

The draft for the ANRC decision for the endorsement of the regulation regarding the accomplishment of the “top-down” calculation model for long run incremental costs by the trading company Orange Romania SA –includes Orange Romania remarks and text modification proposal.

We require that this remarks to be taken into consideration and that the arisen problems to be clarified.



ROMÂNIA
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By virtue of the Decision of the Prime Minister no. 113/2002 regarding the appointment of the President of the National Authority for Communication Settlement,

By virtue of the provisions of art. 38 paragraphs (1), (3) and (5) of art. 34 paragraph (3) and of art. 46 paragraph (1) section 11 of the Government Urgency Ruling Order no. 79/2002 regarding the general frame of communication settlement, endorsed, with the subsequent amendments and additions, through Law no. 591/2002, as well as of art. 8 paragraph (1) and of art. 13 paragraphs (1) and (3) of the Government Ruling Order no. 34/2002 regarding the access to public electronic communication networks and to the associated infrastructure, as well as their interconnection, endorsed, with the subsequent amendments and additions, through Law no. 527/2002,

Considering the provisions of art. 7 paragraph (1) of the Decision of the President of the National Authority for Communication Settlement no. 124/EI/2003 regarding interconnection with the public mobile telephony network operated by the Trading Company „Orange Romania” S.A. for call termination,

THE PRESIDENT OF THE NATIONAL AUTHORITY FOR COMMUNICATION SETTLEMENT

issues this:

DECISION FOR THE ENDORSEMENT OF THE REGULATION REGARDING THE ACCOMPLISHMENT OF THE „TOP-DOWN” CALCULATION MODEL FOR LONG-RUN INCREMENTAL COSTS BY THE TRADING COMPANY „ORANGE ROMANIA” S.A.

Art.1. – The Regulation concerning the accomplishment of the „top-down” calculation model for long-run incremental costs by the Trading Company „Orange Romania” S.A., provided in the annex making integral part of this decision.

Art.2. – This decision shall be communicated to the Trading Company „Orange Romania” S.A.

**PRESIDENT,
ION SMEEIANU**

Bucharest, _____ 2003
No. ___/EI

ANNEX

**REGULATION
REGARDING THE ACCOMPLISHMENT OF THE „TOP-DOWN” COSTING MODEL FOR
CALCULATION OF THE LONG-RUN INCREMENTAL COSTS
BY THE TRADING COMPANY „ORANGE ROMANIA” S.A.**

1. General provisions

1.1. Object of the regulation

This regulation establishes the method of accomplishment of the „top-down” costing model for the calculation of the long-run average incremental costs, hereinafter called *the costing model*, by the Trading Company „Orange Romania” S.A., hereinafter called *the Operator*, for ~~activities relating to interconnection and to the access to the Operator’s network or to the its infrastructure~~ the provision of the interconnection service with the Operator’s network in the view of terminating calls at mobile points (according to the Decision 124/2003 establishing the obligation of Orange of cashing fundamental tariffs, depending on costs, only for interconnection services in the view of terminating calls at mobile points)

We suggest:

1. including a paragraph referring to the fact that the „top-down” costing model settles only the national traffic and only the voice services.
2. mentioning the time period for which the „top-down” model is calculated – during discussions, there was reference to a period of X years.

1.2. Purpose of the regulation

1.2.1. *The costing model* shall ensure the accuracy of the determination of the total and incremental costs of *the Operator*, in order to use these results in the process of cost orientation of tariffs.

1.2.2. The structure and documentation of the *costing model* shall be sufficiently transparent and detailed, to allow:

a) the analysis, the verification and the evaluation of the primary accounting information, of principles, hypotheses, parameters and estimates used within the model, giving the possibility to export data in an accessible format;

b) the determination of intermediary and final results, ~~through which the Operator shall contribute to the calibration of a new "bottom-up" costing model for long-run incremental costs.~~ We consider that the provision referring to the calibration of a „bottom-up“ model based on the results provided by Orange should be reanalyzed by taking into account that, as it resulted from discussions, there will be only one „bottom-up“ model for both operators, therefore this model shall be calibrated based on the results of both operators. 1.2.3. The *cost costing model* ~~will be flexible enough, in order to allow~~ shall allow the reconciliation with a „bottom-up“ costing model for long-run average incremental costs, model developed by the National Authority for Communication Settlement, hereinafter called *ANRC*, ~~in order to determine tariffs for the services provided by the Operator on the markets in the field of electronic communications on which it is appointed, through the decision of the President of the ANRC, as having significant power, to whom are being imposed obligations related to tariff orientation depending on costs~~ From the formulation of the text result the following ambiguities:

1. the term of "services" is very wide, risking to create confusions; thus, there is no mention of the fact that, based on the model, **only** tariffs for **interconnection services** for call termination at mobile points shall be established, and not the tariffs for the other services provided by Orange
2. we understand that interconnection tariffs shall be established base on the „bottom-up“ model created by the ANRC. Please specify if the interconnection tariffs shall be established based on the „top-down“ model or on the „bottom-up“ model.

The „bottom-up“ model, developed by the ANRC, shall be calibrated by using the „top-down“ costing model for long-run incremental costs, accomplished by the *Operator* according to the provisions of this regulation.

Note:

Art. 1.2.3. specifies that „the costing model shall be flexible enough....“ We consider that the „bottom-up“ model should be the flexible one as it represents a theoretic model, while the „top-down“ model is a model representing reality

1.2.4. In default of an opposite special mention, the terms used in the documentation of the *cost costing model* shall have the meaning consecrated in the legislation referring to the field of electronic communications and in the financial and accounting legislation.

