



Cable Europe

Cable Europe response to the European Commission's Consultation on its draft Recommendation on regulated access to Next Generation Access Networks (NGA)

24 July 2009

The European cable TV industry currently provides broadband, telephony and digital TV to approximately 73 million customers. Cable Europe¹, represents Europe's leading cable TV operators and their national trade associations. The aim of Cable Europe is to promote and defend the industry's public policy positions and business interests at both European and international level, and to foster co-operation among its members.

Cable Europe welcomes the opportunity to comment on the European Commission's Draft Recommendation on regulated access to Next Generation Access Networks (NGA). Cable Europe believes that the Draft NGA Recommendation must be an integral part of a package that includes the Draft Broadband State Aid Guidelines and other related initiatives, notably the forthcoming European Broadband Strategy. The overarching strategy should determine the means of delivery of a harmonised regulatory approach that is applied consistently across these instruments.

In order to provide an innovative and investment-friendly environment we call on European policy makers to develop a sound understanding of the cable technology and market dynamics European Cable operators are unleashing through continued dialogue such as this open consultation.

Advancing European Cable Networks

Today's modern European networks rely on new and ongoing investments to increase the technological capabilities of high speed networks across Europe. The average capital expenditure (CAPEX) level for the industry is 25% and is above average when compared to other infrastructure providers.

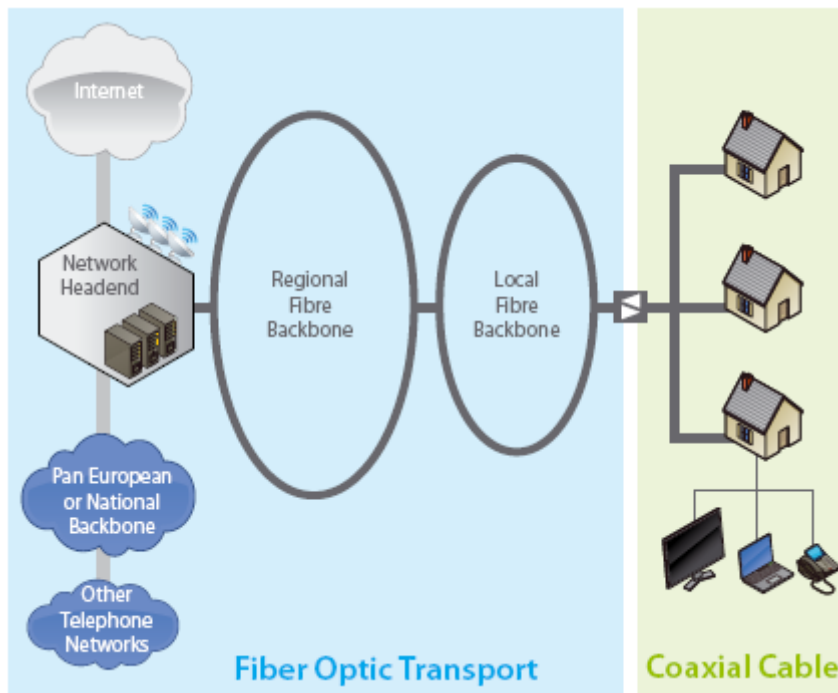
EuroDOCSIS 3.0 represents a crucial technological development for the cable industry in its role as key high speed infrastructure provider in Europe (*please see below for an overview of EuroDOCSIS 3.0 and its European rollout*). Modern large-scale hybrid fibre-coax (HFC) networks began to be deployed across a number of countries from the 1990s, ultimately bringing fibre to every street corner in densely cabled areas.

From all-coax networks, the industry has moved to a position where the coax part of the network is restricted to the last few hundred metres. Upgrading coax networks to HFC has meant 1) putting a significant amount of fibre in

¹ **Cable Europe** is the Brussels-based European Cable Communications Association

the ground, 2) creating small segments of homes that are connected via coax to the fibre backbone, 3) installing new hardware at the network headends.

The Modern Hybrid Fibre-Coax Powered Network



Upgrading its networks permitted cable operators to offer a new range of services such as high-speed data and phone services which require a two-way capability. These new services are enhanced with the introduction of the latest standard for data over cable, EuroDOCSIS 3.0, which will enable cable operators to offer further increases in downstream and upstream speeds in excess of 100Mbps. This provides a significant performance advantage over DSL.

