

Public Consultation

**DRAFT COMMISSION RECOMMENDATION ON
REGULATED ACCESS TO NEXT GENERATION
ACCESS NETWORKS (NGAs)**

Submissions by PT (Portugal Telecom) Group



Commentary and Reply from the PT Group regarding the Public Consultation

REGARDING THE DRAFT COMMISSION RECOMMENDATION ON NGAs

The present response represents the common position of all companies belonging to the Portugal Telecom Group concerning the public consultation over the "Draft Commission Recommendation on regulated access to Next Generation Access Networks (NGA)". The relevant companies are as follows:

- a) PT Comunicações, S.A.
- b) PT Prime – Soluções Empresariais de Comunicações e Sistemas, S.A.
- c) PT Acessos de Internet Wi-Fi, S.A.
- d) TMN – Telecomunicações móveis nacionais, S.A.

Executive Summary – Portugal Telecom’s Key Observations

NGAs require a stable regulatory framework, one which is able to resolve the existing ambiguities as regards the terms in which investment in high-speed networks is to take place;

Given the current market conditions, it is crucial to outline a framework which promotes investment and innovation;

NGAs are still at present in their developing stages, and this should require the adoption of a flexible and open-ended regulatory framework, especially one which takes into account each country’s particular circumstances;

As such, Portugal Telecom bases its position regarding the regulatory framework applicable to NGAs on the following key points:

1. The European Commission’s draft Recommendation on the regulatory principles applicable to NGAs should constitute a driving factor towards the identification of a common ground on which to build the regulatory framework applicable to new access networks. Nonetheless, it is vital that this Recommendation does not contribute, conversely, towards the overlooking, by the several NGAs, of existing diverse national circumstances, as these differences play a considerable role in shaping the development of new infrastructures. Moreover, this Recommendation should not result in the forcible establishment of a pre-formatted, single regulatory model.
2. As such, it is Portugal Telecom’s belief that the guiding principles of the European Commission’s forthcoming Recommendation on NGAs should be based on the fundamental premise that, all horizontal barriers being lifted, every telecom operator should stand on an equal footing as regards its ability to invest, and as a result, that any asymmetric regulation should be considered to be both excessive and disproportionate.
3. Portugal Telecom does not view NGAs as the natural evolutionary stage from copper access networks and even less as the new heirs of legacy networks. Instead, it considers that development is possible across a number of different access platforms. Among these are cable networks (which are able to offer speeds of up to 100 Mbps, with the integration of DOCSIS 3.0 protocols), mobile networks, and other wireless solutions – in particular BWA (Broadband Wireless Access). By manifestly focusing on the so-called legacy networks and on optical fibre solutions, the draft Recommendation puts forward a regulatory approach which fails to adequately uphold the principle of platform and technology neutrality.
4. Despite the fact that, in its draft Recommendation, the European Commission does allow that NGAs are bound to develop a differentiated identity at a geographical level, the issue of markets geographical differentiation should be more highly valued as an instrument conducive to proportionate regulation. Portugal Telecom furthermore considers that the identification of sub-national markets is a device of critical value in the application of the regulatory framework, with particular bearing on the implementation of regulatory measures best suited to existing competition circumstances.
5. Ducts access should be regarded as the main regulatory gauge, as well as being the one that best safeguards the establishment of genuine infrastructure-based competition. As such, where there is already access to ducts, no regulatory measure regarding physical or virtual access to optical fibre should be imposed, and FTTH solutions should consequently be released from regulatory obligations.
6. Portugal Telecom thus questions the need to impose the requirement of offering bitstream and/or virtual unbundling solutions where there is a supply of access to ducts already in place. In effect, the new networks paradigm differs substantially from that of the legacy networks since, at least in the case of areas of high population density, all operators are able to invest in the new elements of these networks, optical fibre included. To impose such a requirement would be, in these circumstances, both excessive and discriminatory, especially in comparison to cable networks (whose optical fibre component is already dominant and geared to become entirely so in the short term). Once again, such imposition would fail to acknowledge the regulatory principle of technology neutrality.

7. As regards the imposition of the copper sub-loop unbundling and its connection to a different operator's network, this is an issue which poses several complex questions, such as the installation of street cabinets, of either single or shared ownership. This can become a problem given increasing administrative constraints, in addition to the unlikelihood that different operators will be able to establish sustainable business plans based on FTTN solutions. The regulatory balance of imposing the unbundling of the copper sub-loop should therefore only come about as the result of a comprehensive evaluation of regulatory cost/benefit ratios.
8. Portugal is particularly well-placed as regards removing the hardest and most significant barriers to investment in new networks. We refer here to horizontal barriers, since Portugal Telecom has had, since 2004, a Reference Offer of Access to Ducts (ORAC) which encompasses both all self-owned ducts and ducts under its direct management. This allows for the installation of infrastructures both at the core network level and at the access network level (therefore all the way through to the end user). This level of supply respects the principles of transparency, non-discrimination and cost-orientation. Moreover, it becomes a driving force in encouraging competition between alternative infrastructure, by removing horizontal barriers to the installation of new networks.
9. Thus, PT's ORAC places Portugal in a distinctive situation within the European context, in that Portugal is the only country where there is a tried and tested supply of ducts. At present, there are around a dozen operators using Portugal Telecom's Offer of Access to Ducts, with over 12,000 km of ducts leased to these operators. In the first semester of 2008 alone (the point at which the first investments in NGAs were announced by alternative operators), there were more than 1,500 requests for information on access to ducts and over 4,200 requests for viability studies.
10. Moreover, Portugal is also one of the few countries in the EU in which cable operators possess, all combined, both a broadband market share and an investment capacity comparable (if not higher) with those of the incumbent.
11. As such, Portugal Telecom considers that the degree of maturity already attained by its ORAC, combined with the competitive circumstances observable in the current market, renders superfluous (and as such, punitive), the requirement of further obligations of access to new optical fibre networks, both in their FTTH and FTTN forms.
12. In Portugal Telecom's view, it is also vital to overcome the barrier of access to contents, since otherwise the operators of cable networks will continue to hold a significant competitive advantage over other operators.
13. Finally, it is the understanding of Portugal Telecom that the two Annexes to the draft Recommendation should be removed, since they condition the regulatory intervention of NGAs in such a way as to preclude making any allowances for each country's individual realities. In effect, the regulations proposed in either of the Annexes are excessively detailed and prescriptive, and therefore needlessly restrict the effective scope of NGAs. In particular, the Recommendation introduces, in Annex II, the Principle of Equivalence, which can be understood to suggest an attempt to bring about functional separation, with which Portugal Telecom is in complete disagreement.



