does not yet meet the criterion of "adequate" which is closely connected with a more modern conception of how to fairly implement fundamental rights by creating and maintaining good living conditions for all human beings within a specific territory and which is based upon the recognition of an intrinsic value of each and every human person. In addition, "positive" obligations with a similar content are laid down in arts. 158 et seq. of the EC Treaty ("social and territorial cohesion") and in the basic principle of social statehood („Sozialstaat"), art. 20 par. 1 of the German Basic Law, because this is also aiming at similar – although not totally identical – living conditions to be granted for every person anywhere in the whole territory (of a member State like Germany or even the EU). A second argument for broadening the "universal" service by adding further telecommunications services to this category may be derived from the rule of democracy which is requiring equal opportunities for all citizens in order to enable the creation of a more just society as the basic foundation for proper government in the interest and with the consent of the governed. Here too, democracy is not only a principle of (fair) organization of the body politic, but it also depends upon "enlightened" citizens having equal chances (based once again upon fundamental political rights) to inform themselves as well as being informed about public affairs in the best possible manner since only then they will be able to work actively for the wellbeing of the general public.

But we must not forget that there is another side of the coin. At least from a legal point of view, there might be a big difference between forcing private enterprises to perform specific (economic) activities although these would not really differ from the core business they have chosen to engage in at their free will and the duty of corporations to finance State (welfare) activities by paying income or other taxes. The tax burden may of course be heavy, but the enterprise remains autonomous at least what to do (and when). It is even free to stop its activity for some time or for ever. Universal service obligations of any kind, however, must thus take due account of economic (fundamental) rights of (private) service providers in a proper way because the legal prescription to "play" (i.e. to offer a particular service even when it will lead to a financial loss) or to "pay" (to other enterprises because payer and payee are "sitting in the same boat" as they both are able to actually offer the relevant service) changes the (horizontal) relationship between two (private) persons in the telecommunications sector in a one-sided manner: The provider will lose, the user will gain. This may sound fair if the user is really in urgent need of a service which only one or a few enterprises are ready to offer. But whether this is equally just for services (far) better and more valuable than those basic ones mentioned before? Thus, the German legislator recently tried to find a compromise by inserting a new sec. 9a in to the Telecommunications Act of 2004 concerning "new" markets where innovative enterprises could be enjoying "regulatory holidays".[26] This provision might be in contradiction with EC rules, but it is simply trying to put the "first mover advantage" into a legal text by treating unlike matters unlike (although the enactment of the rule was caused at least partially by announcements of Deutsche Telekom AG to increase its broadband ["DSL"] activities only if the firm would get less governmental regulation).[27]

5. MODES OF GOVERNMENTAL ACTIVITIES RELATED TO BROADBAND

Obviously, if neither private enterprises would be eager to provide broadband services all over the country out of their own will for commercial reasons nor the government would be ready to step in instead of them and do this job itself, there might be some alternatives left for other forms of engagement of public institutions. The State could of course try to rearrange the financial burden caused by establishing a modern broadband infrastruc-

[26] Kühling, J. / Elbracht, A. 2008, Telekommunikationsrecht, C. F. Müller Verlag, Heidelberg, pp. 68 – 69.

[27] „Telekom: Milliarden-Investition bei weniger Regulierung" (http://www.heise.de/newsticker/meldung/120469, accessed 14 Jan. 2009.

