



Generalitat de Catalunya  
Departament de Governació  
i Administracions Públiques  
**Secretaria de Telecomunicacions  
i Societat de la Informació**

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

on transforming the digital dividend  
opportunity into social benefits and economic  
growth in Europe



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## Introduction

Catalan Government considers that new networks and electronic communications services are key factors to increase competitiveness and social welfare, as we mentioned in different occasions. It is necessary to modify our productive model to evolve to more added value activities, and new technologies (and specially new networks and services) can help this evolution, also they can be a great opportunity for rural areas or zones with complicated orography.

Electronic communication networks tend to move in a common direction, converging in technology (architectures) while at the same time ramping up mobile services (enhancing the mobility of offices, access, information, leisure, etc.). Market forecasts suggest there will be extensive and intensive use of mobility, and this means that it is vital that new services have sufficient radio spectrum available to them so as to ensure that they can meet new demands.

Mention should be made of the specificity of Mediterranean society. For a variety of cultural and climate reasons, it is a society in which interpersonal relations are conducted in open spaces where mobility has a key role to play and is both rapidly accepted and intensively used.

The demand for mobile services calls for efficient use of the radio spectrum, a scarce resource which needs to be managed carefully and with an eye to the future.

It would also appear to be especially strategic in the case of the electronic communications market, in which terminals or “access points” and their associated technologies evolve quickly, to afford commercial service providers the utmost freedom and not restrict them to using one specific type of technology, in the same way as they are not obliged to market a particular size of terminal.

Likewise it also seems advisable to provide operators with “technologically neutral spaces” in which to manage and deliver their commercial services, provided that they are deemed to be voice and data transmission services, by using the most suitable, effective and efficient technological solutions.

Thus it makes sense to increase the resources available to electronic communications operators to cater for new uses and the delivery of innovative services and make room for new operators entering the market to foster competition or drive certain markets (for example the rural market) or specific services. In spite of this, the European trend is to concentrate operators in a few small groups which can compete in the pan-European or international market. Hence there is a need to take into account territorial requirements while at the same time maintaining a market vision in the share out of a scarce resource such as the radio spectrum, as we argued in the Catalan Government response to the Public Consultation concerning



the use of frequency bands held by the Spanish Ministry of Industry, Tourism and Trade<sup>1</sup>.

Against this backdrop, the current consultation impacts on the first steps in strengthening and generating new innovative electronic communications markets in Europe (and on a Europe-wide scale) which will lead to new and better services for consumers and the creation of modern innovative services for Europe's economy.

The release of spectrum space, as harmonised at the European level, needs to generate synergies and create new markets for electronics and services alike. In the same way, harmonisation of the DTT market should enable fresh economies of scale for equipment manufacturers.

Consequently, and without losing sight of the fact that the goal has to be enhanced service for consumers, the importance of harmonising the approaches taken by member states in global actions which enable markets with a critical mass that help to develop innovative technologies and services at the European level should also be underlined. In this respect we are very much in favour of the setting up of the Body of European Regulators of Electronic Communications (BEREC), a major step forward towards cohesion in European markets and agreed initiatives which help to reinforce the consistency of approaches and strengthen innovation on a European scale, unfortunately, still not an European Agency. Even more, we consider that Barcelona, capital of Catalonia and site of the *Comisión del Mercado de las Telecomunicaciones* (Spanish National Telecommunications Regulator) and the Mobile World Congress, would be the perfect place to install their offices.

This harmonisation needs to enable the development and rapid implementation of new compression standards, high definition and new DTT services at the European level.

Furthermore, the release of the 790 to 862 MHz band should foster a new market for electronic communications services which can take advantage of the propagation characteristics of this band in order to enhance the penetration of broadband in rural areas and coverage in indoor urban environments.

But also, it is necessary to guarantee, at same time, the preservation of DTT European communication media, and reinforce National, Regional and Local communication markets, especially in multilingual environments.

