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European Commission,
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For the attention of the State Aid Registry
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Amsterdam, 22 June, 2009
Our ref: 360000112/4176701.1
Re: **Stedenlink/State aid & Broadband consultation (HT. 2079)**

Dear Sir, Madam,

Please find below the comments of Stichting Stedenlink on the proposed "*Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks*".

Stedenlink (www.stedenlink.nl) is a Dutch foundation comprising municipalities and provinces, that share the view that, like drinking water and energy, ubiquitous very high speed, symmetrical broadband connectivity -broadband 2.0- is an essential prerequisite for a competitive local, regional or (trans-)national economy, and that broadband 2.0 requires "open" next generation access networks to be built as soon as possible.

Participating in Stedenlink at present are the provinces of Overijssel and Gelderland and the municipalities of Amsterdam, Rotterdam, Den Haag, Eindhoven, Tilburg, Helmond, Enschede, Arnhem, Amersfoort, Zoetermeer, Deventer and Leeuwarden with a total population of over 6 million people.

Introduction

On behalf of Stedenlink, I would like to comment on the Commission's draft guidelines from the perspective of a Member State that has 95% coverage (homes passed) by both copper and cable.

It should be noted that these competing "first generation" access networks have been the result of historical accident, rather than design.

In addition, both networks have been built by public authorities: KPN, the former Dutch PTT, used to be wholly State-owned until 1994, whereas almost all of the local CATV networks were built and operated by municipalities until they consolidated in the private com-

panies UPC (Liberty Global) and Ziggo (Warburg Pincus, Cinven) that now dominate Dutch TV distribution

Having two fixed line access networks has clearly been a benefit to the Netherlands. Broadband 1.0 (including ADSL 2+/VDSL and cable/Docsis-2/3) penetration amounts to 80% of Dutch households, resulting in a consistent top 3 ranking within Europe.

It may be questioned, however, whether this ranking can be attributed to infrastructure competition between the copper and the cable access networks alone. It is true that the transition from dial-up internet access to broadband 1.0 started with cable in the late nineties, which, after some time, required KPN to start offering DSL. For most of the past 5 years, however, market shares in broadband have been stable at roughly 60:40 (DSL:cable). Both the Dutch NRA OPTA and the competition authorities (NMa and the Commission) have recognized the importance for competition on the broadband market of DSL competitors on KPN's network such as Tele2, offering services to end users on the basis of regulated LLU or WBA. Indeed, OPTA often uses the phrase "*two is not enough*" to indicate the insufficiency - in the access market - of infrastructure competition.

NGA roll-out not assured

Ensuring competition on and between existing networks is, however, an entirely different challenge than ensuring the roll-out of new 'next generation' access networks enabling broadband 2.0, meaning networks allowing for *symmetrical* download and upload speeds (far) in excess of 100 Mbps that are 'always available to every subscriber, simultaneously'

When thinking of ways to make sure that our children and grandchildren will have the new access network they'll need -and which will take at least 10 years to build on any significant scale-, in the opinion of Stedenlink, we should not be afraid of fresh thinking, nor of *'creative destruction'*, neither in the real world of physical assets, nor in the world of ideas and policies, and be aware of the risk of fighting the last war again with a blind eye for present battlefield conditions. We should avoid a repetition of Maréchal Ferdinand Foch's: "*Les avions sont des jouets intéressants mais n'ont aucune utilité militaire* "

Never before the privatised e-communications sector has been faced with a paradigm shift, requiring entirely new access networks to be built. The risk of 're-monopolisation' has been rightly highlighted by many commentators, but perhaps the unique opportunity to shape the conditions for truly welfare enhancing competition has not been given the attention it deserves. Stedenlink calls upon the Commission to use its tremendous reservoir of economic expertise, regulatory know-how and intellectual power to focus on precisely that once-in-a-lifetime opportunity

Only fibre "future proof"

There is no other medium in sight that matches the bandwidth fibre offers. It follows that in the years to come, our citizens will be served best by a full fibre connection to their homes

