4.5.3 The trans-European transport network has been declared a key element in the relaunched Lisbon strategy for competitiveness and employment in Europe. Only two out of the 30 priority projects are, however, inland waterway priority axes, nr. 18. Rhine/Meuse-Main-Danube inland waterway axis and nr. 30. Inland waterway Seine-Scheldt.

4.5.4 Following the adoption of the EU budget for the period 2007-2013, the allocations proposed by the European Commission for the TEN-Ts have been considerably reduced. With a view to avoiding jeopardising the planned co-financing of designated inland waterway projects, the EESC calls upon the EU Member States concerned to make a start, without delay, on carrying out the activities defined in the TEN-Ts.

4.5.5 The EESC also calls upon the European Commission to follow the examples set in respect of railway projects by appointing a coordinator for the two inland waterway projects; the person appointed should be able to play both a coordinating and stimulating role.

4.5.6 The EESC awaits the publication of the process announced by the Commission in connection with infrastructure charging.

4.6 *Modernisation of the organisational structure*

4.6.1 One of the main outcomes of recent investigations in the sector, set out in the report of the European Framework for Inland Navigation (EFIN) entitled 'A new institutional framework for [the] European Inland Navigation' and in the Prospects for Inland Navigation in an Enlarged Europe (PINE) report commissioned by the European Commission, proved that the impact of inland waterway transport at political level is comparably low and its strategic policy management is insufficient. Therefore the EESC recently took the initiative to draw up an own initiative opinion on The Institutional framework for inland waterway transport in Europe. For the sake of brevity, reference is made here to this opinion.

Brussels, 14 September 2006.

The President

of the European Economic and Social Committee

Anne-Marie SIGMUND

Opinion of the European Economic and Social Committee on the Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions — Bridging the Broadband Gap

COM(2006) 129 final

(2006/C 318/36)

On 5 April 2006, the Commission decided to consult the European Economic and Social Committee, under Article 262 of the Treaty establishing the European Community, on the abovementioned proposal.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 4 September 2006. The rapporteur was Mr McDonogh.

At its 429th plenary session, held on 13 and 14 September 2006 (meeting of 13 September 2006), the European Economic and Social Committee adopted the following opinion by 193 votes to one, with four abstentions.

1. **Introduction**

1.1 The Committee is pleased that the critical problem of a broadening in the digital divide between the developed and less-developed areas of the European Union is being addressed in a coordinated approach by the Commissioners for Information Society and Media, Competition, Regional Policy and Agriculture and Rural Development.

1.2 However, the Commission's Communication — COM (2006) 129 *'Bridging the Broadband Gap'* — lacks sufficient ambition, and it doesn't include enough concrete recommendations to demonstrate a serious commitment to closing the broadband gap.

1.3 The Digital Divide Forum (DDF) report ([1]) presented an analysis of the territorial broadband digital divide in Europe

([1]) Digital Divide Forum Report: Broadband Access and Public Support in Under-served areas, Brussels 15 July 2005.

and it identified possible EU initiatives to bridge the gap. Considering the seriousness of the problem identified by the DDF, and taking account of the retarding effect on economic and social development caused by the broadband gap, the Commission should be taking more aggressive steps to deal with the problem of the growing digital divide.

1.4 The Committee welcomes the Riga ministerial declaration on e-Inclusion of 11 June 2006 ([2]), which commits member states to significantly reduce regional disparities in Internet access across the EU by increasing broadband coverage in under-served locations, and to halve the gap in Internet usage by 2010 for groups at risk of exclusion. The Commission now needs to give force to this declaration with policy initiatives and recommendations that will quickly close the digital divide.

In this opinion, the Committee wants to emphasise areas of specific concern and to recommend further actions.

2. **Recommendations**

2.1 The Committee believes that because of the growing importance of broadband service to economic and social development, broadband connectivity should be included within the scope of the universal service definition ([3]) as the service of significant public interest.

2.2 The Commission should take whatever measures possible to ensure that Member States rigorously enforce the regulatory framework for electronic communications ([4]).

2.3 The Commission should consider special measures and sanctions to accelerate the process of effective Local Loop Unbundling LLU in Member States. Delays and technical obstructions to the implementation of effective LLU is a major obstacle to the introduction of much needed competition for service provision, especially broadband connectivity.

2.4 Member States should be encouraged by the Commission to assert their national interests to retain or recover influence over core telecommunications infrastructure — trunk-level transmission and switching networks. Government influence is necessary to ensure the development and use of this strategic asset for the achievement of national policy objectives: like closing the broadband gap.