Technological context and the origins of cable

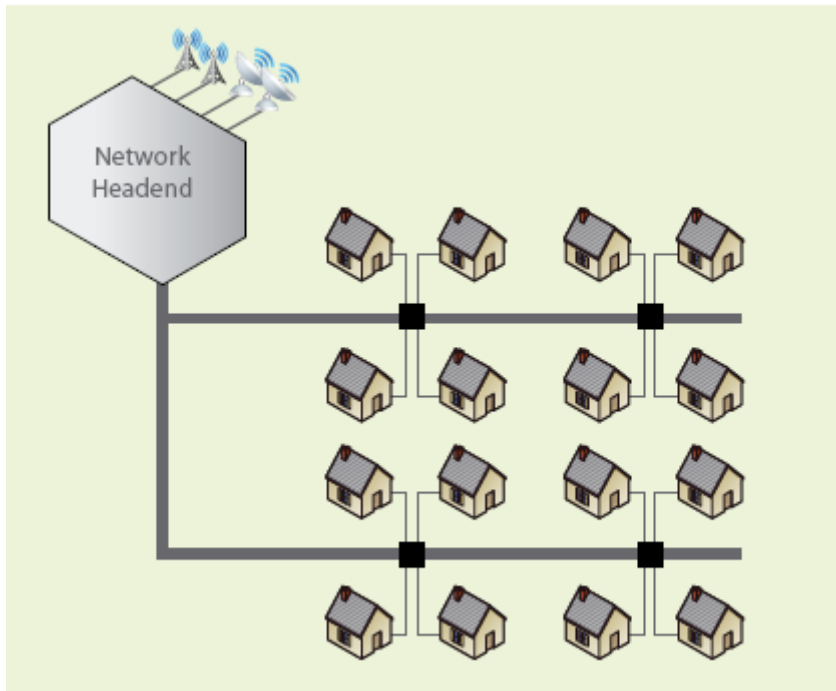
It is worth noting the origins of today's modern high speed cable networks. The majority of cable networks in Europe were created in the 1960s primarily to eliminate the need for millions of individual TV antennas but also as a means of reaching citizens otherwise unable to receive TV via over-the-air transmission.

The purpose of these networks was usually to deliver a relatively small number of TV and radio channels to consumers, for which coaxial cable technology, originally used to transmit radio signals since the 1930s, was more than sufficient.

Coax networks had the advantage of being able to deliver signals with greater reliability and superior quality to over-the-air networks.

These older networks were unable to support the kind of two-way services that today's consumers' demand, including the delivery of internet and phone connections over the same network.

The Original Coax Network

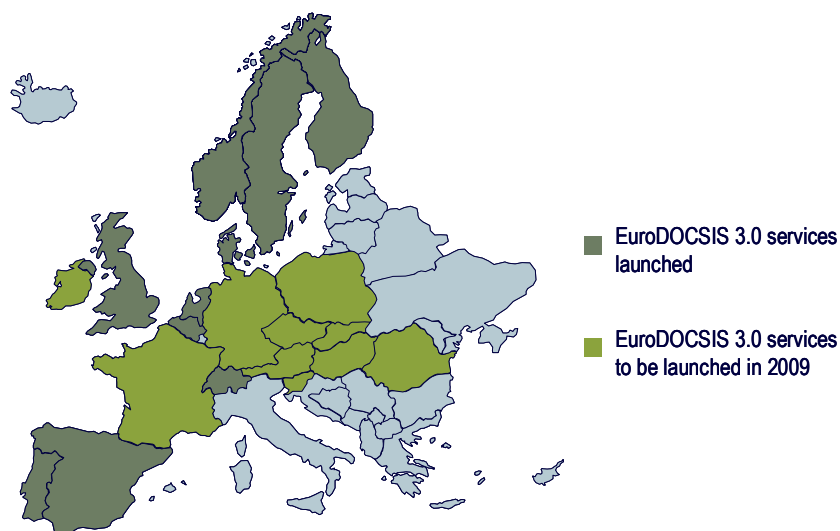


When contrasted with the original cable networks, **today's modern cable networks are a helpful European case study for examining the chain linking investment, R&D, innovation and new services** brought directly into the homes of millions of European citizens. An overview of the progress brought to modern networks by EuroDOCIS 3.0 is found below.

EuroDOCSIS 3.0 basics and European roll-outs

DOCSIS stands for Data over Cable Service Interface Specification, originally developed by CableLabs in the US, and defines interface requirements for cable modems involved in high-speed data distribution over an existing Cable TV system.

The latest version of this standard, DOCSIS 3.0 (or EuroDOCSIS 3.0 in Europe) represents a significant progress for Cable operators, making much higher bandwidths available to end-customers at a lower per household cost than FttH build. Now, speed levels of up to 160 Mbps downstream can be reached, which is a significant increase on DOCSIS 2.0 (32 Mbps). Further channel bonding could allow maximum speeds up to 400 Mbps using the same base HFC infrastructure. Moreover, DOCSIS 3.0 will also allow much higher upstream speeds, currently up to 120 Mbps, and such symmetry of speeds will become increasingly important.



Compatibility along versions has also been ensured in each version of the standard, *i.e.* End user equipment designed for one standard version can be used in another, be it an older or a more recent version of DOCSIS.