Without denying the increasing importance of mobile broadband, WiFi, WIMAX, 3G and LTE are no substitute to fibre-to-the-home. The same is true for upgraded hybrid-fibre-coax (HFC) networks of cable operators, that with Docsis-3 technology can match the (download) speeds of fibre to a certain extent, but cannot overcome the handicap that it is a shared medium up to the last few meters, in time inevitably leading to congestion by in-

creased simultaneous use in the shared part of the coax network. As regards copper (twisted pair), its life can be extended by FttC and VDSL, but its inherent cap on bandwidth makes it a medium of the past rather than the future. Thus, neither mobile, nor upgraded copper/coax can be more than a temporary solution for the "digital home" of the future.

Just like operators in the past 30 years have replaced copper by fibre first in their undersea cables and later in their backbones and core networks, full fibre will be the end game for the fixed line access networks. Only fibre is a truly 'future proof' medium.

Economies competing with the EU in Asia as well as the US have chosen fibre, resulting in large and fast roll-outs. Whereas the EU until some years ago ranked high on fast broadband rankings, it now is falling. A noticeable exception is Sweden, where FttH has been rolled out, leading to the highest fibre penetration in the EU.

As noted by the authorative standards organization IEEE (USA) the next step in the 21st century will have to be ubiquitous gigabit networks:

> *"The U.S. economy is based on knowledge - its creation, dissemination and application. A knowledge economy uniquely creates new wealth through invention and innovation. Development depends on research that depends on access to the entire body of existing knowledge and the rapid exchange of new knowledge throughout the economy and the society. Modern research typically retrieves, creates and exchanges massive information files at gigabit rates. After the research, many follow-on functions will benefit from gigabit networks, including computer-aided design, integration of design, manufacturing, sales, and distribution, and collaboration among all through high quality video conferencing.*
> *Seamless and rapid communication permits easy access to all knowledge - scientific, medical, economic, commercial, educational, political and recreational. Through ubiquitous gigabit networks the entire U.S. population, urban and rural, could contribute fully to developing our nation's standard of living while overcoming a digital divide that now forecloses productive activity by those without such access."* [1]

The ubiquitous "gigabit networks" Europe needs too, require the bandwidth that only fibre can offer.

Open P2P FttH

It is Stedenlink's opinion that except perhaps in rural areas the eventual truly future proof NGA should be a point-to-point FttH network. This network should serve as a universally available, neutral and open platform for a host of competing active operators.

In most of the EU as well as the USA facility-based competition at best leads to a network duopoly. In June 2009 a study by the famous Pew Research Center researched the effects of limited competition on consumer prices for broadband.[2] The graph below shows the very marginal effect of having only two providers, whereas the effect of having three or even better four providers to choose from is remarkable

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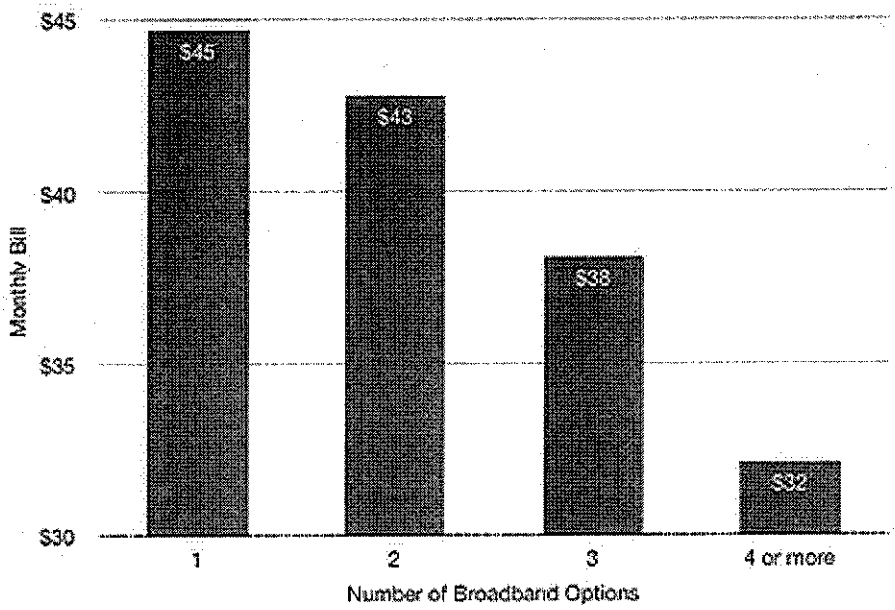
[1] http://www.todaysengineer.org/2005/Sep/gigabit.asp