1.3. Definitions

1.3.1. *the costing model* – cost model using data from the accounting registrations of the *Operator* in order to calculate tariffs corresponding to ~~activities related to the interconnection and access to the Operator's network or to its infrastructure~~ the interconnection service in the view of terminating calls at mobile points (according to art. 7 paragraph 1 of the Decision 124/2003, the costing model applies for provision of interconnection services, not for activities relating to interconnection), based on the determination of long-run average incremental costs

corresponding to these activities services ~~As it is based on information referring to the Operator's recent performances, that can reflect or not an efficient activity, the cost costing model shall include adjustments that are meant to eliminate costs referring to the Operator's structural and operational inefficiencies;~~

1.3.2. *long-run average incremental cost*:

a) *long run* – period during which the *Operator* can achieve capital investments or withdraw capital investments in order to increase or decrease the production capacity. On a long run, all production factors and, implicitly, the cost associated to them become variable depending on the change of production volume and structure, as an answer to the evolution of the market demand;

b) *increment* – a sufficient and finite quantity of products or services provided by the *Operator*;

c) *incremental cost* – cost determined by the supplementary supply of the defined service increment of the cost saved when the defined service increment is no longer provided;

d) *average incremental cost* – average cost determined by dividing the incremental cost (it is not clear how to divide) to each service by using a cost generating element, common to them (for example traffic), within the long-run average incremental cost, the increment being established at the level of a large group of services. For example, in order to determine interconnection tariffs, the increment is defined at the level of the entire group of services provided by the *Operator*, including both services provided on the retail market and the services provided to the other operators, on the wholesale market. Incremental costs of the network supplying this group of services are divided to the entire traffic, thus obtaining the average incremental cost. The average incremental cost also involves the attribution of indirect costs specific to the increment for the corresponding services.

Within the *cost costing model*, costs of services corresponding to an increment shall include costs directly attributable, both fixed and variable, and indirect costs specific to the increment. Costs common to several increments shall also be taken into account within the *cost calculation model*, in accordance with the provisions of this regulation.

Notes:

Letter a) – is necessary for establishing a fixed period (e.g. x years)

Letters b), c), d) – need more detailed definitions

Letter d) – note regarding the calculation formula.

1.3.3. *directly attributable costs* – costs that can be directly and certainly allotted to a certain product or service provided by the *Operator*. Directly attributable costs are determined by the supply of another service within the increment, being classified into two categories:

a) directly attributable variable costs – the cost size is modified proportionally to the production volume of the service they are associated to;

b) directly attributable fixed costs – the cost size is fixed, regardless of the production volume of the service they are associated to (for example amortization costs and certain operational costs);

Note: As long as, according to the long-run calculation model, all costs become variable, we believe that cost division into fixed and variable is irrelevant.

1.3.4. *indirect costs specific to the increment (shared costs)* – costs determined by the supply of two or more services within the same increment and which cannot be allotted directly and certainly to a certain product or service, the extent to which they are generated by the

supply of a certain product/service not being identifiable. These costs shall be allotted to the corresponding products or services, depending on the most adequate cost generating element;

1.3.5. *common costs* – costs determined by the supply of one or more services within two or more increments and which cannot be allotted to a certain increment, the extent to which they are generated by a certain increment not being identifiable. These costs shall be included in the cost calculation for services by using a percentage margin (mark-up);

[Note: Taking into account the importance of a correct classification of costs for the accuracy of the data provided by the model, we request their detailing, using examples from the field of the mobile telephony.](#)

1.3.6. *cells* – physical areas into which is divided the coverage area of a mobile telephony public network, within which low power emitters (mobile terminals) use specific radio frequencies in order to make calls. To avoid interference, adjacent cells use different radio frequencies, and non-adjacent cells use the same radio frequency, so that the capacity of the entire network is increased;

1.3.7. *base transmission station - BTS* – element of the mobile telephony public network transmitting and receiving calls to and from the mobile terminal. This network element includes radio transmission and signaling equipment, containing shelves for electronic equipment and tension generators. The BTS is connected to antennas through transmission cables;

1.3.8. *transceivers - TRX* – radio transmission equipment incorporated in each sector of the mobile telephony public network, BTS sub-components, whose number depends mainly on the traffic volume;

1.3.9. *base station controller - BSC* - element of the mobile telephony public network having the role of management of radio resources, acting at the same time as a switch and a concentrator. This network element controls the intercellular transfer of the signal between BTSs, the re-allotment of frequencies between BTSs, as well as the management of the generators corresponding to mobile BTSs and terminals, within the coverage area;

1.3.10. *mobile switching center - MSC* – element of the mobile telephony public network achieving location registration and the dynamic allotment of resources in order to coordinate call originating. It routes calls inside the network, searching and processing the information coming from the HLR and the VLR. MSC is connected, on the one hand, to a BTS and, on the other hand, to the public telephony network;

1.3.11. *home location register - HLR* – permanent database containing administrative information regarding the totality of subscribers of the services provided through the mobile telephony public network, including information concerning the current localization of each visitor. The current localization of the visitor is generally presented under the form of the VLR address the visitor is temporarily registered to, at a given time;

1.3.12. *visitor location register - VLR*) – temporary database containing information regarding the visitors localized at a certain time in the cells associated to the MSC the VLR is attached to. The VLR contains precise information concerning the localization of each mobile terminal within the area covered by the MSC.

2. Description of the *cost calculation model*

2.1. Development stages for the *cost calculation model*

2.1.1. Determination of homogenous cost categories

2.1.1.1. First development stage of the *cost calculation model* consists of grouping costs presenting similar features in categories distinct from the cost, called homogenous cost categories. In order to determine homogenous cost categories, the *Operator* may use information from its own cost accounting system.