2.5 National broadband strategies of member states should be reviewed for specific actions to close the broadband gap by 2010. The strategies should be benchmarked against best practice.

2.6 The Commission should put-in-place an effective broadband planning and management process throughout the EU to future-proof the delivery of this essential infrastructure at local level. The process would integrate all National Broadband Strategies and local plans into a European-wide operational plan for the delivery of broadband across the Union. This process would pay particular attention to the delivery of broadband to rural and disadvantaged areas to close the digital divide.

2.7 The Commission should consider how member states could provide financial incentives to telecommunications companies ([5]) to make infrastructure investments in underdeveloped regions; namely by means of strong fiscal incentives for public-private-partnerships (PPP).

2.8 The Commission should explore the mechanisms by which municipal and local government authorities can play a more proactive role in the provision of broadband services and the stimulation of demand for broadband in their regions. These authorities should be fully included in the development and execution of the National Broadband Strategies, as mentioned in 2.6 above. In addition, other mechanisms should be explored — for example, perhaps these authorities might become commercial participants in PPP initiatives; or perhaps member states might impose broadband cabling or service provision regulations for all new housing developments.

2.9 To facilitate the exchange of technical and commercial knowledge between SMEs across the EU, the Commission should launch a web site about world-wide developments in broadband technology and services. It is believed that a knowledge network like this would stimulate more entrepreneurial activity around the provision of broadband connectivity and services.

2.10 To bring clarity to the reality of broadband availability in Europe, the Commission should stipulate the minimum acceptable effective download speed for a connection to be called broadband. This would facilitate proper benchmarking of the territorial divide in broadband access across the Union.

([2]) Ministerial Declaration, Riga 11 June 2006, IP/06/769.

([3]) COM(2005) 203, and EP and Council Directive 2002/22/EC on universal service and user's rights relating to electronic communications networks and services.

([4]) Directive 2002/21/EC on a common regulatory framework; Directive 2002/19/EC on access and interconnection; and Directive 2002/77/EC on competition in the markets for electronic communications services.

([5]) 'Telecommunications companies' includes every company that offers two-way telecommunications services, including fixed-line and mobile phone companies, and cable television companies providing such services.

2.11 Structural Funds and Rural Development Funds should be used for targeted public information campaigns to stimulate market demand for broadband, especially in rural areas and among specific consumer groups where take-up of the technology is a problem. This will have the dual effect of educating potential consumers about the technology, and it will also increase the market pressure on suppliers to deliver the broadband services needed.

2.12 The Commission should emphasise support for R&D efforts into finding broadband technologies for effective solutions to the problem of providing high speed broadband connectivity in areas not served by adequate telecommunications infrastructure.

2.13 Policy makers should issue consumer protection guidelines on broadband services which simplify the terminology and explain the service offerings and benefits in clear language. This would make it easier for consumers to make good buying decisions.

2.14 Every secondary-level school child should have broadband in their school to include them in the information age.

2.15 The Commission should support initiatives across the EU to introduce school children, older citizens, and socially disadvantaged citizens, to the use of broadband technology (e.g. Web-based learning, video conferencing, on-line public services, etc.).

2.16 The Commission should ensure that all future statistics relating to the provision of broadband services and the measurement of the digital divide and the broadband-gap, should be collected and prepared in accordance with the recent Commission Regulation concerning Community statistics on the information society ([6]).

3. **Background**

3.1 On 20 March, 2006 the Commission adopted its communication '*Bridging the Broadband Gap*'. This Communication focuses on the *territorial* divide regarding broadband access. It aims to make governments and institutions at all levels aware of the importance of this divide and of the concerns about the lack of adequate broadband services in the less developed areas of the Union. The Communication implements one of the priorities of the i2010 initiative — a European Initiative for growth and employment ([7]).

3.2 Broadband enables new ICT applications and enhances the capacity of existing ones. It stimulates economic growth through the creation of new services and the opening up of new investment and jobs opportunities. But broadband also enhances the productivity of many existing processes, leading to better wages and better returns on investment. Governments at all levels have recognised the impact that broadband may have on everyday lives and are committed to ensuring that its benefits are made available to all ([8]).

3.3 Securing long term sustainability of remote and rural areas requires a strategic approach to the development of the information society. The availability of broadband services is one critical element in assisting local communities in attracting businesses, in enabling tele-work, providing healthcare, improving education and government services. It provides a critical link to information.

