Calculation of the costs of efficient provision for some electronic communications services provided at the wholesale level in Romania

A report summarising the responses to the Public Consultation document on calculation of the costs of efficient provision for interconnection services provided at the Point of Interconnection

PUBLIC VERSION

Purpose: To summarize the responses received by ANCOM following the Public Consultation about the PoI model

June 2013

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1 Introduction

1. ANCOM ("National Authority for Management and Regulation in Communications") published on the 14th of November 2012 a Consultation document related to the calculation of the costs of efficient provision for interconnection services provided at the Point of Interconnection (PoI) and its associated Microsoft Excel model prepared by TERA Consultants.

2. These documents were presented to the Romanian operators during industry group meetings on the 30th of October and 5th of November 2012.

3. Following these presentations, ANCOM received comments from Cosmote, Orange and Vodafone.

4. The following section summarises the analysis of all stakeholders' comments and the responses of TERA Consultants and ANCOM.

2   Main changes made to the PoI model as a result of the comments received

Several comments were received from Vodafone, Orange and Cosmote at the end 2012. These lasts relate to the following issues:

- **Issue 1: Labour costs**

  - **Average operator labour cost has been used rather than labour cost provided by Romania statistics**

  - **Non productivity time has been considered**

- **Issue 2: Time required to provide the service**

  - **Thanks to relevant inputs provided by operators, tasks durations have been updated**

  - **For the "reconnect a suspended service" ancillary service for which expert view was not available, median duration is used instead of the minimum**

- **Issue 3: Material costs.**

  - **Material costs have been updated to include additional port and DDF/ODF and database costs provided by operators. Protection costs have been included on the basis of industry response to a questionnaire.**

- **Issue 4: Relevance of services currently provided;**

  - **The "capacity reservation" service is now considered as a relevant service. However, as this service is a prevention mechanism, TERA/ANCOM is of the view that the charge should be reimbursed to operators reserving capacity and effectively using the capacity.**

  - **For the services "installation of transmission equipment" and "removal of transmission equipment", price of the service is not used since services provided by operators can be very different, even if operators are equally efficient. Therefore, rather than publishing a price, a rate per hour that should be used by operators to calculate the total cost of the service in a quotation is published.**

Cost of providing PoI services are listed in the table below:

Type of service	Total service cost
	€
Configuration of partner in PoA/PoI	539
Reconfiguration of partner in PoA/PoI	526
Removal of partner in PoA/PoI	148
Installation of port in the switch	276
Reconfiguration of port in the switch	247
Removal of port from the switch	100
Monthly rent of port in the switch	37
Other reconfiguration operations - for the 1st circuit	358
Other reconfiguration operations - for each of the other circuits in the same reconfiguration operation	61
Connection charge for the IC link	89
Reconfiguration charge for the IC link	84
Disconnection charge for the IC link	64
STM1 port monthly fee	331
Capacity reservation	200
Increase of capacity order	350
Decrease of capacity order	199
Reconnect a suspended service	170
Connecting the equipments of 2 operators collocated in Romtelecom's space - connection fee	187
Connecting the equipments of 2 operators collocated in Romtelecom's space - monthly fee	0,1
Administration fee for cascade payment in the transit arrangements	72

For the ancillary services "installation of transmission equipment" and "removal of transmission equipment", a price per hour of 16.3 €/hour should be applied.

