Response of COLT to the public consultation of ERG on Regulatory Principles of NGAs

1 Introduction & synthesis

COLT Telecom Group S.A [COLT] thanks the European Regulators Group for issuing this consultation on the regulation of Next Generation Access networks.

COLT is a Pan-European operator dedicated to businesses in 13 European countries[1]. Since 1992, COLT has invested over € 4.5 Bn of its shareholders' money to build 32 metropolitan networks totalling over 6,000 km of metropolitan network route and serving over 10,000 business building with Fibre-to-the-Building services. These 32 metropolitan networks are connected through a fully-owned 20,000 km long distance network. To build this network COLT has invested over 2.75 years worth of 2006 revenue, a ratio which is quite comparable to a fixed incumbent, which has typically invested 3.25 years of 2006 revenue, and much higher than a pure unbundler, which has barely invested one year of revenue.

At first glance such data could let outsiders believe that COLT's position about access network is all about "on-net" services, i.e. services delivered to the customer on COLT fibre. However one third of the revenue of COLT is drawn out of "off-net" services, i.e. services delivered to the customer either out of the TDM network of incumbents (carrier selection), or out of all local loops providing a public telephony service (IN services, both generally since 1998, or from wholesale broadband access services (mostly delivered by incumbents, sometimes by altnets) or from unbundled local loop services, generally since 2001.

The main reason for what looks like a deviation from an initial "pure play FTTB" strategy is that, whatever your network geography, the telecom demand of each business customer rarely stops where your network does. This is especially relevant to meet the demand of multi-site business customers (with different needs at different) sites in different geographies. This is very different from the situation of a cable network operator who can afford to play 100% on-net. Therefore the only valid strategy for COLT is to buy off-net on a wholesale basis in order to maximise on-net sales.

COLT has amply demonstrated its commitment to the "ladder of investment" principle by climbing right up to the last rung of the ladder for more than two-thirds of its revenue. However this achievement would be endangered if wholesale access alternatives, which support the remaining third of revenue, are reduced following the development of next generation access networks. The response by European regulators to NGA developments must ensure continued availability of fit-for–purpose wholesale access services that allow competitive telecoms operators such as COLT to supplement their on-net revenues, and to meet the needs of customers across a wide geographic area. Indeed, if COLT were unable to purchase wholesale inputs outside its FTTB footprint, not only would the "off-net" revenue be lost, but this would have knock-on negative effects on COLT's "on-net" revenues, because multi-site business customers usually issue tenders that combine metropolitan connectivity with connectivity in other geographies.

[1] Austria, Belgium, Denmark, France, Germany, Ireland, Italy, The Netherlands, Portugal, Sweden, Switzerland, Spain, United Kingdom

2 Do you agree/disagree with the general approach?

COLT disagrees with the approach because it focuses solely on supply side considerations. The supply of network infrastructure and services is clearly an extremely important consideration, but analysis of supply in isolation may result in incorrect conclusions. COLT suggests that there are three interrelated elements, or rings, which must be considered in developing the optimal regulatory policy in response to NGA developments.

The three rings are:

1. The **Demand Ring**: Demand for services for which NGA are needed (either from the general public, or from businesses, or from content providers)
2. The **Supply Ring**: Supply of network services by broadband network operators and whether this supply should be vertically integrated or not, and more or less competitive. In other words, this is about how many NGA infrastructures should exist and whether and in which part they should be shared between competitors.
3. The **Public Service Ring**: Definition of broadband infrastructure level as a public service or not (and, if it is, at which level of performance and deployment, and at whose initiative).

When Local Loop Unbundling was the hot regulatory topic in Europe in 1999-2000, demand for broadband internet was a proven fact: the gap between fibre-based access in universities and businesses and narrowband access for residential customers was indisputable. So, at the time, the existence of demand could be taken for granted and no further analysis of the Demand Ring was necessary.