3.4 Demand for residential broadband services in the EU has been growing fast. The number of broadband access lines has almost doubled in the past two years. In October 2005 there were about 53 million connections in the EU25, corresponding to a penetration rate of 11.5 % in terms of population and to roughly 20 % of households. These developments have been mainly market driven and enhanced by increases in competition.

3.5 Despite the general increase in broadband connectivity, access in more remote and rural regions is limited because of high costs due to low density of population and remoteness.

3.6 The Communications stresses that the European Union must step up its efforts to encourage take-up of broadband services and stimulate further deployment, in particular in the less developed areas of the Union. The scope for public intervention in under-served areas was emphasised in *e*Europe 2005 ([9]), which highlighted the role that Structural Funds can play in bringing broadband to disadvantaged regions.

3.7 The Communication emphasises the critical role of local/regional authorities in the development of broadband in their areas. They are best placed to plan a broadband project that takes into account local needs and technological requirements. National broadband strategies need to be strengthened to involve and reflect local needs.

([6]) Commission Regulation (EC) No 1031/2006 of 4 July 2006 implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the information society.

([7]) COM(2005) 229 'i2010 — A European Information Society for Growth and Employment'.

([8]) COM(2004) 369 'Connecting Europe at High Speed: National Broadband Strategies', COM(2004) 369.

([9]) COM(2002) 263 'Europe 2005: An Information Society for All'.

3.8 The Communication identifies number of policy instruments available to governments at EU level to close the broadband gap:

(i) Implementation of the regulatory framework for electronic communications.

(ii) Public funding.

(iii) EU funding: Structural Funds and Rural Development Fund.

(iv) Demand aggregation and procurement.

(v) Fostering the creation of modern public services.

3.9 In summary, this Communication invites all levels of government in the European Union to be more active in using the available instruments and technologies to close the growing digital divide. Member States are invited to update their existing National Broadband Strategies to provide additional guidance to all stakeholders. Their documents may well define targets in terms of coverage as well as take-up, on the basis of an active partnership with regional authorities, and exploiting synergies between alternative sources of funding (national, Structural Funds, Rural Development Fund). National broadband strategies should also set clear targets for the connectivity of schools, public administrations and health centres.

4. **Comments**

4.1 *Specific comments*

4.1.1 The universal availability of high speed broadband connectivity is essential to the economic and social development of every region in the EU — urban and rural. This is especially true in the global, knowledge-based economy that now drives so much development. Knowledge-based businesses will grow where the skills and infrastructure exist to support them. Low-cost, world-class broadband infrastructure is a fundamental component of a vibrant 21st Century economy. And an increasing amount of advanced services in health, education and social services will depend on broadband availability. Without such availability the citizens of disadvantaged communities will be further discriminated against.

4.1.2 In contrast with the United States and some Asian countries, most European countries have been too slow to provide broadband to their citizens. Even the modest penetration figure quoted in the Communication for broadband connectivity of 20 % of households in the EU25 by October 2005 masks the fact that the quality of connectivity (speed of access) is poor in many cases — with download speeds well below 512kbps in both urban and rural regions, and that most of the broadband density is in the urban areas with only 8 % of households in the rural areas connected.

4.1.3 Rural communities are particularly vulnerable to the rapid macroeconomic shifts that are taking place; unless these communities get parity of access to broadband connectivity they face inevitable decline. In the knowledge-economy countries, regions, cities and towns are competing to attract and grow information-intensive businesses that will increase their prosperity, and broadband infrastructure is a key enabler.

4.1.4 Reasonable access, in the home and at work, to high speed broadband Internet access should be a 'right' for every EU citizen, and we reject the Commission's assertion that '… Broadband has not yet become necessary for normal participation in society, such that a lack of access implies social exclusion'. The Commission should reconsider the inclusion of broadband within the scope of the universal service definition at the earliest opportunity.

4.1.5 Also the Commission should stipulate the minimum acceptable effective download speed for a connection to be called broadband internet connection. This is necessary to ensure that the infrastructure and service standards are good enough to support the delivery of emerging Internet services. A direction like this from the Commission would clarify the real situation in Europe regarding the provision of broadband connectivity — today we have inflated connection statistics because the quality of broadband service provided to end-customers is too low to be truly considered broadband — and it would also put appropriate pressure on service companies to provide genuine broadband to their customers.

4.2 *Technology barriers to broadband connectivity*

4.2.1 Although broadband can be provided on a variety of platforms, limitations with some existing technologies are inhibiting the provision of connectivity to many rural locations.