Introduction

A stable regulatory framework

1. The vast majority of operators have, for some time, petitioned for the establishment of a stable regulatory framework which promotes investment in high-speed communications infrastructures.
2. The Commission's Recommendation can potentially constitute a driving factor towards the identification of a common ground on which to build the regulatory framework applicable to new access networks.
3. However, in order for this to happen, it is essential that the Recommendation makes a decisive contribution towards the establishment of an environment which is favourable to investment. It should also avoid resorting to excessive and top-heavy regulatory measures, and act as an instrument which safeguards the coherence of regulatory activity across all Member States.
4. The Commission's Recommendation should function as a stabilising factor which creates trust in the development of the market, rather than as a source of restrictions to investment and innovation. Even more fundamentally, it should not be the cause of hindrances to the development of new services which incorporate the functionalities of high-speed networks.
5. It would be highly desirable that the Recommendation, while contributing towards a satisfactory level of regulatory standardization between all the Member States, should not lead to an overly specific regulatory model, nor to a list of remedies to be indiscriminately applied, regardless of the individual circumstances of each country.
6. This last aspect is of particular importance to Portugal Telecom, not only because (and this should be stressed from the outset) Portugal is the only country where there is a mature and tested supply of duct access, but also because it is one of the few countries in the EU in which cable operators possess, all combined, both a broadband market share and an investment capacity comparable with those of the incumbent.

A regulatory framework that allows for differences in national circumstances

7. The Recommendation should therefore operate as a generic framework that does not compromise a focused regulatory analysis of each country's particular situation regarding the electronic communications sector.
8. The Recommendation should not, under any circumstances, contribute to the neglect, by the several NRAs, of the different national situations which influence the development of new access infrastructures. Among these national variations can be counted: the diversity of population densities, socio-economical conditions, each country's particular geography, the geographical differentiation of competition levels, the existence of alternative infrastructures, technological choices and/or network architectures.
9. The Recommendation should promote coherent regulatory practices, as opposed to rigid and pre-formatted regulatory practices.

NGAs are a factor of economic and social development

10. It is important to recognise that high-speed networks constitute a unique opportunity for economic development, as well as the improvement of the lives of the citizens within the European Union.
11. High-speed networks will enable the development of new services, new applications and new functionalities, and will have an impact in the economic efficiency of businesses. They will promote a more effective relationship between citizens and public services as well as facilitate a sustainable development.
12. Given the range of functionalities they offer, their guarantee of high-speed services and associated performance levels, NGAs will undoubtedly facilitate a diversity of novel services. It is becoming clear that NGA will support services with different business and market structures that will replace the existing services but will not be replaced for the existing ones.
13. Therefore, we can only foresee the visible aspects of what may take place in the future, possibilities such as the emergence of multiple play solutions interacting with new contents and new forms of social and economic interactivity between end users or even between technological tools.

14. Just as we have been, for some time, experiencing the "digital revolution", we are now at the threshold of a new transformation, one in which communications - contents, the media, television, entertainment and all manner of novel applications, namely in the fields of Health, Education and the provision of several other public services, will be at the core of the new service and new products, which will be characterized by an endless array of possible combinations of technological resources.

A regulatory framework which promotes investment and innovation

15. It is essential to bear in mind the potential of alternative infrastructures as regards NGAs, without disregarding the fact that the regulatory framework is based on the principle of technology neutrality.

16. NGAs are not the exclusive domain of legacy networks; neither are they the natural heirs of legacy networks.

17. This reality highlights the need to find a regulatory context favourable to investment in NGAs which, first and foremost, should involve the adoption of symmetrical regulatory mechanisms or, at the very least, the reduction of asymmetrical solutions to a minimum.

18. It is estimated that, in order to guarantee the installation of optical fibre for telephone access within the EU, an investment of around €300,000 million would be required.

19. This is a considerable endeavour which is being demanded by all operators, especially the incumbents, and such a challenge becomes even greater at a time when we find ourselves in the midst of a global economic and financial crisis requiring the introduction of regulatory measures which promote investment. The financial and economic crisis the world is going through is affecting the European economy and development. The communications sector could play a major role in overcoming the situation by directing investments to high speed networks and to innovation. The development of the ICT sector always had positive impact on GNP and on productivity. The capacity of the ICT sector to invest on new technological platforms and new services will help to preserve and to create employment in Europe.

20. The EU Commission does acknowledge that Europe is losing ground to other economies, such as Japan and the USA, as regards the dissemination of optical fibre. The evolution of NGA access in Europe demonstrates that there is a less favourable environment to investment in new networks in this part of the world.

21. As such, it is important to avoid a situation in which regulation leads to the disruption of current market dynamics and the stifling of innovation, by eliminating the first mover advantage that operators can potentially hold by setting up new networks. Similarly, it is vital to overcome a static outlook which concentrates on short-term benefit to consumers, and to acknowledge the fact that a regulation-induced increase in risk weighing over the sector will have an impact on investment policies, and result in an inferior final outcome both for the consumer and for the economy as a whole.

A regulatory framework that does not overlook the barrier of access to contents

22. The ERG and the NRAs have so far taken into account the existence of vertical and horizontal barriers, overlooking the barrier of access to contents.

23. It is the view of Portugal Telecom that, even once vertical and horizontal barriers are overcome (the latter being already so in Portugal, as previously mentioned), should the barrier of access to contents remain, then there will continue to exist a significant competitive advantage on the part of cable operators, so long as they remain the main distributors (wholesalers) of content available in the market.

24. Recently, OFCOM acknowledged that British Sky Broadcasting Ltd (commonly known as BskyB or Sky) holds a dominant position in the wholesale market for the supply of premium channels in the UK, and is accordingly taking steps to intervene in this situation, within its competency remit.

25. A similar situation exists in Portugal, whereby ZON Multimédia restricts the distribution of certain television channels from other retailers and/or charges excessively high rates for their supply, thus establishing serious constraints to competition between content providers.

26. Portugal Telecom is thus of the view that the regulatory framework cannot overlook the analysis of the contents market.

27. This aspect gains further relevance the clearer it becomes that operators are investing in high-speed networks (both optical fibre and cable) not to continue only to provide telephone and internet access but with a view to offering ever more diversified television contents which will function as a differentiating factor in their market positioning.