## Regarding the EU Roadmap

We agree with the Commission about the need to push TV markets to migrate to standards which provide greater transmission and compression capacity, higher

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<sup>1</sup> Public consultation about the use of the 2,500 to 2,690 MHz frequency band and about possible new ways of operating the 900 MHz, 1,800 MHz and 3.5 GHz frequency bands held by the Spanish Ministry of Industry, Tourism and Trade.



quality and new services to enhance spectrum efficiency and generate new, innovative markets for technology and associated services. In this respect we believe a firm commitment should be made to high definition combined with driving the marketing of these new standards. It would be necessary a clear European leadership to implement high definition, as in DTT and DVB-T or, in the past, with the GSM.

It should be borne in mind that only by making improvements to current systems will it be possible to check their effectiveness and perhaps, in the light of the advances achieved, have more spectrum available for new channels or new electronic communication services.

Analogue shutdown at UHF band generates an opportunity not just to member states, also to reinforce a unique European market. In this respect the analogue shutdown is set for April 2010 in Catalonia (as in the rest of the State). From then on the release of the 790 to 862 MHz band will require the migration of current DTT channels to lower channels in order to free up the 800 MHz digital dividend frequency band. This process is to be implemented in Catalonia on 1 January 2013 in order to have the 790 to 862 MHz band released. After this it will become necessary to look at optimisation of the spectrum used by DTT, in case it is possible to release more dividend space or whether improvements need to be brought in so as to increase spectrum efficiency.

In this respect, from the Catalan Government point of view, we feel that in order to move forward and develop innovative markets for equipment and services, appropriate measures need to be taken so as to be able to grow the mobile electronic communications solutions market on the released frequencies band as soon as possible by incentivising member states to maximise frequency release. Thus we believe that release commitment dates near to 2013 would be much more appropriate than some proposals which look to 2015, also we consider it would be necessary a unified roadmap at European level.

## **Regarding Urgent Actions**

As has already been noted in the Catalan contribution to the consultation, we believe it would be crucial to have the released spectrum available as soon as possible so as to be able to begin a new stage which makes it possible to develop new and innovative markets and move forward in the knowledge economy. Furthermore, spectrum release will help to grow a new market for solutions which seek to overcome the current economic crisis using a new model of innovation and markets with greater added value.

We would also argue that mobile electronic communication services on the released band which is the subject of the consultation may to a great extent help to avert the digital gap in rural areas. Hence we would encourage the Commission to be even bolder and agree dates with member states for analogue shutdown that are earlier



than 2012 and for frequency release which are not so far in the future as currently proposed by some of these states, namely in 2015.

It should also be borne in mind that the evolution of wireless technologies, and especially mobility-based ones, suggests that even greater availability of frequency bands may become necessary in the medium term. Hence it is imperative to begin analysing evolution in use for television, compression and potential improvements as soon as possible in order to open the way for new media and wireless electronic communication services.

## **Other considerations**

Finally, and even though this does not fall within the remit of this consultation, we would like to highlight the importance of a number of aspects which will emerge during the next phase of the European roadmap. Technological and service neutrality in the new frequency assignments should not prevent member states being given guidance as part of a harmonised assignment which takes into account the major economic impact of this band. We believe that only by generating an electronic industry market with a critical mass will it be possible to influence equipment manufacturers so as to achieve significant industrial production with consequent long-term investment in R&D&I and production.

Furthermore we think that it would also be an excellent opportunity to begin implementation of the Commission's approach to spectrum policy flexibilisation and foster the setting up of a secondary spectrum market including this frequency band as part of the implementation processes in member states.

We would also urge the Commission to start up a process similar to that put in place for bands IV and V of the spectrum in band III, where it also seems possible that opportunities for a new digital dividend may be found which would enable the introduction of new services and technologies. This is also necessary because a lack of joint leadership is hindering the growth of new markets such as digital radio, where DAB has still not success, and a global rethink is required which maps out consistent development on a European scale.

There is also a need to update the spectrum assignment made to the emergency services (the TETRA networks) so as to enhance the services they can provide to cater for contemporary needs as part of the constant growth in data transmission which calls for greater bandwidth. New bands, digital dividend results, could generate also opportunities at emergency and security network services.



## ***Technological neutrality***

Even though trends may be discerned, it seems more reasonable to give freedom to agents and not restrict the technology they can use to deliver their services. This is especially so after the unfortunate Spanish experience with the assignment of LMDS operating licences. Today in Catalonia only one of the operators remains active which means that bids in public tenders for this band come from a de facto monopoly.