2.1.1.2. Within this stage, the *Operator* shall aim:

- a) to take over the information from the accounting registrations ~~(at current costs);~~
- b) to evaluate fixed assets at the current costs, by using the concept of „replacement cost“ and, respectively, of the concept of „equivalent modern assets“;
- c) to establish homogenous expense and asset categories;
- d) to define the structure of the *Operator's* network in order to distinguish its optimization possibilities;
- ~~e) to adjust operational costs in order to eliminate additional costs caused by the possible inefficiencies of the network;~~
- f) to determine the annual costs of fixed assets.

Note:

1. the currency used in the cost calculation model needs to be specified.
2. letters a) and b) refer to the evaluation to „current costs“. Presently, accounting registrations are at a historic cost, not existing information concerning current costs. In order to obtain the „evaluation at current costs“ according to the requirements of this model, great human material and time resources shall be involved, in certain cases this evaluation being impossible to achieve.
3. letter d) needs clarification.

2.1.2. Cost allotment directly or indirectly attributable and the identification of common costs

The second stage of development of the *cost calculation model* consists of the definition of the modeled increments and of the corresponding services, as well as of the allotment of the costs directly or indirectly attributable to modeled services and the identification of common costs. The cost allotment process requires both to determine cost generating elements corresponding to each homogenous cost category and to elaborate the use factors matrix, that identify relationships between the costs of the network elements and the costs of services. Within this team, common costs of services are identified and highlighted in a distinct category.

2.1.3. Calculation of incremental costs corresponding to modeled services

2.1.3.1. The third stage consists, mainly, in the development of the cost-volume relationship, that indicated the change of costs depending on the change of the volume of the provided service. The determination of the cost-volume relationships depends on the analyzed cost category. Depending on the category, cost-volume relationships shall be based either on technical and economical models or simulations performed by engineers, or on regression analyses or analysis of processes that various activities are based on.

Note: These analyses, procedures shall determine significant costs, that shall have to be recuperated within the model.

2.1.3.2. The calculation of incremental costs for modeled services is achieved by adding or excluding a service increment and by establishing the effect of this change on total costs, based on cost-volume relationships.

2.1.4. Allotment of a part of the common costs for the incremental costs of modeled services

The fourth stage of development of the *cost calculation model* consists of the determination of the margin corresponding to common costs, that is added to incremental costs, by obtaining the costs of modeled services. The effect of the externality of the network ~~shall not be~~ shall be taken into account when calculating the margin corresponding to common costs.

2.2. Development of the *cost calculation model*

2.2.1. The *cost calculation model* shall be developed, as much as possible, on the structure of the model implemented by the *Operator* in order to calculate entirely allotted ~~current~~ costs of the supplied services. The *Operator* shall develop this model by observing the provisions of this regulation.

Note: The (Orange) cost calculation method is based on cost evaluation at historic values, not allowing their calculation based on current costs.

2.2.2. The development of the *cost calculation model* shall get through all stages mentioned under section 2.1. and will allow to get intermediary and final results, necessary for the determination and presentation of the long-run average incremental costs (~~at various levels of aggregation~~) and for their use in the reconciliation process.

2.2.3. The *cost calculation model* shall include a computerized calculation integrated system of long-run incremental costs and will be accompanied by a detailed documentation.

Note: „the computerized calculation integrated system“ shall determine additional costs, that shall have to be recuperated within the model.

2.2.4. The documentation of the *cost calculation model* shall include analyses and supplementary calculations relating to use factors, asset lifetime, capital cost, the extent to which indirect costs, general costs and the administrative ones are included in the tariffs of the interconnection services, estimations of the demand evolution and of the market development rate, statements concerning the network and equipment optimization degree, ~~as well as any other information necessary in order to analyze and evaluate the costing model.~~

Note: There must be a definition of general and administrative costs.

~~2.2.5. The documentation of the *cost calculation model* shall be detailed enough to allow the comprehension of its content and the evaluation of principles, hypotheses and procedures used within the model.~~ Repeat the idea under section 2.2.4.

2.3. The level of detail of the *costing model*

2.3.1. ~~The *Operator* shall limit the cost aggregation degree, so that the *cost calculation model* may offer a detailed classification of them, that allows both the validation from the point of view of the accuracy and completeness of the model and the compared analysis, within the reconciliation process, with the „bottom-up“ long-run incremental „bottom-up“ cost calculation model.~~ The *cost calculation model* shall allow the *Operator* to export information concerning

registered costs, at a sufficient level of detail for the classification of costs by their nature and homogenous character, for each network element. In order to check the accuracy and completeness of the information included in the *cost calculation model*, costs classified like this shall be able to be identified based on the primary accounting registrations.

Note: Taking into account the affiliation of Orange Romania to the Orange Group, its activity is characterized by a series of features. In order to allow a good understanding of these, we need bilateral Orange-ANRC meetings.

2.3.2. The documentation of the *cost calculation model* shall include a detailed classification of the used costs, together with the associated cost generating elements. Each cost category shall be homogenous and will be characterized by a single cost generating element. The *cost calculation model* shall be flexible as for the definition and number of homogenous cost categories, so that to allow their change within the reconciliation process.