28. Content supply cannot be ignored since it is already a determinant factor to gather new markets and new clients.

The Underlying Principles of the Recommendation

The Characterizing Elements of NGAs

29. The Recommendation on NGAs should take into account the fact that the market has already determined that:
- a. The technical model for the development of NGAs goes beyond the mere evolution from copper networks;
 - b. The economic model associated with NGAs is not a universal model, dissociated from the reality particular to each country;
 - c. Competition should, in the first instance, be grounded on the existence of alternative local access structures;
 - d. Regulatory predictability is needed as a catalyst for investment in NGAs and consequently, as a promoter of competition and innovation;
 - e. The services paradigm is undergoing profound change, since NGAs are associated with multiple play supply which is dependent on access to contents, and particularly so in the case of television content.
30. Although the Recommendation does not present a set definition of an NGA, it considers that “NGAs are access networks which have been substantially upgraded either wholly or in part, using existing local access infrastructures and technologies and/or using new optical fibre infrastructures, and which are capable of delivering broadband access services with bandwidths significantly above those currently widely available.”
31. It is common knowledge that one of the differentiating characteristics of the new generation networks is their ability to support end-to-end IP communications. This allows these networks to develop into platforms which integrate and aggregate a variety of services.
32. The Recommendation’s description of NGAs reinforces the notion that we are in the presence of a new infrastructure which supports services with more advanced characteristics than those provided by currently existent broadband services.
33. However, the Recommendation does not elaborate on this characterization of NGAs, neither does it follow it through to its inevitable conclusion.



34. Portugal Telecom believes that NGAs constitute new infrastructures which will support services with new characteristics and new functionalities, to be developed around multiple play offers, with further integration of television content supply.
35. NGAs should not, therefore, be considered as a mere upgrade from legacy networks. High speed solutions are unlike anything presently existing in the communications market. On the contrary, NGAs emerge as catalysts for a new market reality, combining electronic communications and television content supply.

Preserving the Principle of Technology Neutrality

36. Effectively, we consider that the Recommendation focuses fundamentally on the so-called legacy networks and optical fibre solutions when analysing the different possible NGA architectures.
37. It is vital to acknowledge that networks, regardless of their base technology, will tend to encompass, both in their core component and in their access network, new technological solutions, new interfaces and new protocols, so as to permit the supply of services of ever-increasing quality, and of insuring speeds compatible with the evolution of market demand.
38. NGAs can be established from cable networks, which, with the integration of DOCSIS 3.0 protocols, can offer speeds of up to 100Mbps, which are significantly higher than the speeds currently available. It should be noted furthermore that these values could increase in the near future.
39. NGAs established from cable networks constitute autonomous networks of passive, hybrid or fully optical fibre architectures.
40. In comparison with the situation in place a few years ago, it is possible to observe a shift in the supply axis from telephone to integrated solutions, where television and broadband internet access are now placed at the centre of the development of the communications market.
41. Telephone landline services, overtaken at an initial stage by mobile communications, have now increasingly become a commodity which is offered in conjunction with other services of a novel nature, thus benefiting from the IP's integrating capabilities.
42. This business paradigm shift will inevitably benefit those cable operators which began their activity by offering television content supply first, then gained a dominant position in this market, and finally incorporated into their supply access to broadband internet and telephone communications.

43. Whereas it is true that, at present, both electronic communications operators and cable operators can emulate each other's core services, once a multiple play supply logic comes into place, the offer of telephone communication supply by cable operators can be achieved at a much lower incremental cost to that necessary for a communications operator wishing to conversely offer television supply.
44. Moreover, it is apparent that cable networks are in fact closed networks, inaccessible to other operators, and they shall remain so as long as the Recommendation focuses solely on legacy networks and on investment into fibre on the part of the incumbents.
45. As an example, the Recommendation mentions that concentration points should be identified from which the incumbents must either guarantee fibre access or develop virtual bitstream solutions.
46. However, the Recommendation does not carry these NGA solutions over to cable, since it places itself within a logic of "natural" evolution from the strategies applied to copper networks, thus compromising the principle of technology neutrality.
47. It is a fact that legacy networks did not allow new operators to hold completely autonomous solutions.
48. However, this is no longer the case with optical fibre or cable NGAs. NGAs should therefore develop within a new regulatory framework based on a minimum level of regulatory intervention.
49. This is a pertinent fact which should be taken into account when analysing the competitive circumstances of the relevant markets, namely Market 4 and Market 5, and also when identifying the need for regulatory safeguards which enable competition.
50. The Recommendation should follow the application of the principle of technology neutrality to NGAs, given that NGAs can be established over different access platforms, such as cable networks, mobile networks and other wireless solutions, and especially those of BWA (Broadband Wireless Access).

The range of services supported by NGAs – a postponed debate?

51. One other aspect in which the Recommendation's characterisation of NGAs does not follow through to its term is the issue of the services supported by NGAs.

52. The Recommendation claims that NGAs offer broadband services with significantly higher speeds than those offered presently.
53. In effect, it is the case that several operators within the market are offering multiple play services with speeds of around 100 Mbps.
54. However, the Recommendation seems to consider that the services supplied by NGAs should be considered as mere incremental upgrades of existing services, therefore not constituting new markets.
55. Portugal Telecom considers, however, that we are facing the emergence of a new kind of operators and of new kinds of services, which will lead to new behaviours on the part of users. Quite soon, the communications market will become unrecognizable from what it is today.
56. This is another characteristic of NGAs which demands the adoption of a regulatory vision that promotes innovation.
57. The analysis of the substitution potential of products and services being vital, it is no less important to acknowledge that some of the services supported by NGAs can have emerging and new characteristics.
58. Such characteristics support the argument that NGAs should not be placed under regulatory intervention and, should this become inevitable, such intervention should be confined to an analysis of the cost/benefit ratio and be restricted to a bare minimum, with total transparency, predictability and symmetrical application.
59. The regulatory framework should therefore take into account the dynamic nature of the sector, which will become further marked by the development of NGAs and the added services these will provide.
60. It is known that the regulatory framework considers that emerging services should not be placed under regulation.
61. However, the Recommendation itself states that NGAs "are capable of delivering broadband access services with bandwidths significantly above those currently widely available", which means they support services with emerging characteristics.
62. Why is this the case?
- ✓ Because they are integrated services, comprising new functionalities;
 - ✓ Because they are evolving services capable of incorporating technological developments;

- ✓ Because they are multiple play services with a strong component not only of electronic communications supply, but also of content supply;
- ✓ Because this is a market, far from reaching its maturity stage;
- ✓ Because demand is still undefined and commercialisation conditions are not yet consolidated;
- ✓ Because NGAs are still at an expansion stage, and are only partially available in each country;
- ✓ Because NGAs represent a considerable investment risk.