Source: Cable Europe, Solon

Broadband Development and Competition

By providing very high speed broadband products and a wide range of TV content, the European Cable industry consistently supports the development of the European information and knowledge society. Due to high ongoing investments into networks and product developments, the European Cable

industry has become a driving force in developing the European entertainment and communications markets:

- Once founded to provide access to the consumer for an ever growing number of TV channels, Cable now provides its customers with very high speed access to the digital space
- Once just offering "single-play" TV access, the European Cable industry now also offers broadband and telephony. Mobile options and home entertainment services like Video-on-Demand (VoD) complement Cable's multi-play portfolio
- Once just having uni-directional TV networks, Cable now is the leading provider of High-speed Broadband services

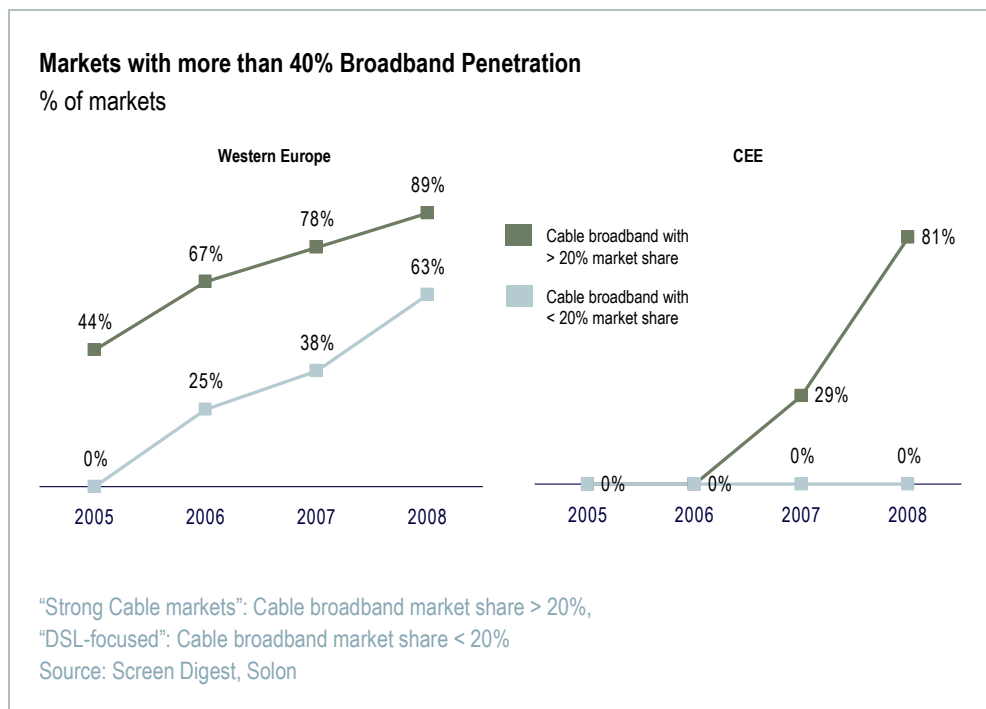
Overall the European Cable industry generates a turnover of €18bn on an annual basis of which, on average 25% is reinvested into further network build out².

Broadband Penetration and Infrastructure-based competition

With broadband competition shifting from a service-driven to an infrastructure-based level, Cable operators have significantly impacted the European broadband landscape. Competition in the telecommunications market is recognized as boosting service uptake and, with infrastructure-based competition, is likely to provide the most long-term benefits to consumers.

Broadband penetration in markets with infrastructure competition, driven by cable, is not only higher than in markets with limited infrastructure competition, it also reaches higher penetration considerably earlier. While in 2006, 2/3 of all Western European Cable markets already showed penetration rates of more than 40% (*i.e.* the average EU-27 penetration in 2007), only 25% of DSL-focused markets had reached this level. Markets dominated by DSL have only started catching up after Local Loop Unbundling (LLU) regulation and ULL pricing was revised. Incumbent telecommunication operators were then forced to allow their competitors to connect their own backbone network to the customer access network, the so-called "last mile", which is owned by the incumbent. ULL operators have then to rent the "last mile" from incumbents. Cable-driven broadband markets are approximately 2 years ahead in broadband penetration than their DSL/ULL driven counterparts.

² Solon Management Consulting, *Cable Industry in Europe*, 2009 (forthcoming)



The existence of sustainable Cable infrastructure-based competition not only supports higher penetration rates, it also reduces the need to heavily regulate these markets.

Network Investments

Cable customers are not the only ones to benefit from Cable’s very high-speed offers. By establishing high-speeds, the Cable industry has given the overall broadband market a new momentum and forces fixed-line operators to follow suit with network investments and fibre roll-outs. Although DSL infrastructure may be sufficient for many of today’s applications, it will not be able to fulfil future bandwidth needs of new, video-based services. Simultaneous use of multiple high-bandwidth applications is already testing ADSL2+ to its limits.

