

**Final decision on amendments to the Leased Lines Reference Offer (LLRO) and to the
Reference Ethernet Leased Lines Offer (RELLO)**

ICP-ANACOM

CONTENTS

1.	FRAMEWORK.....	3
2.	ANALYSIS	4
2.1.	Quality of service and compensation for non-compliance	6
2.1.1.	Supply time	8
2.1.2.	Repair time	12
2.1.3.	Degree of availability	14
2.2.	Method of payment of compensation	15
2.3.	Dependency between the payment of compensation and the sending of demand forecasts	16
2.4.	Premium service	18
2.5.	Backhaul and access to submarine cable landing points	19
2.6.	CAM lines	22
2.7.	Ethernet lines	25
2.8.	Prices	37
3.	DETERMINATION	42
APPENDIX 1		
APPENDIX 2		

1. FRAMEWORK

Leased lines are a fundamental tool for the development of markets for electronic communications services, stimulating to a large extent the development of transport and access networks throughout the national territory.

The Leased Lines Reference Offer (LLRO) provided by PT Comunicações, S.A. (PTC), the first version of which was published in 2006, supports a significant proportion of leased lines, especially in terminating segments and in a significant share of trunk segments, and, as such, it is a relevant factor for the promotion of sustained competition in the markets for electronic communications networks and services.

The decision of ICP - Autoridade Nacional das Comunicações (ICP - ANACOM) taken on 28 September 2010¹, on the definition of product and geographic market, assessment of significant market power (SMP) and imposition, maintenance, amendment or withdrawal of regulatory obligations in the retail market and wholesale markets of terminating and trunk segments of leased lines (hereinafter referred to as “market analysis”) maintained for the Grupo PT the obligation to publish a leased lines reference offer and all associated obligations, except for trunk segments in the so-called “competitive routes” (“Routes C”).

In the scope of the “market analysis”, ICP - ANACOM specifically:

- (a) Imposed the broadening of the scope of the reference offer to encompass the offer of access to lines supported using Ethernet technologies.
- (b) Decided to conduct a separate analysis on the possibility of imposing access (collocation) to submarine cable stations.
- (c) Acknowledged that there are some aspects of the LLRO which warrant a revision or update, in order to better align them with the interests of the market, with particular attention to access to CAM² lines (and to other matters, such as operator interconnection, levels of quality of service - line supply times or Premium levels - or compensation for failures to comply with levels of quality of service, which would be detailed under a specific determination to be submitted to public consultation).

These issues are specified and analysed below.

However, as regards point (a) above, it should be taken into account that, still in the scope of the “market analysis”, ICP - ANACOM admitted that Ethernet lines could be considered in a reference offer other than the LLRO. In this case, PTC, no later than two months following the final decision, would be required to publish an updated version of the LLRO with the

¹ Vide <http://www.anacom.pt/render.jsp?contentId=1000059>.

² Leased lines between the mainland and the Autonomous Regions of the Azores and Madeira.

inclusion of Ethernet lines or a specific offer of Ethernet-supported leased lines (hereinafter referred to as Ethernet line offer - RELLO), submitting previously to ICP-ANACOM - not later than 1 month prior to this publication - the reasoned basis for its various components.

Further to the referred determination, PTC published the reference Ethernet leased lines offer (RELLO) in December 2010, establishing the characteristics as well as technical and commercial conditions for the provision of Ethernet lines by PTC in wholesale markets.

By determination of 17 November 2011, the Management Board of ICP - ANACOM decided to conduct the prior hearing of interested parties and to launch the general consultation procedure on a draft decision it intended to take on amendments to LLRO and RELLO, which took place between 30 November 2011 and 13 January 2012³. Comments received, the respective analysis and grounds for the decision are included in the “Report of the prior hearing and general consultation procedure on the draft decision on amendments to the leased lines reference offer (LLRO) and the reference Ethernet leased lines offer (RELLO)”, which is deemed to be an integral part hereof.

Subsequently, by determination of 30 April 2012, the Management Board of ICP - ANACOM approved:

- (a) The report of the prior hearing and public consultation procedures and the draft decision for notification to the European Commission, BEREC, and NRA of other Member States on amendments to LLRO and RELLO.
- (b) The notification of the draft decision to the European Commission, BEREC, and NRA of other Member States, pursuant to paragraph 1 of article 57 of Law No 5/2004, of 10 February, as amended by Law No 51/2011, of 13.09, in line with Commission Recommendation C(2008) 5925, of 15 October.

The European Commission provided its response on 4 June 2012, making no comments on the matter.

2. ANALYSIS

Taking into consideration the matters identified in the preceding section, the following analysis organizes the various issues as follows:

- (a) Quality of service and compensation for non-compliance;
- (b) Method of payment of compensation;

³ The initial deadline for receiving comments from interested parties was 30 December 2011. Later, by determination of the Management Board of ICP - ANACOM taken on 9 December 2011, an extension by 10 working days was provided for interested parties to respond in respect of the prior hearing and general consultation procedure to which the DD had been submitted.

- (c) Dependency between the payment of compensation and the sending of demand forecasts;
- (d) Premium services;
- (e) Backhaul and access to submarine cable landing points;
- (f) CAM lines;
- (g) Ethernet lines;
- (h) Prices.

This analysis also takes into account, among others, the Common Position taken by ERG (European Regulators Group) - now BEREC⁴ - on best practice in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale leased lines⁵. This common position refers that, as wholesale leased lines are key inputs for providing a wide range of electronic communications services (especially to companies), it is vital that, where they are not supplied under conditions of effective competition, they are regulated effectively. According to ERG, the regulation of wholesale leased lines will promote the competition and choice of businesses.