3 Responses to the cost calculation and TERA CONSULTANTS / ANCOM view and position

Issue 1: Labour costs	
Respondent — **Comments received**	**TERA CONSULTANTS / ANCOM view & position**
✂	The respondent believes that labour costs considered by ANCOM (5,178 RON/month) are significantly lower than the real costs of ✂ for its staff (10,526 RON/month) on top of which administrative costs should be added. The respondent therefore recommends using *"real"* labour costs of its company.	First of all it is to be noted the respondent had not provided this type of information during the data collection phase while this had been requested by ANCOM since the first data request (Question 39: "What is the charge out rate per type of employee for 2010 and 2011? Please specify what is included in the charge out rate (for example computer)."). 3 types of labour costs for 3 different grades have been used: 5,178 RON/month for the lowest grade, 6,227 RON/month and 7,542 RON/month for the two other grades. Therefore, the respondent's comparison is biased as it is only comparing the lowest grade with its average labour cost. The values provided by 4 operators have been compared with the operators financial data and the Romanian statistics for the telecommunications sector. ANCOM observes a significant difference between Romanian statistics for the telecommunications sector and operators' average labour cost per month and a close match between the operator's submission and their financial data. Romanian's statistics may be too aggregated to reflect real operators' data. As a consequence, it is proposed to use the average labour costs of the 4 operators, which are all different falling in a reasonably reduced range. Two operators provided labour costs for 3 different grades while two other operators provided only one average labour cost. In order to take into account appropriate labour cost values for the different type of grades that are conducting PoI tasks, the labour costs provided by the two operators which provided only average values have been de-

averaged to obtain the labour costs for 3 different grades.

Cost of tasks (€ per hour)	Average from operators
Bureaucratic & paperwork	11,8
Technical & on site work	16,0
Network testing and analysis	21,2

Finally, the respondent states that administrative task costs should be added on top of the figure it has provided. However, the cost of administrative tasks is fully taken into account in the PoI model (see spreadsheet "expert view on some services"). In addition, administrative tasks related to the general organisation of the company are recovered thanks to the mark-up for common costs (in the LRAIC+ approach only).

The respondent adds that TERA's model does not take into account a non-productivity rate accounting for:

- Illness and professional accidents;

- Training;

- Breaks; and

- Communication (with managers, dispatching coordinator, etc.)

In order to handle this issue, the respondent recommends either increasing the labour cost per minute by dividing the monthly salary by the productive labour time (rather than the total labour time) or including a non-productivity mark-up on the time spent per task.

The respondent's comments are accepted and the monthly salary has therefore been divided by the productive labour time. ANCOM used the following parameters to derive the productive labour time from the total labour time:

- Training: 3.7 days per year (source: ANCOM)

- Illness, maternal/paternal leave, unpaid holidays, unmotivated absence: 12 days per year (source: ANCOM)

- breaks and communications: 5.5% (source: TERA Consultants expertise).

✂ The respondent is of the view that the statistical average labour cost from the telecom industry does not reflect the average for the mobile industry where the professional skills and the quality requirements are very high, being required that these last have to be paid accordingly.

The respondent does not provide elements showing that the statistical average labour cost from the telecom industry does not reflect the labour cost for the mobile industry. However, having considered the significant difference between labour costs as measured in the Romanian statistics and the labour cost provided by operators, it is understood that Romanian statistics may not reflect the real fully loaded labour cost of operators. Also, the labour cost needs to be uplifted to take into account non-productive time (sickness, training time, etc.) in addition to holidays

			(already taken into account).
✂	The respondent first points out that it is not surprising that labour costs are slightly different from an operator to another as processes and employees involved may not be at the same.		The respondent's comment is inappropriate since labour costs provided by operators are average labour costs for specific grades and therefore, they should not vary so significantly between operators.
	However, the respondent totally disagrees with ANCOM when comparing staff costs with statistics in relation to how much people earn in the telecom industry. The respondent is of the view that this approach is inappropriate as the cost of employing a member of staff does not equate to just the salary that is paid. Additional costs such as supervision, human resources, payroll, insurance, training and so one should be also included.		It is agreed that the risk of using statistical average labour cost is that it leads to cost being under recovered as staff management costs, payroll costs, training costs, human resources would not be taken into account. In particular, having considered the significant difference between labour costs as measured in the Romanian statistics and the labour cost provided by operators and having observed a close match between the operator's submission and their financial data, it is considered that Romanian statistics may not reflect the real fully loaded labour cost. As a consequence, it is proposed to use operators' average labour cost.

