

FTTH Council

Response to the public consultation on

Recommendation on regulated access to
Next Generation Access Networks (NGA)

Brussels, 14 November 2008

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Executive Summary

The FTTH Council Europe (hereafter “the FTTH Council”) believes that the Commission’s initiative to bring forward a ‘Recommendation on regulated access to Next Generation Access Networks (NGA)’ is timely and appropriate. The FTTH Council welcomes the opportunity to comment on the European Commission’s proposal.

The FTTH Council supports the central element of the Commission’s Recommendation, that competitive markets will deliver NGA for the mass market. The FTTH Council believes that, where feasible, competition based on access to passive infrastructures offering all operators the ability to make NGA investments is the best mechanism for ensuring an appropriate and timely NGA deployment. The FTTH Council recognises that other remedies will need to be applied in a graduated manner but where it is viable; the primacy of physical access competition must be maintained. Giving regulated access to non-replicable passive infrastructures creates the possibility for any operator to initiate network deployment starting a dynamic which may stimulate other operators to make their own investments in NGA.

There are two general points which the FTTH Council would like to raise before addressing a number of specific points in relation to the Commission’s proposed Recommendation.

1. The FTTH Council believes that the future needs of broadband users can only be met by bringing fibre directly to the subscriber. Thus, Fibre to the Home (FTTH) is perceived by the FTTH Council as the clear end game. While other solutions including fibre hybrids and even wireless solutions will play an important role as complements, they will in no way act as demand substitutes. The need for a FTTH solution relates to the realistic future needs of end users in terms of capacity and is entirely consistent with the need for technological neutrality.

2. The FTTH Council believes that the range of initiatives currently under way by the Commission from the Review of the Regulatory Framework to the Communication on future networks and the internet, and the ongoing consultation on the internet of things etc. risk creating confusion in the market concerning NGA. There is an urgent need for this Recommendation to clarify the application of Article 7 remedies in this area. Once this Recommendation is completed, the Commission should consider preparing an overview document which sets out the Commission’s vision for NGA which would tie together all the different initiatives from the Commission in this area.

In terms of specific comments on the Recommendation itself, the FTTH Council calls on the Commission to incorporate the following FTTH positions in the final draft of the Recommendation on NGA.

- The FTTH Council calls on the Commission to base the sharing of indoor cabling up to and including the fibre concentration point on symmetrical remedies and not on Article 7 remedies. The Commission should advocate the

adoption of national laws which would reflect the proposals in the new Article 12 Framework Directive.

- The Commission should strongly promote mandatory pre-cabbling for new buildings as well as harmonising the technical implementation for pre-cabbling across Europe.
- The Commission should strongly promote the over-provisioning of fibre in all buildings.
- The Commission should specify how legacy obligations can be met on NGA infrastructure to avoid new copper deployment.
- The Commission should place more emphasis on the role of commercial negotiations in network deployment and give more guidance to Regulators on how they can facilitate the sharing of risk between the operators.

In addition the FTTH Council asks that the Commission clarify a range of issues in the final Recommendation on NGA

- Clarify the issues regarding Wholesale Broadband Access (WBA) access remedies and how readily available such remedies should be.
- Clarify operators' ability to price differentiate at the retail level and the need for corresponding WBA products as appropriate. Without the ability to effectively price discriminate at the retail level, the FTTH Council does not believe operators will have the incentives they need to invest.
- Clarify the Commission's position on geographic sub-markets and/or Regulators' ability to apply different remedies in different geographic areas.

Finally the FTTH Council asks that the Commission recognise that a number of difficult longer term issues need to be addressed and calls on the Commission to initiate a dialogue amongst all relevant stakeholders on these issues.

- When and under what conditions copper switch off would take place,
- How copper decommissioning will be managed in the future.

The FTTH Council believes that the Recommendation is fundamentally correct and sound in what it proposes but that it can be greatly improved by incorporating these changes in the final version.

1. Introduction

The FTTH Council welcomes the opportunity to respond to the European Commission's 'Recommendation on regulated access to Next Generation Access Networks (NGA)'.

The FTTH Council's members represent more than 80 of the technology industry's leading communications companies, all of which are broadband leaders who have many years of experience in deploying complex solutions to the fast growing broadband market. These organisations are also experts in advising governments and service providers in the delivery of valuable services to their citizens, stakeholders and customers. Additional information is available at www.ftthcouncil.eu

This consultation is timely given the large number of recent developments regarding the regulation of NGA across Europe both by national regulators and at a European level. The FTTH Council has been developing a view at the European level of how regulation and policy should help promote NGA investment while retaining an appropriate level of competition. The FTTH Council believes it is appropriate to take these themes and develop them at a European level.