2.3.3. The standard network elements that shall be used by the *Operator* in order to achieve the *cost calculation model* are provided in annex no.1, (Annex 1 does not represent the real structure of the Orange network, and is going to be completed/revised – with the endorsement of the ANRC – with other network elements that take into account the practical aspects related to the registration of the fixed assets in accountancy) which makes integral part of this regulation. The *Operator* may use, in order to achieve the *cost calculation model*, other network elements than those provided in annex no. 1 ~~only with the prior approval of the ANRC and based on justifying documentation.~~ The documentation of the *cost calculation model* shall include the ~~classification and~~ definition of each network element used.

~~2.3.4. The structure of the cost calculation model shall allow the identification and change of the of the treatment of each cost category, as well as the adjustment of the main parameters for model optimization. The model shall also allow to identify and adjust the factors and hypotheses used in order to eliminate additional costs caused by the structural or operational inefficiency of the Operator~~

3. Modeled services and increments

3.1. Modeled services

The *cost calculation model* shall be used for the calculation of the interconnection service costs in order to terminate calls at mobile points. In order to ensure the accuracy of the cost allotment process and of the possibility of reconciliation with the „bottom-up” model developed by the *ANRC*, the *cost calculation model* shall be developed so that it may be capable of calculating costs at least for the following services:

- ~~a) subscribers access~~
- ~~b) traffic in one's own network;~~
- ~~c) traffic originated from one's own network and terminated in fixed telephony public networks in Romania;~~
- ~~d) traffic originated in one's own network and terminated in other mobile telephony public networks in Romania;~~
- ~~e) traffic originated in one's own network and terminated in fixed or mobile telephony public networks outside Romania;~~

- f) traffic originated in fixed telephony public networks in Romania and terminated in one's own network;
- g) traffic originated in other mobile telephony public networks in Romania and terminated in its own network;
- ~~h) traffic originated in fixed or mobile telephony public networks outside Romania and terminated in its own network~~
- ~~i) SMS;~~
- ~~j) GPRS.~~

Note: We believe that the level of detail (traffic by destination) is irrelevant and that only letters f) and g) must make the object of this model.

3.2. Increments of the *cost calculation model*

Note: We suggest an analysis of the possibility to define services as „increments”

In order to calculate costs of services provided under section 3.1. based on the *cost calculation model*, the *Operator* shall use ~~two~~three main increments:

- a) the “subscribers” increment;
- b) the “traffic” increment.
- c) The “coverage area” increment

3.2.1. The “subscribers” increment

The “subscribers” increment shall include those network costs generated exclusively by the number of subscribers of the services provided through the network, by supposing that the various traffic services provided by the network register constant volumes. Based on this, the “subscribers” increment includes the costs of the SIM cards (Subscriber Identity Module) and the cost of handsets ~~subventions~~ granted to subscribers ~~when purchasing handsets~~. The “subscribers” increment also includes ~~costs with the component elements of the MSC and (it is associated with „traffic” and not with „subscribers”)~~ HLR, VLR, AUC and EIR, costs caused by „location updates”, as well as the part of the marketing costs associated to attracting new subscribers as well as billing costs.

3.2.2. The “traffic” increment

The “traffic” increment shall include the costs associated to insuring the capacity of network switching (taking into account the traffic for voice services, ~~SMS and GPRS~~). Within the “traffic” increment shall also be included the costs associated with ensuring the minimal capacity for the coverage area supply. Therefore, the incremental cost of the traffic shall be the cost exceeding the insurance of the minimal presence of the coverage area (minimum coverage presence) and visitor serving, namely that cost registered by the network for traffic transport and switching. The minimal presence of the coverage area (needs the redefinition of the notion of minimal coverage area; switching, base stations and transmission should also be included) ~~represents the coverage area supply cost, excluding the insurance cost for the traffic management capacity, being made up of costs of acquisition, preparation and/or renting of several sites necessary for the supply of the coverage area, as well as of costs associated to the~~

~~network management system. These costs represent costs common to visitor and traffic increments and will be recuperated by applying an equally proportionated margin.~~ Therefore, within the "traffic" increment shall be included the majority of network costs (with some exceptions, such as HLR costs, ~~depending on both main increments~~), such as costs associated with BTS, BSC, MSC, frequency spectrum and costs corresponding to call transportation at the level of the transport network (core transmission).

4. Cost of permanent assets

4.1. Accounting at current costs ~~(as we specified above, Orange Romania operates with historic costs)~~

4.1.1. Within the *cost calculation model*, assets shall be evaluated at the current cost, using the method of the net replacement cost.

4.1.2. The *Operator* shall include, in the *cost calculation model* documentation, a detailed description of the methods used for the retreatment of the asset value at the current cost, achieved in order to include their value in the *cost calculation model*.

4.2. Replacement cost – we think it is necessary to discuss this article entirely, because the constitution of a replacement cost needs, on the one hand, to refer to the current structure of the fixed asset register and, on the other hand, to the calculation method of the replacement cost.

4.2.1. The method of the gross cost (under art. 4.1.1. there is reference to the net replacement cost, and here appears the notion of gross cost; we must establish if it is a net or a gross cost) replacement means the cost associated to the replacement of an existing asset with another asset of a similar performance. Within the *cost calculation model*, the gross value of the assets shall be evaluated by using the method of the gross replacement cost, determined either at the current market value of assets, or, in the case of those assets that can no longer be found on the market, at the value of some modern assets, equivalent from the point of view of the capacity and functionality, hereinafter called *modern equivalent assets*.