ture also in less developed – mainly rural - regions of a country. So, if neither actual users nor persons otherwise benefiting from broadband services would be able to spend the money which private investors will demand as payment for an extension of their activities into the "white spots" thereby offering new or better access to the Internet, government could put up different modes of burden sharing to reach its aim of improved broadband service. One of them has been mentioned before already, namely enacting provisions addressing the group of network operators and service providers only and allocating to them solely the costs as well as the benefits of the game.[28] An efficient incentive for each group member to become a player itself might be the danger of getting charged if he does not join. And it would be just the competing player who would get at least a part of the costs for his performance reimbursed (and who will perhaps earn some more benefit because what is good for the country might also be good for him and his account). On the other hand, each enterprise will try to avoid financial losses. Thus, also universal service providers would look for other ("third") candidates who are able to relieve them from their burden. If they would not be permitted to demand higher prices from their users, they will certainly propose and lobby for other modes of cost re-allocation. So, government might be asked by them to enact legal provisions imposing taxes or other (e.g. access) charges to be levied upon all persons who are at least potentially benefiting from universal (broadband) services.[29] In Germany, a proper model might be the fee to be paid for the benefit of public broadcasting institutions because this is no price for actually listening radio and watching TV but it falls already due if a person merely possesses a device which could be used to receive such programs, including a personal computer or a notebook. The German States only recently modified the Broadcasting treaty in order to abolish any doubts about the scope of that monetary obligation.[30] If the group of potential payers would be extended in this manner, there would of course have to be some exceptions for poorer people. But then the service provider would certainly ask to be compensated for his altruistic attitude, and he would most probably beg the government to do that because the exception was enacted out of social or ethical reasons and contrary to the commercial interests of the private provider. Regarding the results, however, there would be hardly any difference between paying the provider any sums of money which this enterprise

[28] See supra, chapter 4.

[29] For financing of universal service obligations, see art.13 of the Universal Services Directive (European Parliament and Council 2002, Directive 2002/22/EC. Official Journal of the EC, part L, no. 108, pp. 51 – 77).

[30] http://de.wikipedia.org/wiki/Rundfunkgeb%C3%BChrenstaatsvertrag (visited 14. Jan. 2009).

could not collect from its debtor on the one hand and granting financial assistance directly to the enterprise itself from public funds on the other. Thus, regional or local public bodies willing to reduce "white spots" in their respective areas as far as possible will be more inclined to put up schemes of financial incentives for providers because this would be a far easier and less bureaucratic way to reach their aims.

However, if "third" persons who would neither directly nor at least indirectly benefit from extending and improving broadband services would nevertheless be caused by governmental action to (partially) pay the costs for these activities (from public funds), there would certainly evolve a hot debate on the legitimacy as well as on the limits of such a seemingly rather unfair allocation. So, this solution should only be reached after a broad political discussion among all relevant societal stakeholders would have proved clearly that a project might be good for all citizens (and other residents) because it would (probably) enhance the living standard of the whole people.

This overall solution seems appropriate only if some basic requirements would be met. At first, there is a need for a clear and solid legal framework because several relationships between different persons/entities have to be combined in an optimal way. Furthermore, any State action whether it will be direct intervention or merely setting financial incentives for certain private activities is limited by constitutional legal restraints. There must be a legitimate aim and purpose laid down either in the wording of the constitution itself or decided by parliament according to constitutional law procedures. And second, the means used to reach the desired results must be adapted to the aims and purposes, they must not be stricter than necessary, and they have, at last, to be appropriate in a more narrow sense, seen from the perspective of the person or enterprise concerned.

So, State action could more easily be justified if and insofar as public services must or at least should be used by the whole people. But also if private activities would only be started or maintained if government itself would be planning and performing some basic infrastructure projects (in French law: "service public", in Germany: "Daseinsvorsorge"), those measures would be legitimate. In these situations, public bodies may be forced to cooperative with private enterprises because they will often have neither the tools nor the technical knowledge to implement a project without such assistance. This "division of labour" between government and business will thus often be a necessary condition for success. But every form of public-private partnerships – as well as other arrangements with private parties in

order to serve the public interest – must strictly respect government procurement rules to find out which private partner(s) will be the best one(s) to work with . Transparency and formality of procurement procedures will by the way also reduce the risks of corruption and discrimination.