From the Catalan point of view, we believe it to be more appropriate to talk about wireless services rather than specific technologies. This is because the market is changing in ways that are still open and GSM/GPRS/UMTS/HSPA/LTE or WiFi/WiMAX/WiMAX Mobile evolution (for example) may come together or battle it out between themselves, or new players may even emerge who redefine the future of mobile communications. Given these unknown quantities in the medium term, we need to learn from history and take a new approach.

Nonetheless, it is also essential that the spectrum is used and does not become a source of business speculation. This means that even though we may not specify the technology we can still establish a duty to offer mobile services on those frequency bands, thus making sure that the spectrum is actually used by the license operator. Equally it would not make sense if technological developments led to some bands not being used in order to give priority to other technological options. Neutrality should be defined as freedom of technological choice in delivering services on a particular frequency band, and not as leaving a band idle to the detriment of another overcrowded one.

Hence technological neutrality must include commercial use duties and must at the same time enable the secondary spectrum market in order to make it possible to release the bands not used by operators who opt for an exclusive technological solution, or to have these frequencies available in specific geographical areas.

## ***Rural Areas***

Nowadays that Commission is redefining the concepts of white/grey/black areas at NGA, Generalitat of Catalonia believes that the concept can be used also at wireless world. It is necessary to use the technology depending on the territorial zone, but also to guarantee that the disfavoured zones, orography complicated zones or economically not developed zones benefit from the electronic communication services and opportunities.

The opportunity to reorder the spectrum does not have to let pass without making a reflexion relative to the rural environments, of low density of population or of difficult access. The public administrations have had to use efforts and resources in order to convince the agents to spread their plans of deployment beyond from their initial plans making an effort for the territorial equity, the social development and the competitiveness.



In spite of not being in the Universal Service definition, mobile electronic communications and broadband are assumed as such for the Government of Catalonia, as well as by many other administrations, that's why we can face, now, from the beginning, the opportunity to stimulate the agents of the market to make an important contribution in this way.

It would be necessary to create and to articulate mechanisms of strengthening the rural deployments by the state operators as well as possible concessions at regional level. These mechanisms should take into account the modulation of the spectrum canons to fit out regressive methods in the coverage of small villages, the *rural roaming*, the sharing of infrastructures, etc. In the document we will bring up some of them, but we want to highlight the importance of the *rural roaming*. It would be necessary to propose that all sites covering very rural villages (for example, under 200 inhabitants) should be included in a *rural roaming* that would increase the perception of coverage and the capacity to choose operator, increasing the competition, and at the same time facilitating to promote the extension of coverage beyond from the sharing investment among the operators.

The territorial equity and the elimination of the digital divide are a goal of all the public administrations, as shown by the agreements of collaboration between the Generalitat and the mobile operators or plans like the EGSM (Spanish State). These efforts concentrate on generating opportunities that avoid the rural depopulation and allow to attract investments and new businesses in these areas; collaborating to generate a sustainable and balanced development of the territory.

It has been demonstrated that the concession of frequencies does not guarantee that the operators provides the service at the rural zones, requiring public initiatives to increase their deployments. The projects of different public administrations are a good example to spread the broadband through WiFi/WiMAX.

In spite of not being included at the Universal Service definition, the mobility services or the broadband are part already of the basic services that all developed society expects to find everywhere. They define a new digital divide between the territory with the services and the territory without. On the other hand, the public administrations need to spread the ubiquity of the pan European emergencies service, 112.

Respecting the technological neutrality, it would be necessary to describe the mobility services that operators will have to offer, and these criteria can vary depending on the equipment or population where they give coverage. Thus, for example, in a rural environment, can be considered that the commitment to offer broadband can be to offer capacities of connection with a speed of access to internet for user above the MBps (downlink) with a determinate concurrence of connections depending on the population of the zone; while for an industrial estate, this requirement can be increased (not for the pike of speed as well as for the requirement for concurrent accesses to this minimum speed).



It should be considered necessary to differentiate among the conditions of frequency assignment in environments with effective competition and in rural zones, according Commission principles.

