



4<sup>th</sup> of September 2009

To: European Commission  
For the attention of the Spectrum Policy Unit  
B-1049 Brussels  
Belgium  
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## **Com Hem's response to the Commissions consultation on Transforming the digital dividend opportunity into social benefits and economic growth in Europe**

### **Background**

Com Hem is Sweden's leading cable operator offering interactive digital TV services, high speed broadband services as well as IP telephony. By investing in and upgrading its cable network, which in large parts is fibre based with dark fibre and wavelength leases, Com Hem is not only offering its customers high-speed and high-quality services, it also has contributed to the development of competition between the incumbent's copper based access network and alternative access networks.

### **Executive summary**

Com Hem welcomes the opportunity to comment on the Commissions consultation on Transforming the digital dividend opportunity into social benefits and economic growth in Europe.

Com Hem agrees with the Commission that it is time to take concrete steps towards a common approach to use the digital dividend in Europe. An effective use of radio spectrum should be a prioritized goal with the telecom business. New frequency space which could be used for mobile services will increase the possibilities to offer more customers broadband services, especially in rural areas.



Hence, new usage of frequencies in one infrastructure should not affect the possibilities to offer electronic communication services over another infrastructure.

According to the Swedish regulator PTS, there are approximately 2.6 million households in Sweden where TV-, broadband- and IP-telephony services are distributed via cable-TV infrastructure. In order to receive the services these customers have invested large sums in customer electronic products, as for example TV-sets, set-top boxes and cable modems. These products have for a very long time used the frequency space, which now will be harmonized for mobile services within EU.

If the digital dividend is used as currently planned, these customers will suffer from interference on their existing services. Mainly receiving TV and using IP-telephony will be negatively affected. For the 2.6 million Swedish customers receiving electronic communications via these consumer products this degeneration will be very serious. On the basis of the tests carried out on European level it can not be excluded that other consumer products than TV and broadband will be affected.

The interference mentioned above, which will affect the household directly, will also effect incentive to invest in mobile and cable solutions. As long as there are uncertainties regarding who will be responsible for any interference problems for the customer, investments in new service in this frequency spectrum will be at risk. Cable operators will also deal with the risk that part of their investments, as a result of awarding the spectrum for mobile solutions, has to be used for compensating decreased capacity. This uncertainty will threaten the provision of Next Generation Network (NGN) as well as infrastructure based competition.

These consequences for customers, operators and market development which are mentioned show the importance in creating a very well supported EU Roadmap which clarifies the long term rules for the market players.

Com Hem therefore urges the Commission to encourage full impact assessments of the potential for interference with existing customer equipment as part of its EU Roadmap initiative. In this respect, we would again stress that we do not believe that this applies only to equipment



used by cable customers and, based on test results to date, we believe that it could affect viewers and broadband users more widely.

**Detailed comments on the consultation**

For detailed comments on the consultation Com Hem refer to our European trade association Cable Europe's response to this consultation which is attached to this response.



# Cable Europe

## **Response of Cable Europe to the Commission's consultation "Transforming the digital dividend opportunity into social benefits and economic growth in Europe" published 10 July 2009**

4 September 2009

### **Introduction**

This response is submitted by Cable Europe, the trade association that represents the interests of all of the leading cable operators within Europe as well as their national trade associations. Further information on Cable Europe can be found at [www.cable-europe.eu](http://www.cable-europe.eu).

**Cable Europe** is active within the regulatory and public policy arenas, where it aims to promote and defend the industry's business interests at European and international level and also to support the lobbying activities of its members.

In parallel, it provides technology support to its members as **Cable Europe Labs**, which focuses on research of emerging technologies, development of specifications for cable technology and certification of network and customer premises equipment.

In terms of scale, the members of Cable Europe provide digital TV, broadband Internet and telephony services to approximately 73 million customers.

### **Summary of Cable Europe's views**

Cable Europe fully supports the underlying objectives of the Commission in relation to the re-use of the band of spectrum between 790-862 MHz and recognises the benefits that could be available to large numbers of citizens throughout Europe and to economic growth more generally in line with the Commission's Economic Recovery Plan.

However, Cable Europe is equally concerned that many millions of customers/viewers could be negatively impacted by interference to their existing television and broadband services, arising from the introduction of LTE based services, unless the potential for interference to existing customer equipment is fully assessed prior to the introduction of the services and necessary measures are introduced to deal with any problem.

This is particularly important because the reallocation of spectrum will involve companies making significant investments in the roll out of new networks. It seems essential that the companies making such investments should be fully aware of any obligations they may incur to resolve potential interference problems.

Hence, Cable Europe would urge the Commission to encourage full impact assessments of the potential for interference with existing customer equipment as part of its EU Roadmap initiative. In this respect, we would stress that we do not believe that this applies only to equipment used by cable customers and, based on test results to date, we believe that it could affect viewers and broadband users more widely.