2 http://pewinternet.org/Reports/2009/10-Home-Broadband-Adoption-2009.aspx

Open P2P FttH will enable true competition, on the level of transmission as well as communications services, and lead both to innovation and lower prices for consumers.



Only point-to-point FttH provides a future proof upgrade path. Once the fibre local loop has been built, the upgrade path towards a next generation in active equipment is easy: just the appliances on both sides of the wire have to be changed. This is not unlike the upgrade path of today's copper based networks that, however, are reaching the upper limits of the transmission capacity of the copper as a medium.

Pro-competitive network design

The question of what constitutes the best medium to use in the access networks of the future, should be distinguished from the question what is the design of the new networks that is best suited to enhance competition on service markets like (HD)TV, voice and broadband 2.0, whether or not bundled (whilst it is highly likely that the market share of bundles of broadband, TV and voice will significantly increase, this issue has no bearing on the present discussion). The first question is a purely technical matter ('which medium offers the most bandwidth'), the second question is a more complicated matter.

Even in the Dutch market, the emergence of two or more competing, private full fibre networks enabling broadband 2.0 services, is far from certain. Clearly, as even now there is still a (diminishing) market for dial-up, there will also be for some time to come a market for broadband 1.0 that will continue to support upgraded first generation networks. Replacing the last few hundred meters of coax connecting the cable operators' fibre core networks to their subscribers' homes by fibre can be almost as expensive as building a new FttH network. It should be expected, therefore, that as soon as a NGA in a particular area has been built, either by KPN, by cable or a third party, that network will enjoy a monopoly as regards broadband 2.0. Only without sufficient demand for broadband 2.0 services, competition (in broadband 1.0 services) would be ensured. The steep increase in the past 10 years of the use of bandwidth, when it is made available, would make it an extremely dangerous as-

sumption that broadband 2 0 demand will be structurally lacking. This is particularly true when taking into account the spectacular growth of video/TV on the Internet (YouTube, Hulu, BBC iPlayer), the advent of HDTV with its very high bandwidth requirements, and the bandwidth necessary for real-time high-quality video communication and massive file exchanges with doctors (e-health), colleagues, friends & family, and public services (e-government) Policy cannot be based on a presumed absence of a 'tipping point' at which the market will shift towards broadband 2.0 , provided it really is available in the market. Other countries -South Korea, Singapore, Australia, to name a few- have already definitely chosen for fibre in their new access networks as a prerequisite for the broadband 2.0 services their societies need

Fibre loop unbundling required

For all practical purposes, therefore, present public policy in Europe should be based on the probable 'worst case' scenario that the eventual NGA at some time will become the dominant network and will have to be forced to provide 'open access' at regulated rates to competitors. Except in the event incumbents (either Telco's or cable operators) or new entrants, if any, would voluntarily build structurally 'open' NGA's from the outset, regulators will have to step in at a certain time, as they have done in the past 10 years to force the incumbent Telco's to offer unbundled local loops and bitstream services to its broadband 1 0 competitors.

