

## **Wholesale Broadband Access via Cable (ERG (04) 19rev1 as consulted)**

### **Consultation report**

In the consultation of the cable BSA document (consultation period: 18 Febr. – 04 April 2005) 14 comments were received: from cable operators AUNA, NTL Ireland, Matav, TDC and PT (these last three operators are also PSTN incumbents) and cable association – ECCA and WKO; from alternative operators associations ECTA and VAT; from PSTN incumbents not owing a cable network: FT, KPN, Telefónica and DT which will be named just incumbents throughout this report, and from an incumbent association – ETNO.

This report will try to cover the ERG appreciation of the comments received. It does not substitute the individual analysis of the individual responses which are available at the ERG site and does not try to deal exhaustively with all comments.

Market players welcomed the consultation paper on “Wholesale Broadband Access via Cable”.

#### ***a) Market analysis and access obligations***

Cable operators claimed that, due to technical and economical considerations, broadband access via cable should not be considered in the market 12 analysis since they are not equivalent. ECTA adds to this argument geographical and product substitutability constraints.

Incumbents argued that the principles of technological neutrality and non-discrimination should prevail and therefore the same regulation should apply in market 12 independently of the technology used. However, they also warned to extend regulation and questioned the need of regulating the broadband market at all.

Alternative operators on the other hand are concerned that NRAs might relax current bitstream access obligations imposed on DSL.

Cable operators argue that an access obligation would imply high implementation and regulation costs and are therefore concerned that imposing an access obligation might impair their ability to compete and invest in the broadband market. ECCA produces some figures albeit relative on these costs.

On this issue one incumbent recognizes that cable networks can be technically upgraded in order to allow bitstream wholesale offers based on cable and that the PSTN network has also been upgraded for the purpose of enabling access.

Cable operators questioned the need for an additional broadband access obligation since there are already wholesale bitstream access offers on DSL networks and there seems to be no demand for wholesale offers based on cable.

Incumbents and ETNO considered that one particular paragraph in the paper might lead to the conclusion that further regulatory interventions can be expected in broadband services provided through new technologies such as fixed wireless access (FWA), fibre, 3G, WiFi or WiMax confounding however new technologies with emerging markets (see below).

ECTA favours DSL bitstream as the remedy to encourage the development of a sustainable and effective competition as it provides a clear ladder of investment opportunity leading to LLU.

The ERG wishes to clarify that market analysis issues are not the primary focus of this document. Hence product substitutability; market structure and geographical scope; as well as SMP assessment and proportionality of required remedies to solve specific competition problems are analysed, in due process, by individual NRAs according to national specificities.

The aim of the “Wholesale Broadband Access via Cable” paper is to discuss the technical feasibility of implementing bitstream equivalent access on cable networks with a view to include these options in the ERG CP on BSA (ERG (03) 33rev1). Its starting point is that regulation of cable network operators is subject to an SMP finding, and cable access is a possible remedy, but is not a priori excluded as cable networks fall in principle under the scope of the ECNS regulatory framework. The paper concludes that it is technically possible to provide cable BSA.

This of course does not imply an a priori judgement on the imposition of this obligation, which could only be addressed after due market 12 analysis SMP assessment and the proportionality analysis of the remedies required to solve the identified competition problems.

Economical considerations involving the cost of implementation and regulation of a possible cable BSA access offer are of the utmost importance and have to be considered in the above mentioned market analysis process as for regulatory measures on any other technology following from the fundamental principle of technological neutrality (Art. 8.1 FD).

ERG recognizes the importance of setting investment incentives to climb the ladder of investment and the recent uptake of LLU in Europe. It is not the intention of this paper to discuss the deregulation of PSTN based access obligation.

### ***b) Technical aspects (Overview)***

Cable operators argue that the local access medium (from the end-user to the CMTS in a cable network) is shared, whereas in DSL technology (from the end-user to the DSLAM) it is dedicated and therefore overall capacity in cable networks is scarcer.

Cable operators argue that layer 3 access would impair service differentiation.

Cable operators note that specific network topologies and technologies - including software, hardware and firmware – have to be recognized in a feasibility study of CMTS access and layer 3 solutions.

Based on a study by consultant TNO KPN is confident that wholesale broadband access in The Netherlands is already been offered by cable operators NL Tree and Casema<sup>1</sup>.