In this context, it should be noted, still according to that common position, that it is important to guarantee a balanced level of competitive conditions, and a reasonable certainty that alternative operators are able to compete on a level playing field with the operator holding significant market power (SMP). This implies that certain regulatory measures are effectively put in place, specifically in order to:

- (a) Ensure that the SMP operator does not have an unfair and unmatchable advantage, (relatively to other operators) by virtue of its economies of scale and scope, especially if derived from its position of incumbency.
- (b) Prohibit the SMP operator from discriminating in favour of its companies and services, either on price issues or other conditions.
- (c) Effectively deter obstructive and foot-dragging behaviour.
- (d) Ensure that policies adopted by the SMP operator towards the development of new infrastructure, required for provision of new retail services, provide all market operators with the same opportunity to compete in that scope.

⁴ Body of European Regulators for Electronic Communications (BEREC).

⁵ http://erg.eu.int/doc/publications/erg_07_54_wll_cp_final_080331.pdf.

2.1. Quality of service and compensation for non-compliance

The quality of service of leased lines is an issue which operators and alternative service providers have raised repeatedly and at various levels. In their response to the draft decision (DD) on the “market analysis”, OSP raised specific questions concerning:

- (a) The incompatibility between supply times and fault repair times defined in LLRO and those required by public tenders, having been presented the example of the Public Purchasing Framework Agreement for the provision of fixed data communication services⁶, which in the view of OSP leads to market distortions⁷;
- (b) Absence of SLA⁸ for 100% of cases for all parameters of quality of service (PQS) - service supply, repair and availability - which is detrimental to the relation of wholesale operators with their business clients;
- (c) Supply and restore times, which are not adjusted to the market reality and represent *“the main constrain to the success of the offer”*⁹;
- (d) The indexation of the payment of compensation to the sending of forecast plans by operators.

These issues were covered already in the “market analysis”, having been stated at the time that:

- (a) Many LLRO beneficiaries have already proposed to ICP-ANACOM that the levels of compensation provided for in this offer should be strengthened, considering them insufficient as a deterrent of non-compliance by PTC;
- (b) In particular, compensation for failures to comply with fault repair times, which is equivalent to 3% of the monthly price of the leased line in question, regardless of the seriousness of the non-compliance, corresponding in practise to a refund of less than one day of monthly charge, constitutes a clearly insufficient incentive for PTC to fully comply with the objectives of quality of service in terms of fault repair;
- (c) Current restrictions applicable to the payment of compensation for non-compliance with the established objectives would be assessed¹⁰;

⁶ Vide http://www.ancp.gov.pt/PT/ComprasPublicas/AcordosQuadro/Pages/Concursos_concluidos.aspx.

⁷ Given that, according to Optimus, *“the Grupo PT responds to calls for tenders with supply and fault repair times that are not guaranteed to operators via regulated offers.”*

⁸ Service Level Agreement – a contract that establishes the conditions and procedures concerning the quality of service of the offer.

⁹ According to Optimus, as far as the supply time is concerned, there have been no changes since 2006, and parameters are substantially different from those recommended by EC in its Recommendation of 21.02.2005. The company stresses further that supply times do not include maximum values, which is deemed to be *“inacceptable given the characteristics of retail customers that use this type of offer”*.

- (d) It is essential to ensure that the supply times and fault repair times applied contractually to the wholesale provision of leased lines do not prevent operators from providing their customers with supply and fault repair times which are in line with those of the companies of Grupo PT (operating at retail level). In this respect it must be highlighted that one of the beneficiaries of LLRO informed ICP-ANACOM that it had urged PTC to submit a proposal for more demanding levels of service than those defined in the reference offer, to which PTC responded imposing proposal-submission conditions which the operator deemed to be unacceptable.

In this context, an analysis of levels achieved by PTC in 2010 and in the first half of 2011, as regards leased line supply, fault repair and degree of availability¹¹, shown in detail in **Appendix 1**, led to the conclusion that:

Supply time

- (a) PTC generally complied with leased line supply times during 2010, providing lines within a significantly shorter period than the objective, and there are few situations of non-compliance towards OSP (for the most part, failures to comply concern 64 Kbps lines).
- (b) In 2011 (first half) the situation deteriorated as cases of non-compliance related to the supply of lines to OSP increased substantially, affecting in many cases 2 Mbps lines.
- (c) There was one situation, which may be specific, in which 155 Mbps lines were supplied to companies of the Grupo PT within one day, the objective being 59 days¹².

It may be inferred from these facts that:

- Notwithstanding the registered failures to comply, generally there is room for reducing supply times, not least because in certain situations the Grupo PT is able to supply lines to its own companies within a very short time;
- Additional incentives for PTC to comply with defined supply times objectives may be required, thus ICP - ANACOM will keep a close eye on the subject;

¹⁰ According to Annex 6 of RCAO, “In order to ensure a correct planning and an optimization of PTC’ resources required for the evolution of RCAO, the OSP must provide PTC, by 30 June every year, with a [quarterly] forecast plan of line needs for the subsequent year (...) which must be reviewed every three months in the course of [that] year N+1” and “In case the required capacity exceeds forecasts made by the OSP, PTC must endeavour to guarantee the provision of the excess over the forecast. In this case, supply times shall be negotiated on a case-by-case basis.” RCAO provides also that PTC must settle payments related to compensation for non-compliance with time-limits no later than one month after reception of a notification from the alternative operator, which must be submitted within at the most three months after occurrences have taken place.

¹¹ On the basis of data sent on a quarterly basis by that company.

¹² Less than 10 setups were registered for the first half of the year. Another situation occurred (outside Grupo PT), where the supply time was three days.