The FTTH Council fully endorses the central tenet of the Recommendation on NGA which states that competition is essential to the rapid roll out of high speed networks in the short, medium and long term. The preservation of existing competition and the encouragement of new and developed forms of competition have consistently been at the top of the FTTH Council's agenda to encourage the rollout of very high speed broadband networks.

The FTTH Council sees an urgent need for guidance in this area and welcomes this Recommendation as being both necessary and timely. Once this Recommendation is adopted, The FTTH Council believes that the Commission needs to set out a coherent vision of how it sees networks developing in Europe over the medium term and what its overall mechanism will be for achieving that vision.

The FTTH Council also has a number of specific comments on different aspects of the Recommendation where it believes the document can be improved.

2. Fibre is Next Generation Access

The FTTH Council is concerned that the Commission is taking an overly broad view of what constitutes NGA in the context of this Recommendation. All indications regarding patterns of use by broadband users indicates that in the near future only end-to-end fibre based solutions will be capable of meeting the needs of end users. According to a recent report from the FTTH Council Europe, improvements in broadband connectivity speeds are having a direct impact on consumer bandwidth usage, with demand per broadband home growing at almost 20% per annum over the last 5 years. The research, which was undertaken with Ventura Team LLP made the following findings:

- European broadband speeds are rising at 50%+ per annum.
- High end broadband usage per home is growing at 20% per annum.
- FTTH broadband homes drive 3x more traffic than ADSL in Europe.

The first part of the research tested Nielsen's Law from a technology perspective. It was found that a decade after it was first conceived, Nielsen's Law is still working well as a guide to the trend in broadband speeds, as the growth rate of 50% per annum held true for all European countries evaluated. Secondly, the study tested Nielsen's Law from a usage perspective, examining European broadband traffic patterns across a sample of 100,000 broadband homes using FTTH. The results of this research show that high speed broadband usage is growing at an annual rate of 20%. These patterns clearly demonstrate that end-to-end fibre solutions will be needed to meet European broadband requirements in the near future.

While other solutions including fibre hybrids and even wireless solutions will play an important roll as complements they will in no way act as demand substitutes. The FTTH Council is concerned that facilitating and emphasising the role of alternate infrastructures such as FTTN may present a view that these other network solutions provide a potential long term answer to Europe's broadband needs.

The Commission needs to stress in its Recommendation the need to maintain a path to fibre end-to-end solutions and understand the consequences of other solutions creating potential new bottlenecks or migration problems when large scale investments are made in intermediate solutions.

This position should not be misinterpreted as an attack on technological neutrality, one of the basic principles of the regulatory framework. The FTTH Council fully endorses the principle of technological neutrality and believes that it is appropriate that free market forces determine the winning technology. However, under any reasonable view of the trends in terms of broadband capacity needs, a threshold will soon be passed where the only technology capable of delivering the necessary

bandwidth is fibre. Any signals or measures which would delay or impede the momentum to a FTTH solution should be resisted in our view.

The FTTH Council recommends that the Commission makes clear in its Recommendation the transient need for FTTN remedies and the importance of enabling migration from FTTN to FTTH. Specifically, the Commission needs to ensure

- that operators have the capacity to go directly to the end user with fibre even if other operators are starting with FTTN deployments.
- that new choke points are not created (such as stranded assets at the street cabinet) which would delay an ultimate migration to FTTH.

3. The need to promote competition in a harmonised way.

The FTTH Council agrees that the promotion of infrastructure competition is the best means to ensure that the networks needed for the future are built today. In particular, the FTTH Council has been calling for the sharing of passive infrastructures since the organisation's creation and is very pleased that the Commission is endorsing this view now. At a practical level the sharing of passive infrastructures will lower deployment costs both for the incumbent as well as new entrants and is thereby an effective mechanism for sharing risk between the network investors. The FTTH Council also believes that by starting with remedies at the lowest point in the value chain and only invoking other remedies when lower remedies would not be viable, the maximum economic limits of end-to-end infrastructure competition can be reached.

Regulation on current networks in Europe focuses on the ability of entrant operators to replicate the incumbent's deployment strategy since they could not economically deploy their own copper networks. Competitors were compelled to adopt a follower strategy, deploying their networks and providing services only after the incumbent operator had made it possible. In the case of existing networks, the first major enduring bottleneck is the legacy copper access network. In the case of NGAs, that first bottleneck is not necessarily the network, but instead the primary bottleneck is the passive infrastructure within which the network sits. The Commission estimates that the cost of civil works can represent more than 80% of the total cost of the network. In analysing future deployments of NGAs it would appear logical to conclude that the primary bottleneck is the existing civil engineering infrastructure and in the vertical part of the network (in-building cabling). In moving to NGA, it is essential to encourage access to the passive infrastructure in order to offer to all operators the opportunity to lead investment and deploy their own NGAs. Those initial investment may accelerate other operator's decisions to make their own NGA investments.