We have become aware of this potential issue because cable networks operate up to 860MHz. As a consequence, some of our members commissioned tests earlier in 2009 that indicated that new LTE services could cause interference with the services currently provided to both TV viewers and high-speed data users on cable networks.

The results from those initial tests align with conclusions in a report by the UK regulator, Ofcom,<sup>1</sup> which was submitted to CEPT SE42. That report concluded that a separation distance of between 22 and 40 meters radius could be required to prevent interference to viewers, although this may not allow for higher power base station transmitters.

In the light of the test results generated by our members, which were also submitted to CEPT SE42<sup>2</sup>, Cable Europe commissioned further tests to provide a broader validation of the conclusions. These tests are ongoing and are aimed at assessing potential interference to a wide range of customer equipment and in-home networks, not just those used by cable customers. Once available (probably later in September), we are willing to share these with interested parties. To date, Cable Europe has raised its concerns with ECC/CEPT, the RSPG and with a number of national regulators.

We strongly believe that, since this is a technology issue that could have a direct effect on the general public and consumer, it needs to be resolved at the policy level before final decisions on spectrum award and reallocation are fully implemented.

## **Comments on the consultation document**

### **1 A UNIQUE OPPORTUNITY TO CONTRIBUTE TO ECONOMIC RECOVERY**

As mentioned above, Cable Europe recognises that the digital dividend is a unique opportunity for Europe to meet the growing demand for radio spectrum, particularly to allow the development of new wireless services offering the next generation of mobile broadband.

We agree that wireless communications can create efficiency gains in the broader economy and be a key driver for economic recovery. We support also the Economic Recovery Plan target of 100% broadband coverage by between 2010 and 2013 and agree that wireless infrastructures will be important to this

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<sup>1</sup> OFCOM, *Impact of interference from ECN terminal stations operating in the band 790 – 862 MHz on digital TV receivers operating below 790 MHz*, SE42(09)069, 31 March 2009

<sup>2</sup> See SE42(09)75 and ECC(09)075 at <http://www.ero.dk>

objective, particularly in the provision of broadband to rural areas. We accept that access to the digital dividend is important<sup>3</sup>.

Against this background, Cable Europe would recommend that due time is allowed for the potential interference issues to be resolved and, as these are likely to be more evident in higher population density areas, it would seem appropriate that the rollout to rural areas should be the main priority and part of the licence obligations when spectrum awards are made. In any event, the issue and potential obligations for successful bidders should be included in spectrum auction guidelines.

## **2 WHAT HAS BEEN ACHIEVED SO FAR?**

### ***Extensive consultations with main interested constituencies***

We recognise that the Commission has consulted with a wide range of interested stakeholders (both current and potential users) through different channels.

Unfortunately, to date, the cable industry has not been adequately consulted on these issues and has had its inputs to the CEPT process somewhat overlooked when attempting to highlight major problems for viewers and existing broadband users.

More importantly, we would question whether the interests of the major stakeholder, "the television viewer" have been adequately addressed. We believe that the Commission needs to do more to understand the extent of interference that viewers may experience (and when) and also review how any costs involved in changing their existing equipment would be covered.

In summary, we believe that the Commission should satisfy itself, before its final decision, that the current programme to deliver the digital dividend policy does not disadvantage many millions of households.

### ***Technical preparation under the auspices of the CEPT***

We are aware that the Commission requested technical input from the Member States' experts in the CEPT, which has had a mandate to identify technical solutions allowing the co-existence of bidirectional low/medium power networks (e.g. for wireless broadband) and traditional high power broadcasting networks.

Despite the Commission's belief that the CEPT has fulfilled its mandate, as already indicated, we do not consider that the CEPT has identified all the technical issues nor given sufficient evidence that the interference management issues can be properly dealt with.

In particular, the CEPT report has not fully addressed the interference that could be generated by new mobile systems (LTE) to viewers receiving their TV signals via, for example, domestic installations, communal aerial systems (apartment blocks) and cable customer equipment.

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<sup>3</sup> *It should however be noted that in some countries Mobile Network Operators (MNOs) give their spectrum back to their government (this is e.g. the case in the Netherlands) because of non-use and that those same MNOs want to obtain Digital Dividend frequencies. In such a case we question the efficient use of the spectrum allocated to mobile communications services.*

As far as we are aware, no proposals for mitigation techniques have been put forward in the report other than a statement as follows:

*“It may be necessary to use band pass filters at DTT receivers in order to be sufficiently protected against interference caused by this in-block EIRP limit. This is particularly important for portable reception.”*

However, we believe that the possible reduction in power would be contested by the new mobile service providers as it could increase the number of base stations required to provide the necessary coverage and service quality which, in turn, is likely to impact financial viability.

Therefore, the EC Mandate that required “the identification of common and minimal (least restrictive) technical conditions for 790-862 MHz for the digital dividend in the European Union” has not been adequately completed because the interference and costs to viewers with existing equipment has not been fully considered when defining the “least restrictive” technical conditions.

