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Determination of 7.11.2007

## PUBLIC VERSION

### DECISION ON THE CONDITIONS OF THE RIO APPLICABLE IN 2007 AND THE CONDITIONS GOVERNING INTERCONNECTION INSIDE THE EXCHANGES OF PT COMUNICAÇÕES, S.A. (PTC)

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## **I BACKGROUND**

1. By determination of 2004.12.17<sup>1</sup> concerning the imposition of obligations in respect of the wholesale markets for call origination and termination in the public telephone network at a fixed location (markets 8 and 9), an obligation for transparency of published information was imposed on the companies of Grupo PT active in said markets. This need for transparency results in the obligation to publish a reference interconnection offer and to publish the prices, terms and conditions associated with the wholesale services covered by this offer. Likewise, an obligation of price control was maintained.
2. In the determination referred to above, ICP-ANACOM states that "the annual revision of the prices being based on this evolution and the expectations related to productive and allocative efficiency on the part of the operator with SMP is a methodology which allows these market characteristics to be combined with the pursuit of the regulatory objectives, especially in the setting of prices which promote efficiency and sustainable competition and which maximise benefits for the consumer, allowing a gradual and effective move towards the LRIC model.
3. In conjunction, an analysis is presented below of the interconnection prices in force and also of the conditions currently being practised<sup>2</sup>: (i) in calls originating from public payphones; (ii) in the activation of pre-selection; (iii) in the activation of number porting; (iv) in the service of invoicing, collection and risk of non-collection, and (v) in interconnection within PTC exchanges.
4. On 28.02.2007, ICP-ANACOM determined not to oppose the proposed FTS residential tariff within the scope of US (presented by PTC on 28.08.2006 and modified on 20.12.2006)<sup>3</sup>, provided that, among other conditions, PTC attributes (without prejudice to the normal and periodic revision of RIO), a reduction of 10% for each one of the components of metered interconnection (activation price and price per minute) covering call termination and origination (PTC – Indirect access operator), with the prices resulting from this reduction being those applicable in respect of the calculation and setting of prices for capacity-based interconnection.
5. On 23.03.2007, PTC notified ICP-ANACOM of the publication of new version of the RIO, whose call origination and termination prices, in force as of 26.03.2007, included a reduction of 10%, in acceptance of the condition referred to above, to which, however, it is only obliged in the event that it intends to implement the retail tariff in respect of the proposed US, as effectively occurred.
6. By determination of 14.06.2007, the Board of Directors of ICP-ANACOM decided to sound out interested parties with regard to the draft determination being considered for adoption, setting out the comments received, the respective assessment and grounds for the decision in the "Report on the prior hearing on the draft determination concerning the conditions of the RIO effective for 2007 and the conditions governing

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<sup>1</sup> See [http://www.anacom.pt/streaming/8.9final.pdf?categoryId=138582&contentId=250987&field=ATTACHED\\_FILE](http://www.anacom.pt/streaming/8.9final.pdf?categoryId=138582&contentId=250987&field=ATTACHED_FILE).

<sup>2</sup> In order to provide for a review of the conditions set out in the RIO based on updated data, a request was made to PTC on 06.12.2006 to send information in respect of (i) traffic volume (routed in 2006 and estimates for 2007) and (ii) the estimate of costs for 2007 for the services of calls origination and termination, portability (with separation between portability by individual number and by number in each numbering block) and pre-selection. On 11.01.2007, PTC sent the requested information to ICP-ANACOM, with the exception of a breakdown for the portability service, stating that it was not possible to provide a breakdown of this information, given that the system of Regulatory Costing (RC) of PTC had been conceived solely to identify the cost associated with the porting of a number, irrespective of whether it is an individual number or forms part of a block of contiguous numbers.

<sup>3</sup> <http://www.anacom.pt/template31.jsp?categoryId=236682>

interconnection within the exchanges of PT Comunicações, S.A”, which report forms an integral part of the present decision.

7. On 16.07.2007 PTC made the 2006 results of the analytical accounting system available. These results were taken into account in the present decision, while the approach taken in the DD was maintained.

## II ANALYSIS

### II.A PRICES FOR CALL ORIENTATION AND TERMINATION SERVICES

#### II.A.1 Orientation of interconnection prices, in force for 2006, to costs

8. In order to gauge the price controls to which PTC is obliged in the wholesale markets for call origination and termination in the public telephone network at a fixed location, an estimation is given below of PTC’s 2007 margins in the provision of these services, in the event that the tariff of the RIO 2006, in force until 25.03.2007 (this does not yet include the reduction of 10% in each component which PTC agreed to apply as a condition for implementing the tariff for fixed telephone service provided at a fixed location within the scope of the universal service, in accordance with the determination of 2007.02.28<sup>4</sup>), remains applicable.

##### ***II.A.1.1 Maximum prices applicable to call origination and termination in 2006***

9. The determination of 21.04.2006<sup>5</sup>, concerning the alterations to be made to the proposed reference offer for 2006 (RIO2006), establishes, *inter alia*, the maximum prices chargeable for the origination and termination of calls (*see table below*), to be applied in 2006.

**Table 1. Price per minute, based on a 3 minute call; value in Eurocents excluding VAT; billed to the second from the first second**

Level	ORIENTATION / TERMINATION	
	PRICE PER MINUTE	
	PEAK <sup>(1)</sup>	OFF-PEAK <sup>(2)</sup>
LOCAL	0.64	0.41
SINGLE TRANSIT	0.93	0.58
DOUBLE TRANSIT	1.44	0.88

<sup>(1)</sup> 09.00am – 7.00pm on working days; <sup>(2)</sup> Remaining periods

Source: ICP-ANACOM, determination of 21.04.2006

10. The maximum prices for 2006 result from the aim of establishing a margin that gives reasonable financing of common costs and possible variations from the estimates arising from possible unaccounted alterations in traffic structure. As stated in the report on the prior hearing on the determination of 21.04.2006, the differences in 2006 between the sum of the direct and joint costs and income is estimated at 18% for termination and 21% for origination, which provides, overall, for a difference of 19% between interconnection income and corresponding direct and joint costs, which costs were estimated based on the 2005 results of the AAS, including an approximation of cost of capital [start of confidential information -<sup>6</sup>] [end of confidential information <sup>7</sup>].

<sup>4</sup> <http://www.anacom.pt/template31.jsp?categoryId=236682>.

<sup>5</sup> See <http://www.anacom.pt/template31.jsp?categoryId=191443>.

<sup>6</sup> hereinafter [SCI]

<sup>7</sup> hereinafter [ECI]

## II.A.1.2 Average estimated costs for 2007

### II.A.1.2.1. Estimates presented by PTC

11. On 11.01.2007<sup>8</sup>, presented an estimate of 2007 costs, citing the following as the principle inputs for these estimates:
- (i) Operation budget for 2007, based on accounting resources
  - (ii) Investment budget for 2006 (including completion up to October 2006) and 2007, for the calculation of variations induced in depreciation and net value of fixed assets;
  - (iii) Sales volume of telecommunications services forecast for 2007 at the level of installations, traffic and parks (namely access and leased lines, ADSL and RUO);
  - (iv) Rate of yield on invested capital of [SCI] [ECI]. The parameters used in the calculation of this value in the 1st half of 2006 were maintained, with the OT rates updated to 10 years and Euribor to 3 months;
  - (v) The curtailment value estimated for 2007 is equal to the value for 2006 plus [SCI] [ECI] million Euros, with their accounting and inclusion in the regulatory costing carried out in accordance with the methodology proposed by PTC to apply from 2003 (which considers that the costs of curtailment are depreciated over a period of 8 years, with the costs of each year including 1/8 of the costs for that year and of previous years)
12. Based on these premises, PTC presented the estimates of the costs in respect of the interconnection service (origination and termination) as set out in the table below<sup>9</sup>.

**Table 2. Costs estimated by PTC for 2007 [SCI]**

Values in Eurocents	Origination				Termination				Interconnection - Total consideration			
	L	TS	TD	Average consideration	L	TS	TD	Average consideration	L	TS	TD	Average consideration
Unit direct costs												
Unit joint costs												
Unit common costs												
<b>UNIT TOTAL COSTS</b>												

[ECI] Source: PTC and ICP-ANACOM calculation

### II.A.1.2.2. ICP-ANACOM Estimates

<sup>8</sup> Fax received by ANACOM-E2755/07, of 11/01/07.

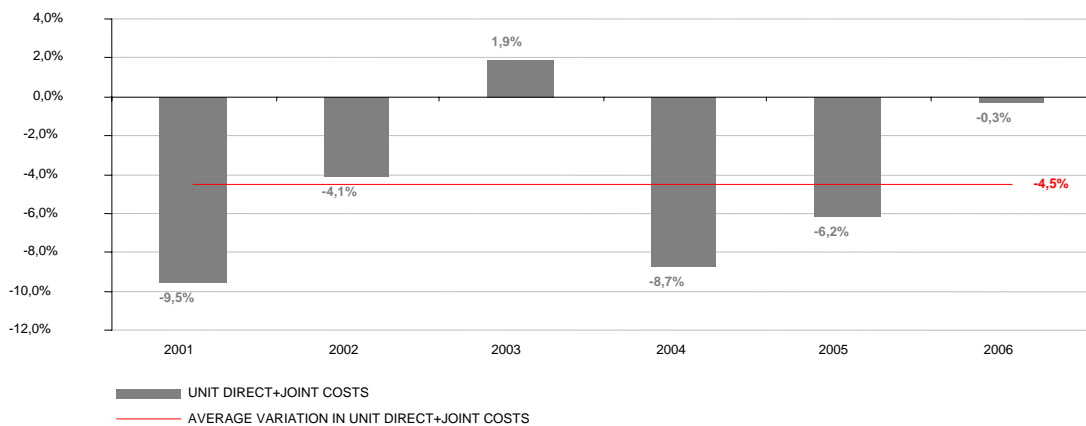
<sup>9</sup> Note: for reasons of simplification and better visualisation of the presented results throughout this document, it has been decided to present them in rounded form, whereas the basis of calculation takes into account the effective values with all the decimal place. Therefore in some table the result of calculations using the values given may be different to those effectively calculated and employed.