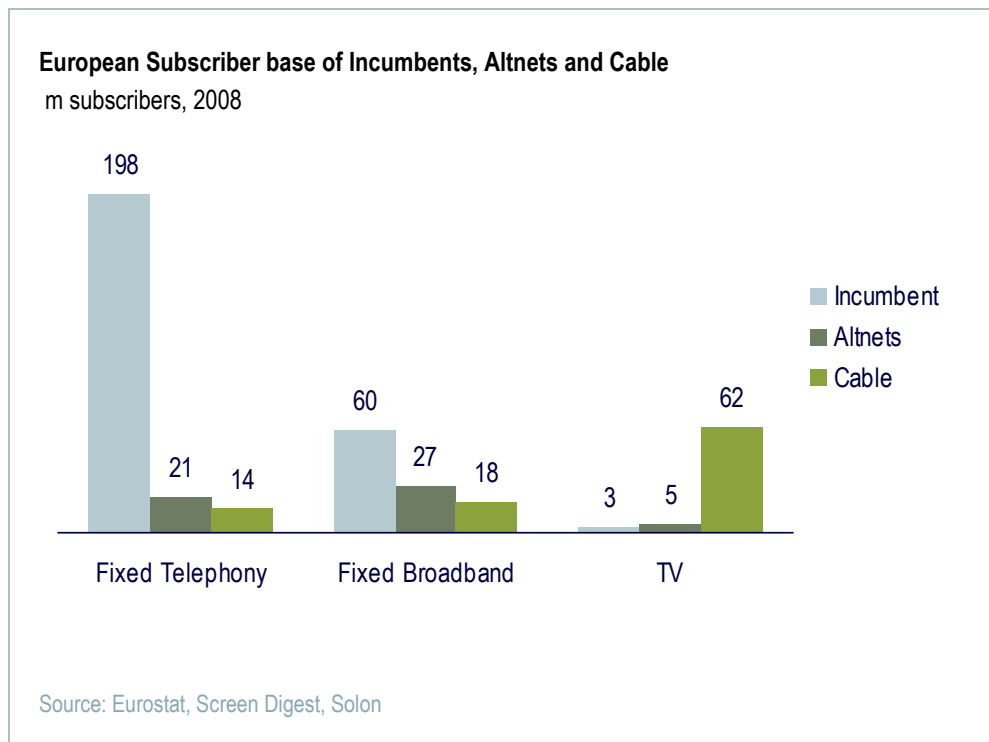
Even if we consider that current usage scenarios requiring bandwidths of more than 16Mbps (*i.e.* watching multiple SD or HD TV streams at the same time) do not constitute the majority of usage in Europe, the popularity of high-bandwidth applications will increase significantly over the next few years. **Policy makers should be cautious of overly pessimistic views of demand for fibre-based services. Investment in infrastructure must be accompanied by a competitive model for services and content, as it is the latter that will drive the investment in NGA networks.** Only VDSL, Cable and FTTH will then be able to provide sufficient bandwidth to deliver multiple high-bandwidth applications.

Even without further upgrades, most Western European Cable providers can already offer downstream speeds of up to 32 Mbps. After implementing the new EuroDOCSIS 3.0 standard, speeds could reach the extraordinarily high

speed of up to 400 Mbps (using further channel bonding). In order to keep up with the bandwidths available via Cable, fixed-line operators will have to invest in their legacy networks and roll-out of high-speed next generation networks.

In addition to their own significant investments in next generation networks, **Cable operators act as a catalyst for network investments by other telecommunications players**, making the Cable industry one of the most important drivers in the roll-out of a future-focused high-speed broadband infrastructure.

The great impact of the Cable industry on the European Broadband market is noteworthy when taking into account its comparatively limited revenue size. Fixed-line incumbents still account for 71% of telecommunications revenues whereas Cable operators' share is marginal with communications revenues of €7.4bn in 2008 or 2% of total telco revenues.



Compared to the telecommunications industry, most Cable operators are relatively minor players in the converging communications and entertainment markets yet still have a remarkably positive influence on overall market development in Europe.