It is a normal requirement for a full impact assessment to be carried out on the economic effects of sharing or allocating spectrum<sup>4</sup>. This does not appear to have happened and, whilst there have been a number of reports on the advantages to the European economy from these new mobile service, we do not believe that the costs to the economy and citizens’ of implementing these proposals have been properly considered.

It should be of concern to all stakeholders, not least the LTE service providers, to understand the extent of their obligations to bear costs of resolving any interference problems arising from the use of the 790-862MHz band, particularly if the “polluter pays” principle were applied.

### **3 A COMMON WAY FORWARD: TOWARDS AN EU ROADMAP**

#### ***Benefits of a common way forward on the digital dividend***

We recognise the benefits of agreeing on a roadmap for a common way forward. Therefore, the methods for resolving the potential interference issue should be applied as consistently as possible across all Member States. Most importantly, the Commission must ensure that the costs to viewers and industry are properly understood and appropriately compensated for.

### **4 PROPOSED ELEMENTS FOR A ROADMAP**

We agree that consumers have high expectations regarding future developments of broadcasting services, whether in the form of more programmes, increased quality from HDTV or via mobile reception.

At the same time, if the viewer’s legacy equipment, which is likely to be in use for many years, suffers from interference prior to change out to new equipment, their expectations will be negatively impacted.

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<sup>4</sup> See Commission’s Communication on Impact Assessment, (COM(2002) 276) final, 5 June 2002

In relation to the Commission's proposals for setting standards for the ability of digital TV receivers to resist interference (section 4.1.b of the consultation document), we agree that a close cooperation of Member States within both CENELEC and ETSI must occur. We firmly believe that ETSI must be involved in the process.

We believe also that the initial ECC view, that the potential interference is 'only an EMC issue', is not consistent with the existing policies of the Commission and the present EMC standards. Existing customer equipment on the market conforms to existing EMC standards.

The rules will be changed by the proposed reallocation of the 790-862 MHz band for LTE such that domestic TV equipment, other customer premise equipment and associated ancillaries, that continue to tune this band, will be vulnerable to interference from the new service.

Cable Europe has raised its concerns in its response to the consultation on the Radio Spectrum Policy Group's (RSPG) draft Opinion on the digital dividend. We are encouraged that the RSPG is advising the Commission to give sufficient time to stakeholders to plan investments and complete the necessary technical preparation before the actual availability of the band following analogue switch-off in 2012.

Because of the time required to address potential interference problems, which may be felt more intensely in higher density areas, it seems logical, as suggested above, that Commission policy should focus on the provision of broadband access to the rural areas (i.e. the rural areas must be the first part of the system rollout.)

In relation to section 4.5 of the consultation document, we support the Commission's objective to ensure a "migration path" for current secondary users of the UHF spectrum (wireless microphones and similar applications). We support also an examination at EU level including, if appropriate, a mandate from the European Commission to the CEPT.

Failure to provide sufficient quality spectrum for radio microphones will badly damage a number of major industries and reduce Europe's ability to make quality programmes and films; to provide multimedia content and to host sporting events.

In relation to future challenges (section 4.7), we agree that dealing with the evolving nature of the digital dividend issue is a "dynamic" process and that developments in technology, services, market demand and societal requirements will require that the actions established under the roadmap evolve in parallel.

We also agree with the list of factors of uncertainty identified in the consultation document, notably the emergence of unforeseen additional broadband uses that would require access to more spectrum below 1 GHz. The cable industry has already started to consider whether it could use frequencies above 860MHz (i.e. up to 1GHz) to provide expansion capability for new broadband services. But Cable Europe considers that LTE services in the UHF band might really hamper the development of any cable innovative services such as high speed broadband services based on the Eurodocsis 3.0 standard, HDTV or VOD services.

Therefore, as already stated, the proposed approach should take account of the outcome of a full impact assessment of any changes proposed in spectrum use in order not to disadvantage television viewers and other stakeholders.

## **5 URGENT ACTIONS**

Although we understand the objectives of accelerating analogue switch-off, we caution against an acceleration of the re-use of spectrum for LTE until a full impact assessment is carried out. Timely completion must be interpreted as getting the conditions right for the delivery of services that will satisfy consumer demands.

In this respect, one further 'urgent action' that we would add is that, prior to any implementation of the new service, there should be clear "guidelines to citizens" on the assistance (including economic) available to them in the case of interference to their domestic television equipment.

## **6 NEXT STEPS**

Cable Europe fully understands the reasons why the Commission wishes to adopt a Communication on the digital dividend this autumn as part of a wider spectrum action programme to be submitted to the European Parliament and the Council for adoption at the beginning of 2010.

We do not wish to delay that activity unnecessarily. However, we urge the Commission to address the concerns raised by Cable Europe in this response when developing its proposals for the EU roadmap for the digital dividend.