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- It is relevant to analyse whether higher performance levels than those established currently in LLRO (Premium or not) may be required, in order to effectively meet requests for shorter supply times or situations where this shortening may be easily implemented such as, for example, mere increases of capacity/speed in pre-existing lines/routes.

Repair time

- (d) Having the analysis focused only on “Wide Line Network” contracts, where the set of accesses is significant, it is possible to observe a large number of failures to comply with fault repair times, regardless of the type of line or OSP (some of which with significant divergences).

It may thus be concluded that, either repair times that have been set are not realistic, or incentives (compensation) for compliance on the part of PTC are not strong enough.

Bearing in mind that PTC itself defined fault repair times, which were not changed or restricted by ICP - ANACOM, and that PTC could have adjusted at any time the resources required to meet shorter periods, it must be concluded that the second option (the level of compensation not being effectively discouraging) is more likely.

As such, this analysis will not focus on the reduction of repair time objectives as such, without prejudice to the possibility of imposing a Premium level, to be analysed in section **2.4**

Degree of availability

- (e) Restricting once more the analysis to “Wide Line Network” contracts, it is possible to observe a very low number of failures to comply with the degree of availability when compared to fault repair times, however there are some situations of non compliance as far as submarine cable access lines are concerned (backhaul).

This leads to the conclusion that backhaul lines require a specific intervention, given their specificity.

Taking into account the above conclusions, each of the indicators of quality of service are analysed below in greater detail.

2.1.1. Supply time

As concluded earlier, generally there is room for reducing time limits as far as the supply of leased lines is concerned.

The objectives for leased line supply times currently defined in the LLRO are as follows:

Table 1. Performance objectives for setup times

	Objective	Occurrence
Leased lines (end-to-end and partial)		
64 kbps	33 days	95%
N x 64 kbps	37 days	95%
2 Mbps	37 days	95%
34 Mbps	62 days	95%
155 Mbps	59 days	95%
Traffic interconnection lines	37 days	95%
Traffic interconnection internal extensions		
OSP - Grupo PT	37 days	95%
OSP - OSP	22 days	95%
Submarine cable access lines		
2 Mbps	37 days	95%
34 Mbps	62 days	95%
45 Mbps	62 days	95%
155 Mbps	59 days	95%

In its last decision on these matters¹³, ICP - ANACOM had already referred that, in a context of a gradual evolution, it was deemed excessive to set, already at that stage, a supply time for network line setup according to the third lowest value, having opted to define such time limits based on maximum time limits for 95% of cases practised in average in the European Union (EU15), based on the last available data.

This gradual evolution meant naturally that, at a certain subsequent point, time limits would be shortened. That time has come, the question is now to which levels should such time-limits be set.

In a field in which there are no up-to-date data on leased line supply times at European Union level, Commission Recommendation of 21.01.2005¹⁴ is no longer a relevant reference.

On the other hand, certain public tenders, such as in the scope of the “Public Purchasing Framework Agreement” for the provision of fixed data communication services, in spite of being technologically neutral and able to cover also Ethernet or VPN-based lines¹⁵, are a

¹³ Vide determination of 26.05.2006, at <http://www.anacom.pt/render.jsp?contentId=369386>.

¹⁴ Vide Recommendation 2005/57/EC, available at <http://www.anacom.pt/render.jsp?contentId=984790>.

¹⁵ Vide http://www.ancp.gov.pt/PT/ComprasPublicas/AcordosQuadro/Pages/Concursos_concluidos.aspx. In that framework agreement, the provision of data services (Internet access and connectivity) is defined as the capacity to establish lines

relevant reference. Attention should be drawn to the fact that PT Prime was one of the chosen service providers.

In the context of that contract, the deadline for supplying all contracted data services, when the client does not define an objective date, is 21 calendar days. PT Prime thus undertook to provide by that deadline - a time-limit lower than any other in the scope of LLRO, as summarized in Table 1 - a service which is generally more complex (or at least has more components) than the wholesale leased line service. Failing to do so, the company incurs in penalties for non-compliance, up to 7% of the amount invoiced (for a supply over 36 days). Given that PT Prime seeks PTC for the provision of leased lines or for the setup of the network over which lines are based, that quality is also guaranteed at upstream level (that is, at wholesale level) by the Grupo PT.

It is thus considered that PTC must ensure to OSP, at the least, a quality that is compatible with that PT Prime is provided with, which guarantees to the latter compliance with a 21-calendar-day deadline (and in case of non-compliance, the payment of compensation). In fact, it had already been stated in the “market analysis” that it was fundamental that time limits for the wholesale supply of leased lines should not prevent competing operators from providing their customers with supply times and fault repair times similar to those practised by the Grupo PT.

As such, it is deemed that more demanding deadlines must be applied (for 95% of cases) for the supply of leased lines.

In addition to arguments presented earlier, it should be stressed that some 155 Mbps lines were supplied, notwithstanding the 59 calendar day objective, within very short periods (1 calendar day, in the case of a company of the Grupo PT; 3 calendar days, in the case of one OSP), as regards cases, at first sight, of an increase of capacity in a pre-existing link/line, thus it is appropriate to distinguish situations where an appropriate infrastructure has already been implemented on the ground (and even with operating services) from situations where this is not the case and which require the development of the infrastructure. On the other hand, these are one-off situations, so it is not reasonable to admit a supply time reduction taking into account these extreme examples.