NGAs will develop progressively – geographical differentiation

63. The Recommendation acknowledges that NGAs are still at an early development stage, with a geographically diverse presence, especially in larger urban areas, where there is a high level of competition.
64. In these circumstances, the Recommendation rightly points out that "NRAs should examine the need to define geographic markets taking into account the competitive conditions created at both a national and sub-national level by the progressive roll-out of NGA networks and the status of infrastructure competition."
65. The identification of sub-national markets is, in Portugal Telecom's view, a vital application tool of the regulatory framework in the implementation of measures best suited to the existing competition circumstances of each country.
66. Geographical segmentation seeks to identify sub-national markets with homogeneous competition characteristics which can be identified, quantified and audited both temporally and geographically.
67. Particularly in the past two years, the issue of geographical segmentation in the electronic communications sector has received increasing attention from regulators, especially from OFCOM and CMT, as well as the EU Commission.
68. In turn, ICP-ANACOM is also evaluating the identification of sub-national broadband markets in Portugal.

69. Therefore, given the differences in demographics, wealth distribution levels, economic development and the existence of different kinds of infrastructures, there are bound to be sub-national markets for electronic communications. This will enable the best possible use of existing infrastructures, with the consequent diversification of products and services both in quality and in price. The purpose will be to establish a more sustainable competition, based on market demand rather than competition propped up by regulatory intervention.
70. Geographical segmentation is therefore a pertinent element in the identification of regulatory measures for the application of the so-called sunset clauses.
71. Geographical segmentation is also of particular import in the regulation of new networks, such as NGAs, since:
- ✓ NGAs will progressively develop according to geographical areas: urban and metropolitan areas first, i.e. in larger, central areas.
 - ✓ Operators will elect common geographical areas to install NGA and roll-out fibre.
 - ✓ In such areas, operators are faced with the same barriers.
 - ✓ Should competition markets be identified among the existing networks, competition levels will not, in any way, be affected by the introduction of NGAs.

Transparency and access to Ducts

72. This chapter of the Recommendation deals with the issue of transparency, particularly regarding access to underground infrastructures, which demonstrates how significant this issue is to the Commission, within the regulatory framework for NGAs.
73. It is essential to point out, regarding this matter, Portugal Telecom's accumulated experience as regards access to ducts.
74. However, the application of the transparency principle should not be undermined by the equivalency principle (Annex II of the Recommendation), which, as mentioned in the introductory remarks, can constitute an indirect attempt to enforce functional separation, with which Portugal Telecom is in complete disagreement.

Transparency and reference offer of access to ducts

75. Transparency is not necessarily to be equated with reference offers. Transparency in the relationship between operators can be successfully guaranteed through commercial offers and build-and-share agreements.
76. The Recommendation touches on the issue of transparency in a somewhat sweeping and vague manner, which may hold back the consolidation of a reference offer for access ducts.
77. The existence of a reference offer comes about as the result of an evaluation of a particular relevant market; therefore, the imposition of a reference offer of access to ducts should uphold the procedures set out in the regulatory framework.
78. The access to ducts should be faced as an evolving process to be worked out in time, and it is hardly reasonable to expect the establishment of a stable reference offer in the short term.
79. The establishment of a reference offer of access to ducts requires a proportional and realistic regulatory action which takes into account not only the incumbent's infrastructure, but the wider potential of each country's underground infrastructure.
80. In this regard there are no unique models, since the legal framework regarding access and use of the public domain is variable within the European zone.

Access to ducts – a complex range of supply

81. Access to ducts entails heavy logistics, with lengthy operational procedures which are not always totally automated. As such, whereas the six-month deadline prescribed by the Recommendation is reasonable, some degree of flexibility should be exercised. The dimension and dispersion degree of duct networks should be taken into consideration.
82. The information system for ducts and their associated infrastructures demands an audit of the situation for the whole of the national territory. If we add to this project the details of the condition of each duct, it is clear to see the volume of information to be gathered, the amount of resources required and the high costs this project will carry.
83. In addition, the Recommendation includes in its definition of access to ducts all civil engineering works to be undertaken by SMP operators, thus establishing an excessive regulatory imposition which, unless clearly set out, will belie the principles on which the offer of underground infrastructures is based. In our view, the actual status of PT's reference offer to access ducts contains the main elements for establishing a balanced regulatory intervention without disproportionate additional obligations
84. It is therefore vital that the elements constituting the reference offer are defined in a reasonable and proportionate manner which enables the establishment of an offer simplifying access to underground infrastructures, rather than being a source of disputes and unworkable solutions.

Access to ducts – support to competition between access infrastructures in Portugal

85. Portugal Telecom boasts an Offer of Access to Ducts (ORAC) which encompasses both all self-owned ducts and ducts under its direct management.
86. In Portugal, the imposition of access to ducts did not result from an analysis of a relevant market, but from a ruling contained in Law 5/2004, of the 10th February, resulting from legislation regarding the basic telecommunications network comprised in the foundations for the Concession of Public Service Telecommunications. This ruling followed a consultation process and resulted in a reference offer of access to ducts, by deliberation of the NRA.
87. The decision process regarding the reference offer was initiated in April 2004 and the first draft of the reference offer was drawn in November of the same year, that is, seven months later.
88. This is an offer which enables the installation of infrastructures in the core and access networks (all the way to the end-user).

89. However, the access to ducts should take into account the existing ducts in each country (including the ducts owned by entities other than telecommunications operators), this being a fundamental element in the dissemination of optical fibre all the way to the end user.
90. In fact, in the face of the existing situation, the Portuguese Government itself, through its Resolution nr. 120/2008 recognized that it would be vital to develop legislative and other necessary measures to safeguard access on the part of all operators, under transparent and non-discriminatory circumstances, to the ducts and all other relevant infrastructures presently owned by all other entities.
91. It is therefore essential to guarantee the open, transparent and non-discriminatory access to ducts, posts and other installations which belong not only to communications operators but also to other entities which, while operating in other sectors, are owners of extensive set of ducts, such as motorways and also other companies, namely those of water, gas and sewage.
92. The access to ducts represents for NGAs what the loop unbundling represented for legacy networks, that is, it should be considered as the regulatory measure that will best safeguard the establishment of a real, infrastructure-based competition¹.
93. In Portugal this is more so the case as it is a fact that there are cable networks disseminated throughout the national territory, and several operators are investing and installing their own fibre networks using Portugal Telecom's ducts.
94. Portugal Telecom's offer of access to ducts is an enabling element of competition between alternative infrastructures, thus placing Portugal in a unique position from the majority of European countries.
95. The experience accrued by Portugal Telecom allows us therefore to state that the opening of ducts to the installation of NGAs renders the imposition of other access obligations both unnecessary and excessive.