From the point of view of society at large, therefore, it is highly desirable that when the present copper and coax lines in 'the last mile' are being replaced by fibre, the new network is designed to allow for the greatest possible degree of competition on the network. This means that

i. physical local loops should be available to all competitors at non-discriminatory terms,

ii. unbundling should be very easy and preferably not be handled by a downstream competitor (*i e* the incumbent, usually), and

iii. aggregation points or Points-of-Presence ('PoP') where the local loops from the individual homes that are connected to the access network end, are sufficiently big to accommodate the active equipment of at least 3 operators and have sufficient lines to justify even for smaller 'altnets' to roll-out their own fibre to these PoP's in time and so provide for independent 'backhaul'

We will call pro-competitively designed NGA's that conform to the above specifications: 'open' networks

Incentivising open NGA's

It doesn't come natural to any network owner without outside pressure to make its existing network obsolete -even when it's been almost fully depreciated, as is the case with the PSTN, as well as the cable networks (which are 30-40 years old, with the upgrade to partial fibre having been effected often more than 10 years ago) in the Netherlands- by building a better one (which explains the reluctance of incumbents to invest in NGA's, even in the Netherlands, where cable, however, seems to take care not to threaten DSL's market share too much).

It is even less natural for incumbents to design networks that facilitate competition by their rivals, notwithstanding arguments that open networks generate more traffic (to be fair to KPN, it should be observed that it consistently -and in sharp contrast to the 'closed shop' of Dutch cable- has taken the position that its future access networks would be 'open').

The challenge for public authorities, therefore, is to either devise incentives to build only 'open' NGA's or to devise disincentives to build 'closed' NGA's.

The latter has been done by OPTA recently, when it decided to put in place a regime for setting price caps for mandatory ODF access for KPN and its affiliate Reggefiber, which only applies to point-to-point (or 'home-run') FttH networks.

No authority in the Netherlands, however, has the power to force an operator to invest in NGA's, or whatever other fixed line network: as anyone who intends to put cabling in public land for communication networks must by law be allowed to do so, no conditions can be attached to a permission to 'dig' The operator is free to build a new fixed network as unfit for unbundling as he chooses

Government roles: investor or sponsor of NGA's

Consequently, the only way for (local) government in the Netherlands to warrant that i NGA's will be built at all, and ii NGA's will be designed and operated as open networks, is to build them themselves, either with (Public Private Partnership, 'PPP') or without private partners in the project, and either with or without State aid

Thus, four different cases can be distinguished:

1 PPP without State aid

2 No PPP, no State aid

3 PPP with State aid

4 No PPP, with State aid

The Market Economy Investor Principle: Citynet Amsterdam

Cases 1 and 2 are straightforward, *prima facie*: if there is a convincing business case for the project and a local authority (or the national government or any State agency) is investing as a normal private investor would, with or without actual private partners, the *'Market Economy Investor Principle'* ('MEIP') applies

The only example in which the MEIP has been found to apply by the Commission in a NGA setting, is the Citynet Amsterdam case of 11 December 2007. However, although the public version of the Commission's decision provides for a measure of guidance, it would be helpful if the Commission would use the present guidelines to expand on the standards it intends to use in the future

In particular, Stedenlink would suggest to create a 'Safe Harbour' or 'presumption of innocence' for government investments in NGA projects, in which the entire government stake is less than 50%. If the private sector provides more than 50% of the equity capital required

for the project and is willing to risk its money, government funds invested in that project *pari passu* with substantial private funds should be presumed to be genuine investments that don't constitute State aid. Of course, if it would transpire that a private party involved in fact doesn't take the same risk per euro invested as the government, the presumption wouldn't hold anymore.

By clarifying in the guidelines that minority stakes in open NGA projects by (local) government are presumed to conform to the MEIP, provided that other MEIP criteria are fulfilled as well, the Commission would significantly ease the path towards NGA's.

Compatible State aid

Cases 3 and 4 constitute the hard part for the present purposes. It is possible that in certain instances the business case for a NGA project does not result in a return on investment ('ROI') that is sufficiently attractive to private investors and the question then arises whether or not the difference can be made good by -compatible- State aid.