Also, the labour cost needs to be uplifted to take into account non-productive time (sickness, training time, etc.) in addition to holidays (already taken into account). |
| | Finally, the respondent considers that *"it is difficult to see why a regulator feels that they are better placed than operators providing services in question to judge what is realistic"*. | | It was explained in the consultation document that it was surprising that for one given service, the average labour cost provided by operators could be 3 times higher from one operator to another. It stated for example: "*for the service "reconfiguration of port in the switch", the average unit labour cost varies from €11 per hour to €33 per hour*". As a consequence, ANCOM remains of the view this is unrealistic.

The main issues with this approach are the unrealistic labour costs and the fact that operators having provided very different mix of roles, results can be significantly different from one operator to another. |

Issue 2: Time required to provide services

Respondent	Comments received	TERA CONSULTANTS / ANCOM view & position

✂ According to the respondent's experience on more than 100 interconnections, the time spent for each activity and to be implemented in the model is:

- Configuration of partner in POA/POI: ✂ hours;

- Removal of partner in POA/POI: ✂ hours;

- Installation of port in the switch: ✂ hours;

- Reconfiguration of port in the switch: ✂ hours;

- Removal of port from the switch: ✂ hours;

- Connection of the IC link: ✂ hours;

- Reconfiguration of IC link: ✂ hours;

- Disconnection of the IC link: ✂ hours;

- Increase of capacity order: ✂ hours;

- Decrease of capacity order: ✂ hours; and

- Reconnect a suspended service: ✂ hours.

The respondent provided also the duration of some tasks and its comments in an Excel spreadsheet ("POI Model v1 4 - v7 AA - ✂ comments").

The respondent indicates that these values are higher than those calculated by ANCOM and notes a mistake in the model for the task "4. Technical department perform reconfiguration activities for switching resources (DLR+reconfiguration solution+ ERICSSON).

Regarding the installation/removal of transmission equipment the respondent reassesses that the time and materials were already provided.

The respondent's estimates but also the relevant estimates provided by ✂ and ✂, enable to better assess some tasks and better understand the specificities of such tasks and complement expert views. Therefore the time spent for the following activities has been modified, in order to better reflect real processes followed by operators in Romania, which can be considered in this case more relevant taking into account that they embed actual local experience and follow the pattern of the services provided for in the reference interconnection offers :

Update of the time spent for the following tasks:

- Preparing a draft solution: increased from 120 to 240 min (data from ✂ and ✂)

- Reviewing the solution: increased from 60 to 180 min

- Paperwork (work orders, etc.): increased from 60 to 90 min (data from ✂)

- Updating an IT system or database or updating it: increased from 15 to 30 min (average value between ✂ (45) and ANCOM decision no. 15/2011 - Access model - "Update billing system" considering the fact that work may be slightly different)

- Carrying out tests and analysing tests: increased from 120 to 240 min (value provided by ✂ and ✂)

- Configuring and testing interface: decreased from 184 to 120 min as the 184 min value comes from a former ANCOM's decision but in the present context, less activity is needed.

Add new specific tasks (in the draft Pol model, these tasks were supposed to be the same as other tasks):

- Technical department eliminate the connection of 2 Mbps links (incl software changes): 120 min

- Technical department verify availability of resources (switching, transmission, infrastructure): 60 min

- Technical department configure the removal of voice network

(voice routes, voice instalment): 30 min

Add new tasks for some activities:

- − New task added for the service Removal of partner in PoA/PoI: "2. Technical department perform work order and Data/Digital Line request (paperwork)"

- − New task added for the service Connection of the IC link: "2. Technical department perform work order and Data/Digital Line request (paperwork)" and "3. Update of technical database"

- − New task added for the service Reconfiguration of the IC link: "2. Technical department perform work order and Data/Digital Line request (paperwork)".

Also, the model has been modified to remove the mistake noted by the respondent.

The results of these changes have been compared with the respondent's own figures. Indeed, the respondent is the only operator having provided, in addition to time duration estimate for specific tasks, measured duration for ancillary services, over a large number of ancillary services being delivered. This statistical data is very relevant to make sure that proposed time duration are really achievable.

