FTTH Council Europe
Reply to
ERG Consultation on Regulatory Principles of NGA (ERG (07) 16)

1. Introduction

The FTTH Council Europe[1] is a unique industry structure uniting 70 European companies that together supply the full value chain of fibre access deployments, from components to content, from civil works, fibre layout to active optical networks. The Council defends and promotes the European citizens' quality of life (economics, social interest, administration, health, education and leisure).

Access NGN involves deployment of fibre deeper in the network with the ultimate target for mass-market fibre-to-the-end-user (FTTH/FTTB) for all wireline subscribers. As we are in the early phase of deployment, the Council sees the ERG's Consultation as an opportunity to identify the barriers and propose solutions in order to ensure the promotion of investment while protecting competition and eliminating regulatory uncertainty. As such, the consultation complements the Review of the EU Regulatory Framework.

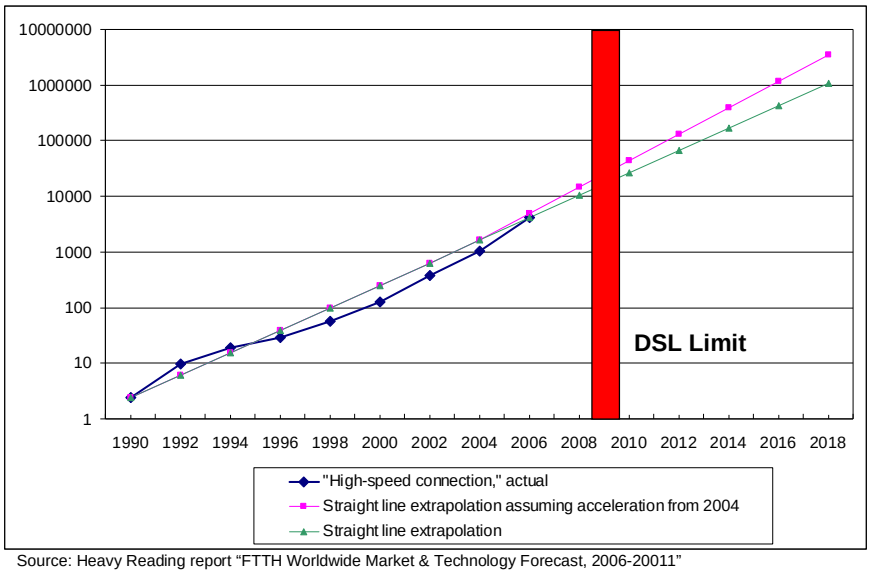
The major concern for the FTTH Council in Europe today is "how to secure investment" in next generation access based on fibre, based on the following observations:

1. Next generation wireline access based on fibre is ready for mass-market deployment. Technologies are now mature, standardized and being deployed throughout Europe and the world. Prices are dropping drastically.
2. Next generation access policy and regulation should distinguish between competitive conditions in "market driven" urban areas, "investment risk" suburban and business areas, and "policy driven" remote or under-served areas.
3. In multi-operator, multi-access technology wireline environments, surplus provisioning of ducts as general practice, and pre-cabling of dark fibre in underserved areas, greatly reduce the cost of civil works.
4. Very high-speed broadband offers will be based on new approaches to customer billing and terms for Quality of Service guaranteed to end users.
5. The regulatory framework applicable to such innovation should take into account the emergent nature of new service markets (based on 100 Mbs symmetrical or more), and the high levels of upfront CAPEX required from the private sector.

Governments should build ambitious public policy in order to encourage deployment of next generation access networks with "very high speed" broadband for all. Public investment in passive infrastructure (trenches, pipes, ducts, manholes and shelters) should be increased significantly in order to lower the cost of civil engineering, and facilitate private investment in optoelectronic infrastructure (Fibre to the Home/Building). Some form of public policy is necessary to extend next generation access to high risk, underserved areas and to compensate isolation by service quality communications where most needed.

[1] http://www.europeftthcouncil.com/

Trend for access bitrates : exponential growth



Source: Heavy Reading report "FTTH Worldwide Market & Technology Forecast, 2006-20011"

2. The need for a vision

While the Internet backbone and some large businesses have been fitted with ultra high speed fibre optics, the last mile to consumer residences and SMEs remains constrained by low bandwidth capable copper pairs, coaxial cable, and limited wireless spectrum. The present Regulatory framework should promote the emergence of next generation access infrastructure (NGA). Unfortunately, it does not provide clear incentive, guidance or paths for the necessary large-scale investment. From a process point of view, the current Regulatory framework is unable to predict the regulatory treatment of FTTH and consequently is not encouraging new end-to-end fibre investments.

