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Response of the **Generalitat de Catalunya**
to the Public Consultation of the
European Commission

on the Community Guidelines for the
application of State aid rules in relation to
rapid deployment of broadband networks



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1. Need and opportunity of present consultation

The concept of “broadband” is changing rapidly. The switchover from copper networks to fibre optic will change the concept of “broadband” from the end-user’s point of view. The change in the user experience from DSL to fibre optic connections opens the door to new tools and services.

Current networks are evolving somewhat slowly towards new generation networks, and indeed much more slowly than had been hoped. This is because DSL technology has extended the life of the current copper networks and made it possible to continue to take advantage of the investment made in them, with the result that fresh investment has not been such a priority. Obviously, the current economic situation has also had a lot to do with this as has the need to achieve a return on investment in the short-term rather than the medium or long-term.

In particular, new services are being brought in which call for extremely large bandwidth and communication symmetry. That means not only Web 2.0 services for social networks, but also health services, educational and professional skills recycling services, regional services that require remote control, video, etc.

These new services are creating a new digital gap in access to the internet which is much more restrictive than its forerunners. Basic services carried on the copper network services were expanded with the advent of DSL technologies while their scope was simultaneously reduced to areas within just a few miles of telephone exchanges. The appearance of NGA associated with fibre optic means that the new services are only available where there is access to these technologies (fibre/DOCSIS 3.0) and which are still thinner on the ground in terms of access than DSL-equipped exchanges.

The new generation of public services seeks to rationalise resources. However, it also requires massive data transmissions (including image and video) and sets limits which are even more restrictive. This excludes not only rural areas but also areas hitherto covered by DSL but which are not attractive to market operators due to their low population density.

Hence the evolution of services and networks, while it does provide new and more advanced services, is also shaping a market that is even smaller than the traditional one. In terms of new services and facilities and also the reach of the new networks, a new reality is being created in which the market only meets the needs of densely populated or high economic interest areas.

Public intervention is required to spread these new services and facilities across the country, in particular to rural areas but also to urban ones which are not so densely populated or do not have high levels of economic activity. Public intervention can be



justified in terms of territorial cohesion, the provision of state-of-the-art services in all government offices and containing or cutting the cost of public services.

There are thus two key aspects:

- Public interest
- Shaping of a new and even smaller market

Public intervention in the electronic communication infrastructures sector needs to be updated to respond to the new reality and meet new needs.

Thus this public consultation not only highlights a need but it also comes along just at the time when the need for these services in areas which private operators are not covering has appeared.

Mention should also be made of the opportunity afforded by public projects that roll out new networks to hire local workers in the current economic climate. Hence these actions create job opportunities at a difficult time while they also help local economies to move towards models which provide greater added value and enhance the competitiveness of companies. These companies will be able to benefit in line with the Lisbon strategy of making the European economy more competitive and dynamic based on knowledge.

2. NGA vs. traditional broadband

Electronic communication infrastructures are basic infrastructures and should be viewed as being on the same level as ones for electricity, water or gas. So far efforts have focussed on ensuring that basic communications services are available everywhere. The more advanced communities have assimilated traditional broadband to universal service and have backed the expansion of megabyte access networks to rural areas.

Taking “traditional broadband” to mean a few megabytes in speed (2, 3 or 5), the qualitative shift to NGA brings with it a new environment, “real broadband”, which in particular features enhanced information upload capabilities.

Hence the difference between the two infrastructures revolves around two factors: download capacity (increased by factors of 10 or 100) and moving towards connection symmetry. Below is an overview of its impact on public services in key fields in Catalonia:

- Health: large data transmissions (both upstream and downstream) between health centres are becoming a critical need due to the implementation of the



shared medical history scheme around the country. Furthermore telediagnosis projects that seek to make resources in leading centres available throughout the country, such as the Telelctus project, call for high capacity connections for real time exchanges of large quantities of information derived from clinical tests at the same time as videoconferencing. Further information about the projects (together with many others that would be secondary in terms of this consultation) can be found in the ICT Health Strategic Plan 2008-2011¹.

- Education: Catalan schools and colleges are incentivising the use of ICT in the classroom with wire and wireless connections in line with the drive to bring IT to the classroom instead of having an IT classroom. The Catalan Government's Heura project has wired the inside of schools and what they need now is a good internet connection that can meet the requirements of the new Web 2.0 applications which students will require together with new e-learning applications. This fact, combined with existing educational networks (www.edu365.cat; www.xtec.cat) and the numerous school websites and online activities, means there will be significant rise in demand for symmetric bandwidth in the immediate future.

Moreover, the need to recycle the skills of people who are suffering most from the crisis will call for e-learning programmes geared towards specific groups.

- Interior and Justice: the use of videoconferencing for testifying in court means that people do not have to travel to the larger towns, while it can also generate significant savings inasmuch as it is no longer necessary to take the accused to the courtroom (which means savings on law enforcement officers, travel and associated resources).