6. CENTRAL LEGAL ISSUES

Legal issues must always be taken into account when government tries to improve broadband services in a country. In Germany, at the national level constitutional law reserves the operation of electronic communications networks and the provision of electronic communications services for private commercial activities and, on the other hand, guarantees freedom of commerce for each German person (including domestic private corporations). But, as described above, that does not mean that governmental action is totally prohibited in the telecommunications sector. Closely related to the fundamental principle of "social statehood" ("Sozialstaatlichkeit"), art.72 par. 2 of the Basic Law is commonly interpreted as a mandate to legislative bodies (at both Federal and State levels) to create or maintain like or similar living as well as (other) economic conditions all over the whole German territory. Seen together with art.87 f par. 1, the question to be answered is thus not if (Federal) legislative or other measures are needed to ensure adequate telecommunications services, but only if and at what extent Parliament is permitted or even obliged to impose broadband services as universal service obligations.[31]

As a member State of the European Union from the very beginning, Germany is also bound by EC law. On the one hand, conflicts could arise there with primary law rules on subsidies (art. 87 et seq. EC Treaty) if public funding or otherwise assisting private service providers would not be justified either by a Commission decision based upon arts. 87 par. 3 (lit. c]) or by the general exception for services of general economic interest laid down in art.86 par. 2. On the other hand, the European Parliament and the Council (of Ministers) may according to art. 95 EC Treaty, take any legal acts in order to harmonize rules of member States focussing upon the establishment and proper functioning of the single European market (art. 14). Referring to this mandate, these two EC institutions enacted the "telecoms packet" in 2002 including the "Universal Service Directive".[32] In 2007, the Commission

[31] DIE LINKE 2008, „Schnelles Internet für alle – Unternehmen zum Breitbandanschluss gesetzlich verpflichten", Deutscher Bundestag, -Drucksache 16/8195, pp. 1 – 3; CDU / CSU and SPD 2008, „Breitbandversorgung in ländlichen Räumen schnell verbessern", Deutscher Bundestag, Drucksache 16/8381, pp. 4 – 8.; Bundesregierung 2008, „Zwischenbilanz der Breitbandaktivitäten der Bundesregierung", Deutscher Bundestag. Drucksache 16/10089, pp. 10 – 11.

[32] European Parliament and Council 2002 (fn. 29).

proposed a (moderate) reform of the other legal acts of 2002.[33] Regarding "universal service", the Commission had for a first time reviewed its scope one year earlier and concluded that "in the case of broadband Internet access, current level of take-up does not meet the criterion of use of the service by a 'majority of consumers' and so the conditions for including broadband services within the scope of universal service were not fulfilled".[34] In its second report from fall 2008, the Commission somewhat modified its view holding "while, on the existing interpretation of the Directive (of 2002), neither mobile nor broadband fall within its scope, it seems clear that the substitution of mobile for fixed voice telephony as well as the increased levels of take-up and importance of broadband in daily life raise questions about the universality of access to e-communications services for the future. It is therefore an appropriate time to begin a reflection on the concept of the universal service obligation as part of an overall approach to high-speed internet for all, which could also include Community, national and regional/municipal support, public-private partnerships and other mechanisms".[35] So, it seems unlikely that the current reform will already lead to an extension of universal service obligations to (certain) broadband activities. The Commission did not propose such an amendment, neither in its original draft nor in its modified version of fall 2008.[36] But that may not be the last word on this issue. The 2008 report invited Parliament, Council, national regulators, telecoms providers, consumer associations and citizens to contribute to a debate on achieving "Broadband for All" in the EU. These contributions should feed into a Commission Communication in the second half of 2009 and possibly new legislative proposals in 2010.[37]

7. HOW TO SHAPE BROADBAND PROPERLY?

"Broadband for All"[38] should certainly conform to a few essential preconditions. At first, main "positive" requirements would include "technological

[33] EU Commission 2007, Proposal for a Directive of the European Parliament and of the Council amending Directive 2002/22/EC on universal service and users' rights relating to communications networks…, COM(2007) 698.

[34] EU Commission 2006, Communication on Report regarding the outcome of the Review of the Scope of Universal Service in accordance with Article 15(2) of Directive 2002/22/EC, COM(2006) 163 final, p. 5.

[35] EU Commission 2008, Communication on the second periodic review of the scope of universal service in electronic communications networks and services in accordance with Article 15 of Directive 2002/22/EC, COM(2008) 572 final, p. 9.

[36] EU Commission 2008, Amended Proposal for a Directive of the European Parliament and of the Council Amending Directive 2002/22/EC…, COM(2008)723 final.

[37] EU Commission 2008, "Broadband Internet for All European: Commission launches debate on future of universal service" (IP-08-1397), p. 2.