The FTTH Council has considerable experience monitoring FTTH developments across the EU. While FTTH is unfortunately at a very early stage of development in the EU, we can see that most of today's FTTH investments have been made by new entrant operators, local authorities and other regional initiatives. There is a body of opinion that believes that only when incumbent operators commit to making FTTH investments will Europe see a mass market deployment of fibre. The FTTH Council does not necessarily subscribe to this view. The FTTH Council believes that under the right conditions, new entrants could make the first large scale fibre deployments and already there are indications in some Member States that this is the case. A prerequisite to having entrant operators in a position to take the initiative for large scale fibre deployments is access to the passive infrastructure which constitutes such a large proportion of costs and where access facilitates a speed of deployment not possible without such access.

Creating the possibility for any operator to move first creates its own dynamic. Even if the first operator to deploy in a given area does not ultimately engage in a large scale deployment, the real possibility that it could happen may, of itself, stimulate other operators to accelerate their investments in NGA. The FTTH Council fully believes that competition based on access to passive infrastructures and the ability to pursue independent deployment strategies is the best mechanism for ensuring mass market deployment in an appropriate and timely manner. Other remedies will be needed where only one infrastructure proves viable and indeed public intervention may be needed where no infrastructure proves viable, but it is competition which will push the general market forward. The public sector may also act as a catalyser which accelerates the roll out of infrastructure and which facilitates competition which can develop over that infrastructure.

The FTTH Council would also stress the need and importance of harmonisation in this respect. Cross border strategies by both incumbent and entrant operators will be an important element of European mass market roll-out. A regulatory approach based on consistent principles rather than outcomes, even where network topology or the level of competition may be different, is crucial in the FTTH Council's view. Clarity regarding regulatory interventions is best observed by comparison with other States and such clarity will lower risks and allow business planning to be done with far more confidence. Those whose networks will lead the migration to FTTH are doing so because of competitive pressures. Those network operators are compelled to make their investments irrespective of the regulatory regime to some extent. However, by observing regulatory practice in those Member States, operators for whom investing in NGA is a more marginal decision need to have confidence concerning the regulatory regime they will face. If regulation is another uncertain element in a business case it will undermine rather than help investment.

4. Indoor Cabling

One issue of particular concern regarding the coherence of regulatory approach concerns indoor cabling. Indoor cabling is an extremely important enabler of FTTH roll-out and potentially represents a real and persistent bottleneck to FTTH deployment. The FTTH Council is concerned that different regulatory mechanisms will be used across the EU to implement access to indoor cabling. Conflicting mechanisms to ensure sharing of indoor cabling risks creating uncertainty for market operators rolling out their networks and would hinder rather than help harmonisation across the EU.

Clearly, symmetrical remedies as in Article 12 of the Framework Directive will be very important in order to roll-out NGA, particularly in the context of in-building wiring. The Commission recognises this and indeed refers in the Explanatory Memorandum to mechanisms that could be used for asymmetrical remedies to have symmetrical effects:

NRAs could in such case allow SMP operators to refuse sharing new investments with alternative operators who, without due reason, do not agree to reciprocal sharing of commercially equivalent physical assets¹

This hints at the use of Article 7 remedies as a mechanism to achieve symmetrical remedies. However, in the Review of the Regulatory Framework currently under negotiation, the symmetrical sharing of basic infrastructures also appears to be the purpose of the Commission's proposals regarding Article 12 of the Framework Directive and the subsequent amendments proposed by the European Parliament.

There now appears to be two principle ways of dealing with the issue of indoor cabling.

First, national laws, in the spirit of Article 12 of the Framework Directive are adopted to ensure symmetrical sharing of indoor cabling without reference to market power criteria or the regulatory framework.

Second, the market analysis mechanisms in the Framework could be invoked to address a 'sub-loop' market which would include indoor cabling.

The problem of a lack of consistency can be seen when one considers that the French national law² requires sharing of indoor cabling at a concentration point, in principle located beyond the building. If this concentration point was to be 100 metres from the

¹ Explanatory Note Accompanying Document To The Commission Recommendation Of [...] On Regulated Access To Next Generation Access Networks (NGA), Page 13.

² Loi de Modernisation de l'économie, Juliet 2008

building it would start to look very similar to a sub-loop in a number of Member States with given network topologies. Basing such access on SMP remedies means that unless an endless number of geographically distinct geographic markets are defined, local monopolies where perhaps, individual buildings are fibred by an operator may often be exempt from an obligation to give access to its infrastructure. The Commission's proposal to give access selectively would create confusion in the FTTH Council's view and would make such access subject to considerable local discretion.

In any case, having two mechanisms to address the same problem runs the risk of creating confusion and encouraging a lack of harmonisation. In addition, the administration of Article 7 remedies and the administration of Article 12 in national law may not be conducted by the same bodies creating additional co-ordination problem.