The Draft Commission's Recommendation

Further to its comments of 17 November 2008 on the Commission's first Draft Recommendation on NGA, Cable Europe is of the opinion that **the role of cable to deliver sustainable infrastructure-based competition should be more clearly articulated in the revised draft recommendation.** We do, however, see much in the way of improvement in comparison with an earlier draft circulated in September 2008. In particular:

- Firstly, **the over emphasis on duct access as the primary remedy for achieving NGA network investment has rightly been replaced** by a more balanced approach in which duct access is graded as one of several regulatory remedies necessary to promote competition, together with access to unbundled fibre and Wholesale Bitstream Access (WBA), dependent upon different national market conditions.
- Secondly, **the new draft rightly departs from the use of historical costs** for access to existing duct given the potentially detrimental effect access prices based on this approach would have upon infrastructure-based investment and competition.
- Thirdly, it provides improved guidance for NRAs on the pricing principles and methodologies to be applied to access products. In particular Cable Europe welcomes:
 - 1) The recognition that at **least in some circumstances cost orientation might collide with the incentives to promote infrastructure competition.** In particular recital 29 is a marked improvement: *"...If an SMP operator had to face the imposition of cost-orientation even in the case of deployment of an FTTH network based on multiple fibre lines, there would be no incentive to deploy multiple rather than single fibre lines in the first place. The imposition of such obligation, which would limit the SMP operator's pricing flexibility and its ability to profit from increased consumer willingness to pay for new services, would thus delay rather than foster the deployment of networks based on multiple fibre lines and the emergence of feasible infrastructure competition...";*
 - 2) The **introduction of alternative pricing approaches** to cost-orientation for fibre loops and WBA, such as volume discounts and prices complying with a margin-squeeze test (see Annex I Pricing principles and risk and Annex III Regulated access to the unbundled fibre loop in case of co-investment into FTTH).
- Fourthly, **Cable Europe supports the Commission's recognition of the need for regulators to take a holistic view of the measures adopted in both markets' 4 and 5 so that regulated WBA would not be necessary if unbundled fibre loop access proves to be effective.** See p. 15 point 41: "Where NRAs consider that there is effective access to the unbundled fibre loop of the SMP operator's

network and that such access is likely to result in effective competition on the downstream market, NRAs normally should not impose an obligation of wholesale bitstream access". Cable Europe supports the view that **where competition has been achieved via an unbundling remedy, there should be no need to impose regulation further up the value chain.** If active and passive remedies are imposed by NRAs at the same time, it will create disincentives for investment by other operators. Cable Europe also suggests that **where there is a second infrastructure (such as cable) present on the market, the unbundled fibre loop remedy is sufficient to stimulate effective competition.** On the other hand, if there is only one network in place, some kind of other (active) access may need to be imposed to ensure adequate competition depending on market circumstances.

In the following section, you will find Cable Europe's more detailed comments on the revised draft Recommendation.

Scope of the Recommendation:

Recital 6 says that:

"The scope of this Recommendation covers remedies imposed upon operators designated with Significant Market Power (SMP) on the basis of a market analysis procedure carried out under Article 16 of Directive 2002/21/EC. According to Article 12 of Directive 2002/21/EC, Member States may also under certain circumstances impose the obligation of reciprocal sharing of facilities or property on undertakings operating an electronic communications network".

Cable Europe welcomes the fact that the scope of the Recommendation clearly covers remedies imposed upon SMP operators. However, **we are cautious about Members States potential use of Article 12 of Directive 2002/21/EC in this context which could lead to an inappropriate imposition of symmetrical remedies.** Currently this article refers to sharing of network elements in particular in order to protect the environment, public health, public security or to meet town and country planning objectives. However, the proposed approach set out within the yet to be finalised review of the Telecoms Package³, runs the risk of discretionary, symmetric regulation being imposed on all investor in NGA infrastructure regardless of their position on the market, their access to resources and the differing economies of scope of scale in telecoms markets. As currently drafted, **Article 12 represents a significant and unwarranted departure from economically justified regulation of the SMP regime** which has proven to have worked effectively so far.

³ See amendment 14 on Article 12 of Council Common Position of 9 February 2009, 2007/0247 (COD)

Whilst we support sharing of network elements based on commercial agreements, **enforcing a non SMP regulatory obligation on all operators to provide access will negatively impact existing and future investment in competing NGA infrastructure.**

The **sharing of network elements is not a “silver bullet” solution to create the right incentives for NGA investment.** On the contrary, Article 12 as revised in the common position text, if used by NRAs in a misguided manner and without appropriate reference to the need to safeguard infrastructure competition, is likely to result in asymmetric economic regulation on all NGA operators. This approach, we believe, can only serve to undermine and deter investment by non SMP operators in building competing NGAs. It is precisely this form of investment, spearheaded by cable, which is stimulating incumbent investment in fibre.

Definition of NGA and policy consistency

Cable Europe believes that any definition of the concept of “NGA” established under this Recommendation should be consistent with the definition in the forthcoming ‘Broadband State Aid Guidelines’. In this context, we refer to our comments to the Commission’s Draft Guidelines on Broadband State Aid as follows:

“Cable Europe questions the need to further define an NGA network with different technological criteria (other than in the context of determining whether it should be subject/can be subject to an appropriate access obligation). In our view, setting speeds limits is not necessary for this purpose and runs the risk of being inaccurate, misleading or not sufficiently forward-looking with regard to the technology to be deployed. It is much more important to deploy a fibre network in the access network than concentrating on a certain bandwidth when technology improves so rapidly. Should this definition remains technology-specific, we urge the Commission to revise it as well as the whole set of Guidelines on an annual basis. Moreover, as being a first step towards the FTTH network and providing similar services as the cable networks based on EuroDOCSIS 3.0 cable modem standard, any network built upon the VDSL or VDSL2 technology should also be expressly included in this definition”.