In the first case, which concerns requests for increase of capacity - which may involve, in practise, a mere change of network parameter setting at central level - or even new lines for links already served by PTC’s line network, namely the fibre-optic network, ICP - ANACOM considers that deadlines should be more demanding, having been defined a 20-calendar-day deadline for the supply, for 95% of cases, of any type of leased lines in areas/routes where this provision is already possible for PTC. In the absence of better information, and as in a perspective of transparency locations to which this deadline applies must be clearly defined beforehand, the division established by PTC for RELLO is adopted, namely the division of

between specific and different locations, whether they are dedicated or implemented to constitute a virtual private network (VPN). In both cases, the offer is independent of the support technology used by providing bodies to provide their services.

local exchanges into A and B exchanges, the referred 20-calendar-day deadline applying to the supply, for 95% of cases, of lines that involve only exchanges of Type A.

Where at least one of the leased line segments to be supplied is not located in areas/routes already covered by PTC's network infrastructure, ICP - ANACOM acknowledges that, as that infrastructure requires development, supply times should not be as demanding as in the case above. Nevertheless, as referred earlier, there is room for a reduction as regards current deadlines. As such, in these conditions, a 40-calendar-day deadline of is hereby defined, for the supply, for 95% of cases, of any type of leased line in areas/routes involving exchanges of Type B.

Given the current situations, this decision, in the case of more complex supplies (involving exchanges of Type B) results in the increase of the deadline for 95% of cases for the supply of 64 Kbps lines from 33 to 40 calendar days, and in the reduction of the deadline for the supply of 34 Mbps lines from 62 to 40 calendar days. Taking into account PTC data for the 1st quarter of 2010 - as referred earlier, PTC's performance as regards the line supply time within the scope of LLRO has deteriorated over time, without a significant increase of demand to justify such deterioration - this 40-consecutive-day deadline for 95% of cases would have been met in all months and for all lines and operators, so it is deemed not to be disproportional.

In the light of time-limits currently in force, it would be excessive to set a 21-calendar-day deadline for any type of supply, regardless of whether an appropriate infrastructure has been implemented on the ground, given that, taking into account times achieved by PTC in 2010 and in the first half of 2011 (broken down by line), it can be verified that 72% of cases were supplied in more than 21 calendar days (the analysis was made as if the 21 days applied per type of line identified in Table 1) - vide **Appendix 2**. However, lines supplied or to be supplied in the scope of the "Public Purchasing Framework Agreement" for the provision of fixed data communication services are only part of lines supplied by PTC, and in case of non-compliance, there can be room for compensation. As such, such lines may not be the sole reference for the setting of prices of each and every type of line.

On the other hand, it is important to define a deadline for the supply of any line, which may not exceed double the time-limits established for 95% of cases, so as to limit cases that may be protracted.

- D 1.** The deadline for supply of leased lines defined in the LLRO, for 95% of cases, and regardless of the type concerned, shall be:
- 20 calendar days, for lines involving only exchanges of Type A, defined as such in RELLO;
 - 40 calendar days, in all other cases,
- being assessed on a monthly basis for the set of lines supplied to a specific OSP.

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- D 2.** The deadline for supply of leased lines defined in the LLRO, for 100% of cases, and regardless of the type concerned, shall be:
- 40 calendar days, for lines involving only exchanges of Type A, defined as such in RELLO;
 - 80 calendar days, in all other cases,
- being assessed on a monthly basis for the set of lines supplied to a specific OSP.
- D 3.** Compensation currently defined in LLRO for failures to comply with supply times for 95% of cases also apply to failures to comply for 100% of cases.
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Decisions above mean that objectives are now assessed taking into account the set of lines supplied to a given operator, and no longer by line capacity (e.g., 64 kbps, N×64 Kbps, 2 Mbps, 34 Mbps and 155 Mbps).

In the scope of the referred “Framework Agreement” it is not absolutely clear if the invoice amount, to which the penalty for non-compliance with supply times applies, refers to the invoicing of all services or only to the service in which the non-compliance occurred. Anyway, taking into account the amendments now imposed at the level of deadlines, the compensation method provided for in the LLRO for situations of non-compliance will remain unchanged for now, as so far it has discouraged relevant failures to comply. In case situations of systematic non-compliance occur, the value of such compensation shall be increased.

2.1.2. Repair time

As referred earlier as far as fault repair times are concerned, the main concerns here lies with the high level of situations of non-compliance, thus ICP - ANACOM’s priority in this decision is to establish measures that encourage PTC to meet objectives defined and possibly to define Premium levels.

Specifically as regards compensation for non-compliance, ERG supports that a requirement to pay appropriate compensation for service below the level agreed should be imposed, which should be of a sufficient level to create an incentive for the operator with SMP to comply with the service level agreed. According to ERG, a National Regulatory Authority (NRA) can for instance consider compensation which properly reflects the loss borne by the OSP in the downstream market.

In ICP - ANACOM’s determination of 26.05.2006 on amendments to LLRO, it was referred that *“relatively to compensation for non-compliance with fault repair times and degree of availability, ICP - ANACOM, in the light of available information, namely absence of specific claims against systemic non-compliance by PTC in this matter, deems there are no reasons to alter compensation proposed by PTC for non-compliance with these targets”* and that *“ICP - ANACOM will monitor market evolution and, if it finds that this compensation is not appropriate in the light of any damage caused and cannot ensure deterrence, this Authority*

shall take action in order to ensure the implementation of competitive conditions and to promote the protection of users¹⁶.

In fact, taking into account the fault repair levels of service achieved by PTC for 2010 and 1st half of 2011 (*vide* Appendix 1), it was deemed above that the current incentive for PTC to fully comply with quality of service objectives is insufficient as far as fault repair is concerned. It is thus necessary to increase the value of compensation for non-compliance with established objectives.

The compensation currently defined in LLRO for non-compliance with fault repair times is equivalent to 3% of the monthly fee for the leased line concerned, being independent of the seriousness of the failure to comply¹⁷. That is, the compensation amount is the same whether the delay relatively to the objective is of 1 hour or of 100 hours and corresponds, in practise, to less than 1 day of monthly fee - that is, if a given line remains out of order for a month, the OSP will only be compensated by PTC for less than 1 day (3% of the monthly charge), which clearly does not seem to be adequate and proportional, taking into account potential injury for clients of OSP.