¹ The proof of the above statement is the fact that there are already numerous alternative operators in Portugal investing in NGAs, such as Sonaecom and TVTel, both in the process of establishing FTTH networks.

FTTH, FTTN and wholesale broadband access

96. The issue of FTTH and FTTN solutions has been extensively discussed, both through national consultations and through the consultation launched by ERG in 2007.
97. There are still patent ambiguities regarding the introduction of the regulatory framework applicable to FTTH and FTTN solutions.
98. The ambiguities stem from the fact that the Commission has revealed the intention of extending the legislation on legacy networks to NGAs, thus maintaining an unsustainable ambiguity regarding the terms in which investment in new networks is to take place.
99. We thus reiterate that, regardless of the solution to be implemented by incumbents, NRAs should not find a way of opening access to optical fibre to third parties, to the point of imposing particular NGA architectures on the incumbents.
100. In this regard, positions are clear and well-established. However, the Recommendation draft displays too rigid a stance, overlooking the multitude of confrontational positions.

FTTH solutions should be released from physical access obligations

101. The FTTH solution is faced with horizontal and vertical barriers.
102. The former can be overcome essentially through the access to ducts², a process which demands a study of the potential of underground infrastructures and the definition of non-discriminatory access mechanisms.
103. As was mentioned in the introductory comments, Portugal Telecom has been offering access to ducts for the past four years.
104. This has undoubtedly been a determining factor towards the dissemination both of fibre and cable networks.
105. The existence of access to ducts makes any regulatory measure regarding physical or virtual access to optical fibre becomes thus, in our view, excessive.

² However, there is another kind of barrier common to all operators, to varying degrees depending on each country. This refers to the administrative procedures to be looked into at local authority level. These delay and render costly the scale economies of the installation of an electronic communications infrastructure and sometimes can even obstruct the installation of some kinds of equipment, such as street cabinets, these becoming essential where they are the only possible installation solution.

106. The vertical barriers, which are also faced by all operators, will have to be overcome through mechanisms which guarantee non-discriminatory conditions of access to buildings, as well as to the infrastructures existing therein.
107. The access to buildings and the ability to install fibre depends on the legal framework in operation in each country. This is a significant barrier since, as has been stated above, it affects all operators in equal measure.

The copper sub-loop access should be subject to prior evaluation

108. The issue of copper sub-loop unbundling and its connection to another operator's network raises several questions which have not been addressed up to now, either by the alternative operators or the NRAs.
109. From the outset, it is important to ascertain whether operators are able to establish sustainable business plans based on FTTN solutions.
110. In Portugal Telecom's view, such sustainability will be hard to achieve, a fact which is also acknowledged by the NRAs.
111. However, assuming that such business plans are indeed sustainable and are of a sufficient scale to guarantee that the benefits of regulatory intervention will outweigh their costs, the question is then raised regarding the installation of street cabinets, of single or joint ownership by operators or the co-installation within street cabinets (which will necessarily imply a much greater dimension and a different format from existing cabinets).
112. It is a fact that there are increasing administrative constraints against the installation of new equipments in public spaces. Moreover, the shared cabinets, since they have bigger capacities, will be more expensive, and therefore require some measurement of the benefits of the operator who installs the cabinets in the first place in comparison with those of the following operators who will use them. Management rules will have to be created in this instance.
113. Access to the copper sub-loop must be subject to a detailed assessment of operators' interest and of the conditions of access to the public domain.
114. Therefore, any regulatory decision regarding the sub-loop unbundling and the co-installation of street cabinets must be the result of a cost/benefit analysis of regulatory intervention.



115. This analysis should also clarify what exactly is meant by FTTN to FTTH transitional wholesale products. In Portugal Telecom's view, this issue is not adequately clarified by the Recommendation.

Wholesale access to broadband (bitstream and virtual access)

116. Portugal Telecom questions the imposition to build bitstream and/or virtual unbundling solutions where there is a supply of access to ducts already in place.
117. The unfeasibility of replicating copper access networks has been so far the main justification for the need to guarantee their access to new operators in an open, transparent and non-discriminatory manner, through the existence of regulated supply of bitstream, virtual unbundling and physical access (copper loops and ducts).
118. However NGAs have brought about a paradigm change which significantly alters the situation, since it can be taken as accurate that, at least in the more densely populated areas, all operators can invest in the new elements of these networks, namely optical fibre, especially when the offer of access to ducts is guaranteed.
119. The development of these new networks will enable a new juncture in the creation of broadband services which do not merely replace existing ones, since they go beyond the mere offer of higher speeds, but also create new functionalities, such as IPTV offers (with guaranteed speeds). The European Commission itself views that, under these circumstances, no imposition of ex-ante regulatory obligations should exist, this being a competitive market.
120. Portugal Telecom does not consider acceptable the imposition of the construction of bitstream and/or virtual unbundling solutions where there is a supply of access to ducts for NGAs.
121. To impose such an obligation would be, in these circumstances, both excessive and discriminatory, especially towards cable networks. Such imposition would fail to acknowledge the regulatory principle of technology neutrality.
122. Once access to ducts has been guaranteed, all bitstream and/or virtual unbundling solutions should be jettisoned. PT's offer to access ducts – one of the examples referred to by the Commission and ERG – is sufficient to meet the regulatory purposes. That is why the imposition of a bitstream obligation is in our specific case disproportionate and not in line with the market analysis policy defined by the European Directives

The Annexes to the Recommendation

Introductory Note

123. Portugal Telecom considers that the Annexes to the Recommendation should be removed, given that they preclude an approach to NGAs that takes into account individual national realities.

Annex I (Pricing principles for duct usage and the usage of other civil engineering works and other elements which are not active)

124. The main commentary that Portugal Telecom would like to offer regarding the regulations proposed in this annex is that it considers these to be excessively detailed and prescriptive. Therefore, it is Portugal Telecom's contention that this annex is superfluous and that it should be left to NRAs to define the different aspects of duct access pricing for the ducts which are contemplated by the Commission in this Annex.
125. Similarly, it should be the purview of NRAs to define which physical elements and which associated services should integrate the offer of access to ducts, and for this additional reason, it does not seem reasonable to attempt to define the pricing rules for elements which might ultimately not even be part of a particular offer of access.
126. The above notwithstanding, Portugal Telecom considers that any costing system regarding access to ducts cannot fail to take into consideration the cost of capital, and therefore, as far as new ducts are concerned, it would be preferable to apply a system of penalties, paid in advance by those alternative operators who intend to have access to such ducts, so as to assure the protection of the additional investment.
127. In reality, the fact that new ducts have not been inherited from a previous monopoly must be taken into account and consequently a pricing system adequate to this reality should be adopted.