[38] EU Commission 2008, Communication on future networks and the Internet, COM(2008) 594 final, pp. 6 – 7; Büllingen, F. /Stamm, P. 2008, Breitband für jedermann – Infrastruktur für einen innovativen Standort, Bad Honnef, wik Consult, pp. 105 – 126.

neutrality", i.e. electronic communications should be available via any available means of transmission (fixed lines/cable, mobile/radio, satellite), and they should also take proper account of elements necessary for international communications between different countries (e.g. interconnection, interoperability). A further criterion should be the involvement of all relevant economic actors in order to recognize divergent interests as soon as possible. So, not only network operators, service providers and different groups of users should raise their voice, but also, e.g., producers of various devices and (terminal) equipment needed for getting into electronic contact.

But businessmen and politicians should not forget some important "negative aspects" of a broader and more intense use of means of electronic communications. In Germany, e.g., a lot of various administrative and civil courts – and even the Constitutional Court[39] - had to examine issues of "Elektrosmog"[40] because there are different health risks resulting from different modes of data transmission and it is rather unclear how grave the consequences will be in the long run.[41] Even if users of mobile communications might be deemed to have consented to those risks which any interested person will easily get to know from the media, what about dangers which are not yet (fully) known? The first argument which is based upon the idea of a fair allocation of benefits and risks and opportunities is valid for users only. But there are now and will also be non-users in future. Would this group of persons not have a right to be treated fairly, too, so that government should be obliged to protect their vital interests? Moreover, environmental laws will set up restrictions for building and operating networks or ways of transmission at least in certain places and in regard of certain types. Innovations in the telecommunications sector which are technically feasible will thus have to consider relevant ecological standards, too, to avoid delays or even failure in the phase of implementation.

8. PERSPECTIVE FOR SUCCESSFUL BROADBAND SERVICES

International institutions like the OECD or the EC Commission[42] have been sketching keen visions (or "dreams") of a new world where broadband services are available for the general public all over the country (or even globe). In fact, those services might – and should – not only be used for pur-

[39] Decisions of Feb. 28, 2002(http://www.bundesverfassungsgericht.de/entscheidungen/rk20020228_1bvr167601.html, visited 14 Jan. 2009), and Jan. 24, 2007 (http://www.bundesverfassungsgericht.de/entscheidungen/rk20070124_1bvr038205.html, visited 14 Jan. 2009).

[40] http://de.wikipedia.org/wiki/Elektrosmog (visited 14 Jan. 2009).

[41] For further information, see, e.g., www.buergerwelle.de, www.elektrosmog.bayern.de, www.izmf.de.

[42] EU Commission 2003, Communication on Electronic Communications: the Road to the Knowledge Economy, COM(2003) 65 final, pp. 6 – 8.

poses of information, communication and transaction although that would cover a wide area of activities, in particular eCommerce (B2B, B2C), eGovernment (A2B, A2C, A2A) and also various audiovisual services. But moreover, improving broadband would be a milestone on the way to establishing iSociety („Informationsgesellschaft") because human wellbeing could be promoted in nearly every field of everyday life whether in the private sphere ("smart homes"), relating to (human) health or safety and not the least by extending e-democracy. But the development must not end up in creating an Orwellian-like "brave new world", so each step to realize these goals should be watched carefully.

9. TOWARDS THE NEW WORLD OF BROADBAND? – RECENT PROJECTS

Most of the different ways to improve broadband access for all can be illustrated by pointing to (pilot) projects which were implemented or at least begun in Germany during the last few years. Some examples are listed below:

How to provide services in (rural) local areas, may be seen looking at results from a government-sponsored initiative ("Zukunft Breitband")[43] concerning villages, e.g., in North-East Germany (Rheinsberg) and in Bavaria (Weiding/Oberpfalz).[44] A different project involving public-private cooperation at the local level will be found in Lower Saxony (Oerel, Niedersachsen).[45]

At the regional level (i.e. related to the territories of German States), nearly all of them have been very busy to respond to demands of business and citizens for extending broadband services to rural parts where they did or do not exist till now. More information about those activities – mostly public (co-)funding for private projects, but also advising local public officials or bodies about chances of better broadband services – are published on specific websites created by State governments in, e.g., Brandenburg,[46]

[43] http://www.zukunft-breitband.de/ (visited 14 Jan. 2009).