Geographic Segmentation

The new draft Recommendation recognizes that the geographical scope of markets and remedies (*i.e.* UK market 5) might not withhold in the transition from copper to fibre, as ULL will not determine different geographical competitive pressures any longer within the incumbent’s NGA footprint. Under an NGA scenario, the presence of ULL over copper networks at local exchanges in order to assess whether the incumbent might be subject to a competitive constraint in the WBA market is irrelevant as ULL does not provide a way to enter the NGA market.

In Cable Europe's opinion, in an NGA environment the competitive pressures introduced by alternative network operators should be taken into account by the remedies to be imposed on SMP operators rather than by defining separate geographic markets. **Any attempt to capture the effects of competitive pressures by defining geographically segmented markets when demand conditions are still unknown will inevitably create uncertainty in addition to being an extremely cumbersome exercise.** The risk of setting inappropriate geographic boundaries and thereby applying inappropriate remedies is very large at this stage of market development. Indeed, as the market develops there is a very real prospect that the scope of geographic boundaries will change. In circumstances where the conditions of competition in a particular area can change quickly either because the NRA initially made an error or because the market evolved faster than expected, remedies will need to be able to adapt to those needs in a speedy manner. The process of geographically segmenting the market and making separate notifications is a lengthy procedure and does not lend itself to reacting quickly to changed circumstances. If an NRA chooses to vary remedies within a broader geographic market they retain the ability to change such remedies rapidly when appropriate. Consequently, a regulatory regime which segments markets geographically runs a far greater risk of regulatory failure.

In effect, the resources that will need to be dedicated to the performance of a robust sub-national market analysis, given the amount of disaggregated data required to properly perform the process, will constitute a significant drain on a small NRA's resources, thereby offsetting many of the intended benefits otherwise achieved through the streamlining of the Article 7 notification process for many market reviews. The idea that geographic market definition, especially when applied in an ex ante context, can shift backwards and forwards across physical territories, tends to jeopardize the effective workings of the EU Regulatory Framework. Given the inherent investment uncertainties presented by prospective NGA deployment by PSTN operators, it is difficult to determine that a sustainable competitive situation has developed which renders the need for ex ante regulation wholly superfluous.

Cable Europe also notes that there would inevitably be implications for other regulated markets in the Recommendation on Relevant Markets because regionalisation of markets cannot logically stop with ducts, WBA and LLU, but must also impact on leased lines, calls markets and potentially even termination. Administratively, the number of notifications would increase with greater uncertainty and less harmonisation for operators.

Price de-averaging

Cable Europe has identified a specific provision in the advice concerning the 'Pricing principles and risk' contained in Annex 1 of the Recommendation. There is within that annex a sentence which states:

'The price of access to physical network infrastructure should not be a geographical average in the presence of substantial cost differences between various areas.'

Such a recommendation to NRAs goes much further than in the original Recommendation where NRAs were told that prices should not be '*bound by the principle of geographic averaging...*' which left discretion to an NRA to decide whether or not to implement geographic de-averaging. Such discretion is now removed.

Cable Europe is concerned that the implications of such a policy shift has not been justified in this document nor has it been sufficiently discussed between all the stakeholders.

In that respect it must be born in mind that by keeping an obligation to provide average wholesale access prices on incumbents NRAs might be simultaneously achieving two pro-competitive effects:

- Avoiding geographically segmented predatory strategies by the incumbent
- Ensuring that local competitive pressures brought about by cable operators and others alternative operators are uniformly transmitted across the whole market.

The first effect can be better understood if we recall that a geographically averaged wholesale price can act as a common pricing constraint that ensures that consumers in rural areas, not exposed to the competitive pressure exerted by alternative operators, benefit from competitive pressure from alternative operators in urban areas as the incumbent will have to reflect such pressure in a single geographically averaged price.

Competition that exists or potentially exists in more than 50% of the market is likely to move 100% of the market thereby bringing the benefits of competition to the rural consumers who are unlikely to have offers from alternative operators. Therefore if urban based competition drives prices down, rural based consumers will enjoy the benefits of that competition. On the other hand, if price de-averaging is allowed (as would be induced by the Commission's Recommendation) the effects of urban based competition will not be felt in rural areas and SMP operators could have incentive to embark in strategic behaviour consisting of applying high access prices in less dense areas and predatory retail prices in more dense areas to pre-empt entry by alternative networks or to discipline their behaviour.