As recognized by the ERG in its document, business cases related to the deployment of FTTH vary considerably between the geographical areas. Infrastructure competition is probably unlikely to emerge throughout the full length of the value chain and/or in the entire geographical area. Therefore, there is no one-size-fits-all solution. Nevertheless, a combination of policy and regulatory support can create the incentive to deploy FTTH on a much larger scale.

Most of the current discussions in Europe are limited to VDSL options partly as a result of the regulatory uncertainty surrounding FTTH deployments. In the meantime, significant investments in FTTH are already taking place in North America and Asia, while in Europe we witness only small-scale plans, the majority of them being at the municipal level.

3. Infrastructure vs. service competition

The current Regulatory Framework for electronic communications aims to provide certainty to investors, increase competition, consumers' choice and stimulate innovation and efficient investment in infrastructure to the benefit of the European consumers.

To meet these ambitious objectives, the Framework relies extensively on broad objectives and high-level regulatory principles instead of clear and precise rules, thereby leaving large discretionary power to the national regulators. This is not a problem as such for a sector evolving rapidly. However, the wording of the current directives allows for regulatory approaches that can vary considerably between Member States. The current Directives hide several policy conflicts that make their implementation difficult to predict. This raises the more "ontological" question of the role of the Regulators; should they act as mere economic regulators or as active industrial policy makers?

The Framework Directive[2] provides for three broad policy objectives to be followed by the NRAs: (i) sustaining an open and competitive European market for communications services in order to provide a better deal for the consumer; (ii) consolidating the internal market; and (iii) benefiting the European citizen by ensuring affordable access to universal service and a high level of data protection and privacy.

Taken individually, these principles leave much room for interpretation. A classical debate is to determine if regulation should promote infrastructure (facilities-based) competition or services (access-based) competition. The Directives do not provide a clear indication on how to decide between the conflicting positions. It may be argued that the accompanying soft-law instruments are tilting the balance in favour of infrastructure competition but that is not definitive.

The current Recommendation on relevant markets notes that[3]: "The aim of the new Regulatory Framework is ultimately to achieve a situation where there is full infrastructure competition between different infrastructures. This can occur within or between platforms. Regulation mandating access to existing networks serves as a transitional measure to ensure services competition and consumer choice until such a time as sufficient infrastructural competition exists". Regulation should aim to promote infrastructure competition where possible with access prices safeguarding investment incentives because it is a type of competition that is self-sustaining and may lead to a complete removal of sector specific regulation. Services competition should only be relied upon when facilities-based competition is not possible or as a transitory step towards facilities-based competition. However, the hard-law and the current soft-law leave a great deal of discretion to the NRAs to pursue their own regulatory approaches.

A related issue is to determine if and how sector regulation should promote entry. In particular should regulation only favour entry of operators that are as efficient as the incumbent or also facilitate entry of operators that are less efficient than the incumbent? Should the efficiency of a new entrant be assessed as if they were enjoying the same economies of scale and scope as the incumbent (which will rarely be the case) or should it be assessed without such economies? Similarly, as the centre of gravity between competing operators moves to more direct

[2] Article 8 of the Framework Directive
[3] Explanatory Memorandum, p.25.

competition between application-based vs. facilities-based market players, to what extent does the notion of efficient investment still apply? The Directives are fairly silent on such issues. The alignment of the SMP concept with antitrust principles may suggest that the regime is limited to favour entry of equally efficient firms. However, an alignment of methodologies does not automatically imply an alignment of objectives. More precise indications should be looked for in soft-law instruments (Recommendation, the Common Position on Remedies) but they do not provide an explicit answer. Additionally, it is interesting to note that the ladder of investment concept has not been proposed by the Regulatory Framework but has been promoted by a number of NRAs.

These uncertainties and unresolved policy questions lead to very different regulatory approaches across Europe, while at the same time all of them can remain compatible with the EU regulation because it does not prioritise between the objectives/rationale that the NRAs should bear in mind when intervening. In other words, this situation offered to each NRA the liberty to regulate more or less the different rungs of the ladder of investment without always taking into account the necessary prioritisation between them. Europe allows[4] the development of different regulatory approaches leading indirectly to different industry policies.

