

Decision

Determination of reference speeds associated with coverage obligations in the 800 MHz frequency band

CONTENTS

1. Framework.....	3
2. Methodology for establishing and reviewing reference speeds	4
3. Information submitted by operators	6
4. Determination of reference speeds.....	12
5. Decision.....	14

1. Framework

Regulation No. 560-A/2011, of 19 October (Auction Regulation for allocation of rights of use for frequencies in the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz bands, hereinafter the «Auction Regulation»), imposed under paragraph 2b) of article 33 and article 34, pursuant to paragraph 1 of article 32 of Law No. 5/2004, of 10 February (hereinafter, the «Electronic Communications Law»), a coverage obligation as condition associated to rights of use for frequencies to be allocated in the 800 MHz frequency band.

In this scope, under paragraph 1 of article 34 of the Auction Regulation, each lot of 2x5 MHz in the 800 MHz frequency band has an associated obligation to provide coverage to, at a maximum, 80 parishes as tend to lack mobile broadband coverage.

As a result of the auction, each of the companies MEO – Serviços de Comunicações e Multimédia, S.A. (hereinafter, «MEO»), NOS – Comunicações, S.A. (hereinafter, «NOS»), and Vodafone Portugal – Comunicações Pessoais S.A. (hereinafter, «VODAFONE»), as holders of rights of use for frequencies over 2x10 MHz in the 800 MHz frequency band, was required to ensure coverage of a set of up to 160 parishes as tend to lack mobile broadband coverage, as provided for in the respective titles of rights of use for frequencies¹.

The specification of these coverage obligations required, in a first phase, the definition of the respective geographic scope, through the choice of 160 parishes by each title holder, on the basis of a list of 480 parishes as tend to lack mobile broadband coverage, previously made available by ANACOM, under paragraphs 2 and 3 of article 34 of the Auction Regulation.

This list was provided by ANACOM further to determination of 09.11.2012², having this Authority decided, by determination of 22.08.2013³, to integrate these coverage obligations in titles that identify rights of use for frequencies held by each operator.

In a second phase of the specification of these coverage obligations, it is now important to define the data transmission speed which the mobile broadband service must allow (hereinafter the «reference speed»), under paragraphs 5 to 7 of article 34 of the Auction

¹ Vide titles of rights of use for frequencies for terrestrial electronic communications services No. 01/2012 (point 18), 02/2012 (point 18) and 03/2012 (point 19), all issued on 9 march 2012, available at [Serviço de comunicações eletrónicas terrestres](#).

² Available at [List of parishes as tend to lack mobile broadband coverage - Final Decision](#).

³ Available at [Decision to implement the geographical component of coverage obligations in the 800 MHz frequency band](#).

Regulation. In this scope, ANACOM, by determination of 21.03.2014⁴, defined the methodology for establishing the reference speed associated to coverage obligations, under paragraph 6 of article 34 of the Auction Regulation, and for reviewing it, under paragraph 7 of the same article.

In this context, the reference speed for each company must be determined, in compliance with ANACOM's determination of 21.03.2014. For this purpose, a draft decision (DD) was approved on 28.05.2015, which was submitted to the prior hearing of stakeholders, under articles 100 and 101 of the Administrative Procedure Code (approved by Decree-Law No. 442/91, of 15 November, applicable by virtue of article 8 of Decree-Law No. 4/2015, of 7 January, which approved the new Administrative Procedure Code), and to the general consultation procedure, under articles 8 and 20, paragraph 3, of the Electronic Communications Law (ECL). Stakeholders were granted a 20-working-day time limit to assess both situations in writing, if they so wished. Further to a request submitted by one of the stakeholders, the initial time limit was extended for an additional period of five working days.

In the scope of the public consultation and the prior hearing of stakeholders, timely contributions were received from the following companies: MEO, NOS and VODAFONE.

The corresponding prior hearing and consultation report was drawn up, which is an integral part of this decision and includes a summary of positions taken, as well as ANACOM's views thereon.

2. Methodology for establishing and reviewing reference speeds

In the scope of the methodology for establishing and reviewing reference speeds, ANACOM decided, on 21.03.2014, as follows:

- As regards commercial offers

⁴ Available at [Methodology for establishing and reviewing reference speeds associated with coverage obligations in the 800 MHz band - final decision](#).

