

## Wind Telecomunicazioni S.p.a. answer to the public ERG Consultation Document on Regulatory Principles of NGA (ERG (07) 16)

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## **Introduction**

Wind appreciates the analysis performed in the consultation document and largely share the conclusions. In this document we try to raise some other points that we think are important to assure a proper wholesale regulation for the new NGA service. As all we know the deployment of NGA represents a pivotal point in the development of TLC markets in EU.

The answers given by Regulators to questions about the number and the ownership of access networks, the models of competition allowed and the obligations for incumbents will determine how the ITC markets will develop in the next 10 years.

## **Future scenarios**

It is out of any reasonable doubt that operators will have to face two main problems in the next future:

- more and more bandwidth will be required both for residential and business customers to use effectively the panoply of services that will be available, and
- copper network will be more and more inadequate to assure forever such performance evolution.

No single solution can solve all the problems rising from delivering ultra broad band to customers, so it is likely that operators adopt different approaches depending on:

- Customers mix between residential and business in different areas
- Customers density
- Residential solutions (multi dwelling unit, terrace houses, etc)
- Availability of civil infrastructure for effective equipment installation and backhauling
- Municipality attention to the installation of new networks.

Moreover some technology will be superseded by others as the context changes.

Any new technology change can maintain or even increase bottlenecks and produce stranded costs for Altnets, while Incumbents can amortise them earlier, thanks to their larger economy scales.

The implementation of the new access networks doesn't represent therefore by any means the end of the access regulation. NRAs should continue to be able to adopt measures as the contexts change and different solutions/technologies emerge and taking in consideration the peculiarities emerging in Member States. On this last point it is important to underline that it is likely that many different approaches will emerge in Member States, particularly in the early stages of the transition to NGN/NGA, each of them will require a specific analysis and specific remedies.



## Regulatory issues

The regulation that Wind foresees for the wholesale access markets in the NGNA era should continue to be an ex ante regulation.

It should be based on **properly revised definitions** for Markets 11, 12 and 13. It should allow for technology neutral definitions of remedies, leaving the possibility for NRAs to rapidly adapt or change specific remedies as required.

### The “ladder of investments”

Promotion of the ladder of investment principle cannot be done without an **accurate and coherent definition of technical and economical aspects of any wholesale remedies** imposed to incumbents.

Only if real incentives, in terms of performance and economics, are maintained in the wholesale remedies, the Altnets will be able to carry on in deploying new infrastructure, adopting, the kind of solution which is best suited for the specific environment.

The concept of “ladder of investments”, which has been proved to be so useful for the growth of self-structured new entrant operators all over Europe, would continue to be a basic reference also in the deployment of the new access networks. Its specific applications should be however adapted to the new scenario, considering in particular the technical and economical constraints for an Altnet operator determined by the build up of a brand new access network.

The possibility to pursue many competing independent access infrastructures to the deepest level depends in practice on many different factors such as population density, availability of civil infrastructure and expected ROI. This is different from the present situation where LLU may be considered as a feasible target for seriously infrastructure-based Altnets for at least the 80% of the population in most of the Member States.

With NGA it is possible that in many areas the most economically rational solution for a long period of time would consist in the sharing of a single access network among all competing operators. In these cases the “theoretical” availability of other more infrastructural services (e.g. sub-loop unbundling) could not be used as an argument for weakening obligations regarding less infrastructured, but more feasible, services.

It is also to be noted that in this new scenario the differences between markets 11 and 12, as they are perceived today, tend to blur as very likely “infrastructure based” Altnets wouldn’t use anymore mainly a LLU only approach and “infrastructure less” Altnets wouldn’t always use bitstream. This situation requires a possible rethinking of the wholesale markets architecture defined in the current Recommendation.

It is our firm belief that the definition of a single wholesale access market, grouping the actual 11, 12 and 13, would better represent the multiple technical/economical solutions that will be deployed in the next 3-5 years.

However, in order to maintain a coherent approach with the existing relevant market taxonomy, in the following of this document we will refer to the current markets.

### Network Separation

Even if the consultation document doesn’t discuss explicitly the issue of the network separation, it is undisputed that this subject is related in many ways to the introduction of NGA. This is not to say that network separation is a remedy that is strictly linked with the



deployment of NGAs (as a matter of fact in UK separation has been introduced well before).

There are however some important arguments, both technical and economic, emerging from the discussion about NGAs that may lead to prefer this kind of regulatory solution.

