



Alliance of Telecommunications Terminal Equipment Manufacturers (VTKE)  
Alt-Moabit 90a ▪ 10559 Berlin ▪ Germany  
+49 (0)173 628 62 44 ▪ info@vtke.eu

**Statement on the  
“Rules on the method and conditions of performing the activity of electronic communication  
networks and services”  
(PRAVILNIK O NAČINU I UVJETIMA OBAVLJANJA DJELATNOSTI ELEKTRONIČKIH KOMUNIKACIJSKIH  
MREŽA I USLUGA)**

The Alliance of Telecommunications Terminal Equipment Manufacturers (VTKE) is committed to ensuring that both end-users and manufacturers of telecommunications terminal equipment can make the most of the opportunities offered in a liberalised telecommunications market. In particular, we are committed to ensuring freedom of choice of terminal equipment (also commonly referred to as "router freedom").

Against this background, we would like to thank you for the opportunity to comment on the draft "Rules on the method and conditions of performing the activity of electronic communication networks and services" (hereafter "draft rules"). We would like to focus on the aspects/provisions related to the possibility for end-users to choose and use their own terminal device directly at their broadband connection.

*[For reasons of comprehension, the draft regulation has been translated by us independently from the Croatian original into English. Any inaccuracies or ambiguities in the content of this statement may result from this. Accordingly, we will be happy to answer any queries or questions of understanding at any time].*

➤ **Guarantee of free choice of terminal equipment for end-users in draft rules very welcome.**

We welcome the fact that HAKOM wants to oblige network operators with Art. 30 (3) of the draft rules to enable end-users to use their own terminal equipment for broadband internet access services.

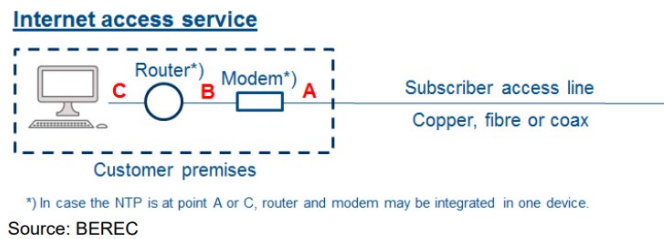
The freedom of choice of end-users with regard to the terminal equipment on their broadband connection, that is now explicitly reflected in the Croatian regulation, is also regulated in Article 3 (1) of Regulation (EU) 2015/2120 and is directly applicable law in every EU Member State. The Croatian regulation on the free choice of terminal equipment would therefore be in line with the corresponding European requirements.

➤ **Legally binding definition of the network termination point is required.**

The necessary prerequisite for guaranteeing the free choice of terminal equipment is a clear definition of the "network termination point" (NTP). It has an important border function which is described in the "BEREC Guidelines on Common Approaches to the Identification of the Network Termination Point in different Network Topologies" (BoR (20) 46) as follows:

"[...] on one side of the NTP is the network operator's domain which includes the public communications network and the equipment of the public network; On the other side of the NTP is the end-user's domain which includes the end-user's private network and [telecommunications terminal equipment] TTE." (cf. Guideline 7.)

Due to its border function, the definition/location of the network termination point affects whether a device is part of the public network under the sovereignty of the network operator ("point B" or "C") or part of the private end-user network ("point A").



Accordingly, the regulatory guarantee of free choice of terminal equipment in Art. 30 (3) of the draft rules comes to nothing if it is not made clear at which point end-users can connect their router/modem.

If a device is part of the end-user's private network, he alone can decide about it; it is no longer part of the public network of the network operator. Therefore, in order to ensure "router freedom", where end-users can use the terminal device of their choice directly on the broadband connection, the network termination point must be defined as a "connection socket to the line" (point A).

- **BEREC Guidelines on the network termination point assume a network termination point at "point A" as a rule.**

The BEREC Guidelines state that

*"if the definition of the fixed NTP location stipulates that the fixed NTP is located at point A, then the end-user and not the network operator decides which equipment (e.g. modem, router, media box) will be used" (Guideline 39.).*

Accordingly, the BEREC Guidelines conclude that the "degree that the NTP location fosters innovation and competition on the TTE market is highest for point A" (Guideline 47.).