«(...) for the purpose of the establishment and review of the reference speed, all mobile broadband commercial offers subscribed on the reference date that are associated to maximum speeds exceeding 256 Kbps, are to be taken into consideration, regardless of any promotions, as well as the market segment they are aimed at, the form of marketing, the trademark under which they are marketed or whether they are available for new subscriptions, and only offers associated to mobile stations/equipment of an active user with actual use on the month concerned by the reference date (that is, the month of March 2014 or of each second year following 2014) must be accounted for. Moreover, in case on the reference date for the establishment and review of the reference speed there is more than one relevant commercial offer associated to the same mobile station/equipment of an active user with actual use, only the offer with the higher maximum speed is to be considered. In case a client changes to a new offer on the exact reference date, the most recent offer is to be considered.»

- As regards the ranking of clients

« As regards the ranking provided for in the final part of paragraph 6 of article 34 of the Auction Regulation, each client must be considered as many times as the relevant commercial offers it has subscribed by each reference date.

*Moreover, in case more than one mobile station/equipment of an active user with actual use is associated to a relevant commercial offer, all mobile stations/equipment of an active user with actual use associated to that offer shall be accounted for. As such, where a given client is associated to vector x of relevant commercial offers, and to vector y of mobile stations/equipment of an active user with actual use associated to offers x , a total of $x*y$ times must be accounted for in the ranking list.»*

- As regards reference dates for the ranking of clients

« The ranking provided for in the final part of paragraph 6 of article 34 of the Auction Regulation must take place:

- i) In the scope of the initial establishment of reference speeds, by reference to 31 March 2014; and*
- ii) In the scope of the review of reference speeds, by reference to 31 March of each second year following 2014.»*

- As regards procedures and formula to apply to determine reference speeds

«(...) MEO, OPTIMUS and VODAFONE must submit to ICP-ANACOM, in accordance with Annex I hereto, a ranked list of clients, in digital format and via email, to the address *dee.stats@anacom.pt*, by the following deadlines:

- i) For the initial establishment of reference speeds: by 31 May 2014; and
- ii) For the review of reference speeds: by 31 May of each second year following 2014.

Based on the information submitted, ICP-ANACOM shall determine the reference speed to which must correspond data transmission speed allowed by the mobile broadband service provided by each company in parishes to be covered, carrying out the respective notification. For this purpose, the formula to be applied in order to identify the client ranked in the upper limit of the lowest quartile of these offers, for each company subject to coverage obligations, is as follows:

- i) if $(n)/4$ is a whole number, $(n)/4$;
- ii) if $(n)/4$ is not a whole number, $INT[(n)/4]$,

where **n** is the total number of clients subscribers of relevant commercial offers and **INT** consists in the rounding down of the value concerned to the nearest whole number.

Additionally, MEO, OPTIMUS and VODAFONE must fill in, in the field "Reference value", included in Annex 1, their calculation for the reference speed, on the basis of the above mentioned formula.»

3. Information submitted by operators

In line with obligations set out in ANACOM's Decision of 21.03.2014, this Authority received the following communications for the purpose of the determination of reference speeds:

- MEO sent by email (on 02.06.2014) and by letter (of 02.06.2014) a «ranked list of mobile broadband clients, under the terms provided for in the referred decision», in *txt* format and *excel* format, indicating in the list itself that the reference speed was 3 Mbps;

- NOS sent by email (on 02.06.2014) a *«ranked list of clients, for the purpose of the establishment of the reference speed associated with coverage obligations in the 800 MHz band»*, referring in the annex that the reference speed was 4 Mbps;
- VODAFONE sent by email (on 30.05.2014) the list *«concerning 31 March 2014, for the purpose of establishing and reviewing reference speeds associated with coverage obligations in the 800 MHz band»*, referring that *“by applying the methodology defined in the above-mentioned determination, the reference speed that results from Vodafone’s calculations is 7.2 Mbps.»*

Having analysed the information submitted, ANACOM requested the three operators, on 31.07.2014, to provide clarifications on the difference between the total of customers submitted for the purpose of compliance with the decision of 21.03.2014 and values reported in the scope of mobile service statistics for the 1st quarter of 2014.