4.2.2. In case replacement cost is evaluated based on some assets existing on the market, using the same technology as the one of the evaluated assets, the replacement cost shall be represented by the current value on the market of these assets. The application at this value of any indexes shall always have to be accompanied by justifying documents. ~~In the case of this type of evaluation, the documentation of the cost calculation model shall describe the relationship between the price of the assets and the purchased quantity. For the purpose of identifying the market value, the Operator shall take into account all trading discounts that it may expect to receive when purchasing the assets.~~

4.2.3. In case the replacement cost is evaluated based on the *modern equivalent assets*, their value shall be adjusted for the purpose of reflecting the differences between the assets existing in the *Operator's* patrimony and the *modern equivalent assets*, as for the quality, productivity and use lifetime. *Operator's* operational expenses shall be adjusted to reflect operational costs associated to *modern equivalent assets*. Differences of operational costs may appear within the maintenance costs, the costs associated to network organization costs, as well as indirect costs associated to *modern equivalent assets*.

4.2.4. In all cases, the asset existing on the market, based on which the evaluation is made, shall be capable to sustain the provision of the same services as the evaluated asset, at least at the same qualitative parameters and at the lowest possible cost. In this context, the reference market is represented by the world market of equipment.

4.3. Determination of the annual costs for permanent assets

4.3.1. Criteria for determining annual costs of permanent assets

4.3.1.1. The annual costs of permanent assets (annualisation charges) represent the amount between the annual cost of the capital and the annual amortization.

4.3.1.2. The annual cost of the capital is calculated as a product between the average capital engaged in the permanent asset during the financial year and the average even cost of the capital. The average capital engaged in the permanent asset is calculated as an arithmetic mean of the gross values of the permanent asset since the beginning, respectively the end of the financial year.

4.3.1.3. In choosing an adequate method for determining annual costs of the various permanent assets, the following principles shall be observed:

a) *the principle of fidelity*, according to which the annual cost of each permanent asset shall be based on an amortization plan that will reflect the level and anticipated evolution of the replacement cost and of the operational costs, the level of production, as well as the productivity of the permanent asset;

b) *the principle of consistency*, according to which the annual cost of each permanent asset shall be established so that, during the asset lifetime, no arbitrage opportunities may appear as for its acquisition. For example, when the production generated by an asset is constant, the amount of the annual costs and of the operational costs of an asset acquired in year N shall be equal to the amount of these costs in year N+1, as if the asset had been acquired in year N+1;

c) *the principle of the availability of information*, according to which the *Operator* shall dispose of a sufficient information volume to be able to apply accordingly the chosen method.

4.3.2. Economic amortization

4.3.2.1. The economic amortization represents, theoretically, the optimal calculation method for annual costs of permanent assets, by observing the principles of fidelity and consistency. The disadvantage of this method consists in the reduced availability of the information necessary for its application. Therefore, in practice are used alternative methods of determination of the annual cost of permanent assets, such as the linear amortization, the accelerated amortization, the regressive amortization and annuities.

4.3.2.2. The economic amortization is determined by the difference between the estimates of the gross updated value of cash flows generated by a permanent asset for the rest of the lifetime, estimates calculated at the end and, respectively, at the beginning of the financial year.

4.3.2.3. The net updated value of permanent assets depends on a series of factors, such as the current and future necessary production (determined by the market demand), the productive capacity of the active, the operational costs, the use lifetime and the cost of capital. The profile of amortization shall depend on the anticipated evolution of these factors.

4.3.2.4. The *Operator* shall use, within the *cost calculation model*, either economic amortization, or an alternative method approximating economic amortization with the highest fidelity.

~~4.3.2.5. The *Operator* shall keep separate accounts of entirely amortized permanent assets according to the statutory accounting, that will contain all the details necessary for the distinct identification of these assets and for the determination of their importance within the categories and groups of permanent assets.~~

4.4. Cost of capital

4.4.1. Within the *cost calculation model*, the cost of capital shall be determined based on the method of the average even cost of capital (CMPC). ~~The cost of the own capital shall be determined by using the CAPM method (Capital Assrt Pricing Method).~~ By eliminating this provision, it will be up to the Operator which method will be used, aspect accredited by the ANRC during discussions.

4.4.2. The documentation of the *cost calculation model* shall contain a detailed description of the calculation method for the cost of capital, including the presentation of the hypotheses and parameters used.

5. Structure and network optimization

~~The development of the *cost calculation model* involves decisions concerning the major strategic options related to technology and, implicitly, to the modeled network. The accomplishment of the long-run model involves the use of some optimal technologic solutions, that ensure in the future a maximum efficiency of the *Operator's* activity. We believe that Orange is an efficient operator.~~

5.1. Technology

The *cost calculation model* shall reflect the activity of an efficient 2G mobile telephony public network operator using efficient technologies in order to provide a set of services similar to the one provided at the present. Costs and services associated to 3G technologies shall be able to be ~~excluded~~-included in the *cost calculation model*.

5.2. Network architecture

5.2.1. The optimization of the *Operator's* network shall be based on the configuration of the main elements of the existing structure, which will be adjusted in order to eliminate structural inefficiencies (the concept of „scorched node“).

5.2.2. The *cost calculation model* shall take into account the current number of base stations and sites of the switches existing in the *Operator's* network. The *Operator* shall eliminate the extra-capacity (the particularization of the method of determination of the excess is needed) in connection with the current demand and the anticipated demand, considering the objective conditions that may determine the excess of capacity (modularity, increase demands, observation of the network quality and security parameters etc.).

5.2.3. The *cost calculation model* shall ~~be flexible enough to~~ allow adjustments of network components, achieved by increasing the capacity of the existing elements in the network, by dividing cells, by adding spectrum or by using the optimal spectrum combination and cells. Please note that the model is built based in the current structure of the network

6. Treatment of operational costs

6.1. The *cost calculation model* shall examine operational costs in sufficient detail to ensure their allotment to the corresponding increment. Seeing the cost classifications announced by the ANRC in the document, we require particularization of this chapter.