First, a distinction should be made in the kind of network contemplated. None of the participants in Stedenlink is interested whatsoever in being involved, either directly or indirectly as a partner in a PPP, in the provision of e-communication services. Stedenlink firmly believes that supplying broadband, TV, voice and other e-communication services should be left to the private sector. Stedenlink would restrict any government involvement to the level of basic infrastructure for the access network only, i.e. in the company that builds and operates the 'passive' access network (ducts, tubes, passive ('dark') fibre, manholes, co-location facilities, etcetera).

We will call this company the *'passive operator'*. The passive operator earns its money not on retail markets, but on a business-to-business wholesale market: it 'sells' dark fibre connecting a particular home to the nearest PoP and co-location to 'active' operators, *i.e.* private companies like KPN, Tele2, Bbned, UPC and Ziggo that install their opto-electronic equipment in the co-location facilities (PoP's) of the passive operators to activate the connection to their subscribers. The supply of e-communications services, be it purely transmission services or (also) voice, broadband, TV and similar services, is left to the usual telecommunications providers.

Passive and active operators' ROI

By distinguishing between 'passive' and 'active' operators it becomes clear that their respective risk profiles are quite different, although both categories share a dependency on the eventual success of broadband 2.0 services on the retail market, without which the active operators wouldn't be able to pay the rent to the passive operator: whereas the active operator invests mainly in opto-electronic equipment and marketing efforts, both with a limited life-span (active equipment usually will be replaced within 3-5 years), the passive operator's horizon is 20-30 years or more, which is comparable to the horizon of real estate investors. Typically, real estate investors require a lower ROI. Thus, splitting up -in a new NGA setting- the activities of the at present usually vertically integrated e-communications providers, would result in a more sharply defined risk profile for passive and active operators respectively, and in different ROI's.

It follows that the Commission, when appraising the viability of a business case for a new passive NGA operator in which a (local) government is investing, should not compare the

ROI resulting from the business case with the ROI's that are customary for vertically integrated telecommunications companies. This implies that a ROI for a passive operator which is lower than the standard for the telecommunications sector, doesn't automatically mean that State aid is involved.

That being said, even with a lower ROI requirement, State aid may in certain circumstances still be necessary to build a NGA, whether by a (local) government on its own or as a participant in a PPP with private partners (which in Stedenlink's opinion, is the much more likely case).

The question then is when State aid to a new passive NGA project is to be deemed compatible under article 87(3) of the Treaty

Creative destruction or protection of vested interests?

Stedenlink firmly believes that State aid rules should not be used to protect industries beyond their prime, except perhaps in exceptional cases to smooth the social effects of the transition. Industries that are entrenched in a technology that has had its day and refuse to implement succeeding technologies, should be challenged. Preferably by private investors, but in their absence also by government

Communications infrastructure and access networks in particular are very expensive to duplicate or to replace. It is perfectly understandable that their owners are hesitant to destroy the value of their present networks by overbuilding new networks, particularly when revenues and profits generated by the existing networks remain at a satisfying level

For incumbents, it is easy to invoke lack of demand for new and better networks, as no one can prove them wrong as long as the latter networks haven't been built. In view of the risks involved by taking on incumbents with a proven track record and millions of subscribers, it is also understandable that private investors are hesitant to invest the required huge amounts of money in next generation networks for which they lack as yet any customers.

The resulting deadlock can only be broken by government. Only government takes account of the indirect benefits (spill-over) for both the economy and society at large of having new, state-of-the-art access networks, that offer unprecedented and almost boundless bandwidth to everyone at the same time.

Innovation can't "distort" competition

It is the view of Stedenlink that State aid in order to build new passive-only, 'dark fibre' access networks that are 'open', should in principle be deemed to be compatible State aid. Their being different than existing networks in many ways, implies that competition is not distorted. Technological progress is by definition destructive. It would be perverse to put innovation on hold because it hurts the companies that use old technology. State aid law should protect competition, not lagging competitors.