As a result, the difference between the respondent's estimates and ANCOM's estimates is relatively small. Lower estimates in the model can be the result of the respondent's approach to use average observations which potentially include activities that were carried out some time ago and which did not benefit from today's productivity (because the respondent's values are the average of 100 interconnections).

Minutes	PoI model final time	✂
Configuration of partner in POA/POI	35.0	✂
Removal of partner in	11.7	✂

POA/POI		
Installation of port in the switch	17.5	✂
Reconfiguration of port in the switch	16.5	✂
Removal of port from the switch	6.5	✂
Connection of the IC link	5.7	✂
Reconfiguration of the IC link	5.3	✂
Removal of the IC link	4.1	✂
Increase of capacity order	23.8	✂
Decrease of capacity order	13.2	✂
Reconnect a suspended service		✂

It is noted that for five services, the model estimates are slightly higher than the respondent's own estimates. This shows that the chosen approach which consists in estimating time duration for separate tasks of a same service can be considered as conservative. Also, this approach reflects the mix of different operator processes and expert views which can be slightly higher (due to different processes identified for example) than the respondent's ones.

Regarding the installation/removal of transmission equipment, it is recognised that the respondent has provided details on time spent. However, it appears that the time necessary to provide this service can vary significantly from one site to another, from one operator to another (operators submissions vary by almost 10 times), depending on the type of traffic, etc. Even with same efficient processes, the nature of this service may depend significantly on the type of sites and configuration at stake. Rather than trying to identify a unique price for these services, the following option should be preferred: the time required to provide these services should be determined **on a case by case basis** and this time duration should be multiplied by a unique price of €16.3/hour. This will provide more flexibility for operators providing this service and will lower the risk of under-recovery which could happen with a unique time duration value. This reasoning cannot be adopted for other services which present a much higher degree of homogeneity and for which it shall be identified a similar unique process to deliver services.

The respondent indicates that for the rests related to the service "configuration of partner in PoA/PoI, not all the settings are subject to technical appendix as there are specific settings per switch which need to be tested separately. The respondent adds that:

- Billing tests must be completed when technical tests are passed,

- Test task involve also trace verification and document.

Estimates have been revised. It is noted that the model estimates are in line with the respondent's estimates as compared in the table below.

The respondent first indicates that it was not asked to provide a decomposition of tasks into steps and it does not recognise the detailed procedures and timings it uses. The respondent believes that steps used by ANCOM are based on company with a completely different organization.

It is reminded that in the data request sent to all operators including the respondent, the following questions were asked:

"Question 48: For each item of the ancillary services (provided in a distinct Excel spreadsheet), please provide a detailed description of what recovers each items and what tasks are carried out (including tasks carried out by managers).

Question 49: Please provide for each item the time needed to accomplish each of these tasks.)"

Therefore a decomposition of each ancillary service into tasks was

requested. In this respect, all operators, except the respondent and ✄, provided a decomposition of each ancillary service into tasks. Even if the decomposition of tasks was not exactly the same between operators, there were some common areas and has been explained in the consultation document: "*Only Romtelecom and Vodafone provided a level of details that allows a proper assessment*".

Steps used in the model are not steps followed by the respondent but steps followed by operators which seem to have more efficient organization since they are able to provide same services in a much quicker way. If the respondent's organization does not enable to reach similar levels of efficiency, then the respondent's estimates and organization cannot be retained as it would reward inefficiency, which is contrary to the regulatory objectives.

The respondent underlines first that the times considered for each action are far away from the real timing that it is experiencing.

Several sources of information have been used to assess time required:

- Previous ANCOM's decisions which were themselves based on real timing,

- Expert view, including experts in Romania, which provided real timing,

- Operators' view sometimes which should have provided real timing.

It is however admitted that the time required for some tasks needed to be updated since following the consultation, some operators provided useful additional data to complement expert's views. This update shows that the time required for the majority of tasks is in line with total timing (including both technical and administrative tasks) provided by at least one respondent operator.