The FTTH Council believes that competition within buildings is not viable (and possibly for some distance from the end-user depending on density as discussed further below) and that it does not make sense to promote competition to replicate fibre infrastructure within the building. Nevertheless, the Commission should require Member States to ensure that national building codes require significant over-provisioning of fibre by the first party to fibre a building so that these fibres could then be shared. Such over-provisioning will be necessary to some extent anyway and it will be a key enabler for the provision of future services.

The FTTH Council is convinced that the Commission should propose one solution to the problem of indoor cabling and that solution should be based on symmetrical remedies. These symmetrical remedies could be based on the Framework Directive (Article 12) but given the urgency of this issue, the Commission should encourage Member States to consider national laws with the same effect. The Commission should strongly promote mandatory pre-cabling for new buildings and over-provisioning of fibre in buildings and a harmonisation of a technical implementation for pre-cabling across Europe.

5. Gradation of Remedies and geographic aspects

The FTTH Council believes that the gradation of remedies approach proposed by the Commission is not only correct but is the key to a successful roll out of NGA for all European consumers. The FTTH Council recognises that there are likely to be large differences in the possibility for network competition between densely populated urban centres, sparsely populated rural areas and the areas in-between. The FTTH Council believes that there is likely to be competing networks in urban centres, that there may be no FTTH network in rural areas without public support and that there may be very limited competition on fibre networks in-between.

The FTTH Council does not believe that there is any possibility for competition within buildings (and indeed possibly for some distance from the end-user depending on density), nor does it see any benefit from trying to promote such competition. The FTTH Council believes that this short but crucial element in the fibre solution should be addressed by building standards which require over-provisioned pre-cabling of all buildings to a European technical standard. The fibre can then be shared on a symmetrical basis between all operators with their own network up to the building and for some distance from the building depending on whether densities and other factors make more than one network viable close to the building.

Where physical infrastructure competition is likely to be possible, or is potentially possible, this should be the first solution chosen and promoted by the regulator. Facilitating competition by making passive infrastructures available promotes infrastructure competition where multiple fibre networks may be deployed and may create a race to invest between operators where operators believe only one network will be viable.

Making non-replicable passive infrastructures available on regulated terms creates the opportunity for any operator to initiate a network deployment starting a dynamic which may stimulate other operators to make their own investments in NGA, competitively, or pre-emptively if only one network may be viable.

Where access to ducts for the deployment of a physical network is not possible for clear and justifiable reasons but spare fibre capacity exists, access to the dark fibre should be possible on regulated terms if necessary. The FTTH Council believes that operators will often have an incentive to enter long term contracts to share the risks of deployment and in these circumstances, regulation may not be necessary.

The FTTH Council fully acknowledges that there is a need for other forms of access competition when full physical access competition does not support multiple networks

or the commercial sharing of a single network. However, as discussed in section 6, there is clearly a trade off to be made since the more readily available WBA access products are, the better the quality of these products, and the more attractively they are priced then the less end-to-end infrastructure competition there will be.

A WBA product which is too readily available runs the risk of undermining the benefits of physical infrastructure competition. This is particularly important in the short term when the limits of infrastructure competition will be tested.

The FTTH Council believes that it is important to enable the existing level of competition to stay in the market. The FTTH Council believes that this can be achieved by ensuring that the existing or equivalent regulated WBA access products continue to be made available to access seekers in order to support a continuation of existing services.

However, the FTTH Council believe it would be a mistake to allow regulated access on the entire capacity of the new fibre investments via these WBA products too readily, because of the negative impact such access will have on infrastructure competition and thereby on the pace of deployment.

The gradation of remedies should harness the market dynamic that accelerates the roll-out of networks. The FTTH Council endorses the use of the three criteria test as the appropriate mechanism to indicate if regulation may be warranted because it is triggered not so much by timing but by the prospects for competition.

In those areas where public support is required to ensure a FTTH network is deployed, access remedies should be imposed from the start. Access remedies should be mandated in these circumstances in a form which supports competitive access in terms which are specified at the time that the financial support is given.

The management of network competition in the way proposed by the gradation of remedies requires an assessment by the NRA of where, geographically, infrastructure competition ought to be viable and where it is unlikely to be viable. This is an issue which is linked not only to geographic factors such as population densities etc. but also to a temporal factors as operators need time to roll out their networks even where such network competition is viable.

The FTTH Council observes that the draft Recommendation provides very little guidance on sub-national markets and that more guidance would help. There may be a feeling that it is too early to take a decision on geographic markets. There is already some experience of operators building networks on a street by street basis and of competing operators avoiding each other, street-by-street. Taking a decision in such circumstances on what constitutes a relevant geographic market may be prone to errors.

Nevertheless, NRAs have been examining sub-national markets in more developed product markets and the Commission has been taking a view on those market analyses.