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13. Below are presented the estimates made by ICP-ANACOM of the call origination and termination costs for 2007, based on the 2006 data from the analytical accounting system (AAS) of PTC (which data is the most recent available), adjusted to reflect the costs arising from the cost of capital calculated in accordance with the methodology employed in 2004 and previous years and without the re-classification of pre-selection fixed assets included by PTC in the AAS results for 2004<sup>10</sup>.
14. Firstly an analysis is made of the annual variation of unit direct and joint costs of the origination and termination services. As can be seen in the graph below, the trend in these costs over the period 2001-2006, in accordance with the results of the AAS of PTC in respect of the period 2000-2006, represents an average overall variation for call origination and termination in this period of approximately -4.5% (in particular -5.8% for origination and 3.8% for termination).

**Graph 1. Unit direct+joint costs of origination and termination services and respective annual variations for the period 2001-2006**



Source: AAS of PTC 2001-2006

15. At the same time and in view of the estimated trends in interconnection traffic (see appendix), an annual reduction in unit direct and joint costs of 5% in respect of the results of the 2006 AAS (sent by PTC on 16.07.2007) is implemented in the calculation of estimates of costs for 2007, giving the results presented in the table below. As stated in the appendix and in view of PTC's access to more detailed information, the analysis of the distribution of traffic over the various scales and times defined in the tariff uses the profile of traffic estimated by PTC for the average duration of calls and for the distribution of traffic over the various levels of interconnection and time periods.

<sup>10</sup> Results sent by PTC by letter of 16.07.2007, As stated in the analysis supporting the determination of 23.12.2005 in respect of the draft determination on the alterations to be adopted with regard to the RIO 2006, PTC executed a transfer of "fixed assets from the pseudo-department "10 - Switching" to the pseudo-department "10PS - Pre-selection". This transfer results in the revision of fixed assets which PTC made following the introduction of costing by network item, while PTC did not provide detailed bases as to the fixed assets concerned and as to why it was reasonable to allocate costs associated with pre-selection traffic." Therefore, as stated in this document, ICP-ANACOM does not accept the transfer of the values given by PTC, allegedly associated with the fixed assets corresponding to pre-selection, given that such would lead to a similar distribution by all the operators who acquire call origination, even though they do not use this service (call-by-call selected operators or holders of non-geographic numbers accessed from the PTC network). Furthermore pre-selection was introduced in order to guarantee the existence of non-discriminatory conditions in the access to services provided by PTC and by other operators, whereby in setting out the distribution of these costs to operators, consideration must be made of the weight in respect of all customers/accesses that generate traffic. Accordingly and for the purposes of the present analysis, it is considered that the additional costs associated with pre-selection fixed assets should not be considered.

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**Table 3. Unit direct+joint costs of estimated for 2007 [SCI]**

	2007			
	LOCAL	SINGLE TRANSIT	DOUBLE TRANSIT	TOTAL CONSIDERED
ORIGINATION				
TERMINATION				
TOTAL INTERCONNECTION				

[ECI] Note: Value in Eurocents

Source: ICP-ANACOM estimates, with the total of considered costs by number of minutes for each traffic scale

16. It is considered that the costs so estimated allow for the historic evolution of direct and joint costs, also taking into account the expected reduction of costs associated with the development of the activity of an efficient operator.
17. It is further stated that the estimates of PTC do not appear to appropriately reflect the efficiency gains arising from the development of the business and the expected increase in interconnection traffic, and rather presented an increase over the 2006 results of the AAS as demonstrated in the following table.

**Table 4. Difference between PTC's estimates of the unit direct+joint costs for 2007 in respect of PTC's 2006 AAS results and ICP-ANACOM's estimates of unit direct+joint costs for 2007 [SCI]**

	2006 AAS results for the sum of direct and joint costs (Eurocents)	ICP-ANACOM estimates for direct and joint costs for 2007 (Eurocents)	PTC estimates for direct and joint costs for 2007 (Eurocents)	Difference between PTC estimates and 2006 AAS results (%)	Difference between PTC estimates and ICP-ANACOM estimates
ORIGINATION				10%	15%
TERMINATION				-1%	4%
TOTAL INTERCONNECTION				2%	9%

[ECI] Source: ICP-ANACOM calculation based on the cost estimates presented by PTC, on ICP-ANACOM's estimate of costs and on the 2006 AAS results

### **11.A.1.3 Average margin estimated for 2007 with the application of the RIO 2006 tariff**

18. In view of the traffic profile estimated by PTC for 2007<sup>11</sup>, the estimates for average income per minute<sup>12</sup>, derived with the maintenance of the interconnection tariff (origination and termination) which was in application during 2006, are given in the table below.

**Table 5. Estimated average income per minute derived using RIO 2006 tariff [SCI]**

Values in eurocents	LOCAL	SINGLE TRANSIT	DOUBLE TRANSIT	TOTAL CONSIDERED
ORIGINATION				
TERMINATION				
TOTAL INTERCONNECTION				

[ECI] Source: ICP-ANACOM estimates

19. In view of the income stated in the table above and in view of the estimated unit direct and joint costs, a global margin of approximately 22% is calculated for PTC in respect of

<sup>11</sup> Fax of 11/01/07.

<sup>12</sup> Calculated in accordance with the premise that the duration of calls follows an exponential negative distribution.

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the direct and joint costs for 2007, in the event that the tariff applied in 2006 based on the respective RIO, remains applicable (see table below).

**Table 6. Estimated margins for 2007, in the event that the RIO 2006 remains applicable [IIC]**

Values in eurocents	TOTAL CONSIDERED			
	ESTIMATED DIRECT AND JOINT COSTS	ESTIMATED INCOME	ESTIMATED MARGIN (I-C)	ESTIMATED MARGIN ((I-C)/C)
ORIGINATION				26%
TERMINATION				19%
TOTAL INTERCONNECTION				22%

[ECI] Source: ICP-ANACOM estimates

20. In particular, for each interconnection scale, it is estimated that PTC's margins, supposing the maintenance in 2007 of the tariff applicable in 2006, will be those given below. As stated, it is estimated that these margins will be lower in the local interconnection scale.

**Table 7. Margins estimated for 2007, in the event that the RIO 2006 remains applicable, for each traffic scale [SCI]**

Values in Eurocents	ESTIMATED DIRECT AND JOINT COSTS	ESTIMATED INCOME	ESTIMATED MARGIN (I-C)	ESTIMATED MARGIN ((I-C)/C)
	LOCAL			
ORIGINATION				24%
TERMINATION				18%
TOTAL LOCAL INTERCONNECTION				20%
	SINGLE TRANSIT			
ORIGINATION				25%
TERMINATION				22%
TOTAL SINGLE TRANSIT INTERCONNECTION				23%
	DOUBLE TRANSIT			
ORIGINATION				46%
TERMINATION				42%
TOTAL DOUBLE TRANSIT INTERCONNECTION				44%

[ECI] Source: ICP-ANACOM estimates

21. It is considered that the margin derived from the prices to be included in the RIO 2007, should, as stated in the analysis of the RIO 2006, be sufficient to finance the common costs incurred by PTC. Moreover, it is considered that the variation seen in common costs reflect, in great part, PTC's management policies, not specifically reflecting costs directly incurred through the provision of determined services. In particular, the level of common costs could be affected by the management decisions taken by PTC in a given year. This is an added factor of uncertainty to which the alternative operators who purchase PTC interconnection services are subject.

22. In light of the above, it is not seen as justifiable that the alternative operators be subject to the possible instability arising from alterations to the internal management of PTC (due to their being subject to variation of costs of their inputs as a consequence of issues internal to PTC and not for reasons arising from market forces and the evolution of services). Therefore it is considered that the fluctuations in common costs which are not specifically associated with the provision of interconnection services should not have an impact on the prices charged for interconnection.
23. It is internationally accepted that the common costs represent approximately 10% of the remaining costs, as was forecast, including in the Recommendation of the Commission of 08.04.1998<sup>13</sup> (in the meantime updated), in respect of interconnection in a liberalised telecommunications market (Part 2 – separation of accounts and cost accounting). This recommendation states that a well defined cost-allocation system will enable at least 90 % of the costs to be allocated on the basis of direct or indirect cost-causation, in efficient terms and in a long-run approach. It is accordingly considered that the margin (in respect of direct and joint costs) derived with the maximum prices set by ICP-ANACOM is compatible with this value. As can be seen in the graphs below, the stated value of 10% is in line with that seen by PTC in recent years, in the event that account is made of the common costs without curtailment for the totality of services provided or solely for services of call origination and termination.

**Graph 2. Weight of total common costs in respect of the sum of total PTC direct and joint costs for the period 2003-2006 [SCI]**

[ECI] Source: Calculations of ICP-ANACOM based on the PTC AAS data

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<sup>13</sup> <http://www.anacom.pt/template20.jsp?categoryId=59510&contentId=94334>



Graph 3. Weight of total common costs in respect of the sum of PTC direct and joint costs for services of call origination and termination for the period 2003-2006 [SCI]

[ECI] Calculations of ICP-ANACOM based on the PTC AAS data

24. In view of this data, in particular in view of the value of the estimated margins set out in table 7, it is concluded that it would be appropriate to review the prices established for RIO 2006.

#### II.A.2 Comparisons of interconnection prices at a European Union level

25. The comparison of the prices of the EU's incumbent operators constitutes an additional means of assessing whether prices, and in an indirect way, costs are reasonable. Accordingly, the comparison between the prices of the RIO 2006 and the average prices of the EU15 (excluding Portugal) observed in December 2006, demonstrates that the prices charged by PTC exceed the simple community average, for double transit terminations (10.7% at peak times and 7.9% off-peak) and single transit terminations (1.2% at peak times), as well as for double transit originations (3.7% at peak times and 1.4% off-peak). In general terms the prices charged by PTC exceed the average when extremes are excluded, corresponding to an overall ranking of between seventh (off-peak single transit origination) and twelfth (peak double transit terminations).