Following this request, operators briefly presented the following responses:

- On 06.08.2014, MEO declared that the reported total value of customers *«concerned only the range of customers that effectively subscribed and used mobile broadband services, the maximum speeds of which were defined in the respective contracts, in the communication of tariff schemes corresponding to this service and in conditions of the service offer provided by MEO. As such, this range does not include users of the “Internet no telemóvel” (mobile phone internet) service, without this constituting failure to comply with the provision imposed by ICP-ANACOM, in the above-mentioned determination»*. MEO additionally refers that this exclusion results from the fact that access speeds indicated in offer conditions for the mobile phone internet service are not more than information on maximum and average registered speeds (the determining criterion for the subscription being the traffic volume, not the contracted maximum speed), and as far as mobile broadband offers are concerned, in offer conditions, MEO declares it makes available to users certain maximum download speeds in the provision of the contracted service. MEO further declares that the provision of information on mobile broadband offers based on the maximum contracted speed is inherent in the scope of the establishment of reference speeds, while the consideration of that criterion is not rooted in the provision of information for statistical purposes.

MEO concludes by referring that in the scope of mobile phone internet offers, for the purpose of the establishment of reference speeds, the maximum speed to be taken into account is left to be established, given that it would not be reasonable to expect it to correspond to the maximum registered speed, as this would mean that the large majority of customers would use offers of speeds exceeding 150 Mbps, which is not in line with reality.

- On 08.08.2014, NOS referred that *«the non inclusion of offers associated to mobile phone internet access, which are not directly associated to any maximum speeds, justify differences between values reported for the purpose of the reference speed associated to coverage obligations in the 800 MHz frequency band and values reported in the scope of mobile statistics»*. NOS further refers that mobile phone internet offers are not directly and explicitly associated to any underlying maximum speeds, the download speed not being a differentiating factor for these offers.
- On 08.08.2014, VODAFONE confirmed that *«values submitted for the purpose of the establishment of reference speeds associated to coverage obligations in the 800 MHz band are correct, and that the correction of mobile service statistical information was already underway.»*

In reply to communications received from NOS and MEO, ANACOM, by means of letters submitted on 07.11.2014, informed these operators of the following:

- «a) *Under paragraph 6 of article 34 of Regulation No.560-A/2011, of 19 October (Auction Regulation), the “mobile broadband service to be made available must enable data transmission speeds which are equal to the highest speed among those associated with the commercial offers subscribed to, at any given time, by customers in the lowest quartile of such offers when ranked according to maximum transmission speed of the offer subscribed to” (emphasis added);*
- b) *Regardless of the commercial designation or classification of offers made by [NOS/MEO], the decision of 21 March 2014, which established the methodology for establishing and reviewing reference speeds associated with coverage obligations in the 800 MHz band, provides that “mobile broadband offers mean all offers supported on the mobile network, that are associated to maximum download speeds of 256 Kbps or more”, footnote No. 8 further clarifying that this means “offers the maximum speeds of which are defined in the respective*

contracts, in communications with users or in offer conditions” (emphasis added in both excerpts);

- c) *In the report of the public consultation and prior hearing of stakeholders that were held prior to the adoption of the referred decision of 21 March 2014, and in the light of the position taken by MEO – Serviços de Comunicações e Multimédia, S.A. (then TMN – Telecomunicações Móveis Nacionais, S.A.) in the scope of tariffs of the mobile phone internet service, which according to this company should be excluded from the definition of relevant of commercial offers given that no maximum speed was associated thereto ⁽⁵⁾, this Authority replies that “as regards tariffs for which no speed is associated, ICP-ANACOM clarifies that they are not to be considered”, which implies, a contrario sensu, that all offers with an associated speed must be taken into consideration; and*
- d) *The Auction Regulation and the decision of 21 March 2014, by using the word “associated”, include cases where, in contracts, in offer conditions or in any other communications, maximum speeds are associated both as contracted commitments on the part of the company towards subscribers, and as mere information on speed allowed by the Internet access service, on which subscribers may typically rely, without any guarantee of a minimum level of quality of service.»*