The plan to centralise all of the department's data will boost efficiency through being able to exchange and view them from anywhere in real time.

- Mention should also be made of the survey carried out by the Telecommunications and Information Technology Centre (CTTI) to analyse connectivity requirements in the main Catalan Government Ministries. This study showed that the main ministries (Education, Health, etc.) require increased bandwidth in order to multiply current capacity, and this would lead to a seven-fold rise in costs. Even on the assumption that connectivity costs will not rise over time but instead will fall, and on the hypothesis that this fall will be of the order of 50%, the final cost would still be 3 ½ times higher than current telecommunications outlay. Given these circumstances, the deployment of new electronic communication networks is thus also a way of cutting down on this expenditure.

¹ <http://www.gencat.cat/salut/ticsalut/>, English version available by clicking the "English" link.
<http://translate.google.com/translate?u=http%3a%2f%2fwww.gencat.cat%2fsalut%2fticsalut%2fhtml%2fca%2fDu54%2findex.html&hl=en&ie=UTF-8&sl=ca&tl=en>.



3. Conclusion of scenario analysis

Hence public intervention to ensure that the new NGA networks are rolled out right across the country should be encouraged due to the need for new services and the fact that it might also be a very good move at a time of economic crisis. Those societies which take advantage of the opportunity now will have new competitiveness tools in place in time for the post-crisis scenario. Those which do not will find that when the crisis recedes new investment will be steered towards other, better prepared locations.

In addition there will also have been a significant change; “traditional broadband” will no longer be viewed as a tool for enhancing competitiveness, and the word “broadband” itself will be used to refer to the service provided by NGA. Thus DSL technology and cable which does not evolve towards DOCSIS 3.0 will become obsolete as competitive tools.

At this new scenario, dialogue with private sector will be a key point to success in final open network model, or final open network models, because there will not be just one unique model at Europe. It will depend on investment models and roadmaps of operators of each area, and also of leadership and compromise of local and regional authorities.

4. Importance of Local Authorities

Regional and local authorities have a crucial role to play in the deployment of these new NGA networks. This is so not only because of the knowledge they have of the people on the ground, but also because they can authorise or hold back the deployment of the new networks.

Local authorities are in addition responsible for urban and business development planning in their areas based on their knowledge of trends in demand and the locations where fostering new deployments might be most attractive (i.e. new urban areas, new industrial areas). Operators use a big amount of resources to predict demand, this prediction should also take into account local authorities plans (and vice versa), to guarantee success of predictions and better usage of resources.

Another reason is that the new deployments, in particular in rural areas or ones with low population densities which are not served by the market, will be put in place in conjunction with public works. In order to reduce the cost of the new deployments it would be advisable to implement them together with other projects being carried out



around the country. Even though major public works are in most cases (depending on the administrative structure of each State) carried out by central government, maintenance work and new road building often comes within the remit of more local authorities. This second kind of public work project, which is more extensive across the country, has the greatest potential for assisting the deployment of the new networks.

Even though major public works (bridges, motorways, ports, airports, etc.) can help trunk networks to expand, it is road works (and especially in rural areas) that will ramify them throughout the country and may persuade operators to decide to deliver services to population centres which they would ignore if they had to meet the cost of trunk network investment themselves.

It is for these two reasons, namely giving authorisation and fostering the spread of the extant trunk networks, that local authorities have a key role to play in planning the new deployments. Hence it is very important to set up structural funds geared towards local authorities for the deployment of electronic communication networks.

In tandem, local authorities should be incentivised to make building electronic communication into planning and the deployment of new networks into public works programmes mandatory in their regulations. In this field on 10 June 2008 the Government of Catalonia brought in measures to foster the Extension of Telecommunications Infrastructures in Catalonia (MEITEL). Based on this Government decision, Technical Instructions have been drawn up for deployment in public works financed by the Catalan Government or with funding from the Catalan Government (also shared with operators during the drawn up process) and they have also been published on the Internet as suggestions for local authorities. Thus Technical Instructions have been drawn up for piping (and reserving space for radio communications) in roads, railways, rural tracks, irrigation and in new town and country planning areas². Other technical instructions are also being drawn up for sewers and drainage work and corporate buildings.

5. Definition of the scope of the new regulation

When it comes to planning the new electronic communication networks, the market has to be respected. However, there is also a need to provide incentives so that these networks reach new areas which have previously not been covered due to high

² These technical instructions can be viewed at: <http://www20.gencat.cat/portal/site/societat-informacio/menuitem.2ec9b3b76c97e1f68e629e30b0c0e1a0/?vgnextoid=f147b7690f740210VgnVCM1000008d0c1e0aRCRD&vgnnextchannel=f147b7690f740210VgnVCM1000008d0c1e0aRCRD&vgnnextmt=default>, though this will soon be changed for a more intuitive link.



initial investment costs or because they do not provide a return on investment within the timeframes set by the private market.