6.2. In the category of operational costs may be included the following: costs associated to the parking lot, with the arrangement of sites and the corresponding utilities, costs related to the financial-accounting department, costs for research and development, costs associated to computing technology and software applications, costs connected to the HR department, costs with the general management, as well as indirect interconnection costs; costs with the conception, implementation and auditing of the "top-down" model; with studies/analyses required by the regulation.

6.3. Within the *cost calculation model*, information concerning operational costs shall be taken over from the *Operator's* annual financial statements, settled through the financial-accounting legislation. According to the legislation in force, annual financial statements are represented by the balance sheet, that provides data evaluated in the national currency. This paragraph shall be influenced by the decision concerning the currency used in the calculation model. We require explanations. ~~Information shall be adjusted in order to exclude costs generated by the inefficiency of the Operator's activity.~~ Inefficiency of the operational costs is determined by three categories of factors:

- a) the use of some assets generating operational costs higher than those generated by the use of *modern equivalent assets*;
- b) the existence of some inefficient operational procedures and processes;
- c) the existence of some other excessive costs (labor, materials, services etc.), even in the situation when efficient technologies and processes are used.

6.4. The reevaluation of current cost assets (using the replacement cost) eliminate the inefficiency of operational costs, generated by the factors mentioned under section 6.3. letter a), based on the procedure set forth under section 4.2. ~~The Operator shall identify and exclude the effects of the inefficiencies generated by the factors mentioned under section 7.3. letters b) and c), either by comparing to the performances of similar activities of other operators (international benchmark), or by developing some theoretic cost models that may evaluate the efficient level of operational costs.~~ A comparison with other operators is irrelevant, if we consider the market penetration rate, the *Operator* shall present, within the documentation of the *cost calculation model*, justifying information related to the level and substantiation of operational costs by efficient practices and technologies, by highlighting the nature and size of each adjustment considered in order to exclude costs generated by its inefficient activity.

Note: We believe that the inefficiency adjustments suggested above are not necessary, on the one hand, and are very difficult to quantify, on the other hand, being able to influence the accuracy of the data.

7. Cost allotment process

7.1. Cost allotment principles

7.1.1. *The cost calculation model* shall comply with the following cost allotment principles:

a) *the principle of cauzalității*, according to which the costs shall be allotted per services or parts of cost depending on the services or activities generating the appearance of such costs;

b) *the principle of objectivity*, according to which the cost allotment shall be objective and shall not follow the benefit obtaining for the *Operator* or a third party, ~~for a product or service supplied by the~~ (vague wording)

c) *the principle of transparency*, according to which the methodology for cost allotment, described in the *cost calculation model*, shall be transparent.

7.1.2. The cost allotment process involves both the determination of cost generating elements corresponding to each homogenous cost category and the creation of usage factor matrix identifying the causality relationships between the net element costs and the service costs.

~~7.1.3. A cost allotment typical process, usable within the "top-down" model for long run incremental cost circulation is described in annex no. 2 which is an integral part of the hereby Regulation.~~

7.1.4. *The operator* shall be able to use its own cost allotment procedures, already implemented within its own bookkeeping system, at the extent at which the requirements regarding the cost allotment as well as other provisions of the hereby Regulation are complied with.

7.1.5. The documentation of the *cost calculation model* shall describe the detailed methodology for allotment of costs corresponding to products and/or services, including the cost generating elements and the causality relationships between them and the operational costs.

7.2. Establishment of cost generating elements and increasing the volumes

7.2.1. Within the allotment process, the indirectly attributable costs shall be allotted to the network elements by using the cost generating elements. Through these elements, within the *cost calculation model*, the extent at which the network increments, services or elements generate a certain category of operational costs shall be determined. Therefore the homogenous cost categories are allotted between network increments, services or elements depending on the associated cost generating element volume.

7.2.2. The documentation of the *cost calculation model* shall include the presentation of the cost generating elements associated to each cost homogenous category and the models used for measuring the volumes corresponding to them.

7.3. Establishing the usage factor matrix

7.3.1. The usage factor matrix identifies the relationship between the network element costs and the service costs. The usage factors measure the level of use for the network parts by the services provided by the *Operator*, identifying the average frequency for using the network various elements by the services provided, within the standard routes, as well as the average

probability for using these standard routes. The information mentioned are included in the usage factor matrix.

7.3.2. *The cost calculation model* shall distinguish, for each individual service, the usage factors or another methods for determining the levels of using the network elements by each individual service.

7.3.3. *The cost calculation model* shall include the usage factor matrix at least for the network elements indicated in annex no.1. [shall be completed.](#)

Note: We believe that, depending on the detail level, the model flexibility decreases.

8. Determination of incremental costs corresponding to the modeled services

The calculation of the incremental costs is made by adding or excluding a service increment and the identification of the effect on the cost homogenous categories, based on the relationships between cost and volume.

The incremental costs shall be separately calculated for each cost homogenous category. In each individual case, it is necessary to measure the cost generating element volume associated to the increment for that respective cost category and based on the relation cost–volume the cost decrease registered as a result of ceasing the supply of that increment or the cost increase as a result of the additional supply of that respective increment shall be established.

8.1. Relationships cost–volume

8.1.1. The relationships cost–volume represent the basis for determining the incremental cost and the shared costs. The relationships cost–volume are established after determining the usage level and indicate the way in which the costs vary as a result of altering the cost generating elements. *The cost calculation model* shall estimate the relationships cost–volume for each cost homogenous category.