In the light of the framework put forward and considering that both operators disclosed on 31.03.2014 maximum access speeds provided in the scope of the mobile phone internet service, whereby NOS’ view according to which the referred offers are covered by the scope of exclusion acknowledged by ANACOM (offers without an associated speed) is not correct, nor is correct MEO’s view according to which these offers should be excluded as maximum associated speeds do not represent a contractual commitment, this Authority ordered NOS and MEO, in same communication of 07.11.2014, to submit a new ranked list of clients, in

⁵ “On the other hand, tariffs of the mobile phone internet service should be excluded from the analysis, taking into account that this type of offers has no associated maximum speed, and as such the respective maximum speeds are not defined in the respective contracts, in communications to users, nor in conditions of the offer. These customers have access to the maximum speed that is available in each moment, on the site where they are located and for the equipment they are using and, as such, there is no real association between the maximum speed and the service provided to each customer, nor is TMN able to identify such speed for each customer subscribing the offer. These offers include all mobile phone internet offers, such as MPI add-ons (internet packages with data limit) and MPI included in a bundle in several commercial tariffs (currently, and once again as example, all business tariffs, consumption post-paid tariffs - Unlimited, M40, Moche Sub-2S). In this respect, TMN considers that these offers should not be deemed to be “relevant commercial offers”, and that the reference to this type of offers should be removed both from the example indicated in Annex 2 (tariff “Internet no Telemóvel Já”) and from the list of Annex 1 (“Internet no Telemóvel Já”).

compliance with point 2.4 and Annex 1 of decision of 21.03.2014, including also, duly ranked, offers of the Internet access service in the scope of the mobile telephone service.

NOS submitted a new list, on 18.11.2014, referring that it included «*all mobile broadband offers made available by NOS*». For this list a reference speed corresponding to 4 Mbps was indicated.

On 21.11.2014, MEO sent ANACOM a communication, declaring its «*surprise at the statement (...) in the sense that the term “associated” covers cases where, in particular, maximum speeds are disclosed in offer conditions, even as mere information on speed allowed by the Internet access service and on which subscribers may typically rely, without there being any guarantee of a minimum level of quality of service.*

In this regard, it is important to clarify, yet again, that the element that references and characterizes these commercial offers, and the key criterion leading users to subscribe them, is the traffic volume (download and upload) included in each tariff, not the maximum speed contracted by customers or which they may typically expect. In fact, access speeds indicated in service offer conditions merely indicate maximum and average speeds registered at a particular time by MEO, in the context of the use of the referred service, this information not being intended to be emphasised in the scope of the marketing/advertising of various tariff schemes of the service.»

The company adds that offer conditions explicitly refer that «*for the mobile phone internet service, MEO’s monthly tariffs register the following speeds:*» and that «*the effective download and upload speeds may vary depending on several factors, and it is not possible to guarantee the speed provided to each and every connection, at any given moment, as this depends on the client’s terminal, the level of use of the network, the network coverage or the server to which the client is connected.*»

It concludes referring that «*the information that ICP-ANACOM now intends this company to submit is not appropriate for the purpose of establishing reference speeds, not even that provided for in the decision of March 2014, given that, with the association and maximum speeds of networks in mobile phone internet tariffs, the methodology approved to identify the lowest quartile and respective maximum speed would be called into question.*»

MEO ends requesting a meeting with ANACOM to discuss the matter.

Having the meeting taken place on 24.11.2014, ANACOM restated, by letter of 04.12.2014, its view on the matter; and, given that the list submitted by MEO in annex to its letter of 06.08.2014 did not integrate the offers of mobile phone Internet access service, the Authority determined the submission of a ranked list of clients, in compliance with point 2.4 and Annex 1 of decision of 21.03.2014, including also, duly ranked, offers of the Internet access service in the scope of the mobile telephone service.

On 10.12.2014, and in reply to ANACOM, MEO complied with this request, submitting a new list *«including mobile phone internet offers, having determined the speed associated to mobile phone internet tariffs as described below»*, although the company considers this Authority's views not to coincide with the literal sense of the determination of March 2013.