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**Table 8. Comparison of 2006 interconnection prices with those current in the EU this year (prices in Eurocents per minute for a 3 minute call)**

Country	ORIGINATION						TERMINATION					
	Local		Single Transit		Double Transit		Local		Single Transit		Double Transit	
	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak
Germany	0.520	0.360	0.880	0.590	1.360	0.890	0.520	0.360	0.880	0.590	1.360	0.890
Austria	0.820	0.480	1.280	0.710	2.900	1.100	0.820	0.480	1.280	0.710	2.250	0.870
Belgium	0.652	0.342	0.910	0.477	0.910	0.477	0.645	0.338	0.900	0.472	1.120	0.587
Denmark	0.465	0.277	0.630	0.389	0.921	0.572	0.411	0.250	0.630	0.389	0.921	0.572
Spain	0.670	0.400	1.000	0.600	1.390	0.840	0.670	0.400	1.000	0.600	1.390	0.840
Finland	1.987	1.987	1.987	1.987	1.987	1.987	1.513	1.513	1.513	1.513	1.513	1.513
France	0.534	0.344	1.002	0.646	1.248	0.805	0.534	0.344	1.002	0.646	1.248	0.805
Greece	0.580	0.550	0.870	0.800	1.300	1.210	0.570	0.530	0.810	0.760	1.290	1.200
Holland	0.700	0.430	1.060	0.660	1.500	0.870	0.707	0.447	0.900	0.550	1.150	0.700
Ireland	0.577	0.313	0.875	0.475	1.097	0.595	0.587	0.320	0.885	0.481	1.176	0.638
Italy	0.419	0.282	0.737	0.493	1.178	0.800	0.419	0.282	0.737	0.493	1.178	0.800
Luxembourg	0.895	0.450	0.895	0.450	1.177	0.587	0.893	0.450	0.893	0.450	1.177	0.587
Sweden	0.679	0.547	0.911	0.724	0.973	0.764	0.679	0.547	0.911	0.724	0.973	0.764
United kingdom	0.393	0.180	0.551	0.253	1.536	0.703	0.366	0.168	0.525	0.240	1.509	0.691
<b>RIO 2006</b>	<b>0.640</b>	<b>0.410</b>	<b>0.930</b>	<b>0.580</b>	<b>1.443</b>	<b>0.883</b>	<b>0.640</b>	<b>0.410</b>	<b>0.930</b>	<b>0.580</b>	<b>1.443</b>	<b>0.883</b>
EU Average (ex PT)	0.707	0.496	0.971	0.661	1.391	0.871	0.667	0.459	0.919	0.616	1.304	0.818
Difference of RIO2006 from average	-9.4%	-17.3%	-4.2%	-12.2%	3.7%	1.4%	-4.0%	-10.7%	1.2%	-5.8%	10.7%	7.9%
Average excluding extremes and PT <sup>14</sup>	0.626	0.398	0.921	0.584	1.306	0.811	0.621	0.396	0.902	0.572	1.257	0.781
RIO2006 difference from average excluding extremes	2.2%	3.0%	1.0%	-0.8%	10.6%	8.9%	3.0%	3.6%	3.1%	1.4%	14.8%	13.1%

Source: ICP-ANACOM calculation based on information compiled by *Cullen International* in December 2006 (exchange rate of 06.12.2006 published on Bank of Portugal website)

26. Accordingly, European practice suggests the need for significant reduction in the interconnection prices set out in the RIO 2006.

### II.A.3 Maximum prices defined for 2007 within the scope of the normal and periodic review of interconnection prices

27. The maximum prices presented result from the consideration of various factors, especially the maintenance of a balance between the need to promote incentives for the development of infra-structure, the promotion of effective competition, the need for interconnection prices to reflect the way in which interconnection costs arise, irrespective of the management policies of PTC, and the need to improve the positioning of the prices set out in the reference offer of PTC in a European context.

28. With respect to common costs, it is considered, as stated in the analysis of RIO 2006, that the overall margin derived in the maximum prices should be sufficient to recover

<sup>14</sup> Average calculated excluding the maximum and minimum values found, permitting the exclusion of effect of possible *outliers* (observation that is numerically distant from the rest of the data) in the calculation of the average.

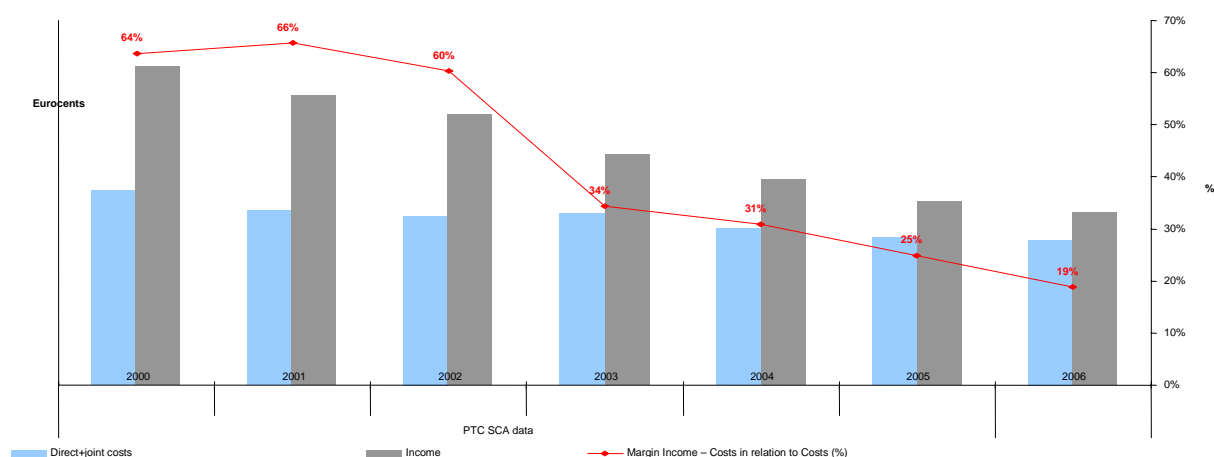
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the common costs of an efficient operator arising in a competitive situation, in line with the position of the EC in respect to the most suitable approach for determining interconnection prices, which defend the use of forecast long-term incremental costs, although not excluding the use of margins justified as a means for recovering costs.

29. It is considered that the maximum prices should allow the maintenance of the downward trend in the margin associated with interconnection prices seen in previous years (see graph below), in which is consubstantiated, for 2006, at approximately 19% of direct and joint costs. Accordingly it is considered that the margin associated with the maximum prices to be established for 2007 should be consubstantiated at a value below 19%, allowing the financing not only of a reasonable level of common costs but also possible unaccounted for alterations in the traffic structure.

**Graph 4. Trend in the difference between the sum of direct and joint costs and the income of PTC**



Source: Calculations of ICP-ANACOM based on PTC AAS data and PTC estimated traffic profile for 2007

30. As shown above, it is considered that the maximum interconnection prices for 2007 will be in line with those set out in the table below, giving a margin over direct and joint costs of approximately 18%.

**Table 9. Interconnection prices defined by ICP-ANACOM for 2007, for origination and termination services**

Level	Call Activation	Price per minute	
		Peak	Off-peak
Local	0.55	0.43	0.22
Single Transit	0.63	0.70	0.35
Double Transit	0.73	1.17	0.62

Figures in Eurocents (excl. VAT); Billing per second from the first second.  
Peak: 09.00am – 7.00pm on working days; Off-peak: 7.00pm-09.00am

31. These maximum prices represent, compared to the prices in force in the RIO 2006, approximate average reductions, based on a three minute call and considering the traffic profile forecast by PTC for 2007, of 3% in termination and origination. In the later part of the present document, an analysis is made of the foreseeable impact of the additional 10% reduction in each tariff component set out in the determination of 28.02.2007<sup>15</sup>, in respect of the tariff applicable to telephone service at a fixed location within the scope of the universal service and which PTC implemented on 26.03.2007.

<sup>15</sup> <http://www.anacom.pt/template31.jsp?categoryId=236682>.

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32. The table below represents the estimated variation of the income derived with the maximum prices defined in comparison to the RIO 2006 prices, for a three minute call.

**Table 10. Variation of ICP-ANACOM 2007 interconnection prices for origination and termination services, based on a three minute call**

Difference compared to RIO 2006	Termination		Origination	
	Peak	Off-peak	Peak	Off-peak
Local	-4.2%	-1.6%	-4.2%	-1.6%
Single Transit	-2.2%	-3.4%	-2.2%	-3.4%
Double Transit	-2.1%	-2.3%	-2.1%	-2.3%

Source: ICP-ANACOM calculation

### **II.A.3.1 Cost orientation of prices**

33. In line with the estimated direct and joint unit costs presented above, which estimate is based on the results of the 2006 AAS and with basis in the income derived with the maximum prices set out in Table 9<sup>16</sup> for 2007, it is estimated that the difference between the sum of direct and joint costs and income for 2007 will be 16% for the termination service and 22% for the origination service, providing a global margin of 18% for interconnection services, as set out in the table below.

**Table 11. Estimated differences for 2007 between direct and joint costs and income in respect of the ICP-ANACOM maximum prices for the RIO 2007, with ICP-ANACOM cost estimates and PTC traffic volume estimates [SCI]**

	Traffic (millions of minutes)	Estimated costs (thousands of euros)	Estimated income (thousands of euros)	Estimated margin (thousands of euros)	Margin (% estimated cost)
Termination	3 130				16%
Origination	1 979				22%
Total	5 109				18%

[ECI] Source: ICP-ANACOM calculations

34. It can be seen that the maximum prices so defined allow the maintenance of a downward trend seen in the past, maintaining a balance between the need to promote incentives for the development of infrastructure and the promotion of effective competition, further allowing a certain approximation to the current prices practised in the EU, in line with the analysis below.

<sup>16</sup> Calculated according to the premise the average duration of calls follows an exponential distribution.

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### 11.A.3.2 Comparisons of interconnection prices practised within the European Union

35. The comparison between the maximum prices now established by ICP-ANACOM for the RIO 2007, demonstrate an improvement in the positioning of the prices practised in Portugal compared to the EU average, as can be seen in the following tables. As set out in the table below, despite the fact that the maximum prices set for 2007 represent a slight improvement of Portugal's positioning in the European context (EU15), they continue to be significantly close to the EU15 excluding extremes.