Finally, it is not necessary to go into all the different reasons, both social and economic that many Member States have expressed and continue to express a desire to maintain a balance to spatial aspects within their State. It is sufficient to note the provisions contained within the Universal Service Directive which gives discretion to NRAs to impose nationally averaged prices to ensure a social divide does not emerge for basic telecom services. This provision in Annex I could be viewed as undermining this policy in relation to broadband provision over NGA.

Therefore, Cable Europe asks the Commission to reconsider the form of this specific text. **Cable Europe specifically requests that the Commission**

revert to text contained in the original Recommendation which left discretion to NRAs regarding whether or not to de-average prices.

Investment incentives, access pricing and infrastructure competition

Cable Europe believes that, **despite several references on the need to encourage infrastructure-based competition and investment in new-build networks**, the new draft retains provisions which work against this objective, and which **risk encouraging inefficient entry based on below-cost wholesale inputs, to the detriment of genuine infrastructure-based competition**. Furthermore the draft still fails to recognize and reward the role that cable operators play in delivering infrastructure-based competition in the context of NGA, a role which, as demonstrated earlier, has resulted in higher broadband penetration and market dynamism where cable is present.

The implications of this approach are profound. Insufficient recognition of the role that cable can (and does) play in delivering infrastructure-based competition will result in NRAs potentially adopting proposed remedies which have **negative implications for cable investment, past and present**. The condition necessary to promote efficient investment in infrastructure is a fair access pricing regime which reflects investment risk but which discourages wholesale prices detrimental to infrastructure investment already made, or about to be made.

Of particular concern is the risk that cable faces competition from other operators relying on below-cost passive wholesale inputs priced on the basis of the current costs accounting of a former monopoly, or on active wholesale broadband access inputs that are similarly mispriced. Whereas this might provide asymmetric regulatory assistance for entry to non network operators (and their business cases) it will be detrimental to cable's past and future investments. We however believe that cable investment is sustainable, future-proof and key to guarantee long term competition in a NGA environment.

With respect to access to physical infrastructure (ducts, manholes, terminating segments), Cable Europe believes that prices should not be set according to the costs incurred by an "efficient operator" operating with the SMP scale economies, as these should not be adopted as the "efficient scale" in a dynamic context. Such a policy would introduce a bias towards non-facility based new entrants vis a vis cable operators as the latter have to compete with incumbents in spite of their much lower scale economies without receiving the benefit of a lower access price. In order to take due account of the presence of infrastructure competition provided by cable when setting access prices to the SMP operator's network, the definition of an efficient operator should be closer to that of a cable operator and not that of the incumbent. In this respect we suggest the recent EU Recommendation on termination rates in which the efficient scale of a mobile operator is

considered not to be that of the largest in the market, but rather set at 20% of the market overall dimension, as the appropriate metric to use⁴.

Technology neutrality and the relaxation of cost orientation

The Recommendation establishes an "exemption regime" to the principle of cost orientation in circumstances when the SMP operator deploys a multi-fibre open access network. **Cable Europe fully supports the assessment made in Annex III part 2 on the role of cable in stimulating competition in an NGA environment:**

"Joint deployment of FTTH networks by several co-investors ... would normally be indicative of absence of SMP ... in markets where an alternative operator competes at retail level on the basis of its own network (such as a cable operator), at least two operators in addition to the operator having been designated SMP at the time of the market review, jointly deploy and control FTTH networks..."

In this way the Commission is neutral as to the source of "infrastructure competition" whether it originates as a fibre deployment or by means of an alternative technology such as a cable HFC DOCSIS deployment. However, we would welcome that such an approach is taken further. In particular we note the following:

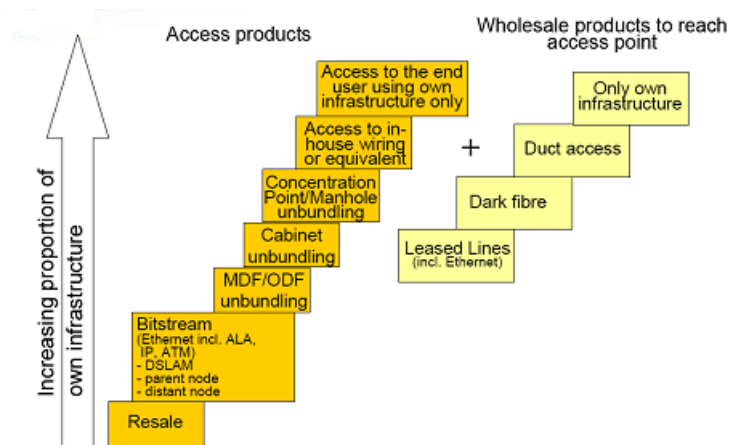
- Recital 16 implies that sustainable infrastructure competition would be achieved by giving access to the terminating segment of the fibre loop in a FTTH context:

"In a Fibre to the Home (FTTH) context duplication of the terminating segment of the fibre loop will normally be costly and inefficient. To allow for sustainable infrastructure competition, it is therefore necessary that access be provided to the terminating segment of the fibre infrastructure deployed by the SMP operator. To ensure efficient entry, it is important that access is granted at a level in the network of the SMP operator which enables entrants to achieve minimum efficient scale to support effective and sustainable competition. Where necessary specific interfaces could be required to ensure efficient access".