4.2.2 The high-speed transmission capacity of cable television systems can provide an excellent carrier for broadband services. Unfortunately, many rural areas do not have cable television systems, and even when cable TV is available the systems often need an expensive upgrade to be able to provide broadband.

4.2.3 Digital Subscriber Line (DSL) is the dominant subscriber broadband technology in much of Europe, and variants of DSL can provide very high bandwidth at low cost. However there are a number of limitations:

— Implementation of DSL requires upgrading of the local exchanges to which customers are connected. Operators are often reluctant to make the investment needed because they have higher return investment opportunities elsewhere in their business. So, the customers don't get broadband.

— Most implementations of DSL can only support customers located within 3-5km of the DSL-equipped exchange. Customers further away cannot get broadband using DSL.

— DSL uses the existing copper cable infrastructure in the local network to provide broadband service; however, often this cable is old and needs to be upgraded for DSL to work properly. Operators can be reluctant to invest in this upgrade. So, even when the local exchange is broadband equipped and the customer is less than 5km from the exchange, the local loop copper cable into the home or business may be of no use for DSL broadband provision.

4.2.4 Legacy backbone infrastructure can be an obstacle to the provision of high-speed broadband services, especially in areas of low population density. For example, in the 1980s and 1990s many countries used digital microwave technology to provide their telecommunications backbone networks. This radio technology was effective in providing high quality digital telephony and low-speed data services to many rural locations. However, numerous implementations of digital microwave technology have left a legacy of backbone infrastructure that is unsuitable for providing the high speed Internet services now defining broadband connectivity — Internet video services. In the case of Ireland it is estimated that up to 50 % of exchanges nationally (those in rural locations), serving about 15 % of telecommunications customers, are fed off this digital radio backbone and will never be able to get high speed broadband using the existing national telecommunications infrastructure. Solving this legacy problem by serving rural areas with a fibre backbone is extremely expensive and could not be justified on a purely commercial basis; the government would have to subsidise the network up-grade.

4.2.5 The Commission should give special consideration to how the expensive problem of upgrading existing infrastructure (backbone trunk circuits, exchanges and local loop) to provide high-speed broadband services could be supported at national and EU levels — perhaps through fiscal incentives and/or public-private-partnerships.

4.2.6 Satellite and proprietary wireless technologies have been used to provide broadband service in areas where the public telecommunications infrastructure is unable to support the provision of broadband connectivity. However, cost and technology problems limit the usefulness of these technologies to bridge the broadband gap. R&D is progressing in a number of areas to find low-cost, high-bandwidth wireless technologies that will provide effective broadband connectivity. Policy makers should proactively support these developments, and should address the problems of radio spectrum availability to make these solutions viable.

4.2.7 Innovation in the provision of broadband services to everyone could be further stimulated by the development of a knowledge network among SMEs across Europe on state-of-the-art technology for broadband. The creation of the knowledge network would be facilitated by a web site that collates and disseminates the information.

4.3 *Problems with the supply of broadband*

4.3.1 With the emergence of high-bandwidth networks and Internet Protocol (IP) networking technology, network costs have plummeted and the flexibility to offer customised services is almost unlimited. In countries like Italy, France, Spain and the UK, telecom companies have implemented all-IP based networks yielding massive savings in network operating costs. The lower costs of building new IP networks, and deregulation, have weakened the power of dominant service providers, and there has been a huge increase in telecom companies offering retail services.

4.3.2 This technology shift has changed the business model for telecommunication companies; the new model separates network ownership from end-customer service delivery. In efficient, developed markets, the emerging model divides telecom companies into wholesale companies and retail companies, with multiple wholesale service providers competing to sell bandwidth to the myriad of retail service providers. This reflects the new technologies, cost-dynamics and regulatory frameworks that are changing the business of telecommunications from being network-centric to service-centric. However, in the less-developed and less efficient markets telecommunications service provision is still controlled by dominant service providers who have no incentive to separate their wholesale and retail businesses and allow real competition to emerge. Such separation will only happen if policy makers encourage separation through appropriate competition policy measures.

4.3.3 In Europe 25 years ago most of the telecommunications infrastructure was owned by national governments, and these assets were developed for the common good. Since that time there has been progressive privatisation of the telecommunications industry in the EU, which has been mostly a positive experience for industry, customers and society. However, commercially-driven telecommunications companies do not have social, health, education or even economic development objectives — profit maximisation, efficient asset management and the growth of their own business is their focus. Now, where we have a deficiency in the network facilities necessary for the provision of broadband services to underdeveloped regions, the commercially focused telecommunication providers do not have any incentive to invest in this socially-essential infrastructure. Where possible, governments should retain strong influence over the provision and maintenance of national telecommunications infrastructure, balancing the high-returns to be earned from infrastructure investment in areas with high population density with the much less financially attractive investment required in underdeveloped regions.