Today, the demand for bandwidth provided by an FTTH or VDSL network is far from proven:

- COLT is well placed to know that demand for 100 Meg plus services for businesses exist, but it is neither ubiquitous, nor infinite, nor growing rapidly. So, demand for NGAs is not primarily coming from the business community.
- By far the most significant driver forcing demand for higher speed residential broadband has been the piracy of intellectual property such as music and films. Residential broadband providers now want to develop paying content offers (without actively eradicating piracy). However, this business model is not very robust, and will not necessarily drive further growth in bandwidth requirements. Specifically, it is unlikely that customers are willing to pay the premium for content *delivery,* which is needed to substantiate the demand for the new networks.
- The most promising future application to drive a requirement for the bandwidth provided by NGA networks is HDTV. However, dedicated broadcast delivery platforms already exist to provide HDTV in the form of satellite and cable, and being broadcast networks they are more efficient at performing this function than FTTH or VDSL. Standard definition TV has been squeezed into DSL Triple play by using idle spare capacity, but this use of a two-way network for broadcast purposes is not necessarily efficient when it means re-building, and therefore re-investing in the passive access network.

Whilst there may be a desire for higher broadband bandwidths, this is not the same as economic demand – i.e. a genuine willingness to pay for the service. In time, the economic demand for these services will almost certainly develop, but this does not mean there is a viable business case for deployment of NGAs in today's market conditions. In fact, the

analysis of demand presented above would suggest that in many cases, such invest would represent an inefficient allocation of resources.

At the other end of the chain, on the Public Service Ring, local authorities are free to define any broadband infrastructure as a public service due to the subsidiarity principle. On this basis, some are now planning to deploy FTTH (Amsterdam, Hauts-de-Seine). At present, this can only be stopped on grounds of competition law (State Aid) - no one can question their definition of the right public service level for broadband infrastructure. Clearly, the other two rings in the chain should be considered in deciding whether or not a particular broadband infrastructure is best seen as a public service. Similarly, the ERG must take into account the developments at a local authority level before deciding on an appropriate regulatory regime for all next generation access networks, whether public or private.

In conclusion, an analysis of competitor and incumbent network supply in isolation from demand conditions and public service provision could easily lead to false conclusions. The ERG must build up a comprehensive picture of the relevant political and market dynamics. Only this will minimise the risk of inefficient and ineffective policy decisions.

3 Do you agree/disagree with regard to the conclusions on economics and business case studies?

On current evidence, incumbents are planning or building NGAs due to the expectation of increased competition from:

- Either a cable network (Belgium, the Netherlands, Germany, Switzerland),
- Or a successful LLU player, such as Iliad/Free in France,
- Or a local authority which wants to pre-empt the next generation fixed local loop (City of Amsterdam in the Netherlands, *département* of Hauts-de-Seine in France).

The loss of revenue associated with customers churning to a new, more advanced, network provides the strongest incentive to invest in NGAs. It may be that increased ARPU associated with selling premium content is required to make a business case give the appearance of viability, but the real driver for investment is the threat of competition.

Distribution of premium content does tend to increase ARPU, and the bundling of multiple services also tends to make customers more sticky. So, there are economic advantages to an access provider offering value added services. However, premium content generates very little or no margin for the distributor (unless the distributor is also the content owner). In particular, if regulation required open access to content, competition would very quickly ensure that margins fell very close to zero. As a consequence, there would be very little benefit from mandating access to content in terms of encouraging NGA investment.

As discussed above, all next generation access networks built by incumbent operators have appeared where private competition on very high broadband services exists. NGAs appearing where there was no very high bandwidth private competition to incumbents were driven purely by local authorities (such as in the city of Pau, in Southern France).

So, on the assumption that NGA investment will only take place where strong infrastructure competition already exists, two policy questions become apparent:

- In the areas where there is competition, are two competitors enough? Will a duopoly provide sufficient competition intensity to deliver benefits to consumers?

- What needs to happen in areas where competition either does not exist, or is ineffective? How could NGA investment be incentivised in these areas?

Taking the two issues together, the opportunity for service competition over a mutualised infrastructure becomes apparent. This would appear to be the only possibility of ensuring any competition in the areas where NGA investment is not likely (i.e. the areas that do not attract infrastructure competition today). Similarly, it is perhaps the only way to get more than two competitors in any geography.

4 What is your opinion on the regulatory implications and on the evolution of the ladder of investment?

It is abundantly clear that as competing infrastructure is rolled out closer and closer to the customer, the level of investment required increases dramatically. Some NGA architectures, e.g. VDSL, move the natural point of interconnect for unbundling closer to the customer, and therefore dramatically increase the cost for a competitor.

However, the mere existence of such a network architecture does not invalidate the ladder of investment theory. Various FTTH network designs can be envisaged where the natural point of interconnect stays in or around the central office, and therefore does not materially affect the level of investment required to get to this rung on the ladder of investment. The conclusion here is that the regulator is still able to maintain a viable ladder of investment even in the presence of NGAs.