8.1.2. The estimation of the relationships cost–volume can be achieved based on developing some technical–economic models, by using some specialists' expertise or by using the regression analysis. The optimal approach is determined mainly by the types of costs analyzed. [The expenditure caused by these studies shall have to be recovered within the model.](#)

8.1.3. The documentation of the *cost calculation model* shall contain detailed explanations regarding the relationships cost–volume for each individual cost category, including the description of the ways in which the relationships cost–volume have been determined, their form as well as the cost generating element corresponding to the activity in discussion. In case for estimating the relationships cost–volume, the *Operator* uses information other than those taken from its own bookkeeping, during the documentation of the *cost calculation pattern* centralizing records of such data shall be included together with the indication of such information sources.

8.1.4. In case of the asset classes for which more cost generating elements are identified, the relationships cost–volume shall be developed for each individual cost generating element.

8.2. Allotment of costs per services

8.2.1. Once the increment cost is determined, the next step is represented by the calculation of the costs for services included in the increment. The cost of these services is determined by full allotment of the costs corresponding to the increment between the services included in it. Therefore the amount of the costs allotted to different services within the increment shall correspond to the total cost of that respective increment.

~~8.2.2. In case of costs common to services within the increment (intra-increment shared cost), the achievement of allotment shall no longer be possible based on the identification of the cost volume generated by each individual service, selecting another allotment element (such as Mbit/s).~~

Note: We believe that this article has to be reformulated.

9. The audit of the *cost calculation model*–

9.1. *The cost calculation model* shall be subject to the audit, according to the legislation in force and the audit national and international standards.

9.2. The audit opinion shall indicate if:

a) *the cost calculation model* reflects, under all material aspects, the information in the *Operator's* relevant accounting books and the financial statements;

b) the processing of the *cost calculation model* was made in accordance with the provisions of the hereby Regulation and with other relevant regulations in force;

c) there is a strict correspondence between the *cost calculation model*, the procedures for gathering and processing the accounting information and allotment methodologies used, on one hand, and the model documentation sent by the *Operator* to ANRC, on the other hand.

9.3. For uttering the opinion on the above mentioned issues, the allotment methods and procedures shall be investigated as well as the asset current cost evaluation and for such a purpose detailed technical analyses shall be performed.

9.4. The Contract concluded between the *Operator* and the auditor, having as object the development of the *cost calculation model* audit ~~shall be subject to the ANRC endorsement. It has to be mentioned in what way the contract shall be subject to approval (for instance if such an endorsement refers to the auditor and/or the value of the contract).~~ The contract shall stipulate the ANRC right to refer to the documents issued by the auditor and to ask from the latter any information regarding the activity performed during the fundamental and uttering the audit opinion, including regarding the procedures, verifications and tests performed by it during the audit. ~~The contract shall also stipulate the right of the ANRC to request additional verifications. It has to be indicated who covers the costs related to such additional verifications in certain areas considered to be relevant.~~ The audit opinion shall be sent ~~both to the Operator's shareholders and~~ to the ANRC.

9.5. The audit opinion shall be ~~subject to endorsement communicated to ANRC. For this purpose. Therefor,~~ at the end of the audit, the *Operator* shall send to ANRC the audit opinion, accompanied by the results of the *cost calculation model* and by the model documentation. The expenditure related to the audit shall have to be recovered during the cost calculation model

10. General elements concerning costs

10.1. Treatment of common costs

In order to determine current costs (contradiction with the current treatment of the entirely allotted costs within Orange) of the provided services¹, common costs shall be added to the incremental costs, by using the Ramsey pricing method under the form of a margin calculated based on the method of equally proportionated margins (EPMU – equal proportionate mark-up). The application of another method shall be justified and detailed within the documentation of the cost calculation model. The documentation shall present the calculation procedure and the method of application of the margin corresponding to common costs at the incremental costs.

10.2. Treatment of network independent costs generated by retail sale

Taking into account that the traffic generated from other networks and terminated in the *Operator's* network do not cause network independent costs generated by retail sale and that it does not bring any benefits to the parties calling from other networks, these costs shall not be included in the cost corresponding to call terminating. Thus, costs determined by ~~mobile terminal subvention and for the~~ stimulation of dealers, sale costs, marketing costs and those related to Customer services (included in the category of network independent costs generated by retail sale) shall not be included in the cost corresponding to call terminating, although part of these costs shall be included in the "traffic" incrementului.

Note: need of analysis of the incoming bonus for PrePay products – specific to Orange

10.3. Treatment of the spectrum use tariff

~~To the extent the specter use tariff is established independently of the subscribers number and of the traffic capacity, this cost shall be treated as a common cost between the "subscribers" and "traffic" increments and will no longer be recuperated through equally proportionated margins. We believe that costs associated to frequencies are not common costs, but they are connected exclusively to the "traffic" increment, as well as the "coverage area".~~

10.4. Relevant costs

The *cost calculation model* shall include only relevant costs. Relevant costs are the cost categories born by an efficient hypothetical operator, newly entered on the market. Extraordinary costs are not considered relevant and, therefore, they shall not be included in the *cost calculation model*. Extraordinary costs must be detailed. (e.g. Treatment for costs associated to cassation of fixed assets).

¹ Aceste costuri mai sunt numite „costuri LRAIC+”.

11. Functionality of the *cost calculation model*

11.1. Transparency

11.1.1. The *cost calculation model* shall comply with the following conditions:

a) it shall indicate the correspondence relationships and will be according to the primary accounting documents and with the financial statements settled by the financial-accounting legislation; (this article shall be influenced by the currency in which the cost calculation model will be achieved, as well as by the adjustments imposed by the model)

b) the model documentation shall contain indications concerning the sources of the information used (both internal and external), as well as the methods by which this information has been collected and used within the model;

c) it shall allow to identify hypotheses and variables used in order to obtain information such as anticipated increase rates, use factors, volumes, asset lifetime, use rates of assets and replacement costs.