The FTTH Council believe that the recent decisions regarding what is the current market 5 could tell us something about the likely range of FTTH³. This is a route the Commission should explore. For example, if the Commission believes that it is unlikely that end to end competitive access infrastructures will get built beyond the current scope of ULL, where ULL processes are working well and have had 5 years or more to develop then that would be a valuable data point for regulators. Another possible delineation concerns areas where State Aid has been permitted as those areas are almost by default areas which are part of a separate geographic market⁴.

In the alternative, if the Commission is not confident it can give advice regarding the scope of geographic markets as part of the analysis, the FTTH Council would invite the Commission to indicate its view on NRAs' ability to apply different remedies in different parts of a national market. The conditions of competition have been markedly different within certain Member States which have found a national market but put different remedies in different geographic parts of that market⁵.

NRAs need guidance from the Commission which focuses their attention on where they can have maximum impact with a set of remedies in those areas where infrastructure competition is potentially possible and another set of remedies where infrastructure competition is not possible.

The FTTH Council asks the Commission to clarify the application of the gradation of remedies and give more guidance on the issue of geographic markets.

³ UK/2007/0733, AT/2008/0757

⁴ State Aid approval implies that the market cannot deliver the infrastructure whereas in the general market, competition is presumed.

⁵ AT/2008/0757, ES/2008/0804-0805

6. Wholesale Broadband Access.

The FTTH Council believes that end-to-end network competition must be the preferred solution to ensure rapid deployment and take up of NGA, however such competition is unlikely to be universal given the economics of network deployment. Within Member States it is probable that there will be areas with multiple NGA networks, areas with only one NGA network and areas where, absent public intervention there may be no NGA network.

The FTTH Council fully acknowledges that there is a need for other forms of access competition when full physical access competition is not available. However there is clearly a trade off to be made. The more readily available WBA and its successors are, the better the quality of these products, and the more attractively they are priced then the less end-to-end infrastructure competition there will be. This is particularly important in the short term when the limits of infrastructure competition will be tested.

The first observation that the FTTH Council would make is that there is a lack of clarity on when WBA ought to be available on regulated terms. It seems to be available straight away under the FTTN scenario set out in the Recommendation but since it is not under the FTTH heading, it is not clear if it is envisioned to be available or not from the initial regulatory intervention. Rather than deal with this issue in two places, the FTTH Council ask that it be dealt with under FTTH rather than under a separate heading.

The issue of regulated WBA prices has a profound impact on the operation of the retail market and goes to the heart of operators' incentives to deploy NGA. The pricing of regulated WBA sets a basis for retail pricing both for those products based on WBA and more broadly in relation to NGA operators' ability to price retail products. The FTTH Council believes firmly that successful deployment of NGA depends crucially on operators' ability to extract a level of value from their customers rather than a rate of return that somehow allows them to recover some mark-up over cost. This is true for all operators, network owners and access seekers alike.

The FTTH Council believes that there is a need for there to be more flexibility to price retail products to capture the value of early adopters whilst also serving regular broadband users. Only by price differentiation amongst the different categories of users and extracting the value under the demand curve will operators have sufficient incentives to make the investments in fibre that are needed. The FTTH Council recognises that there is a need to ensure adequate third party access at a competitive access price. This access needs to be done in a way that preserves the flexibility of all operators to price retail products in a way that allows maximum value to be extracted from end users. This retail pricing freedom is vital to ensuring rollout of NGA infrastructure.

One question the FTTH Council has asked itself is whether the WBA product is too readily available in this draft recommendation. Clearly, such a remedy being too readily available, being ‘too good’ or being priced too cheaply will have a very negative effect on network roll-out incentives for potential infrastructure operators. While raising the threshold for WBA remedies may help network deployment, clearly there will be a long term need for WBA if there is to be access competition. The issue of pricing and pricing flexibility is a fine line where there needs to be balance. The FTTH Council is concerned that one sentence of guidance on WBA pricing is not sufficient in and of itself.

The Commission in its Recommendation on Relevant Markets⁶ has suggested that physical and virtual access markets could merge under certain conditions. The FTTH Council is concerned by this suggestion and believes that beyond an ‘academic’ assessment of the market a more comprehensive view should prevail, one which keeps the pre-eminence of infrastructure competition at the top of the Commission’s agenda. If the deployment of physical access networks becomes very difficult or virtually uneconomic (for instance in the case of unbundling at a fibre concentration point in, or very close to the building) whilst at the same time the successor to bitstream access becomes ‘super-charged’ then naturally many operators may be prepared to switch between these two access products. Such switching is not ‘real’ demand substitution since the different product characteristics remain fundamentally different⁷. However, to send a signal now that these products are substitutes would have a very negative impact on the incentives of access seekers to invest in their own physical network, built or rented. The FTTH Council therefore believes that the Commission should take a firmer position on the primacy of physical access and the non-substitutability of virtual access.