**Table 12. EU-15 Comparison of interconnection prices (prices in Eurocents per minute for a 3 minute call)**

Country	ORIGINATION						TERMINATION					
	Local		Single Transit		Double Transit		Local		Single Transit		Double Transit	
	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak
Germany	0,520	0,360	0,880	0,590	1,360	0,890	0,520	0,360	0,880	0,590	1,360	0,890
Austria	0,820	0,480	1,280	0,710	2,900	1,100	0,820	0,480	1,280	0,710	2,250	0,870
Belgium	0,619	0,325	0,875	0,458	0,875	0,458	0,619	0,325	0,875	0,458	1,121	0,588
Denmark	0,430	0,269	0,555	0,354	0,797	0,502	0,376	0,228	0,555	0,354	0,797	0,502
Spain	0,670	0,400	1,000	0,600	1,390	0,840	0,670	0,400	1,000	0,600	1,390	0,840
Finland	1,987	1,987	1,987	1,987	1,987	1,987	1,980	1,980	1,980	1,980	1,980	1,980
France	0,534	0,344	1,002	0,646	1,248	0,805	0,534	0,344	1,002	0,646	1,248	0,805
Greece	0,520	0,490	0,850	0,790	1,090	1,020	0,520	0,490	0,850	0,790	1,090	1,020
Holland	0,700	0,430	1,060	0,660	1,500	0,870	0,707	0,447	0,900	0,550	1,150	0,700
Ireland	0,540	0,299	0,734	0,406	0,923	0,511	0,556	0,308	0,760	0,420	1,027	0,568
Italy	0,419	0,282	0,737	0,493	1,178	0,800	0,419	0,282	0,737	0,493	1,178	0,800
Luxembourg	0,757	0,383	0,757	0,383	0,997	0,497	0,757	0,383	0,757	0,383	0,997	0,497
Sweden	0,674	0,543	0,903	0,718	0,965	0,758	0,674	0,543	0,903	0,718	0,965	0,758
United Kingdom	0,392	0,179	0,555	0,254	1,536	0,703	0,359	0,165	0,523	0,239	1,503	0,688
RIO 2006	0,640	0,410	0,930	0,580	1,443	0,883	0,640	0,410	0,930	0,580	1,443	0,883
ICP-ANACOM prices	0,613	0,403	0,910	0,560	1,413	0,863	0,613	0,403	0,910	0,560	1,413	0,863
EU Average (ex PT)	0,684	0,484	0,941	0,646	1,339	0,839	0,679	0,481	0,929	0,638	1,290	0,822
Difference of ICP-ANACOM prices from average	-10,4%	-16,6%	-3,3%	-13,4%	5,6%	3,0%	-9,7%	-16,2%	-2,0%	-12,2%	9,6%	5,1%
Average excluding extremes and PT	0,600	0,384	0,886	0,567	1,254	0,775	0,598	0,383	0,875	0,559	1,251	0,752
Difference of ICP-ANACOM prices average excluding extremes	2,2%	5,1%	2,7%	-1,3%	12,7%	11,5%	2,6%	5,4%	4,0%	0,1%	13,0%	14,7%

Source: ICP-ANACOM calculation based on information compiled by *Cullen International* in July 2007 (exchange rate of 16.07.2007 published on Bank of Portugal website)

#### **II.A.4 Consideration of the 10% reduction in interconnection prices, as a consequence of the determination of 20.02.2007**

36. As previously stated, by determination of 28.02.2007<sup>17</sup>, ICP-ANACOM did not oppose the proposed FTS residential tariff within the scope of the US presented by PTC on 20.12.2006, provided that, among other conditions, PTC implemented a 10% reduction for each one of the components of metered interconnection (price of activation and price per minute), covering call termination and origination (PTC – indirect access operator), given that the prices derived from this reduction are those applicable for the calculation and establishment of capacity-based interconnection prices, whereas PTC notified ICP-ANACOM on 23.03.2009 of the publication of a new version of the RIO which included this 10% price reduction.
37. In the same determination, ICP-ANACOM also noted that the 10% reduction would be implemented without prejudice to the normal and periodic review of RIO prices, the analysis of which is set out in section II.A.3. Below is an analysis of the impact of this 10% reduction in maximum prices to be set by this Authority in terms of PTC margins and the Portugal's position in Europe.

##### **II.A.4.1 Cost orientation of prices**

38. In view of the 10% reduction in each component of the interconnection tariff, included by PTC in the RIO on 23.03.2007 and with application from 26.03.2007, and further noting the maximum interconnection prices defined by ICP-ANACOM in the points above, the maximum interconnection prices applicable from 26.03.2007 shall be those set out in the table below.

**Table 13. Maximum interconnection prices considering the 10% reduction determined in determination of 28.02.2007 for the services of origination and termination**

Level	Call Activation	Price per minute	
		Peak	Off-peak
Local	0.50	0.39	0.20
Single Transit	0.57	0.63	0.32
Double Transit	0.66	1.05	0.56

Figures in Eurocents (excl. VAT); Billing per second from the first second.  
Peak: 09.00am – 7.00pm on working days; Off-peak: 7.00pm-09.00am

39. These maximum prices substantiate, in comparison to the prices in force in the RIO 2006, approximate average reductions, based on a call of an average three minute duration and considering the traffic profile forecast by PTC for 2007, of 11.9% in termination and 12.0% in origination. In comparison to the RIO 2006, it is estimated that the average overall reduction in prices to be defined by ICP-ANACOM will be approximately 12.0%
40. In line with the estimates of unit direct and joint costs presented above, which estimates were made with basis in the 2006 AAS and with basis in the income derived with maximum prices given in the table above<sup>18</sup>, it is estimated that the difference between the sum of direct and joint costs in comparison to income for 2007 will be 7% for the

<sup>17</sup> <http://www.anacom.pt/template31.jsp?categoryId=236682>.

<sup>18</sup> <sup>18</sup> Calculated according to the premise the average duration of calls follows an exponential distribution. Likewise in the calculation of income the maximum prices of call origination and termination were considered, including an additional 10% reduction as of 26/03/2007 and that until this date the maximum prices defined by ICP-ANACOM as part of the normal and periodic review of interconnection prices would apply.

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termination service and 13% for the origination service, consubstantiating a global margin for interconnection services, as set out in the table below.

**Table 14. Estimated differences for 2007 between direct and joint costs and income with respect to ICP-ANACOM maximum prices for the RIO 2007, with ICP-ANACOM cost estimates and PTC traffic volume estimates [SCI]**

	Traffic (millions of minutes)	Estimated costs (thousands of euros)	Estimated income (thousands of euros)	Estimated margin (thousands of euros)	Margin (% estimated cost)
Termination	3 130				7%
Origination	1 979				13%
Total	5 109				10%

[ECI] Source: ICP-ANACOM calculation

41. It is noted that, notwithstanding the 10% reduction being independent of the annual review of interconnection prices determined by ICP-ANACOM, seen to be associated with the specific case of the replication of PTC's SU tariff, the resulting global margin of 10% is compatible with the level of common costs commonly accepted at an international level (which, as previously stated is 10% of the remaining costs). Accordingly, it is concluded that, in view of the sum of direct and joint costs and a reasonable level of common costs, the stated maximum prices are sufficient.
42. It is further noted that, where the totality of costs is considered, including curtailment, total costs amount to approximately [SCI] [ECI] million euros, which corresponds to a margin of -8%. Considering common costs without curtailment, a margin of 1% is obtained. It is reiterated, however, that the variation seen at the level of common total costs reflects in great part the management policies of PTC, not specifically reflecting costs directly incurred through the provision of determined services. Therefore the level of common costs could be affected by such management decisions adopted by PTC in a determined year, whereas the alternative operators that purchase interconnection services from PTC should not be subject to the price alterations that result from PTC's management policies. Therefore it is considered that the fluctuations in common costs which are not specifically associated with the provision of interconnection services should not have an impact on the prices charged for interconnection.
43. It should again be stated that the 10% reduction was applied irrespectively of the annual review of interconnection prices determined by ICP-ANACOM, and was associated with the specific issue of the possibility of replicating the SU tariff of PTC.
44. Naturally there is no longer margin to cushion possible alteration in the traffic structure, with impact on PTC's income, which was considered in the past. However this risk was naturally assumed by PTC when it accepted the condition imposed by the determination of 28.02.2007, given that it is reasonable to consider that a reduction in the SU tariff margin corresponds to a similar reduction at a wholesale level in order to guarantee conditions for effective competition in terms of the replication of the offers of the incumbent operator.

#### ***11.A.4.2 Comparison of interconnection prices practised in the European Union***

45. The following tables present the results of the comparison between the maximum prices set out in table 13 applying from 26.03.2006 and the average prices of the EU-15, observed in July 2007.
46. In view of the need to follow best Europe's best practices (EBP) at an EU level, an analysis was made of the third lowest prices (of all the countries considered) practised at each interconnection scale (local, single transit and double transit), the results of which are given in the table below. It should be noted however that the indicated values represent the underlying reality of each country, reflecting, in particular, the distinct network structures and possible differences in terms of adopted costing systems, as stated in the 12<sup>th</sup> Implementation Report (according to the information of this report, the reduction of European termination prices will have resulted from changes made to the costing system and from regulatory measures), whereby the third lowest values among the prices practiced by the incumbent operators of the European Union may not, at present, be totally suitable in the Portuguese context.
47. The specifications are also shown of the Portuguese scenario in terms of the penetration of the telephone service at a fixed location (in 2005, in Portugal the penetration rate was 40.2%, the lowest in the EU, whereas the European average (EU25) stands at 49%) and in terms of the relative weight of fixed telephone traffic as a proportion of the total traffic originated on fixed and mobile networks (according to data published in the 2005 regulation report, Portugal had, in 2004, the third lowest level in the EU of voice traffic originated on the fixed network - 45% - as a proportion of total voice traffic, with an EU average of 62%). This has relevance for the purposes of comparing the prices of interconnection traffic.



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**Table 15. Comparison of interconnection prices with current prices practiced in EU (prices in Eurocent for a 3 minute call)**