Annex II (Application of the principle of equivalence)

128. The regulatory framework is therefore guided by the principles of non-discrimination and transparency, these principles being sufficient and adjusted to the relationship between the different operators of electronic communications.

129. However, the Recommendation introduces, in Annex II, the principle of equivalence. It is hard to understand the need to define the notion of equivalence as a principle, and furthermore, its inclusion in the Recommendation. It is very difficult to understand the context in which the principle of equivalence could be considered as part of the legal environment

130. It is a principle at odds with the regulatory framework and which, in the way in which it is structured, challenges the principles of non-discrimination and transparency. The principle of equivalence is not only outside the scope of the regulatory environment, but also, because of the way it is structured, is in contradiction with the principle of non discrimination, as it has been considered by European Institutions.

131. This being the case, the adoption of the equivalency principle can only be understood as an indirect attempt to enforce functional separation, thus becoming a general regulatory measure as opposed to an exceptional measure, subject to extremely stringent procedures.

The obligation to provide equivalence of input, meaning that a SMP operator should treat a third party in the same way it treats its internal departments, violates the principle of non discrimination.

The principle of non discrimination, inscribed the Constitutional and Administrative legal framework of the Member States and supported by the Community Law, implies not only that equal realities should have equal treatment, but also that distinct realities should be treated differently. In this sense, the principle of equivalence contradicts the principle of non discrimination, as it treats different realities as if they were the same reality.

Moreover, the basic rights to private property and to freely develop economic initiative could be seriously affected due to the fact that the freedom of action by the SMP operator will be at stake.

The principle of equivalence introduces a mechanism interfering in the management capacity of the SMP operator in such way that it will become a matter of uncertainty and of lack of confidence from its stakeholders that will amplify the impact of the worldwide crisis in the ICT sector in Europe.

132. Furthermore, some of the regulations proposed in this Annex seem to be oblivious to the fact that many of the historical operators do not possess detailed information regarding the available space in their entire duct network.

133. As such, it would be excessive to impose that SMP operators develop elaborate usage recording systems solely for the purpose of wholesale supply.



134. As regards the establishment of SLAs and the corresponding compensation measures for the failure to comply, Portugal Telecom is of the opinion that these should be conversely associated to the production, on the part of alternative operators, of forecasts of demand for space in ducts.
135. In effect, without such forecasts, it will not be possible for the SMP operator to assess its capacity in relation to the real needs of its clients, rendering unrealistic the adherence to SLAs and even more so the imposition of compensation mechanisms.
136. For all of the above-mentioned reasons, Portugal Telecom considers that this Annex should be abandoned and manifests its total opposition to the adoption of a regulatory framework which, directly or indirectly, should lead to functional separation, as an *ex-ante* regulatory intervention mechanism.

NGAs in Portugal

NGAs – A regulatory framework in its definition stages

137. The regulatory framework of NGAs in Portugal is still undergoing a process of definition. The result of consultations launched by ICP-ANACOM before the summer regarding the NGAs' regulatory framework, as well as Markets 4 and 5 (concerning respectively wholesale supply of physical access and wholesale supply of broadband), are still to be published.
138. Portugal Telecom considers it to be a positive signal that ICP-ANACOM acknowledges the importance of its offer of access to ducts in enabling the promotion of infrastructure-based competition, NGAs included.
139. We also consider ICP-ANACOM's proposal to undertake the identification of sub-national markets in order to define a policy of broadband regulatory differentiation to be a positive step.
140. When identifying sub-national markets it is relevant to bear in mind the main aspects related to the population density and the distribution of the population in Portugal, as well as the presence of operators in the different areas of the country.

The figures presented below illustrate the situation in the continental part of Portugal and show the main differences between our country and other Member States with the same level of population, around 10 million inhabitants.

The Portuguese population is mainly distributed along the coastline from the metropolitan area of Lisbon to the metropolitan area of Oporto, representing about 80% of the inhabitants, and along the coastline of Algarve. The night view map emphasizes these demographic characteristics and show the concentration of population in the metropolitan areas of Lisbon and Oporto.

The Portuguese situation is completely different from Belgium and the Netherlands, countries with an area smaller than the area of Portugal and with a high level of population density. In the case of Greece the population is mainly concentrated around Athens and the rest of the population is dispersed along the Greek islands.

In broad terms, it is possible to identify two main geographical areas, according to the distribution of population and to the level of consumption of the Portuguese population.



Along the coastline, the population has a higher level of GNP/capita and the market presents a higher commercial potential for operators. In those areas:

- At least one cable operator with significant dimension is present;
- There are cases where cable operators have more than 50% market share;
- There is an important presence of LLU operators and co-location sites;
- The alternative operators mainly use LLU, instead of PT's bitsream offer;
- Operators are starting to invest in optical fibre access.

As one move to the rural areas away from the coast, the population density decreases, the GNP/capita becomes lower and the commercial potential reduces. Differently from the coastal regions:

- Cable operators are mainly located in urban areas;
- The presence of LLU operators is limited to a few districts;
- Alternative operators are mainly using PT's bitsream offer.

Such demographic characteristics, together with the important presence of cable and LLU operators in those areas where the population is concentrated, turn Portugal into a singular case in Europe, favouring a detailed analysis on market segmentation, as well as on the regulatory environment for NGA to be adopted.