The most appropriate rule would be to adjust in an adequate and proportional way the amount of the compensation to the seriousness of the fault, as in fact has already been provided for in the case of compensation for non-compliance with leased lines supply times. Following a similar approach to that adopted for that type of compensation and bearing in mind:

- (a) The value of the objective for leased lines supply times and respective compensation;
- (b) That fault repair times vary between 4 hours and 24 hours and for differing numbers of occurrences (80% and 98%), thus it is not appropriate nor proportional to define steps according to absolute values of hours of non-compliance,

the following rule is hereby defined for compensation for non-compliance with levels of service associated to leased lines fault repair times:

Table 2. Compensation for non-compliance with leased lines fault repair deadlines

Delay in relation to the repair deadline (% of the objective)	Compensation
$\leq 25\%$	$25\% \times \text{LMF}$
$> 25\% ; \leq 50\%$	$50\% \times \text{LMF}$
$> 50\% ; \leq 75\%$	$75\% \times \text{LMF}$
$> 75\%$	$[100\% + 2 \times (D - 75\%)] \times \text{LMF}$

¹⁶ Vide <http://www.anacom.pt/render.jsp?contentId=369386>.

¹⁷ That is, of the leased line that failed to be repaired by the deadline provided for in Table 2.2 of Annex 4 of LLRO - Vide section 3: "PQS2 - FAULT REPAIR TIME": compensation of $3\% \times \text{LMF}$, where LMF = Line Monthly Fee.

where LMF corresponds to the line monthly fee and D corresponds to the delay in relation to the repair time (% of the objective).

In other words, compensation under consideration is applied per each line to be repaired that exceeds the objective defined. For example, for an objective of 4 hours for 80% of cases, if 4 hours for 50% of cases has been achieved, compensation shall be due for lines covered by the 30% of cases of non-compliance (80% - 50%), the respective compensation being calculated on a line-by-line basis.

Therefore:

D 4. Compensation for non-compliance with fault repair deadlines defined in LLRO is as follows:

- $25\% \times \text{LMF}$, for a delay equal to or lower than 25% of the deadline objective;
- $50\% \times \text{LMF}$, for a delay exceeding 25% and equal to or lower than 50%;
- $75\% \times \text{LMF}$, for a delay exceeding 50% and equal to or lower than 75%;
- $[100\% + 2 \times (D - 75\%)] \times \text{LMF}$, for a delay exceeding 75%;

where LMF corresponds to the monthly fee of the non-compliant line and D corresponds to the delay in relation to the repair time (% of the objective).

In addition to the amendment of compensation, it is deemed that, in line with the decision laid down herein for supply times, PTC must include in the LLRO fault repair deadlines for 100% of cases, submitting the respective grounds to ICP - ANACOM, compensation for non-compliance defined in D 4. being applied.

D 5. PTC must include in LLRO fault repair deadlines for 100% of cases, submitting at the same time the respective grounds to ICP - ANACOM, compensation for non-compliance defined in **D 4** being applied.

2.1.3. Degree of availability

The analysis of Appendix 1 shows that the degree of availability objective has been generally met. However, backhaul lines, even when fault repair times have been complied with, fail to comply with the degree of availability objective and thus require a specific intervention.

This intervention will not take place directly at the level of quality of service, but through the analysis of the possibility of imposing access (collocation) to submarine cable stations (SCS), so as to give OSP the possibility of setting up themselves backhaul lines between landing points and their installations and even of providing wholesale backhaul offers, without being dependant on PTC's network (except for space in CSC and services associated to collocation).

Anyway, the possibility of imposing collocation in SCS must be weighted regardless of the issue of the backhaul quality of service, given that it is a measure that promotes the reduction

of costs with third parties incurred by the OSP and, at the same time, promotes competition in this specific segment.

This possibility is analysed in section 2.5

Nonetheless, ICP - ANACOM will maintain an analysis of the compliance with the degree of availability objective, and may significantly increase the amount of compensation in case it finds that this indicator fails to show a positive evolution.

2.2. Method of payment of compensation

According to LLRO, *“PTC must settle payments related to compensation for non-compliance with time-limits no later than one month after reception of a valid notification submitted by the OSP. This notification must be presented within at the most three months from occurrences concerned”*.

This situation requires the OSP to take the initiative to request compensation.

This matter has already been dealt with in the scope of RUO and RCAO, having ICP - ANACOM considered that the pro-active payment of compensation by PTC, without there being a need for OSP to claim for compensation and to prove its right to it, would contribute to improve the compensation payment process, and encourage compliance with objectives laid down.

A measure of this type can reinforce incentives on the part of PTC for compliance with quality of service objectives that have been established and for paying to OSP, rapidly and without administrative or procedural difficulties, the compensation to which they are entitled in case of non-compliance, and as such it should be extended to LLRO.

ICP - ANACOM takes the view that a mechanism should also be implemented, associated to this measure, that allows the reconciliation of values and data on compensation to be paid, which already exists in other wholesale offers as well as in invoicing procedures. In the scope of this mechanism, and in line with the decision on procedures to be complied with for assessing the quality of service of regulated wholesale offers, it is deemed that PTC must submit to beneficiaries the range of situations taken into account in the analyses of indicators for calculating compensation.

D 6. PTC must introduce in LLRO the obligation to pay, on its own initiative, any compensation for failure to comply with established quality of service objectives, by the end of the second month following the end of the half-year period concerned, without prejudice to a subsequent reassessment and adjustment in case different amounts have been established by the OSP. The LLRO shall also include a mechanism for the reconciliation of OSP data and PTC data. Moreover, PTC must submit to beneficiaries the range of situations taken into account in the analyses of indicators for calculating compensation.