Moreover, open NGA's don't compete with older networks, at least not directly. Operators of open NGA's don't offer retail communication services, but only wholesale access to other operators, including the owners of 'last generation' networks. Competition is not distorted, but transferred to a higher level. As long as a level playing field and equal access to the NGA is guaranteed to all operators including the incumbent Telco's and cable opera-

tors, incumbents in any event cannot rightfully complain that their legacy networks are being subjected to unfair competition. They have the choice to either build out their legacy network into a full-fledged NGA, to continue marketing their services based on the legacy network, to use wholesale access to the NGA and offer better services on the retail market, or to use a combination of these options. As the new networks will need considerable time to be built and activated, incumbent operators will in any event have many years left to monetize their existing networks before competition from better services cuts in.

Equivalence of NGA's

In the draft guidelines it is suggested that government aid to a NGA would be incompatible aid in the event the incumbent networks would have been upgraded to VDSL or Docsis-3 (cable). In the opinion of Stedenlink, that should only be the case in the event the networks would in all relevant aspects be equivalent. These aspects include possible download and upload speeds, scalability, 'universality' (coverage of an entire territory, *i.e.* no 'digital divide' within a city) and 'openness' (having a pro-competitive design, fit for the wholesale provision of unbundled fibre loops to competing active operators). Government should be free to build better access networks. Only in the event it would build a network that doesn't surpass existing networks ('more of the same'), incompatible State aid may be involved.

Consequently, in Stedenlink's view, the eventual guidelines should use a flexible definition of a NGA which includes all varieties, whether 'closed' or 'open', of either full fibre (FttH, both home run/P2P and G-Pon) or 'hybrid' fibre/copper/coax access networks using VDSL or Docsis-3 technologies, and specify that State aid will be considered compatible aid as long as the aid is spent on an in any respect 'better' network than the networks being available in the same territory

"Vapour ware"

This brings us to the question to what extent any announcements and plans by incumbent operators as to developing their networks should be taken into account. The draft guidelines seem to take the position that the mere announcement of an intention to build a NGA pre-empts the government. This is an extreme position, that would for all practical purposes frustrate any government involvement in NGA's, which surely will not be the Commission's intention as it makes very clear that NGA's are instrumental for Europe's competitiveness, a view Stedenlink strongly supports. Each incumbent would be tempted to make the necessary announcement to thwart the governments plans, and leave it at that, at no cost to itself. There is no downside for the incumbents, only a very clear upside. If one wants NGA's to be actually built in Europe, this is the wrong incentive, leading to "virtual land grabs" only

Stedenlink would propose that only existing, active and fully operational networks will be taken into account when testing the compatibility of State aid to NGA's. This is consistent with State aid law as it has been applied by the Commission for the past 50 years, which always has focused on actual competition rather than merely potential competition over time. In no circumstances incumbents should be given the chance to prevent better access networks to be built by 'vapour ware'. If their plans are serious, they will be able to convince the government that duplication would be a waste and governments should be able to require binding commitments that the incumbents will indeed build equivalent networks in time, before giving up on its own project. Only when equivalent private NGA's are truly assured, government should step back.

Conclusion

Along with the Commission, Stedenlink believes that a balanced approach is required to promote NGA investment and that private investment is preferable The approach eventually chosen should, however, recognize that NGA's are not necessarily equivalent and that, consequently, private investment in a lesser type of NGA should not crowd out State aid to a better type In addition, incumbents should only be able to pre-empt government with better networks that are operational. Europe needs better access networks that work, no promises.

Please find attached a Memorandum with more detailed comments on the text of the proposed guidelines

The present contribution by Stedenlink does not contain confidential information

Stedenlink is looking forward to discuss the issues raised in this letter with the Commission's services

Sincerely yours,
Houthoff Buruma NV

Jaap Doeleman

Attachment: Memorandum *re* Stedenlink/EU Broadband Guidelines, dated June 22, 2009