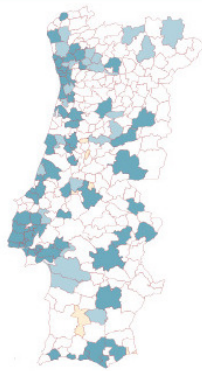
Example: Continental Portugal

LLU and cable operators are mainly present in geographical areas with high market potential and with high population concentration

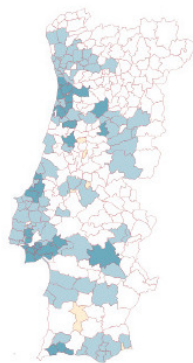
LLU Operators

Cable Operators

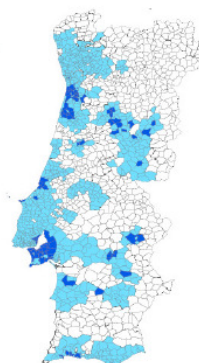
Population concentration



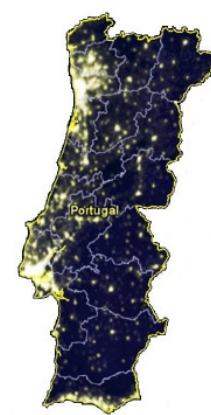
- 0 LLU Operators
- 1 LLU Operator
- 2 LLU Operators



- 0 Cable Operators
- 1 Cable Operator
- 2 Cable Operators



In dark blue, areas where cable operators have more than 50% MS in broadband



Night view of the continental part of Portugal. The population is mainly located along the coastline

Example: Continental Portugal

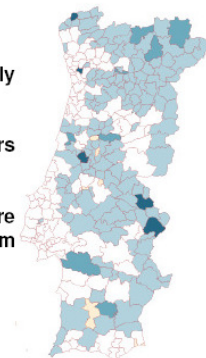
It is possible to identify two main geographical areas, according to the level of consumption

Main differences in the level of competition

Areas with low market potential

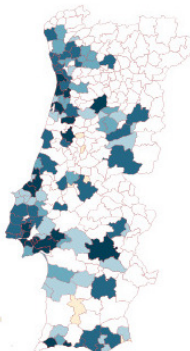
Areas with high market potential

- Cable operators are mainly present in urban areas
- Presence of LLU operators limited to a few districts
- Alternative operators are mainly using PT's bitsream offer



- PT + 2 or more LLU operators
- PT + 1 LLU operator
- Only PT

- Presence of at least 1 cable operator with significant dimension
- Important presence of LLU operators and co-location sites
- Operators use mainly LLU, instead of PT's bitsream offer
- Areas where operators tend to start to invest in NGA



- PT + 4 operators with infrastructure
- PT + 3 operators with infrastructure
- PT + 2 operators with infrastructure
- PT + 1 operator with infrastructure



141. In Portugal Telecom's view, ICP-ANACOM's proposal of segmentation should however be shifted towards a more coherent model as regards the identification and joining of the basic units of segmentation, so as to guarantee the applicability and consistency of the model.
142. Portugal Telecom further considers that it is urgent for the NRA to stabilise the regulatory model for access to NGAs, as the confidence needed towards investment could well hinge on this stabilisation.

A note on PT- Multimédia's spin-off process

143. PT Multimédia's (currently ZON) spin-off introduced an unparalleled level of competition between access networks which, given the scope of its effects, could be said to have been a paradigm-shifting event as regards all levels of competition in the Portuguese market.
144. It is essential to bear in mind that PT Multimédia's spin-off, which took place in November 2007, was an unprecedented event within the EU.
145. This was characterized by a structural alteration with immediate impact on competition levels in the electronic communications market in Portugal, whose consequences should be considered as a study case within the European setting.
146. From the moment the spin-off took place, Portugal possessed a nationwide cable network which was modern and modular and able to carry telephone, broadband internet access and television supply services.
147. PT Multimédia, now Zon Multimédia, counted around 1.5 million television subscribers and 372,000 broadband clients, reaching 2.9 million homes, and thus possessing an enviable position in the electronic communications, audiovisual and contents market.
148. At the time of the spin-off, PT Multimédia was characterized by the following indicators:
- 80% market share in the Pay-TV market;
 - 25% market share in the broadband market;
 - 49% market share in film distribution;
 - It was a supplier of 2-play and 3-play solutions;
 - It held national and international sports broadcasting rights;

- It held the main distribution rights to US films in Portugal and the PALOP (Portuguese Speaking African Countries);
- It was the biggest distributor of home video and cinema;

149. In line with this market position it is also important to outline the characteristics of the infrastructure held by the new operator.

Thus,

- It was a 100% digital network with IP integration capacity and guaranteeing bidirectionality;
- The network integrated over 50 optical fibres for downstream transport from the head-ends and 400 optical nodes for internet upstream;
- The cable network and DTH were able to ensure a potential 100% coverage of Portuguese homes.

150. ZON Multimédia has never been conditioned by regulatory intervention, which allowed it the freedom to operate not just in the electronic communications sector, but also in television content supply.

In Portugal there is competition between access infrastructures

151. The competition between access infrastructures in Portugal must be analysed in the context of the spin-off process, of the presence of cable operators, and of the presence of LLU operators.

152. It is important to acknowledge that the competition circumstances of the access networks in Portugal have significantly evolved.

153. It should be mentioned that in the second quarter of 2008, there were about 4.21 million cabled homes out of a total of 5.59 million homes. In comparison with the same period in the preceding year, this meant an increase of 281 thousand cabled homes.

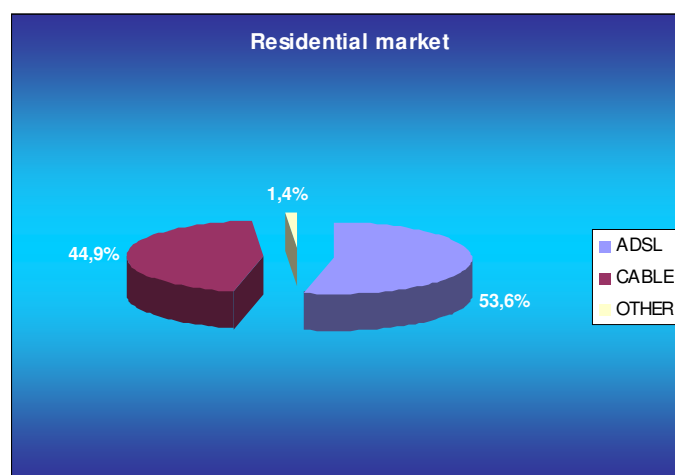
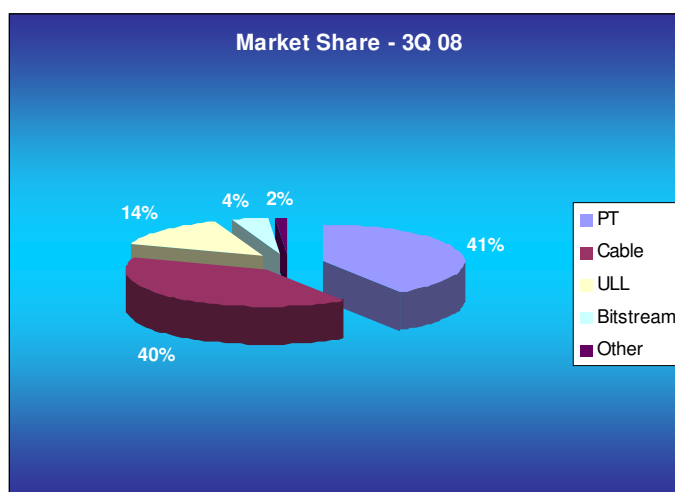
154. In the second quarter of 2007, there were 244 thousand unbundled loops, whereas by the second quarter of 2008 there were already 314 thousand LLU accesses.