2.3. Dependency between the payment of compensation and the sending of demand forecasts

Annex 6 of RCAO provides as follows:

“In order to ensure a correct planning and an optimization of PTC’ resources required for the evolution of RCAO, the OSP must provide PTC, by 30 June every year, with a forecast plan of line needs for the subsequent year.

This means that by 30 June of year N, the OSP must make available the plan for year N + 1, indicating the following information, per quarter:

- a) Forecast of the number, type, speed and termination points of leased lines (end-to-end and partial lines);*
- b) Forecast of the number of lines for traffic interconnection (interconnection lines and traffic interconnection internal extensions) broken down by pair of geographic points of interconnection (PTC/OSP);*
- c) Forecast of the number of SC per PTC exchange;*
- d) Forecast of the number of lines for access to submarine cables.*
- e) Forecast of the number of links between the OSP and another collocated OSP (internal extension OSP-OSP);*
- f) Forecast of the number of links between the OSP and a company of the Grupo PT (internal extension OSP- Grupo PT).*

The plan must be reviewed every three months in the course of year N+1, and shall be submitted to PTC in the last week of each quarter of year N+1”.

Annex 4 makes the payment of compensation dependant on the sending of forecasts, as follows:

“In case of non-compliance with defined performance objectives, PTC shall only deem to be bound to pay compensation insofar as [...] the OSP has supplied forecast plans of services to be contracted, in conformity with this Offer”.

This Authority acknowledges that the obligation on OSP to send the forecast plan beforehand, for the purpose of payment of compensation in the case of non-compliance with supply times, may have some explanation (however that obligation is not deemed to be justified in the case of fault repair and availability). In fact, and as referred in the “market analysis”, in many cases, such as the setup of CAM lines, of access to submarine cables and of lines in new areas or yet to be covered (namely by fibre optic), the timely presentation of forecast plans is important so that PTC can appropriately plan the evolution of its network infrastructure. On the other hand, it will not be as difficult for OSP, as for example with RUO, to define beforehand their needs at the level of the network and leased line basic infrastructure in the short and medium term.

In this context, the requirement to send forecast plans on the part of OSP, for the purpose of the payment of compensation for non-compliance with supply times, is hereby maintained.

However, it is deemed that the level of detail required for RCAO is disproportional, as this detail is not fundamental for a sound management of resources by PTC. Likewise, it is deemed that the fact that forecasts are made in the first half of the year, and concern the following year, is not compatible with the demand for this type of services, fundamentally commercial and frequently conducted by means of public tenders.

As such, the following level of detail is deemed to be sufficient:

- (a) Forecast of the number, type (analogue or digital), speed (equal to or lower than 2 Mbps or higher than 2 Mbps) and PTC network groups where termination points of leased lines are located (for end-to-end lines and partial lines, the breakdown between end-to-end lines or partial lines by operators not being required).

In the case of inter-island lines, islands where termination points of leased lines are located must be identified.

- (b) Forecast of the number of lines for traffic interconnection (interconnection lines and traffic interconnection internal extensions) broken down by pair of geographic points of interconnection (PTC/OSP).
- (c) Forecast of the number of support components (SC) per PTC exchange.
- (d) Forecast of the number of lines for access to submarine cables and of CAM lines.

It is deemed also that the plan must be prepared on a six-month basis and should not be presented so far in advance, that is, during the month of September of year N information should be submitted for year N + 1, with a six-month breakdown. Information for the second half of the year is provisional and may be reviewed up to March of year N + 1. If this review does not take place until March of year N + 1, information on forecasts submitted in September of year N for the second half of year N + 1 becomes final.

D 7. In the scope of the forecast plan of line needs defined in the LLRO, PTC may demand at the most the following information:

- Number, type (analogue or digital), speed (equal to or lower than 2 Mbps or higher than 2 Mbps) and PTC network groups where termination points of leased lines are located (for end-to-end lines and partial lines, the breakdown between end-to-end lines or partial lines by operators not being required).

In the case of inter-island lines, islands where termination points of leased lines are located must be identified.

- Number of lines for traffic interconnection (interconnection lines and traffic interconnection internal extensions) broken down by pair of geographic points of interconnection (PTC/OSP).
- Number of SC per PTC exchange.

- Number of lines for access to submarine cables and of CAM lines.

D 8. The forecast plan of line needs defined in LLRO shall be made available during the month of September of year N for year N + 1, with a six-month breakdown. Information for the second half of the year is provisional and may be reviewed up to March of year N + 1. If this review does not take place until March of year N + 1, the information on forecasts submitted in September of year N for the second half of year N + 1 becomes final.

Acknowledging that the demand for leased lines with impact that the level of line supply times by PTC may be somewhat inconsistent, this likely instability does not occur as regards repair and availability, which are more dependent on the total set of lines (i.e., a relatively stable percentage of the total number of lines being used). In fact, it is deemed that the LLRO is already relatively stabilized, both at the level of processes and of the total set of lines, PTC being provided with the necessary systems, structures and resources.

As such:

D 9. PTC shall remove any restrictions in the LLRO that make the payment of compensation for non-compliance with fault repair times and degree of availability dependant on the presentation of the forecast plan of line needs.

2.4. Premium service

As referred earlier and in the “market analysis”, it is fundamental to ensure that supply and fault repair times that apply to the wholesale supply of leased lines by PTC do not prevent competing operators from providing their customers with supply and fault repair times similar to those practised by the Grupo PT. In this context, it should be highlighted that one of the beneficiaries of LLRO informed ICP-ANACOM that it has unsuccessfully urged PTC to submit a proposal for more demanding levels of service than those defined in the LLRO¹⁸.