Respondents chose to focus on two main technical issues:

- (i) whether cable modems actually constitute a substitute to DSL;
- (ii) the feasibility of using the technical solutions proposed in the consultation document.

### **(i) Substitutability of cable and DSL**

The debate as to whether cable modems really constitute a substitute to DSL focussed on the customer premise equipment itself as well as the access mechanisms behind the two technologies. In one case, it was even stated that an end user cannot use a cable modem to access a DSL service or vice-versa, and hence this illustrated that the two were not substitutable. Although this is obvious, the need to change customer premise equipment should not constitute a switching barrier in any case as modem prices have now come down considerably and in many cases are actually rented or even bundled as part of the broadband service.

One respondent claimed that cable modems still constitute "emerging" technology. Clearly cable modems "emerged" at the same time as DSL (if not earlier) and so in terms of development of the technology such a claim cannot be made.

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<sup>1</sup> TNO Study d.d. 31 maart 2004, page 22.

A number of respondents claimed that DSL provided a dedicated connection to each end user while cable was a shared medium. While technically this is correct, in practice there is little or no difference. In effect DSL networks are also shared, since past the DSLAM, network resources are contended and no longer dedicated. In well engineered networks, an end user should be unable to discern any performance differences between a cable modem or DSL connection at any given link speed.

A further issue that was cited is that cable networks tend to pass residential areas but are not usually present in business focussed locations (business parks, factories etc) whereas DSL networks tend to be more widespread. However this is a market issue rather than a technical one.

One further argument used is that while new DSL technologies could give much higher line rates, cable so far has a limited amount of downstream bandwidth. However these advanced DSL technologies will require significant additional investment to deploy, and it is expected that new cable modem protocols will also be developed that will give comparable performance. Experience in many broadband markets so far has shown that in fact cable operators tend to lead in increasing broadband connection speeds, rather than lagging behind DSL.

The conclusion therefore is that from a technical point of view, from a demand side perspective, it is clear that the two broadband technologies are very similar.

## **(ii) Feasibility of technical solutions**

The document outlined a number of technical solutions that would permit a wholesale broadband offering using a data over cable network. The solutions proposed mirrored those used in a DSL environment as closely as possible. Respondents attempted to challenge these solutions on a number of points.

In the case of CMTS access, it was stated that difficulties with the DOCSIS protocol (used in the vast majority of cable modem networks) could prevent this from working. This issue was actually mentioned in the ERG document and a work around proposed.

Several respondents also claimed that most cable operators do not have the luxury of many "free" downstream frequencies because of the need to provide analogue and digital TV as well as data services. This may be the case but does in no way detract from the technical viability of the proposed methods.

Responses also touched upon the dangers of allowing third parties access to provisioning and management systems as this could promote fraud or system problems. Here, technical solutions that involve the use of adequate security

precautions and safeguards that limit access to only certain parts of the back office systems to trusted third parties can be easily implemented.

It was also claimed that interconnection at handover points 2 and 3 provided relatively little scope for service differentiation and hence these solutions could not be classified as "bitstream" but rather as something approximating "enhanced" resale. It can be argued that the differentiation that can be provided at these points can indeed be significant and at the same level as that available to a self-provisioned party.

Overall, while the provision of wholesale broadband access via cable will necessitate the implementation of certain technical solutions and operational processes, requiring investment, the investment can be recovered from sales to third parties and there are no technical barriers that cannot be overcome.

Overall the experts of the FN WG came to the conclusion that the technical arguments brought forward do not warrant any significant changes to the paper.

### *c) Overall assessment*

The FN WG submits the revised version of the cable BSA to the CN/Plenary and suggests to integrate the cable BSA document with the following changes to the CP on BSA (ERG (03) 33rev1):

- Rewording of paragraph dealing with new technologies as follows:  
"While at present this discussion is focussed on cable as the predominant alternative to DSL, eventually the possibility that wholesale broadband access could be provided over other broadband technologies that could become widespread infrastructures (fixed wireless access, fibre, 3G, WiFi, WiMax, others) needs to be looked at."
- Correction of factual errors (NTL does not offer a cable BSA but rather a resale product).
- Adjustment of the conclusions: ISB cable access is technically possible as it is offered in Austria and the Netherlands, although the offers are not publicly available;
- Deleting sections 1.3, 1.4.1 and 1.6.