It is important to enable the existing level of competition to stay in the market and this can be achieved by ensuring the regulated wholesale access products support the continuation of existing services. However, the FTTH Council believe it would be a mistake to allow regulated access on the entire capacity of the new fibre investments via these virtual access products before the market has matured given the negative impact such access will have on infrastructure competition.

The FTTH Council are concerned that some NRAs may view physical infrastructure competition as unlikely and rely only on WBA access products. Other NRAs will follow the spirit of this Recommendation and test the limits of physical infrastructure competition and only use WBA products to give access outside those areas where infrastructure competition is not possible. This result will obviously be bad for harmonisation across the EU and create uncertainty in the minds of investors and it

⁶ Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Revised version).

⁷ It draws comparison to the classical cellophane fallacy test.

will, in the FTTH Council's view, lead to a slower rollout of NGA in those countries which rely only on virtual access products which is bad for the sector as well as all end users including business users.

The FTTH council believe that the Commission must ensure an appropriate and consistent use of these remedies so that no Member State prematurely forsakes the possibility of real infrastructure competition.

7. The need for an overview document.

The lack of coherence regarding the treatment of indoor cabling described in section 4 above brings the FTTH Council to a broader concern. The FTTH Council is conscious of the fact that there are a number of recent publications by the Commission which deal either directly or indirectly with NGA roll out. With so many Communications and public consultations it can be difficult to develop an overall understanding of what the Commission's vision is for NGA and how it can achieve that vision. The FTTH Council proposes two solutions to this issue.

First, there is an urgent need for this Recommendation to clarify the application of Article 7 remedies in the area of NGA investments. Once this Recommendation is completed the Commission should consider preparing an overview document which brings together all the different messages together in a single document which clarifies how all the different elements sit together. The NGA Recommendation is not the correct place to give such an overview and furthermore it would be a setback for the market if there was any delay in bringing forward this Recommendation. The 'Article 7' remedies as they are often known are a very important element in ensuring effective competition in markets and ensuring static and dynamic economic efficiency. However, these remedies are by no means the only mechanism for facilitating the competitive roll-out of competing NGA infrastructures.

The example of indoor cabling is one very serious example of potentially conflicting messages being sent to NRAs from different initiatives (the Review and this Recommendation) by the Commission.

Another example of significant overlap is the 'Communication on future networks and the internet'⁸ which discusses NGA in a broader context. This Communication was launched before this consultation has even closed and it has a lot of advice on dealing with infrastructure sharing directed at municipalities and suggests stakeholder fora as a mechanism for co-ordination. Clearly, the i2010 initiative will have to be updated simply as a practical matter as 2010 rapidly approaches. Furthermore, there is an ongoing consultation from the Commission on the Internet of Things which deals with the '*political and technological issues related to the move from RFID and sensing technologies to the Internet of Things*'⁹ and has clear relevance and implication for NGA in a broader context.

Taken together, the Commission must recognise industry's concern at a lack of coherence in the approach to NGA. The Commission needs to reassure all stakeholders that there is an overall vision which looks at both the demand enablers

⁸ Communication On Future Networks And The Internet {Sec(2008) 2507}{Sec(2008) 2516}

⁹ See

http://ec.europa.eu/information_society/tl/activities/consultations/index_en.htm#open_consultations

for NGA based services as well as the mechanisms to ensure those networks are delivered in an appropriate way.

Second, the FTTH Council asks that the Commission revisit its State Aid guidelines to give clarity on the position regarding State interventions. The Commission makes a number of assertions in the Communication on future networks and the internet and it is clear that in recent years there have been a large number of State Aid decisions in the area of NGA networks. It would help all parties to understand clearly in a coherent document what the Commission's view regarding State Aid as applied to NGA is. The market needs to understand where State Aid might be applied in the future and if State Aid is applied, what conditions are likely to attach to this State Aid. The Commission does periodically issue guidelines regarding the application of State Aid in certain areas and the FTTH Council believes it would be timely to issue such Guidelines in an NGA context.

8. Transition and Migration Issues

The FTTH Council believes that migration issues are going to be very important in achieving a transition to NGA which does not remove competitors and choice from the market but still preserves firms' incentives to make the necessary investments. The FTTH Council believe that the European Commission should give real and concrete guidance on how to manage these transition issues and calls on the Commission to give far more clarification on what needs to be done in specific circumstances.

In particular, more guidance should be given with regard to legacy obligations such as Carrier Pre-Selection (CPS) or wholesale line rental (WLR). There are circumstances where it may be that for operational reasons, firms need to invest in copper networks even for new build in order to deliver these and other legacy obligations. In this situation, firms will often choose to invest only in copper especially where the development is small. The FTTH Council believes that certain Regulators¹⁰ have adopted a more pragmatic approach where the basic problem is considered and a sensible, fibre based solution, is identified. The Commission needs to give clarity on how these sensitive issues can be dealt with in a way which does not impede fibre deployments wherever new build is taking place.