To analyse this issue it is relevant to take account of conditions, among others, provided by the Grupo PT, specifically by PTC to PT Prime, which enable the latter to provide data services at retail level, namely the service “Prime Link - Premium Class” which covers two types of solutions¹⁹:

¹⁸ PTC responded to this that:

- (a) submitting such a proposal would require a study estimated in more than 30 thousand Euro;
- (b) the deadline for submitting the proposal would be 30 working days from acceptance of the mentioned budget;
- (c) carrying out the study did not immediately guarantee the possibility of implementing a Premium SLA, along the lines requested.

¹⁹ Vide:

<http://62.48.147.70/PTPrime/Homepage/ProdutosServicos/DetalheProduto/?IdProd=43&Familia=Networking%20e%20IP&Classe=Prime%20Link&IdFamilia=2&IdClas=86>.

(a) Premium lines;

(b) Premium Plus lines.

Among the characteristics of this service, PT Prime identified “*requirements of quality of service above average standards established for common lines*”, guaranteeing a quality of service “*by means of a high and progressive compensation*” to the client.

Consideration should also be given to the fact that there are clients and services with different needs in terms of availability and service restore times, and on the less demanding should not be placed an unnecessary burden, thus the introduction of Premium services in wholesale services and, specifically in the LLRO, could be regarded as appropriate to meet the various market requirements.

It should also be stressed that, in the perspective of ERG, different levels of service should be available, to reflect differences in customer demand, and differences in charges for different levels of service should be objectively justifiable. ERG takes the view that, in justified cases, NRAs may also consider the imposition of a tighter form of non-discrimination obligation such as “equivalence of input” conditions to ensure that the conditions provided to OSP are as similar as possible to those faced by the SMP operator’s own downstream business.

Further to the information request sent to PTC and to the analysis of the respective response, it must be concluded that Premium conditions provided by (ex-)PT Prime at retail level, namely at the level of quality of service, may be technically replicated by OSP in the scope of the LLRO. However, the received information does not allow this matter to be examined exhaustively in terms of commercial conditions applicable to these Premium services, which will be carried out in separate.

Without prejudice to future evaluations, and where the possibility of economic replication is confirmed, it is deemed that the identification in the scope of LLRO of more demanding Premium service classes or levels of service than those established currently in the present document is not required.

2.5. Backhaul and access to submarine cable landing points

According to data on leased lines sent on a quarterly basis by PTC, there are two OSP that use PTC’s backhaul service for access to submarine cables supporting international lines.

One of the OSP, with around ten high capacity lines, was provided in 2010 with a degree of availability significantly lower than the objective, having the number of hours of non-availability of the set of backhaul lines for that operator exceeded 200 hours on a given month.

In fact, in their response to the DD on the “market analysis”, APRITEL and OniTelecom maintained that, as these lines are under an effective monopoly, it is fundamental that they are submitted to specific regulatory measures so as to overcome current limitations.

Optimus asserted, in the same scope, that it was necessary to impose an “*obligation to provide access to specific network resources, namely the inclusion of Submarine Cable Stations in the scope of the collocation service, with the necessary technological adjustments*”, to enable a direct access to submarine cables and an actual alternative to the backhaul service (under a “*monopoly situation*”), having reported several difficulties in the requests presented to PTC on this matter.

More recently, Optimus reiterated its request that ICP - ANACOM took action so as to ensure the provision to other operators of access to Submarine Cable Stations (SCE) of the Grupo PT, in order to allow OSP to use their own resources to offer alternative solutions to the International Access Component of the backhaul service provided by the Grupo PT. In this scope, Optimus believes that the possibility of OSP providing connections between SCE of the Grupo PT (Carcavelos and Sesimbra), through the collocation service, should be included, in order to ensure a “*level playing field in the market*”.

Optimus further claims that the lack of competition in the backhaul capacity market, stemming from an absence of alternatives to PTC’s offer, from excessive prices practised by PTC and from alleged discriminatory practices, is wasting Portugal’s geographic location - which makes it the ideal “gateway” in Europe for international connectivity (from the African, American and Asian continents). According to Optimus, operators holding rights on submarine cables with landing points in the Portuguese coast are using maritime routes in different cables connecting the Portuguese coast to the Spanish, French or English coast, to guarantee the delivery of their traffic. Optimus supports that situation leads, in practise, to a loss of wealth for Portugal and of the opportunity to develop national electronic communications networks, as natural links to other European networks.

In the prior hearing report in the DD concerning the “market analysis”, this Authority referred that as regarded the “*backhaul service (access to submarine cables that end in PTC’s termination stations) which remains subject to regulation, ICP - ANACOM acknowledges that there is room for the improvement of access conditions [...] and, inclusively, for the expansion of the collocation service for access to submarine cables at termination stations themselves, this obligation being dependant on a separate analysis. This matter was assessed in a previous market analysis, having been decided to impose access to these stations through the leased lines service. This Authority relied at the time on differences between these stations and a local exchange (with collocation in the scope of LLU, LLRO or RIO), as well as on the absence of effective extensive experience in the scope of collocation for these offers. Given the further experience gained with collocation in the scope of RUO, LLRO and RIO, and taking into account that access at the level of backhaul must be as broken down as possible so that operators do not pay for services they do not require, the suitability and proportionality of imposing collocation in SCE will be duly analysed*”.

In fact, the imposition of collocation in PTC’s exchanges is a measure that promotes the development of infrastructures by operators competing with the Grupo PT and thus, that most appropriately ensures conditions for the development of a sustained competition.