Exceptions to a network termination point at "point A" must be justified by "objective technological necessities". If there are no such objective technological necessities, "then there would be no need for the equipment to be part of the public network" (Guideline 49.) and "the fixed NTP is located at point A" (Guideline 59.).

- **A network termination point at "point A" is technically feasible for all access technologies (fibre, cable and DSL) without any problems.**

From a technical point of view, the definition of the network termination point at "point A" can be easily realized in a technology-neutral manner, i.e. it can apply equally to all access technologies such as fibre, cable and DSL.



The BEREC Guidelines for the definition of the network termination point and, for example, the regulation on the free choice of terminal equipment/network termination point in Germany or the Netherlands all explicitly do not differentiate between access technologies.

- **For free choice of terminal equipment, the network termination point must be defined "point A" by HAKOM.**

According to Art. 61 (7) of Directive (EU) 2018/1972, the national regulatory authority shall define the network termination point. In doing so, the “[n]ational regulatory authorities shall take utmost account of those guidelines” on the definition of the network termination point.

However, HAKOM does not provide for a definition of the network termination point in its current draft rules. This would mean that the possibility for end-users to freely choose their terminal equipment described in Art. 30 (3) would miss the mark and there would continue to be legal uncertainty about the connection point for terminal equipment.

We would therefore like to strongly suggest that the opportunity presented by this regulatory process be used to make a legally binding definition of the network termination point (as “point A”) for Croatia, which is decisive for an effective and successful free choice of terminal equipment.

Among the EU Member States that have already defined the network termination point in regulatory terms are Germany, Finland, Italy, the Netherlands or Cyprus. Some other countries have already started corresponding regulatory processes or are in preparatory discussions.

- **Locating the network termination point at "point B" would limit the practical advantages of a genuine free choice of terminal equipment.**

Not only is a network termination point at "point A" technically feasible without any problems, but it has numerous practical advantages compared to a network termination point at, for example, "point B":

A network termination point located at "point B" - "router-behind-router/modem" or bridge mode<sup>1</sup> - only ostensibly enables a kind of freedom of choice of the terminal device for the end-users. On closer inspection, it contradicts the idea of a real free choice of terminal equipment<sup>2</sup> among other things because of the following negative consequences:

- Higher/double and ultimately partly avoidable electricity costs.
- Greater environmental impact due to twice the electrical waste and resources needed to manufacture two devices.
- Reduction of the range of functions of the desired terminal device.
- In the case of technical problems, the cause is often more difficult to determine and replacing the unit is more complicated.

---

<sup>1</sup> "Bridge mode" means that a customer-chosen terminal device can only be connected "behind" a device that is bindingly provided by the provider.

<sup>2</sup> Meaning the connection of a customer's own terminal device directly to the "connection socket to the line".



- The installation and configuration of two terminal devices is significantly more complex.
- Since two units are in operation at the same time, the probability of a unit failure increases.

It is therefore clear that the use of an integrated terminal device (router with integrated modem) directly at the broadband connection is significantly more advantageous than the “cascading” of two devices (modem and router or router and router).

- **Introducing the obligation to publish interface specifications is a basic prerequisite for the functioning of router freedom**

The right to free choice of terminal equipment for end-users is also ineffective if there is no terminal equipment available on the free market that is suitable for the use on a particular broadband connection and interoperable with the respective network.

To ensure that there is an actual choice of different suitable terminal devices in retail from which end-users can freely choose the device that suits their needs, terminal equipment manufacturers need to know the characteristics of the respective networks (in addition to the generally applicable international standards), as also stated in recital (11) of Directive 2008/63/EC. This is necessary to be able to develop interoperable devices that enable a smooth user experience.