Co-ordination issues are likely to be very important for operators deploying NGA. The very act of sharing duct creates enormous co-ordination issues between operators who may wish to roll-out their networks either simultaneously or successively. The Commission should give advice on how NRAs should manage these processes or at a minimum, indicate a path to the creation of useable practical processes perhaps through the identification of best practice. Without being clear on co-ordination and migration/transition issues NRAs cannot be credible in seeking to encourage build and share projects.

The Commission also raises the subject of copper decommissioning in its draft Recommendation. Copper decommissioning is a complicated and difficult topic to address. Europe is at the start of a progressive roll out of fibre and the FTTH Council believes that now is the time to start a debate about this topic and consequently the FTTH Council calls on the Commission to start a dialogue with NRAs and industry players on the issue of copper decommissioning.

¹⁰ For example Ofcom's approach at Ebbsfleet.

9. Pricing Principles for Passive infrastructure

The FTTH Council believes that the Commission's approach to duct and passive infrastructure access pricing is sensible. The proposed treatment of historical ducts whereby historical costs would be used in an effort to minimise costs for infrastructures (which are normally fully depreciated) should tend to encourage investment. The FTTH Council believe that the Commission should encourage NRAs and all stakeholders to be creative in the search for ways to lower the costs associated with civil infrastructures. The FTTH Council can also endorse the proposal that the treatment of new ducts built for NGA deployment should be different.

The basis for this proposal is fundamentally sound; clearly investors in new infrastructures need to be reassured that they will be in a position to get a return on these investments which is commensurate with the risk being undertaken. Operators should also be encouraged and incentivised to build larger rather than smaller ducts so volume based pricing looks appropriate to the FTTH Council. However, if the Commission is committed to seeing this approach implemented it must recognise the enormous body of work that will lie behind it. This is a project which would not be less complicated to implement than the original development of Unbundling of the Local Loop which took a number of years to make operational. While clearly there has been a lot learned from the experience of putting ULL pricing and processes in place, the task being faced by Regulators should not be underestimated. The Commission needs to give more definite guidance on how it sees this task being implemented.

For instance, the Commission needs to clarify what constitutes 'new build' as opposed to maintenance of existing infrastructure and how such delineation would be managed and made operational by National Regulators. Regulators' accounting systems and more importantly the accounting systems of the operators themselves are unlikely to support such an analysis today. A route by route analysis of the networks of incumbent operators does not look feasible or practical based on an initial observation. The Commission could give guidance on how such pricing mechanisms could work in practice, what sort of data would be required from investors and what model could be used by regulators for setting their pricing. There is of course a need to ensure consistency with previous pricing practices, in particular the treatment of these assets in ULL pricing.

The FTTH Council asks that the Commission give guidance on these issues. If the Commission feel that this Recommendation is not the appropriate place for such detailed operational guidance, the FTTH Council asks that the Commission acknowledge the issues and indicate a way that they can be addressed. This could take the form of an ERG working group or some other mechanism which could address these and other operational issues.

10. Transparency and risk sharing

The FTTH Council believes that transparency is another enabler of investment. That transparency will take many forms including the operational details concerning migration processes from one infrastructure to another as well as the terms and conditions which attach to these products.

National Regulators need to ensure that all operators in the market are clear on how networks will develop as soon as it is known, so that the process of migration can be managed. Clarity on the conditions that will attach to the new network will enable business plans to be developed which allows the migration to be initiated.

In the FTTH Council's view the Commission is correct to seek detailed specification of the remedies which will apply. Experience with ULL would suggest that the more detailed the offerings, the more likely they are to be successful. The FTTH Council therefore endorses the view that there is a need for a clear reference offer concerning NGA products.

The FTTH Council is concerned however, that the extent of transparency currently in the market differs wildly with some Member States having a detailed overview and discussion between all the parties on how the network will develop while other Member States have a much less transparent situation, often citing a lack of legal basis to collect the relevant information.

It is not clear to the FTTH Council whether the proposals from the Commission are strong enough to ensure that this gap is closed and that there is a common approach to transparency.

While transparency would help clearly migration and deployment projects generally, it could be central to enabling build and share type projects. The FTTH Council believes that there are strong incentives for all parties to co-operate on network rollout as a means to minimise and distribute risk.

The FTTH Council believe that insufficient emphasis is placed on commercial negotiations as a solution to the problems which may arise on these markets. At the current stage of development of these networks all parties face uncertainty regarding network deployment and the ability to sell value added services to recoup that investment. Added to these fundamental business risks are uncertainties about competitor behaviour and the regulatory regime that may or may not be applied in the future. The cost of deploying additional fibres is marginal once a decision has been taken to deploy the initial fibre. Many network operators will recognise their ability to distribute network deployment risks and engage in real and meaningful risk sharing through build and share projects. Already in a number of countries using the EU regulatory regime, traditional SMP operators are discussing such build and share projects on purely commercial grounds with their competitors. The form of these

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agreements can be very varied from joint investment and ownership to looser long term rental for certain infrastructure elements.