For instance, to deal with the pervasive domination of the incumbents in the local loop, a NRA may be very interventionist and impose access obligations at several layers of the network. On the contrary, some NRAs may be less interventionist and focus mainly on cost oriented access at the copper level and at the bitstream level. Consequently, the liberty of each NRA to regulate more or less the different rungs of the ladder of investment leads Europe towards a lack of harmonisation. The major unexpected consequence is the apparition of industrial policies without having measured their economical impact.

Obviously, with the development of the complexity of the market, this vision becomes more difficult to set-up. However, it is of the utmost importance that the Commission and the ERG indicate clearly the direction Europe should take and the type of competition Europe needs. It is even more critical today to deliver this vision as it will determine the future NGN/NGA environment. The decisions that will be taken will determine the shape of the future networks.

4. Cut red tape and contribute to the vision

Improving the quality of regulation can significantly spur growth in the EU economy and business. Therefore, the Commission intends to ensure that the regulatory environment is simple and of high quality (i.e., producing efficient market competition benefiting both end-user prerogatives and incentives for investment).

It is the development of facilities-based competition (as opposed to service based competition) that is key to enable the removal of ex-ante regulation at the earliest opportunity (cut red tape).

[4] The Article 7 procedure is a key harmonisation tool. However, it has demonstrated its limits and did not impeach different regulatory strategies (and consequently industrial policies) in countries having similar technical-economic situations. This demonstrates the need for guidelines before starting the market analysis (ex-ante) and leaving to the article 7 procedure its ex-post role.

Up to 80% of the overall cost calls for up to 80% of policy and regulatory attention. Bringing down he costs of passive infrastructure and resolving the complexity of cabling the private domain should be high on the Vision's agenda.

The ERG should first define and communicate how it intends to balance the infrastructure competition vs. the service competition taking into account the regional competitive differences and the ladder of investment. In a second stage, where infrastructure competition needs to be promoted, the ERG should ensure that regulation is kept at the deepest level.

There is a danger that maintaining the current approach will not provide sufficient certainty and may indeed delay the required upfront investments. Europe will remain with a strategy that is built on a case-by-case basis rather than a holistic view. The current Consultation is a clear opportunity for the ERG. The remainder of this document will therefore focus critically on this required balanced approach.

5. The general approach in the ERG consultation

The FTTH Council agrees with the ERG's general approach. We would like to emphasize that investments in FTTx are long term, very capital-intensive investments, FTTx cable plants are expected to last more than 20 years. This very long-term investment profile requires that the conditions for investment and deployment are clear and well-known from the start.

6. Relevant roll-out alternatives for NGA

The FTTH Council agrees with the ERG that the most effective strategy for NGA deployment will likely utilise a mixture of different technologies. The choice of architectures is determined by business models, national regulatory constraints, elements like copper local loop lengths, availability and quality and of copper and ducts, end-user density and competition in particular markets. The Council agrees that the main scenarios are likely to involve Fibre to the Cabinet and Fibre to the Home/Fibre to the Building, but in the long term, FTTH/FTTB will be the sustainable solution.

Many different network infrastructure deployment options exist when planning and building an FTTx network. The FTTH Council has published a paper which aims to describe the different options for fibre networks, as well as provide an overview of infrastructure deployment technologies, common network materials and network infrastructure planning, operation and maintenance guidelines. This document is available at: http://www.europeftthcouncil.com/extra/Infrastructure_/WhitePaperFTTHInfra_DEF.pdf.

7. Economics and business case studies

We believe that the following main factors determine the type and extent of investment in next generation Networks:

- Rights of way data, conditions, constraints (fees, availability, accessibility…)
- A business case with clearly defined geographical coverage, service offering matching RoI constraints,
- A broadband multiplatform market competition analysis (comparable broadband offers over legacy / wired or wireless access, cable and municipal networks).
- An investment plan regarding passive infrastructure (trenching/manholes, cable, cable pulling/blowing, drop end cabling, indoor cabling),
- Active equipment costs (metro node, access node, distribution node line termination equipment / CPE)

The FTTH Council would like to emphasise that fundamental differences exist between investment profiles for passive infrastructure, active infrastructure and retail service markets.

8. Regulatory implications and the evolution of the ladder of investment

The FTTH Council agrees with the ERG's approach which emphasizes the importance of promoting infrastructure based competition (p. 23) and recognition that regulated prices that owners of non-replicable assets can charge should allow for an appropriate return of investments (p. 24).