11.1.2. For revision, the *cost calculation model* shall ensure the availability of information concerning costs by increments and components, up to the level of homogenous cost categories. ~~On request, the Operator shall place at the disposal of the ANRC additional details for each cost category, up to the level of the primary accounting documents.~~

11.1.3. The *cost calculation model* shall identify and highlight those costs that can be directly allotted, by services. Fixed costs, common to the services within the increment shall be allotted to various services at a disintegration level as high as possible, the maximum level of disintegration being given by the homogenous cost categories. The level of aggregation depends on the real structure of the GSM network, as well as on the fixed asset register, therefore it is difficult to obtain a disintegration level as high as possible. The allotment methods used within this process shall be clearly identified within the *cost calculation model*.

11.2. Results of the *cost calculation model*

11.2.1. The documentation of the *cost calculation model* shall describe the method used in order to determine costs of increments and costs of the corresponding services. The *cost calculation model* shall highlight the costs of the services provided by the *Operator* on the markets where it has been distinguished as having significant power, through the decision of the President of the National Authority for Communication Settlement, for which the obligation of tariff substantiation depending on costs has been imposed to it. ~~The cost calculation model shall be able to distinctly identify the costs corresponding to the other services provided by the Operator, mentioned under section 3.1.~~

11.2.2. The *cost calculation model* shall be able to highlight both costs of capital and operational costs for each network element, and use factors for each service provided.

11.2.3. The *cost calculation model* shall highlight, within the cost structures, the size of the costs common to services within the same increment, as well as the size of costs common to services corresponding to several increments.

12. Final provisions

12.1. Until the 31st of March 2004 We believe that is a too short term, the *Operator* shall place at the disposal of the *ANRC* the documentation of the *cost calculation model*, that will contain at least the elements provided in the regulation.

12.2. Until the 30th of June 2004, the *Operator* shall develop and implement the *cost calculation model*, so that it may serve as basis of calculation for interconnection tariffs in order to terminate calls at mobile points and allow the reconciliation with a „bottom-up” cost calculation model.

12.3. The presentation of the results of the *ANRC cost calculation model (bottom-up-)* and the startup of the reconciliation process between the *cost calculation model* and the “bottom-up” model developed by the *ANRC* will be performed at the end of the audit and after the expression of the audit opinion.

Note: The moment is unclear:

1. when the audit will be performed,

2. when the reconciliation will start;

12.4. In case of failure to comply with the term provided under section 12.2, tariffs of the services provided by the *Operator* on the markets within the electronic communication sector for which it has been distinguished, through the decision of the President of the *ANRC*, as ca având putere semnificativă, being imposed obligations related to tariff orientation depending on costs ~~shall be calculated depending on the results obtained based on the “bottom-up” model, developed by the ANRC.~~ Failure to comply with the term can be the consequence of the extension of the reconciliation process, as well as the consequence of the ANRC’s delay in accomplishing the „bottom-up” model. Tariffs thus established shall be revised, where needed, at the end of the reconciliation process for the „bottom-up” model, developed by the *ANRC*, with the *cost calculation model*.

Note:

1. Is there a possibility to adjust from time to time (at what intervals?) the cost calculation model?

Annex no.1 [to be filled in by Operators](#)

Appropriate level of detail – list of network elements:

<ul style="list-style-type: none">● Macrocell: site acquisition, preparation and lease;● Macrocell: equipment (omni sector);● Macrocell: equipment (2 sector);● Macrocell: equipment (3 sector);● Microcell: site acquisition, preparation and lease;● Microcell: equipment;● Picocell: site acquisition, preparation and lease;● Picocell: equipment;● Macrocell: additional TRXs;● Microcell: additional TRXs;● Picocell: additional TRXs;● Backhaul 2Mb/s microwave link;● Backhaul 8Mb/s microwave link;● Backhaul 16Mb/s microwave link;● Backhaul 32Mb/s microwave link;● Backhaul 2Mb/s leased line;● Backhaul 8Mb/s leased line;● Backhaul 16Mb/s leased line;● Backhaul 32Mb/s leased line;● BSC: base unit;● BSC: BS-facing port increment;● BSC: MSC-facing port increment;● BSC-MSC transmission 2Mb/s microwave link;● BSC-MSC transmission 8Mb/s microwave link;● BSC-MSC transmission 16Mb/s microwave link;● BSC-MSC transmission 32Mb/s microwave link;● BSC-MSC transmission 2Mb/s leased line;● BSC-MSC transmission 8Mb/s leased line;● BSC-MSC transmission 16Mb/s leased line;● BSC-MSC transmission 32Mb/s leased line;	<ul style="list-style-type: none">● MSC: processor;● Software;● Interconnect interface;● Switching Support Plant;● Buildings (switch building preparation);● MSC: site lease;● MSC: interconnect-facing port increment;● MSC: switch-facing port increment;● Interswitch transmission 140Mb/s leased line (per 2Mb/s circuit);● Tandem/Transit;● HLR;● HLR Upgrade;● SMSC;● 900/1800 dual overlay Macrocell: equipment (omni sector);● 900/1800 dual overlay Macrocell: equipment (2 sector);● 900/1800 dual overlay Macrocell: equipment (3 sector);● PCU;● GGSN;● SGSN;● IP transmission;
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