The most important point regards the possibility, in a NGA context, for an infrastructured alternative operator to have a reasonable and homogeneous coverage of a commercially meaningful area. As discussed in the consultation document it is in fact very likely that different technical solutions will be used within the same city depending, for example, on the civil infrastructure availability. Moreover, in some areas some solutions may be not viable due to technical constraints (e.g. co-location space in cabinets).

Finally there will be for sure areas where customers density doesn't justify for an Altnet investments down to the street cabinets. In Italy it is likely that in many cities the areas where Altnets will be able to deploy their own local loop could result to be very few. Altnets therefore will be forced to use quite often (different) intermediate services supplied by incumbent.

This situation would be very difficult to manage for an Altnet which in principle needs to offer the same products/services to all of its customers. The "equality of input", which plays a pivotal role in the UK network separation case, would be very difficult to be guaranteed if the incumbent remains a strictly vertically integrated company. This consideration holds true both on the technical side (considering the high quality required by broadband multimedia services) and on the economic side (Altnets will tend to be more dependant on the incumbent exposed cost structure).

For these reasons Wind believes that the introduction of NGA is intrinsically a good argument to accelerate the accommodation of the structural separation among the remedies that an NRA may impose to an incumbent in order to preserve competition.

## **Issues pertaining existing markets**

### **Market 11**

#### **Local Loop definition**

The wide choice of technical solutions for the access network requires a proper definition of local loop, that must be technologically neutral in order to adapt the same principles to all the different solutions.

Such a definition must include not only the copper loop and fibre optic but also all the hybrid, intermediate solutions integrating copper, fibre along with the necessary active elements, where needed.

A possible definition for the "new LLU" could be:

*"Wholesale unbundled access (including shared access) to non technically or non economically replicable physical or virtual links in the access network for the purpose of providing EC services".*

Adopting such a technologically neutral definition all obligations defined for access loops will apply to any possible combination of copper and optical fibre, ranging from the actual



all copper loops to possibly all FO ones, with all the intermediate possibility where copper and optical fibre are mixed ( hybrid local loop).

Some services that must be provided in this Market are also needed in other markets. However, we believe extremely useful that a definition of such ancillary services is provided in Market 11 and 12, as their detailed knowledge is needed in :

- the ex ante verification of incumbents offer, and
- assuring economical and technical feasibility for the Altnets.

#### **Wholesale Services included in Market 11:**

The definition above needs to be completed with a detailed description of the whole set of wholesale services that must be provided by the incumbent in order to comply with the general obligation. Any change within this list, regarding operative definitions and detailed obligations shouldn't require a new market analysis to be effective.

##### **Sub Loop unbundling**

Among those services in particular, sub loop unbundling must be supplied in all the technically possible forms allowed by the incumbent network. Referring to a typical copper network, it should be possible to rent a part of the copper line from the customer premises up to any possible points of the distribution network. (in the cellar, curb , cabinet, MDF). Where a suitable intermediate point is not available (e.g. no collocation is possible), or the investments needed to reach it are not reasonable for an Altnet, a suitable back-haul service must be available to the nearest accessible point.

The same possibility must exist for fibre optic. In case of PON solutions the adoption of a virtual links (VLAN, or equivalent) or lambda should be provided.

In any case, the access should be provided also between any two physical or logical accessible intermediate points along the link.

##### **Co-location services**

Co-location must be allowed in any place where the incumbent has installed its own devices, maximising the sharing of its infrastructure.

Referring to "in Cabinet" VDSL solutions, Altnets must be able to install their equipments both in the incumbent cabinet or nearby it, sharing the same energy/cooling systems or using a different one.

Co-location space must be dimensioned by the incumbent taking into account the number of customers served and allowing for a reasonable number of Altnets, considering the efficient use of resources and keeping in count also Altnets necessities coming from incumbent obligations.

Virtual co-location with maintenance service provided by incumbents (like in the Telecom Italia offer) must be foreseen.

##### **Backhauling**

It is clear that introduction of new access technologies and capabilities must be accomplished introducing suitable measures to preserve and to promote

competition. One of these measures consists in the availability of modular and effective backhauling solutions.

Bringing more and more capacity to the final users involves collection and backhauling of large amount of traffic.

LLU experience have already shown that LLU sites backhauling is one of the most expensive cost element; with ultra broadband solutions it will get worse.