[44] http://www.zukunft-breitband.de/BBA/Navigation/root,did=256178.html (visited 14 Jan. 2009).

[45] http://www.breitband-niedersachsen.de/uploads/media/Oerel_Krabbe.pdf (visited 14 Jan. 2009); "Niedersächsische Gemeinde baut eigenes Glasfaser-Netz" (http://www.heise.de/newsticker/meldung/119285, visited 14 Jan. 2009); „Oerel – GmbH für Breitband" (http://www.kommune21.de, visited 14 jan. 2009).

[46] http://www.breitbandatlas-brandenburg.de/; „Brandenburg – Breitbandlücken schließen" (http://www.kommune21.de, visited 14 Jan. 2009); „Brandenburg: Pilotprojekt zur Nutzung von Rundfunkfrequenzen für breitbandiges Internet", http://www.heise.de/newsticker/meldung/119715, visited 14 Jan. 2009).

Thüringen,[47] Schleswig-Holstein,[48] Niedersachsen,[49] Nordrhein-Westfalen,[50] Rheinland-Pfalz,[51] Bayern[52] and Baden-Württemberg.[53]

Similar programs have been established in other EU member States at the regional level and were approved by the European Commission (based upon similar reasons as related to Germany)[54] according to some common criteria.[55] Whereas in those cases the applicants could easily demonstrate that subsidies were justified because private enterprises would take up activities in the relevant areas only if they would get financial assistance, the situation seems to be more complex and complicated when broadband activities are planned by big cities like Amsterdam[56] or Prague[57] where there are already private competitors so that market failure is hardly evident.

Since the Swiss legal framework differs from EC (anti-subsidy) law, it might be too early to draw more general conclusions from the projects implemented in Zürich.[58] There, the administration has mandated a public enterprise to start operating a broadband network. Any (private) entity ready to offer services (for the public) over this network will get access to it under transparent and non-discriminatory conditions. Whether this public-private-partnership will work properly remains to be seen.

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47 "Thüringer Landesregierung startet Initiative für schnelles Internet" (http://www.heise.de/newsticker/meldung/117531, visited 14 Jan. 2009); "Arcor testet VDSL in Thüringer Gemeinde" (, visited 14 Jan. 2009).

48 http://www.schleswig-holstein.de/MWV/DE/Technologie/Breitband/Breitband_node.html.

49 http://www.breitband-niedersachsen.de/ (visited 14 Jan. 2009); „Niedersachsen: Situation bei Breitband-Versorgung ‚alarmierend' (http://www.heise.de/bewsticker/meldung/113347, visited 14 Jan. 2009), "Jeder fünfte Nutzer in Niedersachsen ohne schnellen Internetzugang" (www.heise.de/newsticker/meldung/116265, visited 14 Jan. 2009);

"Niedersächsische Gemeinden fordern Breitband-Internet im ganzen Land" (http://www.heise.de/newsticker/meldung/121046, visited 14 Jan. 2009).

50 http://www.breitband-nrw.de/.

51 http://www.breitband-initiative-rlp.de/.

52 http://www.breitband.bayern.de/win2/inhalte/index.jsp; „Bayern fördert Breitbandausbau in ländlichen Gebieten" (http://www.heise.de/newsticker/meldung/99421, visited 14 Jan. 2009).

53 http://www.breitband-bw.info/; „Baden-Württemberg will Ausbau des schnellen Internets auf dem Land stärker fördern (www.heise.de/newsticker/meldung/115839, visited 14 Jan. 2009).

54 EU Commission 2008, "State aid: Commission approves 141 € aid scheme to increase broadband availability in rural Germany" (IP/08/1096); EC Commission 2008, „State aid: Commission approves € 45 million aid to increase broadband availability in rural Germany" (IP/08/1662).

55 http://ec.europa.eu/competition/sectors/telecommunications/broadband_decisions.pdf (visited 14 Jan. 2009).