155. The statistical indicators for the broadband market in the third quarter of 2008 are also revealing in terms of market shares:

- Portugal Telecom: 40,7%.

- Cable operators: 39,8% (of which ZON - 27,8%).
- Other operators: 19,5% (of which Sonaecom – 14,0%).

The following charts describe the levels of market share, as well as the distribution of broadband access by technology:



156. Additionally, in the areas of higher competitive pressures (main cities and along the Portuguese coast), Portugal Telecom’s market share falls to values as low as 20%, whereas ZON can sometimes reach values higher than 40%.

157. Therefore, in terms of access, alternative operators are presented with a number of accesses and a level of coverage that guarantees them a stable, autonomous, sustained and disseminated access all the way through to the end user.
158. Both the evolution of the cable network and the evolution of the number of unbundled loops and their level of dissemination throughout the national territory guarantee alternative operators a high level of autonomy from Portugal Telecom.
159. As the above-mentioned statistical data published by ICP-ANACOM reveals, access to local networks constitutes less and less of a barrier to entry in the free market and to open competition between operators.

Access to ducts promotes the installation of NGAs and the dissemination of optical fibre

160. Portugal Telecom's countless wholesale offers, especially its access to ducts and local loops supply, are elements which have promoted the current local access market situation.
161. Its offer of access to ducts has taken on a vital role in the installation of NGAs and in the dissemination of optical fibre.
162. At the present moment, around a dozen operators use Portugal Telecom's Offer of Access to Ducts, with over 12,000 km of ducts being leased to these operators.
163. In the first semester of 2008 alone (the point at which the first investments into NGAs were announced by alternative operators) there were more than 1,500 requests for information on access to ducts and over 4,200 requests for viability studies.
164. The information system, as well as quality indicators, have evolved towards guaranteeing the improvement of the conditions of offer of access to ducts.
165. The elimination of horizontal barriers can be linked with the presence of operators in the most densely populated, higher commercial activity and higher, most innovating and developed service demand areas, thus demonstrating the ability of all operators to tackle the issue of NGAs.

Operators are currently investing both in NGAs and in optical fibre access

166. Alternative operators' investment resources into NGAs is patent through the development of optical fibre solutions and other NGAs which has taken place on the part of Sonaecom, ZON, TVTel and Vodafone.

167. Sonaecom initiated the launch of a high speed solution, called "Clix Fibra", which includes television content, Internet, home video and telephone supply. Clix Fibra's offer includes three different packages with speeds ranging from 30 to 100Mbps and prices ranging from €39.9/month to €64.9/month.
168. Sonaecom has declared its intention to invest €240 million in the next three years, eventually being able to supply access to 1 million households and 25% of the population.
169. In September, ZON (the biggest cable operator) announced it would be initiating the upgrade of its network with the DOCSIS 3.0 protocol, which can offer speeds of up to 100Mbps. This upgrade should be concluded by the end of 2009 and will be complemented by the acquisition of TvTel by ZON – a significant concentration move which will further reinforce ZON's market position in content supply, where it already holds several exclusive rights, thus possessing a clear competitive advantage in the multiple play market.
170. In July, TVTel announced an investment of over €7 million in the installation of optical fibre in 100,000 homes in the wider Lisbon area.
171. Similarly, Vodafone publicly announced an agreement with EDP (Electricidade de Portugal – Portuguese Electricity Company) intended for the construction of a fibre network able to supply high speed solutions to end users.

Content supply is biased towards cable operators

172. Television content supply has granted ZON considerable power as regards national and international content, given that it holds several exclusive rights which constitute a de facto barrier to the establishment of other television platforms in the market, namely Portugal Telecom's platform.
173. The growing importance of the triple-play offers generates the additional risk of competition distortion in the subscription television supply market, caused by privileged access to contents, which may broaden further towards other markets, such as broadband and telephone services.
174. Moreover, the economy of networks is increasingly dependent on the conditions of access to appealing contents. To further compromise competition between network operators through the discrimination between platforms could signify compromising the ability of network operators to invest in innovation and the conversion of their networks. The far-reaching effects of this bind are unmistakable in a transitional shift towards a high-speed paradigm.

175. The privileged position of cable, which was not as evident a few years before, has now become the more relevant and eminent as regulatory pressure affects mainly the so-called legacy networks, which are subject to significant access obligations, whereas cable networks have been so far impervious to regulation, seemingly unaffected by technological developments and the evolution of the market.
176. The ERG and the sector regulators have so far taken into account the existence of vertical and horizontal barriers, overlooking the barrier of access to contents. However, even once vertical and horizontal barriers are overcome (the latter being already so in Portugal), should the barrier of access to contents remain, then there will continue to exist a significant competitive advantage on the part of ZON in relation to other operators, so long as they remain the largest distributors of content in the market.
177. For all of the above reasons, we consider that the weight of cable networks should be appropriately re-evaluated and pondered over by ICP-ANACOM in its regulatory action, namely as regards its capacity to affect competition and the existence of dominant positions in the relevant markets.

There are no horizontal barriers to the installation of NGAs in Portugal

178. It is Portugal Telecom's view that the ability to build an NGA should be coupled with an analysis of its geographical expansion.
179. NGAs will be progressively installed, firstly covering the most profitable areas of large population centres and, from then evolve to other urban areas of smaller population concentration.
180. NGAs will therefore constitute technological "islands" amid traditional networks. The expansion of NGAs towards rural areas will be an effort on the part of operators but also on the part of national authorities both at a central and local government level.
181. At this stage, operators are focusing on "playing the local game" rather than "playing the national game".
182. The evolution of the several operators towards NGAs must be accompanied by a shift in the regulatory paradigm from that which presided over copper networks.



183. In short, in Portugal, competition among the local networks is evident. Moreover, the specific characteristics of NGAs will emphasize the ability of operators which have so far invested in local solutions of building new generation access networks.

184. As Portugal Telecom has already mentioned to ICP-ANACOM, the existence of an offer of access to ducts which allows the construction of autonomous access solutions should preclude any other form of regulation of access to NGAs and optical fibre.