As stated above such a wholesale offer must be included in Market 11 as an ancillary service, in order to make easier both ex ante verification of incumbents offer and economical coherence among service pricing, in order to grant a fair ladder of investment.

Currently in Market 11 some of the following services are already available, called in Italy “*prolungamento dell’accesso*” available in fibre, allowing availability of a fibre optic link between the MDF and the upper concentration level.

Similar solutions should be generally made available making mandatory the provision of :

- a fibre link (dark o lighted)
- one or more wavelength within a fibre
- Transmission capacity
- Access to ducts

between Cabinet and MDF.

Some care should be put in order to avoid that incumbents can circumvent the obligation to supply fibre optic by using someone else’s fibres. As an examples, we attach the recent communication of Telecom Italia that reports an agreement with a local company in Milan, formerly entirely owned by the municipality, to use its own fibre. (Annex 1)

### **Ducts access**

Particular attention must be paid to the generic obligation to provide access to ducts.

This obligation, may be the most powerful among those made available to Altnets, allows them to fully install and control their own infrastructure, only if the problems below are avoided:

- *Lack of information*: it is very hard in many countries for Altnets to get reliable information about duct existence, availability and updated information about the occupancy level. Transparency is the main problem for this service.
- *Impossibility to planning network deployment*: with such a lack of information any network planning is impossible.
- *Obligation can be imposed only on incumbent ducts*: Incumbent may choose to use on a exclusive basis ducts of other subjects (gas, water, sewer, etc) on which any obligation may be difficult to impose. Incumbent can prefer to use such solution to gain a competitive advantage.

## Market 12

The existing Market 12 definition allows for an easier extension to the coming access technologies.

It appears in fact reasonable that Wholesale Broadband Access (WBA) services will be the forerunner solution to provide even extra broad band to the customers.

A similar approach has been adopted when xDSL solution arrived to the market, where, at first, wholesale solution was adopted by Altnets and only later LLU solution has been used.

Anyway, Market 12 services definitions must be enhanced in order to allow:

- Maximum unbundling of service components: promoting the adoption of the ladder of investment principle, allowing better technical and economical condition when collecting traffic near to the final customer.
- Maximum capability for the altnet to control quality parameters: any possible technical configuration should be provided
- Effective Traffic delivery architecture: WBA offers include both customer access component and traffic transport and delivery to the Altnet network. The traffic delivery architecture must be particularly efficient in order to avoid to reduce Altnets competitiveness and extra revenues to the incumbent.
- Ancillary services: they must be provided in order to allow Altnets to deliver high bandwidth services efficiently (e.g. IPTV). Multicast capability introduces efficiency at the interconnection point allowing to deliver only one instance of contents for all customers. Even access to the Content Delivery network<sup>1</sup> of the incumbent must be provided as an ancillary service, in order to perform the most efficient transport of broadcast content avoiding the bottleneck of the interconnection infrastructure.

## Other issues

### Information

Information issues play a very important role among the obligations that must be imposed to the Incumbent operators.

As the “intelligence” of the network is moving towards the customers, relevant importance assume information like:

- customers distribution over an area
- xDSL technology presence in any copper multiple cable
- availability of Optical fibre,
- ducts availability and their level of occupation
- deployment plans of the new technological solution

Only if Altnets can access these information the actual level of asymmetry could be partially filled.

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<sup>1</sup> With the term Content Delivery network is intended the platform that deliver contents available to all customer. Typical example are broadcasting channels that are the same for all customers.



### **Spectrum management issues**

Another relevant obligation that must be introduced in this first step of NGA introduction is the compliance between the VDSL technology adopted by the incumbent and the xDSL technology available for the Altnets co-located for LLU in the MDF.

It must be avoided that the use of VDSL technologies in the terminal part of the loop could disrupt any other xDSL service in the same cable. As long as both technology are used in the same MDF area, specific provisions must be set up allowing Altnets to prove any undue interference.

### **LLU investment safeguard**

The uncertainty regarding the ultimate solution (FTTCab with VDSL, FTTB+ VDSL, FTTH, Optical Fibre with point to point or GPON with point to multipoint solutions) makes particularly dangerous for altnet abandon the investments made at the MDF level using LLU.

Even if it cannot be excluded that different technologies can coexist with different topologies for aggregation points<sup>2</sup>, in the actual situation, where no definitive choices has been made regarding access technologies, it cannot be accepted that incumbent choices may force Altnets to divest investments made when co-locating at he MDF.