The respondent states that it provided only time related to non-technical actions whereas tasks related to the wholesale department, configuration in IT, billing interfaces, billing test have not been included in the list it has provided.

To that extent, the respondent provides additional information to be taken into account by ANCOM. The respondent states that actions such

It is noted that the respondent's previous submission was only related to technical actions. However, this does not impact the assessment carried out, since both technical and administrative tasks have been taken into account in the model. It is noted that ANCOM has included administrative/paperwork tasks in the respondent's time estimates by uplifting time required by 10% (approximate estimates based on expert

as: scheduling billing and technical tests with the partner, billing test reconciliation, fixing problems during testing, are completely missing.

views).

The respondent's additional information cannot be used as such as this information is an *"entire detailed internal process for a new interconnection partner, in order to support ANCOM in obtaining a better view on the whole process"*. As a consequence, it does not match with the PoI interconnection services whose costs are analysed. However, some elementary tasks provided by the respondent have been considered to update the time of certain tasks, when reasonable in comparison with other operators' inputs.

Finally, billing and technical tests are not missing and have been taken into account.

The respondent considers as unrealistic and unreasonable to take the minimum time for each task, as this would reflect the performance of an "ideally efficient" operator, rather than a "reasonably efficient" operator. The respondent indeed explains that an operator may increase time of one task to reduce time on another task. The respondent takes the example of billing and technical tests to state that: *"In a real environment only in exceptional cases there are scenarios to be repeated, discrepancies to be investigated and tests to be re-performed, totally or partially. So, in this case, obviously, the average time, including also the duration and actions associated with the identification and correction of the interoperability malfunctions, is to be considered and not the minimum time"*.

The respondent therefore recommends taking average time, including also the duration and actions associated with the identification and correction of the interoperability malfunctions, rather than the minimum time. According to the respondent, *"this would have the incentive properties for efficiency that ANCOM seek, in that less efficient operators would not be able to recover their inefficient costs and more efficient operators than the average would be rewarded on a temporary basis, until the rates come to be reviewed again and any efficiency gains by the less efficient operators are taken into account"*. The respondent therefore disagrees with the approach followed by ANCOM which consists in using the average time and states that operators have *"an incentive to minimize the overall costs of providing these services,*

First, it is necessary to precise that two estimates have been carried out:

- One estimate based on minimum time provided by operator. Contrary to what the respondent asserts, this is not the minimum time of each task that has been calculated but the minimum time for each ancillary service. As a consequence, this approach enables to avoid the issue identified by the respondent (an operator may increase time of one task to reduce time on another task and therefore comparing time duration between operators on a task by task may not be relevant) because this approach compares only the total time required for providing a whole service.

- One estimate based on expert estimates, ANCOM's previous decisions and some operator estimates.

The second type of estimate has been chosen for the reasons explained in the consultation document. As a consequence, the minimum time of each ancillary service as a whole has not been used. However, for 1 ancillary services (Reconnect a suspended service), the first approach was needed and it is believed that it is more reasonable to use the median duration for the ancillary service instead of the minimum and instead of the average (because average values can be much above median values in the present case and therefore reward operators that have a "median" efficiency by having a price that is above their cost). Therefore, for this specific ancillary service, the approach followed in the

whether or not they regard them as being important".		model has been modified.