Country	ORIGINATION						TERMINATION					
	Local		Single Transit		Double Transit		Local		Single Transit		Double Transit	
	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak
Germany	0.520	0.360	0.880	0.590	1.360	0.890	0.520	0.360	0.880	0.590	1.360	0.890
Austria	0.820	0.480	1.280	0.710	2.900	1.100	0.820	0.480	1.280	0.710	2.250	0.870
Belgium	0.619	0.325	0.875	0.458	0.875	0.458	0.619	0.325	0.875	0.458	1.121	0.588
Denmark	0.430	0.269	0.555	0.354	0.797	0.502	0.376	0.228	0.555	0.354	0.797	0.502
Spain	0.670	0.400	1.000	0.600	1.390	0.840	0.670	0.400	1.000	0.600	1.390	0.840
Finland	1.987	1.987	1.987	1.987	1.987	1.987	1.980	1.980	1.980	1.980	1.980	1.980
France	0.534	0.344	1.002	0.646	1.248	0.805	0.534	0.344	1.002	0.646	1.248	0.805
Greece	0.520	0.490	0.850	0.790	1.090	1.020	0.520	0.490	0.850	0.790	1.090	1.020
Holland	0.700	0.430	1.060	0.660	1.500	0.870	0.707	0.447	0.900	0.550	1.150	0.700
Ireland	0.540	0.299	0.734	0.406	0.923	0.511	0.556	0.308	0.760	0.420	1.027	0.568
Italy	0.419	0.282	0.737	0.493	1.178	0.800	0.419	0.282	0.737	0.493	1.178	0.800
Luxembourg	0.757	0.383	0.757	0.383	0.997	0.497	0.757	0.383	0.757	0.383	0.997	0.497
Sweden	0.674	0.543	0.903	0.718	0.965	0.758	0.674	0.543	0.903	0.718	0.965	0.758
United Kingdom	0.392	0.179	0.555	0.254	1.536	0.703	0.359	0.165	0.523	0.239	1.503	0.688
RIO 2006	0.640	0.410	0.930	0.580	1.443	0.883	0.640	0.410	0.930	0.580	1.443	0.883
ICP-ANACOM prices including additional 10% reduction	0.557	0.367	0.820	0.510	1.270	0.780	0.557	0.367	0.820	0.510	1.270	0.780
EU Average (ex PT)	0.684	0.484	0.941	0.646	1.339	0.839	0.679	0.481	0.929	0.638	1.290	0.822
Difference of ICP-ANACOM prices including additional 10% reduction from average	-18.7%	-24.2%	-12.9%	-21.1%	-5.2%	-7.0%	-18.1%	-23.8%	-11.7%	-20.1%	-1.5%	-5.1%
Average excluding extremes and PT	0.600	0.384	0.886	0.567	1.254	0.775	0.598	0.383	0.875	0.559	1.251	0.752
Difference of ICP-ANACOM prices including additional 10% reduction from average excluding extremes	-7.3%	-4.5%	-7.5%	-10.1%	1.3%	0.7%	-6.9%	-4.1%	-6.3%	-8.8%	1.5%	3.7%
EBP	0.430	0.282	0.734	0.383	0.923	0.502	0.419	0.282	0.737	0.383	0.997	0.568
Difference of ICP-ANACOM prices including additional 10% reduction from EBP	29.4%	29.8%	11.7%	33.0%	37.5%	55.5%	32.7%	29.8%	11.2%	33.0%	27.4%	37.3%

Source: ICP-ANACOM calculation based on information compiled by *Cullen International* in July 2007 (exchange rate of 16.07.2007 published on Bank of Portugal website)

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48. As demonstrated in the following table, the maximum prices applicable from 26.03.2007 represent a significant improvement in the positioning of Portugal with respect to the community average, when compared to the 2006 situation. In 2006, the prices were, for some traffic levels, above the prices seen in the remaining European countries. The maximum prices now defined after the 10% reduction are below the European average at all levels, but continue to be in excess of Europe's best practices.

**Table 16. Comparison of differences in per minute prices for a 3 minute call, compared to the community average, between the situation seen in 2006 and the prices in force in 2007**

	Origination						Termination					
	Local		Single Transit		Double Transit		Local		Single Transit		Double Transit	
	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak
PT difference compared to EU14 average (presented in the decision of 21.04.2006)	-7.1%	-13.4%	-2.8%	-9.8%	4.0%	1.1%	-5.4%	-11.6%	-0.6%	-7.4%	4.7%	2.0%
PT difference compared to EU14 average ICP-ANACOM prices with 10% reduction	-18.7%	-24.2%	-12.9%	-21.1%	-5.2%	-7.0%	-18.1%	-23.8%	-11.7%	-2.1%	-1.5%	-5.1%

Source: ICP-ANACOM calculation

## **II.B PRICE OF BILLING, COLLECTION AND RISK OF NON-COLLECTION SERVICES**

49. An operator recently stated that it considered that the prices of the billing and collection service applied by fixed and mobile operators were excessive, taking into account, in particular: (i) the alterations to the retail price determined by ICP-ANACOM and (ii) the lack of complaints in terms of unrecoverables. Accordingly, it did not agree with the existence of costs in respect of the prevention on situations of non-collection.
50. Accordingly, considering the sum of unit direct and joint costs in 2006 of [SCI] [ECI] Eurocents and taking into account, for these costs, efficiency gains of 5% in these costs for 2007, an estimate of [SCI] [ECI] Eurocents is obtained for direct and joint costs for 2007.
51. Allowing for a margin of 10% in view of a reasonable level of common costs, which is considered appropriate as previously set out, no significant alterations are seen from that established in the decision of 21/04/06 (see table below), whereby an alteration of the current billing and collection prices is not considered justified

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**Table 17. Costs estimated by ICP-ANACOM and PTC (figures in Eurocents, per call) [SCI]**

Service	Activity	ICP-ANACOM Decision of 21.04.2006
Services where the cost born by the caller does not exceed PTC Local	Billing and collection	
	Risk of non-collection	
	Total	
Remaining service	Billing and collection	
	Risk of non-collection	
	Total	

[ECI] Source: ICP-ANACOM calculation

52. It is considered that the price of billing, collection and risk of non-collection currently defined for the services of calls with shared costs in which the cost born by the caller does not exceed PTC Local (range 808xy) shall be extendable to all services where the retail price does not exceed the PTC Local tariff, given that the risk associated with possible non-collection of the associated values will approximate to the values for this type of service as given in the above table, in view of the similarity of retail prices.
53. Therefore, in view of principle of cost orientation of prices, ICP-ANACOM defines the maximum prices for billing, collection and risk of non-collection as:
- (i) 3.08 Eurocent, per call, for the services of calls in which the cost born by the caller does not exceed PTC Local (as defined in the tariffs for PTC residential customers)
  - (ii) 3.44 Eurocent, per call, for remaining special paid services.
54. Without prejudice, it is noted that, as set forth by ICP-ANACOM on previous occasions<sup>19</sup>, interested parties are free to negotiate the separation of the billing and collection service (which includes a component in respect of the risk of non-collection) within the individual services of billing and collection and risk of non-collection, while it is not deemed proportional to impose such an obligation on PTC.

### II.C PRICES OF CALLS IN PUBLIC PAYPHONES

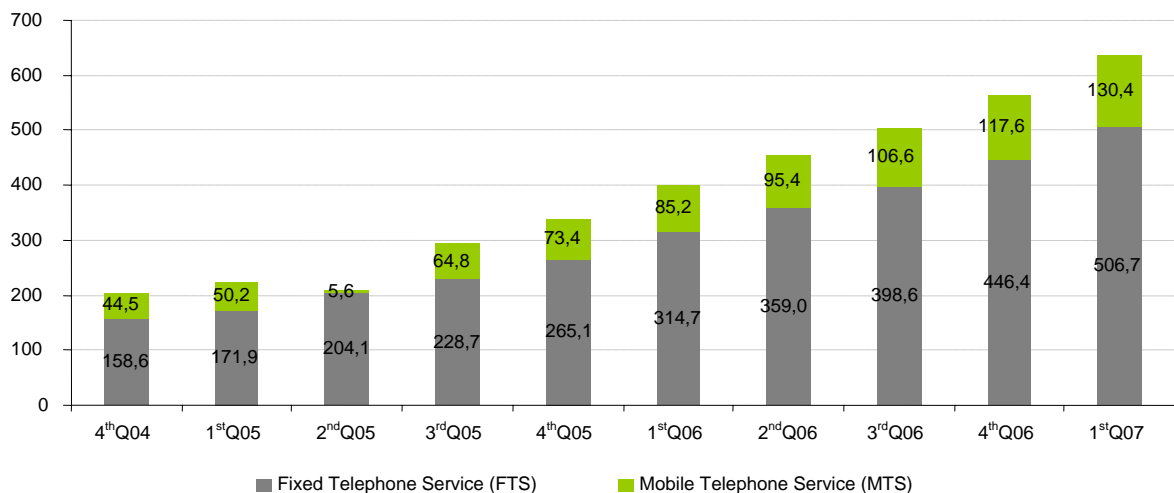
55. Currently, the origination price associated with calls originated from public payphones is 50% higher than that applying to the origination of calls initiated through a subscriber phone.
56. The calls made from public payphones have additional costs above calls made from subscriber terminals, given that, in accordance with the results of the 2006 CR, the margins associated with this services, compared to total costs (with common costs considered as being equal to 10% of the sum of direct and joint costs), remains negative (2006 margin of [SCI] [ECI]), whereby it is considered justifiable to maintain a 50% indexation in the origination price with respect to public payphones, in light of the compensation of costs incurred by PTC as a result of the provision of this service, while PTC shall previous identify, for the purposes of billing, the CLI associated with calls originated from public payphones.

<sup>19</sup> See, in particular, the report on the prior hearing held in respect of the determination of 17.02.2007 (<http://www.anacom.pt/template31.jsp?categoryId=216284>), regarding alterations to be made to the RIO 2005.

## II.D PRICE OF THE ACTIVITY OF PORTABILITY

57. The trend in the quantity of ported numbers is shown in the following graph, highlighting that between 31.12.2005 and 01.03.2007 there was an 88% increase in ported FTS numbers.

**Graph 5. Trend in the volume of ported numbers**  
Thousands of ported numbers



Source: ICP-ANACOM monthly statistics  
(<http://www.anacom.pt/template12.jsp?categoryId=217666>)

### II.D.1 Individual number porting

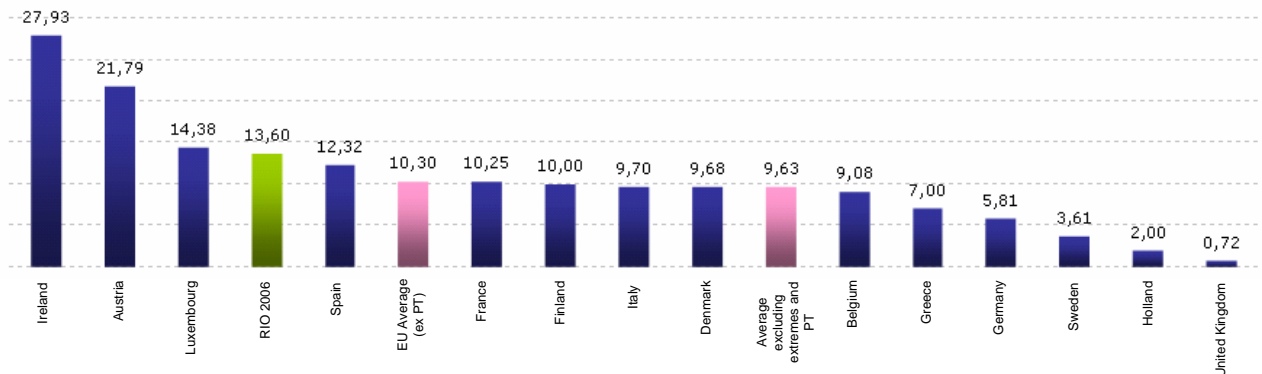
#### II.D.1.1 Current situation

58. As determined in ICP-ANACOM determination of 21.04.2006 regarding alterations to the RIO 2006, the maximum price of porting per individual number is €13.60 (ex. VAT).
59. In the prior hearing held in respect of this determination, PTC stated that the trend, in the near future, of unbundled lines will contribute to an increase in porting and to the reduction of unit costs, whereas ICP-ANACOM viewed as positive the agreement on the simplification of procedures, given that it is foreseeable and consensual that this would result in an increase in efficiency, the exact levels of which, however, it is not possible, *id temporis*, to ascertain.
60. In response to the DD on the RIO 2007, PTC stated that the costs estimated therein referred to the provision of the portability service, whereby porting of individual numbers and number blocks were included, and whereby the estimated cost was not comparable with the price of porting an individual number but rather with the average price charged, which includes individual numbers and the porting of ranges.