A second, and perhaps more important, consideration is that it is vital both to maintain and add to the available stock of alternatives to fully building one's access network. These are required to act as rungs on the ladder of investment and to act as complements to wholly owned access network in different geographies.

The following access methods should be considered:

- The sharing of "historic" ducts makes sense today, just as the sharing of the copper loops did, since it started some eight years ago;
- Dark fibre may complement it, where further construction is actually impossible (e.g. duct construction or sharing refused by the local authority for an objective reason);
- Bitstream also, at least from the street cabinet to the regional level, could finally complement it, for internet access & for VoIP, but not for IP TV, apart from the street cabinet level.[2] This wholesale broadband access should be technically and economically suitable for alternative operators to develop any services of their choice. This means that transparent multiple Ethernet VLANs (IEEE 802.1ad standard with 1534 byte frames) must be made available, enabling alternative operators to determine their own throughput and QoS on a line-by-line / VLAN-by-VLAN basis (multiple VLANs per line with no naming constraint, in order to enable separate channels for voice, Internet and business-class data services, etc.).

VDSL, when introduced at street cabinet level, should be made compatible with ASDL 2 & ESHDSL LLU at central office level. The Belgian and French regulators have been keen to

[2] Bitstream IP TV on a dedicated access segment raises no bandwidth-sharing issue. On the backhaul segments, on the contrary, such an offer would severely disrupt the bitstream market. If an IP TV bit was priced as a VoIP or web access bit, no alternative operator would build. And there would be no ladder of investment Everyone would only sell bitstream for voice & web access, at IP TV bit prices.

ensure this. It is very concerning that OPTA, the Dutch regulator, did not impose this obligation on KPN when the Dutch incumbent announced its All-IP plan, although we recognise that efforts are being made in an industry group, and KPN has entered into voluntary commitments with other operators in this regard.

Apart from historic ducts, which ought to be available at cost-oriented rates, other wholesale offers could be priced at non-eviction and non-squeezing rates, in order both to encourage investment by the incumbent, and investment by alternative operators.

Since NGA means no greenfield investment from incumbent, the part of their network which they rely upon, if built prior to the opening of the telecoms market, needs to be made available to competitors for that precise reason.

5 Additionally please provide more specific comments regarding the issue of multicast capabilities and their regulatory treatment?

It may seem strange for a business operator to express an opinion on multicasting, which is primarily used for residential customers. However both types of operators share the same infrastructure, and the externalities surrounding one type of operator has an indirect but very effective influence on the other kind of operator.

IP Multicasting is typically used for IP TV, which is eating up 80% of broadband networks capacity. IP TV is also about sending a permanent high flow of data, which leaves little else for internet applications. “TCP fairness” characterised the early ages of internet: when there was congestion, all concurrent applications simultaneously reduced their transmission rate. If IP TV were managed in this way, the picture quality would be unacceptable and people would not use it. Therefore a network operator cannot offer multicasting to any application but the ones it fully controls.

In France triple play only exists on the retail market. The incumbent only offers it where there is local loop unbundling competition, and therefore does not face regulatory pressure to provide a wholesale equivalent. In Italy however altnets are trying to obtain access to the multicasting capacities of the incumbent. This would lead to a switch away from volume-based pricing of bitstream, to a flat-rate model, which would encourage further capture of backhaul bandwidth by the most “selfish” applications.

Idate, the consultancy, dubs Web 2.0 as the “digital common”. This can be true as long as the common is not captured by hungry new applications squeezing existing ones out of the internet. Those applications wanting to offer a service permanently equal to the maximum bandwidth available on a dedicated access cannot have it for free; they should contribute to covering their backhaul costs.

Network neutrality never existed (from one service to the other, the price per bit has always varied a lot). Internet neutrality existed in the early days of the internet. New “TCP-unfair” applications (BitTorrent, YouTube, Joost,…) are surely killing it; ISPs commonly throttle them and they are right to. It would not be inappropriate for an application operator to pay for this throttle to be lifted, should he want to.

6 Do you agree/disagree with the conclusions?

With the caveats developed above (no expectation of enhanced ARPU, spur effect of efficient competition on incumbent NGA roll-out, risk of pre-emption of NGAs by local authorities), COLT agrees with the conclusions drawn by the ERG, with a special attention to the "need for ubiquity" of a business operator who should be able to serve customers outside its own access network, provided it has one.

7 Contact

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