Issue 3: Material costs

Respondent	Comments received	TERA CONSULTANTS / ANCOM view & position
✂	The respondent first points out that it cannot identify to what the trunk port for local exchanges refers and asks ANCOM for clarification.	The trunk port for local exchanges is a transmission card able to support 16 E1. This is the name used for this card in the 2005 fixed core network cost model.
	In addition to the STM1 card cost considered in the model, the respondent believes that there are also other mandatory cards that are installed in MGW/MSC. The associated cost shall be included in the calculation: • Cost for E1 / STM1 port in MGW: STM1 = ✂; E1=✂ • Equipment + installation for E1 = ✂ • Equipment + installation for STM1 = ✂ The respondent adds that in both scenarios, the cost of DDF and ODF shall be included also: • DDF + installation = ✂; • ODF + installation = ✂.	The PoI model has been updated to include figures from the respondent, ports at the switching equipment in addition to transmission ports already included in the model, DDF and ODF (assuming 24 ports per ODF) and a utilization rate of all the equipment of 90%. Based on operators' response to a questionnaire, an average protection level factor for switching and transmission for E1 and STM1 ports has been calculated and material costs are multiplied by this factor to account for protection.
	The respondent highlights that the depreciation period for STM1 card is 8 years instead of the 12 years considered in the model.	Regulatory asset lives for these items are 12 years.
	In relation to the service "Installation of transmission equipment", the respondent indicates that it has to install its own transmission equipment and these equipments are dedicated and cannot be treated as leased lines.	Operators have to install their own transmission equipment but these shall be recovered by the leased lines prices which include dedicated and shared costs.

✂	The respondent is of the view that it is not clear enough if material costs have been included or not in the calculation of the POI model.	Material costs have been included in the model (E1 port monthly charge, STM1 port monthly charge, Cable /patch between xDF and trasmission equipment card).
	In addition to smaller items such as tie cables, the respondent recommends factoring costs of systems such as databases that are used to record the details of interconnection ports and so forth.	First, while no information has been provided to substantiate the issue,, neither in answering to initial data requests nor during public consultation, the mere signalling of an issue is in principle not sufficient to accept it.

Secondly, the relevance of the cost element depends on the cost base recognised for the recovery of these costs. in the eventual case a LRAIC+ cost base would be recognised, such costs would be embedded in the mark-up for fixed & joint common costs. |

Issue 4: Relevance of services currently provided

Respondent	Comments received	TERA CONSULTANTS / ANCOM view & position
✂	The respondent first justifies why the cost of installing or removing a port is different for STM1 and for E1 because interventions for installation/removal have to be carried out in more equipments (Mux, ODF, FO patch). Also, the respondent explains that work orders need to be generated for each of the following task: fibre optic cable between MUX and MSC, fibre optic cable between MUX and DDF, fibre optic cable until ODF.	It is noted that the respondent is the only operator providing a different price for the service "installation / removal of STM1 port". Also, it is noted that the respondent did not provide any costing element enabling to assess the relevant costs while asked in the data request.

Finally, it is noted that only 16% of "installation/removal of port in the switch" service costs are related to physical connections and work orders (the rest is administrative tasks, network tests, etc.) and therefore, the difference in cost between STM1 and E1 should be very small (if 10% more time was needed, which appears very conservative for installation, then costs would be higher by less than 2%). |
| | The respondent explains that the "capacity reservation" service reflects ANCOM's decision n° 109/2012 which imposes the provision of the additional requested capacity in maximum 25 working days. As a consequence, the respondent needs to implement a prevention | It is noted that only 2 operators are proposing this service despite ANCOM's decision n°109/2012 being imposed on all operators.

Also, it is noted as per the reference interconnection offers that this |

mechanism in order to respect this decision.

indeed is a prevention mechanism: the reservation fee is deducted from the installation fees for the installed capacities.

However, having considered the respondent's argument about its supplier delivery process, ANCOM accepts the respondent's comment. Such a charge may be necessary to make sure other operators are reserving capacity when they need it. It prevents potential inefficient behaviours from operators which would pre-order capacity for free but would not order this capacity in the end.

As this fee is only a fee which aim is to avoid such behaviours, it cannot be cost based (there is no cost related to it, like for penalties). As a consequence, ANCOM proposes to retain the lowest fee between Cosmote and Vodafone (i.e. €200).

In relation to leased lines, the respondent indicates that its tariffs for leased lines are better as they are not related to the length of the circuit.

ANCOM is of the view that leased lines used for Point of Interconnection tend to be relatively short (because operators provided Point of Interconnection services in Romania such as Vodafone, Cosmote, Orange, RCS&RDS or RomTelecom have several points of interconnection located in big cities) and should generally be below some km, which means that RomTelecom's leased lines prices are more competitive for this service.