### **II.D.1.2 European comparisons of the price of activating individual number portability**

61. With respect to European practices<sup>20</sup> and according to information compiled in July 2007, the values charged for the portability of an individual number are presented in the graph below:

**Graph 6. Current European practice in respect of the price of individual number portability<sup>21</sup>**



Source: *Cullen International* and website of incumbent operators

### **II.D.2 Portability of number blocks**

#### **II.D.2.1 Current situation**

62. By determination of 23.05.2002, it is established that in the case of portability of a contiguous block of numbers, the respective maximum price is limited by the price currently applied in the same situation by the RE.
63. Accordingly, the price of portability, per number in block of contiguous number, currently corresponds<sup>22</sup> to the minimum value between (i) €13.60 per each number block and (ii) the price applied by the Reference Entity (ER), and depends on the size of the block of numbers to be ported and the quantity of porting carried out by PTC, as providing body, for the totality of providers in the previous quarter. Whenever the ER alters its prices with respect to portability, PTC shall also update the following table of prices of portability per number in each block, in accordance with the above rule and effective from the date on which the alteration was performed by the RE.

<sup>20</sup> In Europe there are two types of technical solutions adopted for the implementation of number portability (i) Model A (calls to the ported number are directed to the donor provider (undertaking responsible for the numbering resources from which the subscriber switches through portability), which then relays the call to the recipient provider – undertaking to which the subscriber switched) – in place in Austria, France, Germany, Ireland, Italy (geographic numbers), Luxembourg, United Kingdom; and (ii) Model B (calls to a ported number are relayed to a Database managed by an independent body – Reference Entity (RE) – in place in Belgium, Denmark, Finland, Greece, Ireland, Italy (non-geographic numbers), Holland, Norway, Portugal, Spain, Sweden, Switzerland. This is in accordance with June 2006 data of Cullen. However, the value of the price payable by an operator to each RE is not clear, given that in the case of Spain, the costs of portability are included within the database maintenance costs. Therefore in view of the analysis of costs and current European practices, and also taking into account the improvement in portability implementation procedures, previously foreseen, there is justification for a reduction in the price of portability activation.

<sup>21</sup> In the United Kingdom the price applying to an electronic request for portability was used.

<sup>22</sup> On 03.04.2007 PTC notified ICP-ANACOM of the publication of a new version of RIO, including an alteration of the 2007 Portability price.

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**Table 18. Portability by number in block of numbers (Annex5 of RIO)**

Total quantity of portability in previous quarter	Size of block of numbers				
	1-9	10-99	100-999	1,000 – 9,999	>= 10,000
< 6,000	€13.60	€13.60	€11.60	€5.27	€2.64
6,000 to 8,999	€13.60	€12.08	€8.18	€2.94	€0.98
9,000 to 11,999	€13.60	€12.66	€7.91	€2.85	€0.95
12,000 to 17,999	€10.55	€8.44	€5.27	€1.90	€0.63
18,000 to 24,999	€9.50	€7.60	€4.75	€1.71	€0.57
25,000 to 31,999	€7.60	€6.08	€3.80	€1.37	€0.46
32,000 to 39,999	€6.33	€5.06	€3.17	€1.14	€0.38
40,000 to 49,999	€5.69	€4.55	€2.85	€1.02	€0.34
50,000 to 59,999	€4.96	€3.97	€2.48	€0.89	€0.30
60,000 to 69,999	€4.22	€3.37	€2.11	€0.76	€0.25
70,000 to 84,999	€3.91	€3.13	€1.95	€0.70	€0.23
85,000 to 99,999	€3.69	€2.95	€1.85	€0.66	€0.22
>= 100,000	€3.48	€2.79	€1.74	€0.63	€0.21

Note: Values in euros.

### **II.D.2.2 European Comparisons (price per number in block of ported numbers)**

64. It is shown that, in accordance with the current rule, the price of portability per number in a block of number depends on various factors, one of which is a value applied by a third party which is neither ICP-ANACOM nor PTC, being also dependent on one of five possible sizes (1 to 9, 10 to 99, 100 to 999, 1000 to 9999 and more than 10000) for the blocks of numbers and the quantity of portability performed by the totality of OSPs<sup>23</sup> in the previous civil quarter, whereby each block counts as one portability operation.
65. Therefore a European comparison of prices by number in block of ported numbers can be justified. In order to provide a harmonised comparison within the EU-15 countries, in light of the fact that the method used for calculating the price for number portability in a block of numbers is not uniform in these countries, a comparison was considered of prices for number portability in blocks of numbers up to 10, 100 and 1000 numbers, for which the price in Portugal is €4.96, €3.97 and €2.48 respectively (taking into account that in the first quarter there were [SCI] [ECI] portability operations<sup>24</sup>).

<sup>23</sup> OSP is, according to the RIO, a public telecommunications network operator or provider of the fixed telephone, mobile or data transmission service.

<sup>24</sup> It is shown that, according to the rule current established in the RIO, in the case of requests for porting block of contiguous numbers, each block will count as one portability operation.

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**Graph 7. Current European Practices<sup>25</sup> in respect of the price of portability per number in block up to 10,100 and 1000 numbers**



Source: *Cullen International* and websites of incumbent operators.

66. From this comparison it is concluded that in Portugal the price for the portability of a number in blocks up to 10, 100 and 1000 ported numbers is clearly above the European average by around 17%, 138% and 214% respectively.

67. It is also concluded that the rule currently established in Portugal for the price of number portability in blocks of ported numbers is very complex, and therefore simplification of this rule is urged, in line with European practice.

### II.D.3 Costs of portability

68. On 16.07.2007 PTC presented the unit costs for porting a number<sup>26</sup>, which are set out in the following table:

**Table 19. Unit costs presented by PTC (Euros) [SCI]**

Direct Costs	
Joint Costs	
Direct + Joint Costs	
Common Costs	
Total Cost	

[ECI] Source: 2006 AAS

<sup>25</sup> It is noted however that in Austria, Luxembourg and Spain, a price for portability by number in a block of ported numbers is not calculated..

<sup>26</sup> It is noted that, according to PTC, it would not be possible to separate the information in respect of portability associated costs, into porting by individual number and by number in each block of contiguous numbers, given that the AAS of PTC was conceived to provide the cost of porting a number, irrespective of whether it is an individual number or forms part of a block of contiguous numbers.

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69. The common costs presented by PTC represent [SCI] [ECI] of the sum of direct and joint costs which are considered exaggerated, with it considered more reasonable, as previous stated in this document, to adopt a level of common costs equal to 10% of the sum of direct and joint cost.
70. Taking account, in the calculation of the estimate of 2007 costs, of a 5% annual reduction of unit and joint costs, ICP-ANACOM considers that the value of common units costs to be taken into account is [SCI] [ECI], which provides for a total cost of [SCI] [ECI]. This value is significantly lower than the one in the origin of the price proposal in the SPD (€7.51).
71. Further recognising that the estimated cost cannot be compared to the price of porting an individual number, but rather with the average price charged which includes individual number and ported ranges, in the final decision an adjustment of the average price to the average cost is adopted. In order to obtain the average price of portability, the price associated with each level is multiplied by the weight of numbers ported by PTC as the provider operator, giving the value of [SCI] [ECI].
72. In view of the costs presented in the AAS of 2006 and of the stated adjustments made by ICP-ANACOM to these costs, it is considered that the maximum price for individual number pointing should be €5.39, which, it is considered, would allow a reasonable margin in respect of a reasonable level of common costs and which is also considered to compare favourably with current European practices in the context of the best practices, as is to be expected in view of the included costs, with the significant weighting of labour costs.
73. With respect to the maximum prices for the activation of portability per number in each block of numbers, it is considered reasonable to establish the values set out in the table below, in an initial move towards the average values of the EU, without prejudice to future re-evaluation based on more concrete data on the costs involved.

**Table 20. Maximum prices for the activation of portability per number in each block of numbers**

Block of numbers	Current price	Maximum price RIO2007	Percentage reduction
1 to 9	€ 4,96	€ 4,25	-14%
10 to 99	€ 3,97	€ 1,67	-58%
≥100	€ 2,48	€ 0,79	-68%

74. Due to infrequency of requests for portability for numbers in blocks of over 1000 (for example in the first quarter there were no such requests, and only one request in the second quarter), it is considered that, in the case of blocks of such sizes, the prices applicable to portability of numbers in blocks of the size below should be used (i.e. from 100 to 1000)

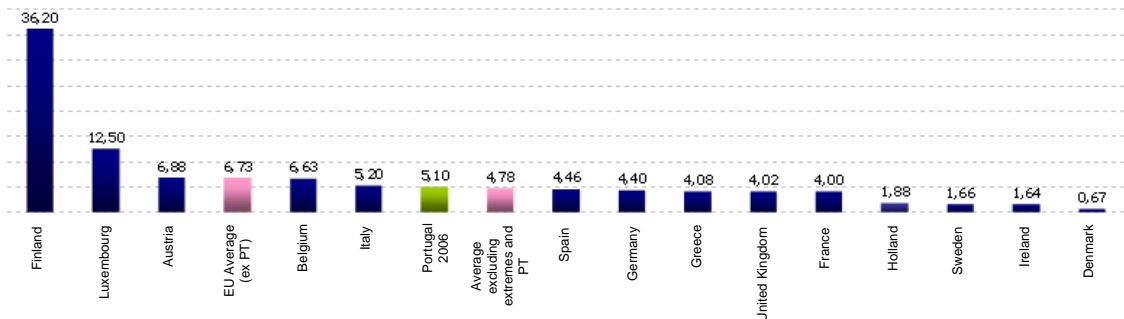
## **II.E PRE-SELECTION ACTIVATION PRICES**

75. As determined in the determination of alterations to the RIO 2006 as approved by ICP-ANACOM determination of 21.04.2006, the maximum price of pre-selection activation is €5.10 (ex. IVA).
76. Use of European practices should be seen in conjunction with the cost orientation of prices, with account also taken of efficiency patterns. Therefore, according to the



information compiled in July 2007, the values charged for pre-selection activation on an analogue line are given in the graph below<sup>27</sup>:

**Graph 8. Current European practice in respect of pre-selection prices**



Source: *Cullen International* and websites of incumbent operators.