The Council is of the opinion that in the case of new investments in NGA, regulation should aim to promote infrastructure competition wherever possible with access prices safeguarding investment incentives because this will lead to self-sustaining competition and has the potential to lead to a complete removal of sector specific ex-ante regulation (reduce red tape). Furthermore, these measures should promote the immediate and wide scale NGA investment which is required. Services competition should only be relied upon when facilities-based competition is not possible or as a transitory step towards facilities-based competition. In other words, the ladder of investment concept should apply on a market basis and not on a per operator basis.

The Council advocates taking a holistic approach regarding investments in new infrastructure such as FTTH. The Council emphasises the significance of utilizing the regulatory option embedded in the EU regulatory framework, but not yet used to any extent, of distinguishing "geographical areas" that have achieved different levels of competition. Such distinction is especially relevant to the case of broadband markets where competition is both facilities as well as service-based, and in the light of the very high upfront investments required to deploy next generation broadband wireline access. The business case for next generation access networks varies considerably between areas where investment is by definition "market-driven", "policy-driven" or a mix of both i.e. representing a high degree of investment "risk". This illustrated in Figure 2.

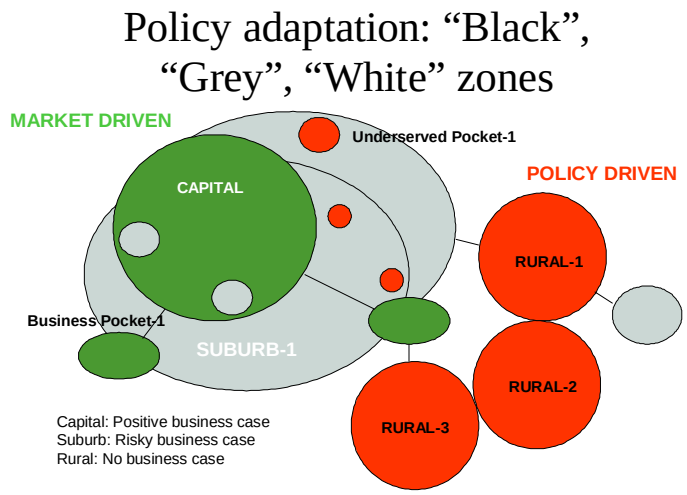


Figure 2 Policy adaptation

- In market-driven (green areas, where there are already multiple infrastructure based access platforms, the application of competition rules should in principle be sufficient to ensure an effective competitive environment. In Europe, this is true for some capitals and the centre of major metropolitan or large business areas.

- At the opposite, in the policy driven areas (red) it is already obvious that no spontaneous private sector investment can be expected, even in the long-term, due to mere return on investment constraints (e.g. such areas often lack broadband coverage). In such cases, the Council requests greater public recognition of the immutable nature of such non-competitive geographic areas, and the urgent need to implement public action and funding in order to bring next generation access to those isolated citizens and communities who could most benefit from it (best in grade communications). This point is key for the i2010 initiative in reaching social inclusion and bridging the digital divide, as for example discussed at the "Bridging the Broadband Gap conference: Benefits of broadband for rural areas and less developed regions", held on 14 and 15 May 2007.

- Between the market-driven (green) and policy-driven (red) areas, large geographical areas subsist, representing grey areas. In such areas, incumbents face regulatory uncertainty like the threat of general ex-ante regulation that may significantly damage their business case, while the alternative operators are facing the incumbents’ high sunk costs in physical infrastructure. As a consequence, investment is not taking place, or at a very low scale. Such areas require a combination of policy push (incentives to invest) and a cautious ex ante regulatory approach (investment visibility).

The definition of Market 12 would appear to continue to be appropriate to NGA deployments although we believe that it will be necessary to carefully consider the impact of any regulatory proposal on an operator’s return on investment and that cost oriented pricing is unlikely to be appropriate for NGA investments.

Moreover, the Council believes that the principle of technology neutrality needs to be revisited in the wider context of NGA. There will be new, different ways to ensure end-to-end connectivity, and the change in scope of access network planning to meet new economic and technology criteria will impact where fibre resources could be shared, and where they could be unbundled.

9. ERG conclusions

As described above, the FTTH Council welcomes the ERG document as it provides a useful overview of current thinking. We agree with conclusions that many different scenarios are likely to develop and there are no one-size-fits-all policy solutions. The FTTH Council calls for a well-balanced approach between ambitious next generation broadband policy and reasoned regulatory measures that will give certainty, visibility and attract all potential stakeholders, while progressively absorb the tremendous upfront costs for fibre in access.