cablenet
/ television / internet / telephony

5 July 2016

Dr. Wilhelm Eschweiler
Chairman
Berec

Cablenet Comments for the Public consultation on the draft BEREC Guidelines on implementation of net neutrality rules - BoR (16) 94

Please find below our comments on the above public consultation.

Of particular concern to us is the provision in Article 4(1) sub-paragraph (d) that internet access service providers should provide *a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services* they provide in the case of fixed networks.

Whereas normally available and maximum speeds do not pose much of a problem, the minimum speed creates significant issues. The problem lies in the definition that will be attributed to minimum; as it should normally be understood, minimum refers to the speed that a consumer would expect to attain from his/her internet access service at any time.

This implies that in order to strictly comply with the regulation, service providers would need to design their networks end-to-end to be able to deliver these minimum speeds for ALL their users at the SAME TIME, even if the probability that such an eventuality would materialise in practice is close to zero.

This will mean effectively two things:

1. Some service providers will not properly design their networks to deliver the minimum speeds they promise; hence they will unfairly compete with the service providers that do properly make the necessary provisions to offer the minimum speeds to their customers; the service providers who do not properly design their networks will be able to advertise and quote higher guaranteed minimum speeds than their networks can really deliver.

2. Those service providers who do properly design their networks to offer the promised minimum speeds will incur additional costs which they would need to pass on to consumers, thus increasing the cost of services, even if the probability that these extra network resources will need to be used in practice is close to zero.

At the moment, even fixed networks are designed from a certain level upwards taking into account the principle of diversity. Diversity essentially means that not all users will need all their bandwidth at the same time and hence upstream network connections can be smaller that the aggregate sum of all the downstream network connections feeding into them. This is true to a greater or lesser extent for all service provides, regardless of size.

Ensuring a minimum connection access speed at the lowest network access level is obviously not a major problem. Most current technologies used for network access (xDSL, DOCSIS and FTTx) can ensure that a subscriber receives a defined minimum access speed. The problem

arises as the connections from the access equipment are aggregated upstream, where it is normally no longer possible to individually keep track of the speed of an individual access connection.

Obviously the biggest issue with aggregation occurs at the highest upstream level, which is the level at which providers normally interface with each other; one should consider that once traffic has been handed over to another provider, then that traffic becomes that provider's responsibility.

In our case, where we are based in Cyprus, our highest level of aggregation is the level of international capacity, where we hand over all our internet traffic to IP peering partners or upstream IP transit providers in Europe.

In mainland Europe, the only cost most European service providers incur in exchanging traffic is the cost of IP transit, in case they have contracts with IP transit providers. The cost of IP transit is typically only a few Euro cents per Mbit per month. Peering is usually done on a free exchange basis and hence there is no cost for exchanged traffic. However the cost of installing and maintaining the peering and transit connections may be more significant.

In the case of Cyprus, which is remote from European exchange hubs, there is a significant cost of acquiring and maintaining international circuits to reach the exchanges in Europe. The cost of these circuits at the moment is around €6-€8 per Mbps per month and reflects largely the high cost of the sub-sea cables needed to reach mainland Europe. This is many times the cost of most European service providers and constitutes a major component (up to 60%-70%) of the cost of high-speed internet access services in Cyprus.

At the moment our company utilizes around 24 Gbps out of our available 30 Gbps of international capacity to service the total internet access capacity of around 870 Gbps sold to our 55,000 retail internet customers. This is a contention ratio of around 1:30. We try to maintain our cable network from end-to-end so that we do not need to apply any network traffic management. Hence our users' normally available speed is equal to their advertised maximum speed.

If we were to define minimum speeds based on these network characteristics, we would need to define a strict minimum speed at around 3.4% of the advertised speeds. This comes about by dividing the available 30 Gbps by the total potential demand of 870 Gbps. So if at any given moment all of our subscribers decide to use their services, the network would be fully utilized and they would each just attain their minimum speed; we would thus as service providers be within the letter of the regulation, since we would be in a position to fulfill our minimum speed promise under all circumstances.

However, if we set our minimum speed at anything above 3.4% of nominal speeds, then there is a possibility that we would not be able to deliver on our minimum speed promise in the case in which all our subscribers were to use their connection simultaneously; we would thus strictly be in breach of the regulation, even if the probability of that happening is miniscule.

We do not consider it correct that service providers should have to be concerned with or judged on the probability that they will be in breach of the regulation or not. The use of the word minimum is an objective measure which service providers should meet all the time and not just probably meet most of the time. If probability will come into play, then the other defined measure of normally available speed is sufficient, since it allows for some subjectivity and is a more meaningful and relevant measure to the subscribers.