The FTTH Council believe that this is an area where the Commission should give more guidance to Regulators on what conditions might be acceptable or what conditions would not be acceptable. The Commission could give more information on what might constitute best practice for initiating such discussions and ensuring they are completed within an appropriate time-frame.

11. Other non-SMP Issues

The FTTH Council is concerned that there are a large number of related issues that are not addressed in this document but which will have a profound impact in terms of NGA rollout. The FTTH Council understand that the Commission wish to address only SMP remedies with this Recommendation but the FTTH Council suggests that many of these issues are interrelated and are worth addressing.

State Aid is being used to deploy network in those areas where NGA would not otherwise be built. Many local authorities on the borders of such regions have concerns to understand what their capacity to build or assist the building of NGA is.

Public finance has also been used in areas where market conditions suggest that NGA would be built by the private market. The financing of some of these projects has been classified as State Aid and prohibited. The financing of other projects has not been classified as State Aid and therefore not in need of approval by the Commission. Collectively this creates uncertainty for investors.

The FTTH Council asks that the Commission issues guidelines on the application of State Aid rules in the area of NGA investments.

The requirements of building regulations in terms of minimum conditions for indoor cabling (mandatory pre-cabling and over-provisioning) and indeed for a point of concentration for such access or access facilities to new buildings is an essential enabler for the application of either SMP or non-SMP remedies.

Similarly, town planning requirements can be a facilitator or indeed an inhibitor of SMP and non-SMP remedies in an NGA context. The labelling of buildings in Korea regarding NGA status has proved a major incentive for landlords to upgrade their building's networks.

The FTTH Council believes these issues deserve comment from the Commission on what best practices should be or how the different bodies could be co-ordinated.

12. Conclusions

The FTTH Council believes that the overall direction of this Recommendation is fundamentally sound. However, the FTTH Council is concerned that with so much activity in this area by the Commission there could be confusion in the market. An overview document which sets out the Commission's vision of NGA and puts this document in context is a prerequisite for clarity.

The FTTH Council believe that the future needs of end users in terms of capacity can only realistically be met on FTTH networks and this should be a core element of the Commission's vision.

The FTTH Council believes that competition based on access to passive infrastructures and the ability to pursue independent deployment strategies is the best mechanism for ensuring mass market deployment in an appropriate and timely manner. Creating the possibility for any operator to initiate network deployment creates a dynamic whereby the potential for such a deployment may stimulate other operators' investments in NGA.

In terms of specific comments on the Recommendation itself, the FTTH Council calls on the Commission to incorporate the following FTTH positions in the final draft of the Recommendation on NGA.

- the FTTH Council call on the Commission to base the sharing of indoor cabling, up to and including the fibre concentration point on symmetrical remedies and not on Article 7 remedies. The Commission should advocate the adoption of national laws which would reflect the proposals in the new Article 12 Framework Directive.
- The Commission should strongly promote mandatory pre-cabling for new buildings as well as harmonising the technical implementation for pre-cabling across Europe.
- The Commission should strongly promote the over-provisioning of fibre in all buildings.
- The Commission should specify how legacy obligations can be met on NGA infrastructure to avoid new copper deployment.
- The Commission should place more emphasis on the role of commercial negotiations in network deployment and give more guidance to Regulators on how they can facilitate the sharing of risk between the operators.

In addition the FTTH Council ask that the Commission clarify a range of issues in the final Recommendation on NGA

- Clarify the issues regarding WBA access remedies and how readily available such remedies should be.
- Clarify operators' ability to price differentiate at the retail level with corresponding WBA products as appropriate. Without the ability to effectively price discriminate at the retail level, operators will not have the incentive to invest.
- Clarify the Commission's position on geographic sub-markets and/or Regulators' ability to apply different remedies in different geographic areas.

Finally the FTTH Council ask that the Commission recognise that a number of difficult longer term issues need to be addressed and calls on the Commission to initiate a dialogue amongst all relevant stakeholders on these issues.

- When and under what conditions copper switch off would take place,
- How copper decommissioning will be managed in the future.

List of Acronyms

FTTH:	Fibre to the Home.
FTTN:	Fibre to the Node
NGA:	Next Generation Access
WBA:	Wholesale Broadband Access
SMP:	Significant Market Power
ULL:	Unbundling of the Local Loop
WLR:	Wholesale Line Rental
CPS:	Carrier Pre-Selection
xDSL:	Digital Subscriber Line. ADSL is Asynchronous DSL VDSL is Very high speed DSL