As far as these offers are concerned, MEO refers that *«the company collected information provided herein on the basis of the actual speed verified on the national territory by measuring the average speed experienced with the use of 3G technology, in mobility tests carried out throughout the streets of district capitals, where downloading sessions of files of a relevant size (several Gbps) are held. In our view, this is a possible way of finding the speed that clients may expect to experience when accessing the Internet, using mobile phone Internet, taking into account the non-marketing/association by MEO of a specific speed to such offers.»*

MEO points out that the reference speed of the new list corresponds to 4 Mbps.

As regards the information conveyed by NOS and VODAFONE, ANACOM checked their compliance with the determination of 21.03.2014, namely taking into account values reported in the scope of quarterly statistics of mobile services and information publicly available in websites of providers.

In this context, NOS was further requested, by email of 27.04.2015, to provide clarifications on the difference between the total number of subscribers reported by NOS in the scope of this procedure and the value reported by this provider for indicator 2.5.1.1. of the mobile service statistical questionnaire for 31.03.2014. Likewise, clarifications were also requested on speeds assigned for some plans (4 Mbps), which according to information available on the company's website, had *“download speeds up to 150 Mbps, for all tariff schemes”* except for *“locations without 4G coverage,... which allow surfing with download speeds up to 21.6 Mbps»*.

NOS replied on 12.05.2015, informing that the difference between the total number of subscribers reported for the purpose of the determination of the reference speed and the value of the 2.5.1.1. indicator mentioned above is mainly due to the fact that the former value included «*data events (MMS, WAP and Messenger) that are not considered in the 2.5.1.1. indicator of the mobile service quarterly report*». Moreover, NOS referred that «*given legal impositions associated to the fact that detailed communication data are not held for more than 6 months, the exercise may not be undertaken a second time, so as to separate out these values (at least with the reference date of 30 March 2014)*». Nevertheless, NOS stressed that «*even if the entire difference was removed from the number of clients reported for offers of speeds up to 4 Mbps... and placed in any higher speed, the final result would remain unchanged*». ANACOM confirmed that the detected difference does not change the conclusion concerning the reference speed.

As regards the difference between the speed assigned to some plans and the speed specified in the company's website, NOS explained that offers concerned were offers «*associated to the use of mobile broadband via terminals marketed in March 2014*», while the information collected by ANACOM in the company's website concerned «*broadband offers through boards*», a fact which ANACOM was able to establish. It was also found that the number of subscribers associated to these situations was low.

4. Determination of reference speeds

Holding information conveyed by NOS and by VODAFONE on the ranked list of customers, in compliance with point 2.4. and Annex 1 of decision of 21.03.2014, ANACOM calculated, for each company, the respective reference speed, by applying the formula indicated in section 2, having identified the customer in the lowest quartile of relevant commercial offers of each company. This exercise confirmed values presented by these companies for the respective reference speeds.

It follows from the application of this formula that the data transmission speed allowed by the mobile broadband service, to be provided in parishes where a coverage obligation is in force, under article 34 of the Auction Regulation, and pursuant to ANACOM's determination of 21.03.2014, corresponds to the following speeds:

- In the case of NOS - 4 Mbps; and
- In the case of VODAFONE - 7.2 Mbps.

As far as MEO is concerned, it is found that, although this Authority repeatedly conveyed its views on the issue and successively requested relevant data from this company, the information conveyed on 10.12.2014 fails to comply with ANACOM's decision of 21.03.2014. This results from the fact that the ranking of customers and of offers of the mobile phone internet access service was not undertaken on the basis of associated maximum download speeds, as determined by the Auction Regulation, and consequently by decision of 21.03.2014, but rather on the basis of *«the actual speed verified on the national territory by measuring the average speed experienced with the use of 3G technology, in mobility tests carried out throughout the streets of district capitals, where downloading sessions of files of a relevant size (several Gbps) are held»*.