77. On 16.06.2007 PTC presented the unit costs of pre-selection activation, as given in the table below:

**Table 21. Unit costs of pre-selection activation in 2006 (Euros) [IIC]**

PTC Estimate	
Direct Costs	[Redacted]
Joint Costs	[Redacted]
Direct + Joint Costs	[Redacted]
Common Costs	[Redacted]
Total Cost	[Redacted]

[FIC] Source: 2006 SCA

78. The common costs presented by PTC for 2006 represent [SCI] [ECI] of the sum of direct and joint costs which is considered exaggerated, with it considered more reasonable, as previous stated in this document, to adopt a level of common costs equal to 10% of the sum of direct and joint costs, i.e. [SCI] [ECI], which gives a total 2006 cost of [SCI] [ECI].
79. Therefore, it is considered that the maximum price of pre-selection activation for the RIO 2007 should be €2.12, allowing a reasonable margin in respect of a reasonable level of common costs and which is also considered to compare favourably with current EU practices in the context of the best practice with a significant move toward European best practice.

## II.F INTERCONNECTION INSIDE PTC EXCHANGES

80. A number of entities asked ICP-ANACOM for a review of the RIO in order to establish the possibility of interconnection, through their own infrastructure, between two OSPs co-installed in PTC exchanges.

<sup>27</sup> By lapse, in the analysis of the RIO 2006, only the value of the "Order dispatch" was considered, while the value of pre-selection activation was not added, whereby the value obtained for 2007 (€36.20) is considerably higher than that considered in 2006 (€5.80).

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81. The same entities further stated that due to the geographic interconnection points (GIPs) of TMN, used for interconnection with its network, being installed in the buildings of PTC exchanges, such inhibits interconnection between TMN and the OSP through their own infrastructure, whereby the OSP is obliged to lease the circuits of interconnection with TMN from PTC.
82. According to the RIO, the space of co-installation used for the purposes of the RUO may also be used for the RIO, provided that such is technically possible. This means that a in a co-installation module of an operator, there could be installation of transmission equipment for the support of circuits (of 2 Mbps) for interconnection with PTC.
83. With respect to the interconnection conditions (in PTC buildings) for the interconnection of traffic with the PTC network, this company provides, under the scope of the LLRO, the Components Support (CS) service, which, according to PTC, is not directed for the interconnection of two OSPs co-installed in PTC exchanges.
84. According to available information, the following GIPs of TMN, are found, for historic reasons, inside the buildings of PTC (see table below):

**Table 22. Localization of TMN interconnection points in Lisbon and Porto [SCI]**

Local PGI	Code	Address	Switch Type

[ECI] Source: Novis letter of 11/10/06 and interconnection agreements with TMN

85. ICP-ANACOM, in view, especially, of the development of the market since the determination of 27.05.2004, considers that it is not reasonable, nor does it permit optimal use of network infrastructure installed by OSPs in PTC exchanges, nor does it promote an overall effective investment, that there is no possibility of an OSP co-installed in a PTC building being able to interconnect with another OSP co-installed in the same building (OSP-OSP) or with companies of Grupo PT which have interconnection points located inside this building (as for example OSP –TMN).
86. The OSPs may currently use the LLRO for interconnection between public electronic communication networks (fixed and mobile), including interconnection with the PTC network, with PTC providing the services of (i) leased circuits; (ii) circuits for traffic interconnection; and (iii) circuits for access to submarine cables.
87. Given that, according to the LLRO, the service of circuits for traffic interconnection is currently designed only for GIP interconnection between OSPs and PTC, it is considered that the possibility of OSP-OSP or OSP-TMN interconnection, as outlined above, could be better encompassed within a reformulated leased circuits service as follows:
88. The leased circuits service set out in the LLRO allows the interconnection of two clients (OSP 1 and OSP 2) with two options currently available: (i) end to end circuits and (ii) partial circuits.

89. In the "partial circuits" solution, one end of the connection consists of a local extension (i.e. connection between the installations of OSP1 and a local PTC exchange). At the other end OSP2 can be co-installed in the same local PTC exchange. In this case there is a connection between the PTC network and an intermediate Distribution Frame (internal extension), requiring a support component (which links the intermediate Distribution Frame of PTC to the coaxial distribution frame of the co-installed OSP), with available capacity.
90. However, the LLRO states the support components service is not directed at the interconnection of OSPs co-installed in PTC exchanges.
91. Therefore, considering the "partial circuits" service currently set out in the LLRO, in which one of end consists of a module of an OSP co-installed in a PTC exchange building, it is considered that there is no reason why the other end (which currently consists of a local extension (LE)) cannot also be situated within the same PTC building and consist of a module of another co-installed OSP, or a company of Grupo PT with the connection point installed inside this building.
92. In this context, it is clarified that it is binding upon PTC to accept requests made by OSPs co-installed in a PTC buildings for interconnection with companies of Grupo PT which have GIPs installed in that building or with other OSPs co-installed in the same building, making use of the leased circuits service defined above, amending the LLRO accordingly (especially lifting the restriction contained at the beginning of appendix B of annex 1).
93. It should be further specified in the LLRO that in the case of interconnection between OSPs, there should only be payment in respect of the corresponding connection between the terminals of each OSP in the intermediate Distribution Frame (excluding support components, where necessary), taking account of the principle of the cost orientation of prices.
94. It is reiterated, as stated by ICP-ANACOM in the clarification of 05/03/07, that the interconnection support component service is not limited to the local exchanges of PTC which constitute GIPs identified in the RIO. Therefore, where there are no technical restrictions in these exchanges (as for example the lack of a suitable distributor), PTC is bound to offer the support component service in other exchanges and not just those which constitute GIPs of the PTC network (set out in annex 1 of the RIO), thus allowing OSPs co-installed in other exchanges to also use this service, including for connection between co-installed OSP modules.

### **III DETERMINATION**

95. Considering that:

- (i) There has been a significant delay in the approval of the present determination, which delay is considered extraordinary and results from various factors, especially connected to:
- the need to ascertain the effects of the determination with respect to the new tariff of the universal service given its possible impact on interconnection prices, even though the reduction of 10% therein established is attributed independently of the normal and periodic review of the RIO, given that PTC notified ICP-ANACOM on 07.03.2007 and 23.03.2007 that it had opted to implement the tariff it had proposed, thereby accepting the 10% reduction in the prices of the RIO as of 26.03.2007.
  - the opportunity taken to analyse the 2006 results of the analytical accounting system of PT Comunicações, as provided on 16.07.2007 following an observation made by the company in respect of the use of the 2005 data.
- (ii) Article 68 of Law no 5/2004 explicitly provides for the possibility of amending the reference offer at any time and whenever necessary with retroactive effect in order to apply the obligations set out in article 66, especially control of prices, under the terms of article 74, which was based on the analysis of the markets (performed taking account of efficiency and sustainable competition and the provision of maximum benefits for the consumer).
- (iii) The obligation of price control and cost accounting was implemented by the decision of 17.12.2004 which provides for an annual review and which sets out the importance of preventing a delay in the final decision from allowing, by this simple fact, non-compliance with the stated obligation of price orientation to cost, given that retroactivity of the decision is necessary to ensure, in a reasonable form, the effectiveness of obligation concerned throughout 2007. Noting also that:
- accordingly, harm to the operators interconnected through the RIO is avoided and as a consequence it obliges them to support tariffs not orientated to costs during part of the year, ensuring achievement of the objective of promoting competition set out in article 5 of Law no 5/2004.
  - the retroactive application allows interconnected to benefit from the margin corresponding to the reduction interconnection prices so determined, with positive effects for competition and translating into benefits for users, given that these operators will have incentive to apply them to their offers, driven by the dynamic of the market.

and taking into account the bases set out above and those presented in the report on the previous hearing, the Board of Directors of ICP-ANACOM, within the scope of the attributions set out in point b) and f) of paragraph 1 of article 6 of the Statutes, approved by Decree-Law no 309/2001 of 7 December, taking account of the objectives of regulation set out in article 5 of Law no 5/2004 of 10 February, especially in the offer of electronic communication services and the defence of citizen interests, and under the terms of paragraph 3, point a) of article 68 of Law no 5/2004, determines the following:

**1. PT Comunicações shall modify, within a period of 10 working days, the Reference Interconnection Offer for 2007 (RIO 2007), introducing the alterations set out below:**

- (i) The maximum prices for call termination and origination services to apply between 01.01.2007 and 25.03.2007 shall be as follows:

**ICP-ANACOM interconnection prices, for 2007, for termination and origination services.**

Level	Call activation	Price per minute	
		Peak	Off-peak
Local	0.55	0.43	0.22
Single Transit	0.63	0.70	0.35
Double Transit	0.73	1.17	0.62

Values in Eurocents (excl. VAT).

Billing shall be per second following the first second. Peak time shall apply between 09.00am and 07.00pm on working days, and Off-peak shall apply at other times.

- (ii) The maximum prices for call termination and origination services to apply from 26.03.2007 shall be as follows:

**ICP-ANACOM interconnection prices for 2007, for origination and termination services.**

Level	Call activation	Price per minute	
		Peak	Off-peak
Local	0.50	0.39	0.20
Single Transit	0.57	0.63	0.32
Double Transit	0.66	1.05	0.56

Values in Eurocents (excl. VAT).

Billing shall be per second following the first second. Peak time shall apply between 09.00am and 07.00pm on working days, and Off-peak shall apply at other times.

- (iii) The maximum prices for billing, collection and risk of non-collection are:
- (i) 3.08 Eurocents, per call, for call services where the cost born by the caller does not exceed PTC Local (as defined in the tariff for PTC residential customers);
  - (ii) 3.44 Eurocents, per call, for the remaining special paid services.
- (iv) The maximum price for pre-selection activation shall be €2.12.
- (v) The maximum price for portability per individual number shall be €5.39.
- (vi) The maximum prices for number portability in number blocks are as follows:

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Size of number block	Price of portability per number in each block of numbers
1 to 9	€4.25
10 to 99	€1.67
>= 100	€0.79

- (vii) PTC shall include new prices in the RIO for capacity-based interconnection with retroactive effects to the dates of alteration of the prices of metered interconnection indicated in points (i) and (ii), with consideration to the price reductions now determined for metered interconnection and the methodology defined in the determination of 08.06.2006 on the specification of RIO alterations. PTC shall further, within the same period of ten working days, submit to ICP-ANACOM detailed grounds for the alteration made to the tariff for capacity-based interconnection.
- (viii) The maximum prices set out in points (iii), (iv), (v) and (vi) shall be effective as of 01 January 2007.
- (ix) The restriction set out in section 8.1 of the RIO, according to which the support components service provided under the LLRO does not apply to the interconnection of two OSPs co-installed in PTC exchanges, shall be removed.