It is therefore important to delimit the areas where NGA services are currently available and specify exactly what we mean by NGA. Here the proposed new guidelines refer to a download transmission capacity for fibre optic infrastructures to the street cabinet of 40 Mbps and above and an upload rate of 15 Mbps and above. In the case of cable infrastructures they talk about more than 50 Mbps (which means DOCSIS 3.0 technology), while for new buildings they recommend speeds of 100 Mbps or more.

With this definition the Commission makes a clear distinction between traditional broadband and NGA networks, and also between having the infrastructure and having the associated service. In addition it should also be borne in mind that the existence of fibre optic networks is not significant if these networks are not open to the market.

The Catalan market, which is by no means immature or lacking in international business operations, has a very limited NGA structure which is moreover centred on Barcelona. Hence the Generalitat of Catalonia believes it is essential for all levels of government to partner the deployment of new networks which deliver access to future services. In the current context of economic crisis, public works are seen as an excellent way of getting these new networks to population centres which have so far not been covered by these new services.

Obviously the current position cannot be reworked overnight and full advantage should be taken of investment made by operators so far, which means that all variables have to be taken into account when mapping out new regulations. Nonetheless, the experience of other markets such as Japan and South Korea, which have had strong leadership with a shared viewpoint and have gone for bolder options, should not be forgotten. We believe that Europe needs to provide this clear leadership and set a medium or long-term horizon that marks the threshold for communication with bandwidths that begin at 100 Mbps. This threshold will enhance the competitiveness of our companies and create a position on the other side of the economic crisis which will enable them to take part in a new competitive environment with improved productivity. Of course, this goal must be achieved dialoguing and by maximising private investment while adding public investment to it in order to guarantee an open network.

5.1. Modification of the white, grey and black areas

In particular, the new definition of white, grey and black areas for NGA networks is extremely significant. This definition, which transfers the extant one for traditional broadband to NGA, defines the “new” areas based on the existence of NGA services (or NGA services within the following five years).



We attach particular importance to the differentiation of this definition without taking into account traditional broadband, as NGA means a new market which will have nothing in common with its predecessor.

Furthermore, the need for information about the planning that operators have in place for their commercial services is a factor which is hard to demonstrate. In the Catalan market the incumbent operator has repeatedly announced plans for commercial FTTH which have been delayed with nothing more specific than vDSL based on its existing networks and only where proximity to the switching exchange has made this possible. The alternative cable operator, immersed in a major restructuring operation to ensure its continued viability, has announced DOCSIS 3.0 pilot testing but its commercial service offer is still uncertain.

A survey of the history of telecommunications deregulation in Catalonia shows that after ten years only some of the incumbent operator's exchanges offer co-location services or local loops. The alternative cable operator, ONO, only has a presence in 17 of the country's 946 towns with high population densities or high economic interest. Furthermore, ONO does not cover all of these towns, but instead just some districts within them, and the market still has grave doubts about its viability plan.

Against the backdrop of economic crisis and an investment freeze, it will be hard for operators to announce their five-year investment plans especially when their organisations are being restructured in order to contain costs.

6. Conclusions

Europe has been waiting for many years for operators to meet the needs of a market which has not developed as was expected and hoped for when it was deregulated. We are now in the middle of an economic crisis which is putting a brake on investment and calling for much quicker returns, and so perhaps this is the right time for government once more to play a role in this market. Perhaps it is the time to drive public investment in the deployment of fibre optic to implement these new networks using open network models. But also taking into account private sector plans, coordinating the efforts, and maximizing private investment; because private investment will still be necessary in order to create new markets and encourage competition.

Europe has a model of territorial and social cohesion which is highly valued by its citizens and which needs to be secured in this new scenario created by NGA. Furthermore, territorial cohesion will also be a key factor both in the location of companies once the crisis has been overcome and in the provision of the public services of the future (from telecare to education and teleworking).



Hence in the light of the experience of telecommunications deregulation, bringing NGA networks to the largest number of people and territories of Europe will in our view involve the use of open network models. In the current economic circumstances it is unreasonable to expect to have networks replicated around the country, as even though in some areas with high population densities or high levels of economic activity the market might be able to provide a solution on its own, this will not be the case in the bulk of the country.

Hence we believe there to be a pressing need for new regulations which make it possible to differentiate between traditional broadband and NGA services. These regulations should differentiate between the two concepts as two separate markets and enable public intervention in cases where private operators are not delivering the service. Nonetheless, public intervention needs to incentivise operators to provide services in new areas and not step in to replace the market, and hence the open network model seems highly appropriate as a public investment strategy which makes it possible to expand the market for these new services while at the same time ensuring the preservation of a competitive market in which operators still have a role to play.

So, new guidelines proposal for the application State aid rules are a step ahead to encourage a long term regulation to help new long term investments. Also they should provide a new and safer environment to encourage public investments coordinated with private ones in a new and open dialogue through a common leadership, a new and reviewed leadership based on European guidelines and put into effect through local authorities and private sector.