41-49 Agiou Nicolaou 2408 Nicosia Cyprus · Tel.: +357 22294000 Fax.: +357 22446807

Furthermore, consider that in order to strictly meet the minimum speed information criterion, we would currently need to define for our customers a very low minimum speed (3.4% as we calculated above) as a proportion of the advertised speed. However, as we have argued above, the strict minimum speed is practically a meaningless measure and all our customers on our network already have a normally available speed close to their advertised speed. There is actually still a lot of spare capacity in the network. If customers focus erroneously on the minimum speed, which if it will be applied correctly by us as service providers will be a very low number, they may be tempted to opt for a higher speed package, without in fact needing it.

If, in order to avoid giving the wrong message to our customers, we set for example our minimum speed at say 20% of the nominal speed (which is still arguably on the low side), we would strictly need to have available almost 175 Gbps of international capacity (20% of 870 Gbps) instead of 30 Gbps that we have today. In our case this would cost several million in investment and the extra capacity would effectively be idle, since we already have excess capacity, whilst still delivering on all the normal requirements of our customers. However the extra investment would probably result in an increase in our prices by a significant amount (probably many multiple times extra on current prices).

There is thus significant potential to create consumer disutility by requiring service providers to commit to and advertise minimum speeds for all internet access services. Firstly, by misinformation, where consumers may attach too much attention to the largely irrelevant measure of minimum speed and may hence end up paying for a higher speed package they do not really need. Secondly, prices of internet access services may go up unnecessarily if service providers try to put in place network resources to ensure quoted minimum speeds are met, even if the likelihood of the need for these resources is close to zero.

It is very probable that the requirement to put in place a minimum speed stems from concerns that usually the lowest level of access networks cannot offer the advertised speeds in a lot of cases. This is particularly true in the case of xDSL services, where the length of the copper loop has a significant impact on attainable speed. Also, to a lesser extent, in the case of DOCSIS and FTTx PtMP networks, where the capacity is shared, the level of oversubscription can impact the minimum achievable speed. In these cases, where diversity is very low, a minimum design speed may be relevant. However the impact at higher network levels, where diversity is a major element of network design, should not be underestimated. If the intent is to provide information to the user on the actual attainable speed due to technological constraints of the access network, a different suitable metric or methodology must be sought. Defining a minimum speed, which impacts the whole network, is not the solution. The normally attainable speed adequately addresses this issue in any case.

In summary, we would highlight that the imposition of a requirement to advertise and commit to a minimum speed in the case of internet access services would be probably detrimental to the consumers and competition, at least in the case of Cyprus, which has its own characteristics given its geographical separation from mainland Europe. The requirement of having an advertised normally available speed is more relevant and useful for consumers.

We therefore suggest, that if a proposal is to be included in the regulation for a minimum speed, countries via their respective NRAs, should have the option of opting out of forcing providers to advertise minimum speeds for all internet access packages.

41-49 Agiou Nicolaou 2408 Nicosia Cyprus · Tel.: +357 22294000 Fax.: +357 22446807

This does not mean that service providers cannot offer services on the market with a specific guaranteed minimum speed. However such products are usually relevant for specialized purposes and are sold to customers who have this requirement.

With regard to the normally available speed, we consider it very important to have some objective measurement mechanisms, even beyond the scope of what NRAs can offer. For high-speed internet services, the normally used, web-based, customer-performed speed tests are not sufficient or objective enough.

A major negative factor is the prevalent use of wireless connectivity by users when performing the tests. The other important factor is the time period over which test are performed. We consider that when discussing normally available speeds, the relevant time period is over 24 hours or even up to 7 days, since peaks can occur at specific hours and days in a week. Users are likely to perform any speed tests only during times of network congestion and not during the rest of the time. This will lead to biased results, unless any periods for which tests have not been performed are considered to be normal full speed periods.

The use of specialized measurement equipment is thus essential, along the lines of the SamKnows series of EU broadband evaluation tests. However any measurements would have to be made locally, at least in the case of Cyprus, since the geographical distance between Cyprus and mainland Europe affects ping time, which in turn may affect the speed results.

It will be very useful to have some sort of EU funding for independent third parties to develop efficient specialized systems and methods that can be used for the objective evaluation of the performance of internet access services provided by providers.

We are at your disposal for any further information or clarification.

Yours faithfully

p.p.

Nicolas Shiacolas
CEO

41-49 Agiou Nicolaou 2408 Nicosia Cyprus · Tel.: +357 22294000 Fax.: +357 22446807