4.3.4 The roll-out of broadband around Europe, especially to underdeveloped areas, has been hampered by widespread market failure. Uncompetitive conditions for potential new service providers still exist in many markets, with dominant infrastructure providers delaying Local Loop Unbundling (LLU) for as long as they can, and restrictive practices inhibiting access to national backbone networks. Also, where broadband provision has been non-existent or poor, there is often insufficient investment incentive for the exiting infrastructure providers.

4.4 *Problems with the demand for broadband*

4.4.1 The problem of latent demand for broadband services, and especially the differential between the take-up of available services in developed areas with the much lower adoption rates in less-developed areas, has many contributory causes: socio-economic; low quality of available connectivity; poor competition; high costs; and lack of knowledge about the benefits of the technology or how to use it.

4.4.2 Policy makers and governments can have a major impact on the demand side for broadband, and the Committee welcomes the Commission's recommendations that the use of fiscal incentives for subscribers be explored in Member States to lower the real cost of adopting broadband, and that governments should prioritise the development of online public services, and the provision of connectivity for public administrations, schools and health centres to educate users to the benefits of broadband and drive demand.

4.4.3 Consumer demand for broadband is adversely affected by lack of clarity around broadband terminology, and confusion over the service packages on offer by suppliers. Efforts should be made to simplify terminology and explain services and benefits in easy-to-understand language.

4.4.4 Public information campaigns could be used to stimulate market demand for broadband, where take-up of the technology is a problem. This will have the dual effect of educating potential consumers about the technology, and it will also increase the market pressure on suppliers to deliver the broadband services needed.

4.5 *Broadband vision for a connected Europe*

4.5.1 Broadband connectivity is an essential utility in our information age. The need for faster, cheaper and ubiquitous broadband services is growing exponentially as the knowledge economy develops and the richness of the Internet experience grows.

4.5.2 By 2010 we will need universal broadband service in Europe with sufficient bandwidth to support a true multimedia experience for all users; then business and society can take giant steps in the Information Society.

4.5.3 The Commission can bring this vision to life by defining it in meaningful technical and commercial criteria, and by promoting policies that overcome the obstacles in our way.

4.6 *The need for government planning and action*

4.6.1 Competitive broadband providers want to see an organised market demand: a market where the customers know what services they want and how much they want to pay, and a market where the demand is aggregated into an attractive service proposition for a new supplier. Organised demand would help real competition to grow. And it would help service providers to see the benefits of providing service to the less developed regions of the Union. The Committee welcomes the Commission's initiative to launch a web site that will facilitate the aggregation of demand and facilitate supply.

4.6.2 For every region, the EU needs a coherent, integrated plan for the development of broadband infrastructure and broadband services. The National Broadband Strategies must be augmented by detailed plans for local provision of broadband services in all areas. And the Committee agrees with the Commission that Local Government must own and drive these detailed plans. Such a plan would include a detailed map of the complete broadband infrastructure in the region, and a detailed (down to street level) view of how the desired infrastructure should evolve — what, when and how. The plan would also specify the minimum range of broadband services to be provided for different user-groups and different locales.

4.6.3 The quickening pace of telecommunications technology innovation and the increasingly dynamic nature of the telecommunications industry, means that the Commission and the governments of Member States, will have to manage a continuous process of ensuring that every area of the EU is served with the best, most cost-effective broadband infrastructure available.

4.6.4 Local government and municipal authorities can play an important role in promoting the provision of broadband connectivity in their regions — by leading public-private-partnership initiatives and by implementing regulations that require property developers to include telecommunications infrastructure for broadband in their schemes.

4.6.5 It is notable that certain member states have done a better job than others at addressing the digital divide and have included specific actions in their national broadband strategies to close the territorial broadband gap ([10]).

4.6.6 Through policy on National Broadband Strategies, the Commission can coordinate and stimulate coherent action on the development of broadband by national governments across the Union. This policy should be further developed to ensure that governments follow best practice in developing their plans, so that a comprehensive plan is developed for the EU that will close the broadband digital divide by 2010.

Brussels, 13 September 2006.

The President
of the European Economic and Social Committee
Anne-Marie Sigmund

([10]) The new broadband plan (September 2004) from Comité Interministériel pour l'Aménagement Du Territoire (CIADT), France, is a good example of a comprehensive strategy.