From our point of view, some different possibilities should be considered to encourage rural zones coverage and services provision:

- The commitments of coverage and infrastructures, conditioning the licenses, could be taken into account in the assignment of the spectrum. These commitments, respecting technological neutrality, should consider the services of voice and data by site type (areas of economical activity, industrial parks, cultural centres, public administration sites, etc) and villages.
- It has to be taken into account also infrastructure sharing policies among the operators, especially for deployments on villages beyond 500 inhabitants (current situation in the case of mobile telephony, DTT and WiMAX in Catalonia).
- It could be a good opportunity to rethink the policy of frequency canons, a need from our point of view. A new factor could be added to distinguish economic profitable zones from the ones with less usage. At rural zones, villages of less than 500 inhabitants, this factor could encourage the deployments of the operators, or, at least, the availability of the services.
- Duty to use the existing nets if an operator is not offering the service and others are, with a known price, the called *rural roaming*. If those kinds of agreements (or obligations) become the rule, the operator with network deployed would benefit from other operators traffic. That would encourage competition because citizens of rural areas (beyond 200 inhabitants) would be able to contract any operator.

### ***Criteria for assignment of the new spectrum***

We believe that spectrum assignment should be linked to an occupancy and marketing commitment that includes timescales, deployment and investment. One of the duties of government is to be responsible managers of the sharing out of a scarce resource like the spectrum. This means they should only award it or put it out to tender with strict control of use so as to ensure commercial operation which benefits consumers through competitive product ranges and attractive services that also serve to enhance the competitiveness of the region or country concerned.

Hence we believe consideration should be given to assigning the spectrum based on technological neutrality conditions which are generic yet are also accompanied by service duties and an investment and deployment plan with specific timescales. Nonetheless, awards linked to deployment or service commitments reviewable over the licence period (putting in place control systems after four years, for instance, with



reviews every two years until the end of the licence) should not be ruled out. The secondary market should be used to enable the spectrum to be recovered for the market in the event that the business project proves not to be viable or investment outlay has to be recovered; it should not be used for speculation which means that penalties will have to be considered should goals not be achieved.

Given the ease of transmission on the digital dividend band which is the subject of this consultation, we feel it would be especially valuable for territorial coverage, making it possible to bring mobile high-speed data transmission services to areas where hitherto they have not been available. It would also bring up the possibility of the administrations being able to act in the market where the private initiative does not, while allowing the entry of new operators of area of Regions for projects of rural zones coverage promoted by these administrations would be necessary to concede a part of the spectrum to those Regions that request it, or through regional concessions.

There is also a need to apply technological neutrality to this band, something which would for instance make it possible to bring mobile data access services to rural areas.

### ***Regarding tenders or licences***

Economic theory suggests that a properly run licence system should favour investment in new services and deployments, while tenders would foster business plans which have a shorter time frame. In spite of this, the deployment of UMTS in Spain has not been different in any way in its deployment or its services, and nor has that of other European states been faster as a result of using the tender method. In fact the experience in the case of UMTS is somewhat disappointing. Thus it seems fair to conclude that rather than the use of one system or another being decisive, what is really crucial is good planning of the process, appropriate definition of commitments and due monitoring and encouragement of compliance with them.

As we believe that the proper deployment of these new services and potential developments may foster progress towards an economy with greater added value and enhanced competitiveness, the Catalan Government feels that in spite of current economic circumstances it is very important that assignments take into account commitments in terms of investment, deployment, timescales, etc. instead of seeking simply to gain immediate revenue.

In short we believe it is very important to insist on the timescales of network deployment and coverage, the sums to be allocated to new investment and the number of radio stations to be deployed. Special attention should be paid to ensuring firm commitments to rural deployment which could be specified in the terms and conditions or requirements for the award of the licence.



Notwithstanding the foregoing, if in the end it is decided to adopt a mixed procedure, we think it will be necessary to set aside funds raised through the tender for the deployment of telecommunications infrastructures in rural areas with an equitable division between the various regions in the same member state.

Finally, and to conclude, it is necessary to remark that the considerations made apply on the band IV of the UHF, aim of current public consultation, but same approach could be valid for other bands of frequencies like those of 2,5 or 3,5 GHz or other future like the one of the band III.