Maintenance of such an approach, and its clear deviation from the principle of technology neutrality, will serve to undermine the investment model pursued to date by cable operators, and the successful role we have played in promoting sustainable infrastructure competition. **Regulatory policy which serves to promote genuine infrastructure-based competition should allow operators to**

⁴ "To determine the minimum efficient scale for the purposes of the cost model, and taking account of market share developments in a number of EU Member States, the recommended approach is to set that scale at 20% market share. It may be expected that mobile operators, having entered the market, would strive to maximise efficiency and revenues and thus be in a position to achieve a minimum market share of 20%", in Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, C(2009) 3359 final

invest and deploy technologies that are independent of the SMP operators' network. The last ERG Report on NGA economic analysis and regulatory principles concludes that the highest rung in the NGA ladder of investment is "Direct access to the end user" can only be reached with "own infrastructure"⁵:



In this respect, we believe **the draft recommendation should be modified to reflect the ERG's careful analysis of NGA hierarchy.** In certain circumstances, and as demonstrated by economic analysis of broadband penetration, competition and pricing, it is clear that effective competition can be achieved with two end-to-end independent infrastructures in place. Accordingly we believe that **the Commission should encourage competition between independent infrastructures as the most beneficial for investment and ultimately end-users.**

- In this context, Cable Europe believes that Article 23 and Annex III of the Draft Recommendation are not entirely consistent with this approach.

We are of the view that Article 23 should be modified: an SMP operator that has deployed a FTTH network based on multiple fibre lines should not be subject to cost-orientation obligation irrespective of whether or not it has granted 'effective and fully equivalent access to at least one independent alternative provider of electronic communications services competing on the downstream market'. **Formally concluded access offers prior to completion of a fibre build should not be a prerequisite for the relaxation of cost orientation** (such access request can come once the multi fibre network has been built).

With respect to Annex III part 2, Cable Europe and its members are somewhat skeptical as to the market's appetite for co-investment in

⁵ ERG, Report on Next Generation Access - Economic Analysis and Regulatory Principles, June 2009, p.14 and figure 1.

Ftth projects at this stage. In particular, we have yet to be convinced of the short term viability of multi-operators cooperative Ftth roll-outs.

Notwithstanding this reservation, **we believe that Annex III needs modification in order to promote and sustain investment incentives in the infrastructure competition model** in which cable networks compete with incumbent Ftth builds.

Therefore the conditions under which cost orientation is not justified should include the circumstance where:

The SMP operator network (with open access) and one other NGA network compete at the retail level on the basis of its own network (such as a cable operator).

And the conditions under which the absence of SMP would normally be indicated should be modified to circumstance where:

3 entirely independent, end-to-end NGA networks are deployed, one of which is the former SMP incumbent operator.

The addition of these 2 additional circumstances would, in our view, not preclude but rather encourage commercial negotiated arrangements on one or more of these networks.

Multi-fibre architectures

The draft guidelines devote a significant level of attention to the promotion of multi-fibre network architectures. Whilst we recognize the potential for co-investment in multi-fibre networks to incentivize investment in NGAs and speed up their rollout, **encouragement of such high cost commercial projects should not come at the expense of the principle of technological neutrality.** Multi-fibre solutions may be a solution in some markets over time, although care should be taken not to harm the competitive and investment dynamic spearheaded by cable NGA investment which yields true infrastructure competition based on competing and independent mono-fibre solutions.

Conclusion

Cable Europe supports the Commission in its efforts to place investment at the heart of its revised approach to the regulation of NGAs. However, the issue is generally treated too narrowly and insufficient account is given to the investments made by cable operators in NGA networks which compete with incumbent network operators.

Whilst variations to the regulatory framework (such as risk premium adjusted regulation and regulatory relief for co-operative investments in fibre networks) may be justified in some circumstances, the net effect of these measures should not result in inappropriately priced, below-cost, wholesale access prices. Such prices would be detrimental to cable operators, put past and future investments at risk and induce inefficient entry.

Business cases for further investment in fibre by cable operators should not be distorted by conditions that make access available at uneconomic levels. It is far from clear that due account of this important competitive and investment dynamic is made in the revised draft NGA Recommendation and we therefore recommend the text to be improved accordingly.