Accordingly, Art. 4 of Directive 2008/63/EC obliges operators of public telecommunications networks to publish the interfaces of the public network (at the network termination point) and their technical characteristics. On the basis of these technical interface specifications published by the network operators, in conjunction with internationally applicable standards, the manufacturers of telecommunications terminal equipment are then in a position to develop and offer products on the market which are interoperable with the respective networks.

Against this background, we suggest that the same provisions should also be made in the draft rules in order to ensure that, on the one hand, suitable terminal equipment can be offered on the market and, on the other hand, that this equipment is interoperable with the respective network.

Thus, operators of public telecommunications networks should provide and publish adequate and precise technical descriptions of their network access interfaces and regularly communicate any updates. The interface specifications should be sufficiently detailed to allow the design of telecommunications terminal equipment capable of using all services provided via the corresponding interface. Here, corresponding regulatory specifications from countries that have already guaranteed the free choice of terminal equipment by regulation can certainly serve as a model.

Under the aforementioned conditions, the successful interaction between network and terminal equipment is guaranteed. For reasons of competition, it is in the greatest possible interest of a manufacturer of telecommunications terminal equipment to place well-functioning products onto the market.



➤ **Provision of access data enables the use of the customers' own terminal equipment.**

The possibility of connecting terminal devices directly to the public telecommunications network is closely associated with the need of end-users to know the necessary access data so that they can register their devices in the network and use all (contractually agreed) services. The decisive factor here is that all contractually agreed services (and not just individual ones, such as Internet access service, as mentioned in Art. 30 (3)) can be used with customer-owned terminal devices without discrimination. Any handling to the contrary would be an implicit restriction of the free choice of terminal equipment, and router freedom would come to nothing.

Fortunately, Art. 30 (3) of the draft rules, according to which all data required for the connection of customer-owned terminal devices should be publicly available to the end-users, is another one of the basic requirements for the successful functioning of the free choice of terminal equipment.

HAKOM provides for public availability of the data necessary for the connection of customer-owned terminal equipment. Should the network operators have any data protection concerns in this regard, it would in our view also be possible to make the necessary data directly accessible to the end-users, i.e. for example via a customer portal or by e-mail or post.

➤ **Protection of the network is taken into account by HAKOM**

In Art. 5 (22) of the draft rules, HAKOM explicitly obliges end-users to use terminal equipment which complies with the technical conditions and standards and which has a declaration of conformity; in addition, corresponding terminal equipment must be correctly installed. Under these conditions, Art. 5 (25) guarantees the right to connect customer-owned terminal equipment (cf. also Art. 3(1) (b) of Directive 2008/63/EC). In principle, therefore, there is a right of connection for all terminal devices that meet the basic requirements.

Nevertheless, according to Art. 15 (1) No. 3 of the draft rules, the network operator has the right to temporarily disconnect the end-user's own terminal equipment from the network if "the end-user has removed the existing/installed network terminal equipment and associated installations and has connected his own network terminal equipment which is reasonably suspected of causing harmful interference in the public electronic communication network".

At this point, however, care must be taken to ensure that there is a "reasonable" suspicion of network interference and the conditions of disconnection (Art. 15 (3)) must also be "reasonable" and appropriate as well as apply equally to customer-owned and terminal equipment provided by the provider. The network operators' right to disconnect terminal devices must not create any discrimination opportunities for customer-owned terminal equipment.

## **Conclusion**

In principle, we welcome the fact that HAKOM wants to anchor the free choice of telecommunications terminal equipment in its "Rules on the method and conditions of performing the activity of electronic



communication networks and services". However, in this context, a binding and clear definition of the network termination point is inevitably necessary.

In our opinion, the regulatory process that has been started offers an excellent opportunity to make a legally binding definition of the network termination point and thus to enable end-users to have full, technology-neutral freedom of choice with regard to the terminal device directly at their broadband connection.

With individual further adjustments - in particular the addition of an obligatory provision of interface specifications by the network operators - the present draft rules will create good conditions for the practical implementation of the right of end-users to free choice of terminal equipment already existing at EU level from Regulation (EU) 2015/2120 (Art. 3(1)) in Croatia.

19 June 2023