56 EU Commission 2007, Decision (2008/239/EC), Official Journal of the EU, part L, no. 247, pp. 27 – 49; Gaal, N. /Papadias, L. /Riedl, A. 2008, "Citynet Amsterdam: an application of the Market Economy Investor Principle in the electronic communications sector", Competition Policy Newsletter, no. 1, pp., 82 - 85.

57 Gaal, N. / Papadias, L. / Riedl, A. 2007, "Municipal wireless networks and State aid rules: Insights from 'Wireless Prague'", Competition Policy Newsletter, no. 3, pp. 116 - 118.

58 http://www.stadt-zuerich.ch/content/ewz/de/index/telecom/ewz_zuerinet.html (visited 14 Jan. 2009).

10. PRELIMINARY CONCLUSIONS

We have still not reached the age of broadband. But nevertheless, a preliminary assessment of actual issues and perspectives might be possible.

1. EC secondary law was obviously right not to impose a prohibition for Member States to establish or maintain public enterprises in the sector of electronic communications because private corporations cannot effectively be forced to fulfil universal service obligations if they are not ready to do this. In an emergency situation like that, government must act. So, there should be clear legal rules for this case. Germany would therefore be well advised to revise its constitutional prohibition at least partially. The abolishment of this restriction would not lead to a fundamental change if it would only open a way for public bodies to act as network operators or service providers when and as long as basic services would not be provided sufficiently by private enterprises.

2. This modification of current law would also permit a stronger involvement at least of local and regional public entities relating to basic elements of electronic communications. They could, e.g., act as a "neutral" (broadband) network operator guaranteeing universal access to every resident. At the local level, various projects of private public partnerships could be started because cities or counties have got a lot of experience regarding such forms of cooperation.[59] Another task for (local) public bodies might be to collect and distribute all relevant information about the situation of the telecommunications infrastructure within their respective territories.[60]

3. If governmental activities concerning the field of electronic communications would be extended in the way described above, that would obviously increase the need for better coordination between State actions at different levels as well as by different bodies or agencies.[61] A prominent example in Germany might be the allocation of frequencies because issues of broadcasting are dealt with by (sixteen) State bodies but the final decision is taken by the Bundesnetzagentur (at the Federal level and according to the Telecommunications Act).

4. Broadband for all might, at last, be one of the consequences of current and future eGovernment projects. Even if the main aim and purpose of those projects will be modernizing governance by effectively using IT, politicians should welcome additional benefits. So, introducing better eGov-

[59] See the case of Oerel (fn. 45).

[60] DStGB / VATM (eds.) 2008, Breitbandanbindung von Kommunen, 2nd ed. ; FDP 2008, „Datenbasis für flächendeckende Versorgung mit breitbandigem Internetzugang schaffen", Deutscher Bundestag, Drucksache 16/7862, pp. 2 – 3.

[61] Cf. „Bund und Länder verhandeln über Breitbandförderung ländlicher Regionen" (http://www.heise.de/newsticker/meldung/94167, visited 14 Jan. 2009).

ernance might at the same time encourage private enterprises to improve broadband services not only for public and business customers but also for citizens living in "white spots". Perhaps, these people would then be ready to stay there because they will have fewer reasons to leave their rural homes and move to urban areas.[62] Broadband policy[63] would thus contribute to a more adequate relation between densely and sparely populated regions within a State and reach a central aim of every good (regional) policy.

[62] BÜNDNIS 90/DIE GRÜNEN 2008, „Medienkompetenz Älterer stärken – Die digitale Kluft schließen", Deutscher Bundestag, Drucksache 16/11365, pp. 2 – 4.

[63] Neumann, K.-H. 2008, „Ein Aktionsprogramm für das Breitbandnetz der Zukunft", wik Newsletter, no. 73, pp. 1 - 3; „Bundeslandwirtschaftsministerium will Internetversorgung schnell ausbauen" (http://www.heise.de./newsticker/meldung/121328, visited 14 Jan. 2009), dpa 2009, „Bundesregierung will schnelles Internet ausbauen" (http://www.heise.de/newsticker/meldung/121629, visited 14 Jan. 2009).