Safeguard of Altnets investments for LLU must be considered as a mandatory objective in the transition toward NGA. When incumbents decide to dismantle any MDF site, this option must be agreed with Altnets, assisted by NRA. Any cost caused by such decision should, in principle, be put in charge to the Incumbent.

This point should be addressed carefully to prevent Incumbent anticompetitive actions (like moving equipment in other sites) just for real estate trading activity leaving all the deriving costs to Altnets.

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<sup>2</sup> For example the MDF, which is the aggregation point for the old point to point copper network could not be optimizing for a VDSL solution, while could be more adequate for a point to point FO solution.



## Annex 1

[http://www.telecomitalia.it/cgi-bin/tiportale/TIPortale/ep/contentView.do?channelId=-8681&LANG=EN&contentId=31179&programId=9599&programPage=%2Fep%2FTImedia%2FTISearch\\_advanced.jsp&tabId=6&pageTypeId=-8663&contentType=EDITORIAL](http://www.telecomitalia.it/cgi-bin/tiportale/TIPortale/ep/contentView.do?channelId=-8681&LANG=EN&contentId=31179&programId=9599&programPage=%2Fep%2FTImedia%2FTISearch_advanced.jsp&tabId=6&pageTypeId=-8663&contentType=EDITORIAL)

### **TELECOM ITALIA: AGREEMENT WITH METROWEB TO EXPAND FIBRE-OPTIC NETWORK IN MILAN**

**The agreement is the basis of a Telecom Italia plan to link 70,000 buildings in the city of Milan and surrounds with optical fiber and forms part of the strategy to develop the NGN2 new generation network.**

Telecom Italia has entered an agreement with Metroweb to expand its fiber-optic network in and around Milan. The agreement will give Telecom Italia access to 70,000 buildings, partly through Metroweb's network infrastructure.

The contract, which includes an investment of approximately €50 million and the right to use the infrastructure for 15 years (renewable for a further 15 years), is part of Telecom Italia's plan to develop its next-generation broadband network (NGN2), which, starting from the city of Milan, is scheduled to be rolled out across Italy.

Under the terms of the agreement, Telecom Italia will be able to use as well as its own infrastructure also the fibre optic made available by Metroweb for the construction of a network of devices sited within buildings and offer VDSL2 ultra broadband at capacities of up to 50 megabit/s, sufficient to carry highly-advanced services.

This agreement with Metroweb – which owns a highly extensive optical cable network in Milan – will allow Telecom Italia to reduce the time it takes to set up these installations and minimize the impact of public works, while at the same time obtaining the greatest possible leverage from its investments.

### **TELECOM ITALIA: ACCORDO CON METROWEB PER LO SVILUPPO DELLA RETE IN FIBRA OTTICA A MILANO**

**L'intesa è alla base del progetto di Telecom Italia grazie al quale saranno collegati in fibra ottica 70.000 edifici nella città di Milano e in alcune aree limitrofe e rientra nella strategia di sviluppo della rete di nuova generazione NGN2**

Telecom Italia ha siglato un accordo con Metroweb per lo sviluppo della rete in fibra ottica sul territorio di Milano. Grazie all'accordo Telecom Italia raggiungerà 70.000 edifici avvalendosi anche dell'infrastruttura di rete di Metroweb.

Il contratto, che prevede investimenti per circa 50 milioni di Euro e il diritto d'uso dell'infrastruttura per 15 anni (rinnovabile per ulteriori 15) si inserisce nel progetto di sviluppo della rete di nuova generazione a banda larga (NGN2) di Telecom Italia, il cui piano, avviato a partire dalla città di Milano, prevede la copertura progressiva della popolazione sul territorio nazionale.

In particolare, in base all'accordo, Telecom Italia potrà utilizzare oltre alle proprie infrastrutture anche quelle in fibra ottica messe a disposizione da Metroweb per la realizzazione di una rete di apparati posti all'interno degli edifici che consentirà l'accesso ultra broadband VDSL2 con una capacità trasmissiva fino a 50 megabit/s in grado di supportare l'offerta di servizi evoluti.

L'intesa siglata con Metroweb, che dispone già di una estesa e capillare rete di cavi ottici su tutto il territorio di Milano, consentirà a Telecom Italia di ridurre i tempi di realizzazione degli impianti, limitare al minimo l'impatto delle opere civili e valorizzare al massimo l'investimento.