**2. PT Comunicações shall modify, within a period of 10 working days, the Leased Lines Reference Offer (LLRO) introducing the alterations set out below:**

- (i) Remove the restriction, according to which the support components service does not apply to the interconnection of two OSPs co-installed in PTC exchanges (see Appendix B of Annex 1 of the LLRO).
- (ii) Shall make clear that it is possible to use internal extension and support components without consideration of any local extension, in order to promote interconnection between co-installed OSPs and a company of Grupo PT which has an interconnection point installed in the same building. In the first case only the prices corresponding to the connection between each OSP in the intermediate distribution frame shall apply, which prices shall be orientated to cost, and to possible support components. PTC shall present, within the same 10 working day period, due grounds to ICP-ANACOM in respect of the costs of the installation of connection patches in the intermediate distribution frame. In the second case (interconnection to the GIP of a Grupo PT company) an identical scheme applies as in force for interconnection with PTC exchanges.
96. It is reiterated, as stated by ICP-ANACOM in the clarification of 05/03/07<sup>28</sup>, that the interconnection support component service is not limited to the local exchanges of PTC which constitute GIPs identified in the RIO. Therefore, where there are no technical restrictions in these exchanges (as for example the lack of a suitable distributor), PTC is bound to offer the support component service in other exchanges and not just those which constitute GIPs of the PTC network (set out in annex 1 of the RIO), thus allowing OSPs co-installed in other exchanges to also use this service, including for connection between co-installed OSP modules.

<sup>28</sup> <http://www.anacom.pt/template31.jsp?categoryId=237842>

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# **APENDIX**

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**Traffic Volume –ICP-ANACOM estimates**

Based on available information on the volume of traffic up to the 4th quarter of 2006 (see table below), ICP-ANACOM made a forecast analysis in order to estimate traffic quantities for the year 2007.

Table 1. Thousand of interconnection traffic minutes for the period 2003-2006. [SCI]

		Origination	Termination	Total
2003	1st quarter			
	2nd quarter			
	3rd quarter			
	4th quarter			
	<b>TOTAL</b>			
2004	1st quarter			
	2nd quarter			
	3rd quarter			
	4th quarter			
	<b>TOTAL</b>			
2005	1st quarter			
	2nd quarter			
	3rd quarter			
	4th quarter			
	<b>TOTAL</b>			
2006	1st quarter			
	2nd quarter			
	3rd quarter			
	4th quarter			
	<b>TOTAL</b>			

Source: Quarterly PTC billing data

Based on the 2006 quantities, the traffic minutes for 2007 are estimated using the application of a methodology consisting of the application of a year-on-year variation, corrected by the traffic development trends in recent years<sup>1</sup>, with the option taken to use only the annual, rather than quarterly, values in the analysis - in order to minimise estimation errors. Accordingly, based on the results for the year of 2006, to which the year-on-year variation in 2005-2006 was applied with the correction of traffic annual development trends, the values for origination and termination service are estimated in the following table.

$$^1 V_i = V_{i-1} \times \left[ 1 + \left( \frac{V_{i-1}}{V_{i-2}} - 1 \right) \times \left( 1 + \frac{\sum_{i=2}^4 \frac{V_{i-1}}{V_{i-2}} - 1}{n} \right) \right]$$

Where  $V_i$  represents the year's volume of routed traffic  $i$ .



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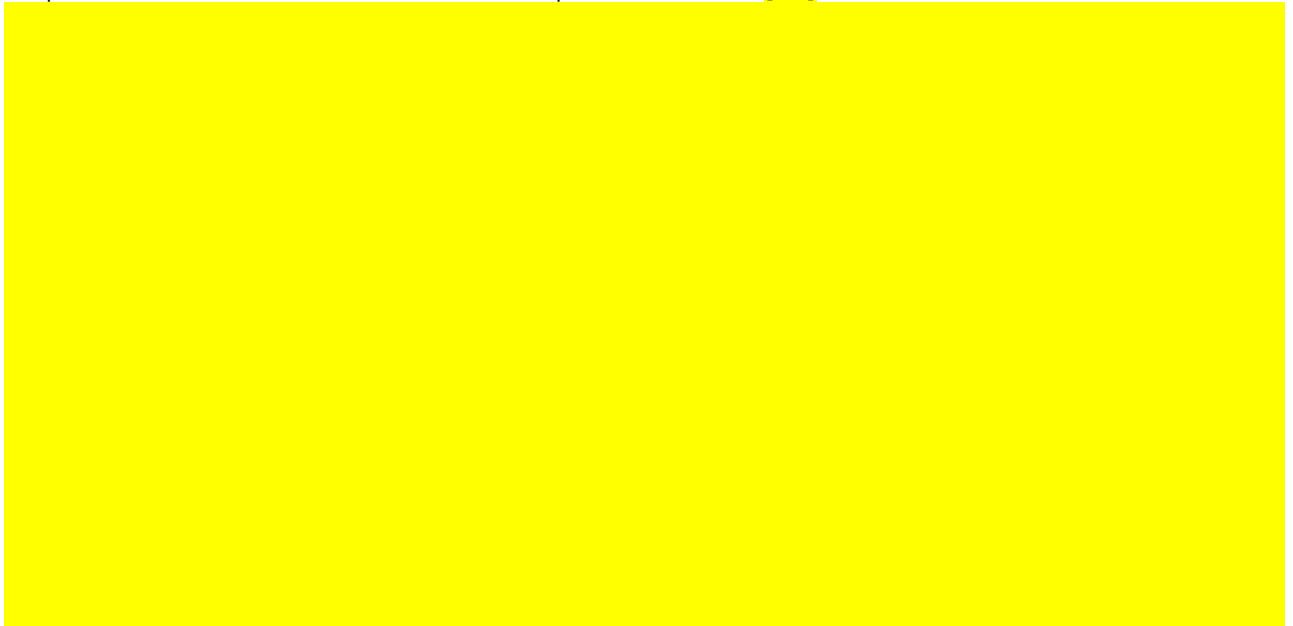
Table 2. Thousand of interconnection traffic minutes estimated for 2007 [SCI]

	Origination	Termination
Average annual variation 2003-2004	30%	11%
Average annual variation 2004-2005	11%	5%
Average annual variation 2005-2006	-2%	5%
Average variation of average annual variation in the period 2003-2006	-92%	-23%
<b>2007 estimates</b>		

Source: Estimates of ICP-ANACOM based on PTC quarterly billing data. [ECI]

In view of the above, it is estimated that in 2007, there won't be a significant variation in origination traffic (variation of approximately -0.2%) and that termination traffic will increase by approximately 4.2%, giving a variation of total interconnection traffic of around 2.4%). The graph below represents traffic seen in the 2003-2006 period and the estimates for 2007.

Graph 1. Evolution of interconnection traffic in the period 2003-2007. [IIC]



Source: PTC quarterly billing data and ICP-ANACOM calculations. [FIC]

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## Principle point regarding the traffic estimates presented by PTC

### A. Volume of estimated traffic

- (i) The quantity of minutes and calls estimated by PTC for 2007 represents an increase over the quantities seen in 2006. In particular the following variations are noted:
  - a. Termination: increase of 9.8% in the volume of traffic in minutes;
  - b. Origination: reduction of 0.8% in the volume of traffic in minutes;
  - c. Total interconnection (termination + origination): increase of 5.7% in the volume of traffic in minutes.
- (ii) In view of the volume of traffic, in minutes, estimated by PTC for 2007, the values estimated by ICP-ANACOM for this year have the following variations<sup>2</sup>:
  - a. Termination: -6.0% in the volume of traffic in minutes;
  - b. Origination: 0.7% in the volume of traffic in minutes;
  - c. Total interconnection (termination + origination): -3.4% in the volume of traffic in minutes.

Regarding the estimate, for 2007, for each traffic scale, the following differences were seen:

- a. Local: ICP-ANACOM estimates 3.7% below PTC estimates;
- b. Simple Transit: ICP-ANACOM estimates 2.7% below PTC estimates;
- c. Double Transit: ICP-ANACOM estimates 1.4% below PTC estimates;

Regarding the estimates of the quantities of interconnection for 2007, it is considered that the differences seen between the ICP-ANACOM estimates and PTC's estimates are not significant, with the analysis taking account of the traffic volumes estimated by PTC..

### B. Estimated traffic profiles

Regarding the estimated traffic profiles estimated by PTC for 2007, it is noted that, with respect to the distribution of traffic between Peak and Off-peak, and in view of the real figures from PTC (based on the billing data up to the third quarter of 2006<sup>3</sup>):

- For call termination, 15% increase in Off-peak routed traffic and 5% decrease in Peak traffic;
- For call origination, 10% increase in Off-peak routed traffic and 5% decrease in Peak traffic;
- For total interconnection (origination + termination), 13% increase in Off-peak routed traffic and 8% decrease in Peak traffic;

Regarding average call duration (ACD), with respect to the PTC estimates for 2007 in view of the PTC's real figures (based on the billing data up to the 3rd quarter of 2006, it is seen that:

- For call termination, 9% ACD increase;
- For call origination, 2% ACD increase;
- For total interconnection (origination + termination), 6% ACD increase;

<sup>2</sup> It is noted however that the estimates of PTC for origination do not take account of the "virtual calling card service", whereas ICP-ANACOM estimates do.

<sup>3</sup> The billing data submitted by PTC, in respect of the 4th quarter of 2006, does not provide sufficient detail (in particular with regard to the number of calls and the distribution over the tariff time periods), whereby the information on the third quarter of 2006 (which was specifically sent by PTC, following a request by ICP-ANACOM, for the analysis of price effective in the RIO) which provided this level of detail, was adopted in the analysis.

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Taking into account PTC's access to more detailed information on the distribution of traffic over the various scales and time periods defined in the tariff, the traffic profile estimated by PTC was used in the analysis for the average duration of calls and for the distribution of traffic over the various levels of interconnection and time periods.