In the light of the above and whereas:

- *“Condições de Oferta e de Utilização de Serviços de Comunicações Eletrónicas da PT Comunicações, S.A.”* (Conditions for Offer and Use of Electronic Communications Services provided by PT Comunicações, S.A.)⁶ indicate maximum speeds associated to offers of the mobile phone internet access service made available by MEO on 31.03.2014, which correspond to maximum download speeds of 43.2Mbs (3G network) and 150 Mbps (4G network);
- The number of customers who subscribed MEO's offers of the mobile phone internet access service is so high⁷, compared to the relevant range for the purpose of the determination of the reference speed, that maximum download speeds of offers subscribed by such customers determine, on their own, the value of such speed

[Beginning of Confidential Information]

[End of Confidential Information];

⁶ Document available at MEO's website.

⁷ The number of customers of the mobile phone internet access service was submitted to ANACOM by MEO in the scope of this procedure. As such, MEO submitted on two occasions the list of customers/offers for the purpose of establishing reference speeds; on 02.06.2014, it submitted a list excluding offers of the mobile phone internet service, and on 10.12.2014 a full list was submitted including these offers. However, these offers were not distributed among maximum download speeds referred in *“Condições de Oferta e de Utilização de Serviços de Comunicações Eletrónicas da PT Comunicações, S.A.”*, as referred earlier, the distribution having taken place according to the actual speed verified on the national territory by measuring the average speed experienced with the use of 3G technology.

- The Auction Regulation establishes coverage obligations for the 800 MHz band under articles 33, paragraph 2b), and 34, and these obligations may only be fulfilled using the 800 MHz and 900 MHz frequency bands according to titles issued to the three mobile operators;
- A “150 Mbps speed”, considering a theoretical peak download data rate using LTE (Long Term Evolution) technology, and given the available 10 MHz bandwidth in the 800 MHz band, is only likely to be made available in the current state of the technology, under ideal and very special conditions, requiring among other aspects the use of MIMO (Multiple Input Multiple Output) 4x4 and not considering the necessary broadcasting and synchronization channels. As such, the referred 150 Mbps speed is not deemed realistically to be achievable taking into consideration the spectrum currently allocated in the 800 MHz band⁸;
- This limitation conditions the correspondence between offers of the mobile phone internet access service provided by MEO and subscribed by its customers and maximum download speeds for mobile phone internet offers disclosed in “*Condições de Oferta e de Utilização de Serviços de Comunicações Eletrónicas da PT Comunicações, S.A.*”, given that only the 43.2 Mbps may be realistically achieved;

it is deemed that the maximum speed associated to MEO’s offers of the mobile phone internet access service is 43.2 Mbps, thus from the application of the formula indicated in section 2 it follows that the data transmission speed allowed by the mobile broadband service, to be provided in parishes where a coverage obligation is in force, under article 34 of the Auction Regulation and in compliance with ANACOM’s determination of 21.03.2014, corresponds, in MEO’s case, to 43.2 Mbps.

5. Decision

Therefore, under articles 8 and 20, as well as paragraph 1 a) of article 32, all of the Electronic Communications Law, paragraph 1 and paragraph 2 b) of article 33 and paragraphs 4 to 7 of article 34, both of the Auction Regulation, and under paragraph 1 g) of article 9 and article 26 q) of its Statutes, approved by Decree-Law No. 39/2015, of 16 March,

⁸ Bearing in mind also that, in the 900 MHz band, the allocated spectrum is less than 10 MHz.

taking into account the available information and clarifications provided by MEO, NOS and VODAFONE to ANACOM as well as comments presented in the scope of the public consultation prior hearing procedures, the **Management Board** hereby determines as follows:

- i) To approve the reference speed, for the purpose of coverage obligations in the 800 MHz frequency band, which each company is required to meet, as follows:
 - a) 43.2 Mbps for MEO – Serviços de Comunicações e Multimédia, S.A.
 - b) 4.0 Mbps for NOS – Comunicações, S.A.
 - c) 7.2 Mbps for VODAFONE Portugal – Comunicações Pessoais S.A.
- ii) To determine that coverage obligations set out pursuant to the preceding paragraph become an integral part:
 - a) of title ICP-ANACOM No. 02/2012, according to point 18 thereof, as regards MEO;
 - b) of title ICP-ANACOM No. 01/2012, according to point 18 thereof, as regards NOS;
 - c) of title ICP-ANACOM No. 03/2012, according to point 19 thereof, as regards VODAFONE.