Collocation in PTC's exchanges is now a widely used and "mature" service, and there seem to be no apparent technical restrictions at first thought that prevent its provision in SCE for the purpose of access to submarine cables of other bodies, insofar as there are no legal impediments related to the ownership of SCE or with contracts concluded between consortium partners.

As such, PTC must provide collocation and associated services in SCE as currently determined for other exchanges of its network, namely in the scope of LLRO and RELLO, unless there is a technical constrain or otherwise, duly substantiated by PTC and accepted by this Authority, that prevents the provision in these terms of any of the services concerned in any of the SCE.

Moreover, OSP that use the collocation service and associated services in SCE have some room for installing the necessary optical interfaces for installing the capacity lines they require, provided that the technical and safety conditions are duly safeguarded. OSP may also resort to collocation in SCE for accessing CAM lines, and prices of CAM lines that may be accessed through collocation in SCE shall be reviewed so as to cleanse backhaul costs.

In the absence of these constrains, services associated to collocation must also be made available, such as transport of the signal and connection between OSP equipment in the collocation space and PTC and/or consortium's equipment, and the possibility of extending fibre-optic of OSP from the manhole to the collocation space shall also be provided for.

- D 10.** PTC must provide the collocation service and associated services in SCE as currently determined for other exchanges of its network, namely in the scope of LLRO and RELLO, unless there is a technical constrain or otherwise, duly substantiated by PTC and accepted by this Authority, that prevents the provision in these terms of any of the services concerned in any of the SCE. OSP that use the collocation service have access to submarine cables of any operator making landfall in SCE and have room for installing the necessary optical interfaces for installing the capacity lines they require, provided that the technical and safety conditions are duly safeguarded.
- D 11.** PTC must break down prices of the underwater and not underwater (backhaul) segments of CAM lines, and OSP may opt or not for using PTC's backhaul, for access to this type of lines.
- D 12.** In the absence of constrains referred in the preceding point, PTC shall make available services associated to collocation, such as transport of the signal and connection between OSP equipment in the collocation space and PTC and/or consortium's equipment, and the possibility of extending fibre-optic of OSP from the manhole to the collocation space shall also be provided for.

2.6. CAM lines

This section covers matters related to access to CAM lines and to certain indicators of quality of service in their provision. Specific issues related to prices of CAM lines are analysed in the following section.

As regards the quality of service associated to CAM lines, ICP - ANACOM supported in the “market analysis” that it was:

- (a) *“necessary to impose conditions which are more precise and appropriate, especially in terms of delivery times and quality of service in this specific segment, where competitive conditions are particularly restrictive”;*
- (b) *“reasonable to impose a change with respect to indicators of quality of service in the leased lines offer, in particular regarding the effective separation of the quality of service indicators for lines between the different types of services provided, the provision of terminating segments and trunk segments on “Routes NC” on the one hand, and on the other, CAM, which could include interisland communications in each Autonomous Region. This will be decided by separate determination.”*

Previously, several bodies and most OSP that responded to ICP - ANACOM’s public consultation on the regulatory approach to next generation access networks (NGA), concluded in 2009²⁰, considered that one of the main problems with the offer of electronic communications services and implementation of NGA in the Autonomous Regions of the Azores and Madeira is related to the connection to the Mainland and between these regions, namely the full control held by PTC and the restricted available capacity²¹.

ICP - ANACOM acknowledges the potential constrain in the offer of electronic communications services by OSP in the Azores and Madeira (and inter-islands communications), due to the absolute need to lease capacity in these routes to PTC, given that there is no alternative and to the fact that the setup of cables by OSP is not economically viable.

Consequently, the total absence of alternatives to CAM lines owned by PTC so that OSP are able to establish connections between their networks in the mainland and those in Azores and Madeira, and to provide their services in these regions, has had, and will have, a strong impact in their competitive capacity at the level of retail services in these (and between these) Autonomous Regions.

As these are very long distance connections, their cost for PTC and, obviously, the price charged to operators for the lease of CAM lines is high (higher), especially when compared

²⁰ Namely, the Regional Government of the Azores, FCCN, ZON, Optimus and Vodafone. *Vide* consultation report at http://www.anacom.pt/streaming/relatorio_NRA_final.pdf?contentId=850938&field=ATTACHED_FILE.

²¹ Apart from the price, which is discussed in the following section.

with costs and prices and leased lines, for example, in urban areas as Lisbon or Oporto, where connections are of a shorter distance. Moreover, this constrain may be considerably burdened in case there are under-capacity problems, affecting any requests for increase of capacity by OSP, which may be more critical in the context of NGA, due to greater bandwidth requirements.

In this scope, ERG considers that a wholesale access obligation could reduce or even eliminate barriers in the downstream retail market, in the case of control of infrastructure not easily duplicated, and that alternative operators should be able to access and use specific resources of the network owned by the dominant operator under reasonable and non-discriminatory conditions. More specifically, according to ERG, there should be reasonable certainty of ongoing supply of wholesale leased lines on reasonable terms in order to give OSP confidence to enter effectively in the market.

It is incumbent on ICP - ANACOM to ensure that conditions of the leased line offer throughout the national territory are open, transparent and non-discriminatory, and that they will remain for a reasonable period²², specifically in the scope of the LLRO.

Thus, where OSP have identified capacity needs for CAM lines, in their forecast plan of line needs submitted in the terms provided for in points D 7 and D 8 to PTC, the latter shall not reject any effective request for supply of CAM and inter-island lines²³. Operators may have to compensate PTC for costs incurred by this company further to forecasts that are not fully met later (in this situation, and before any investment is made, PTC must inform the operator of additional costs in question). Even if an OSP has not sent its forecast plan beforehand, PTC may only reject a supply request in case of an objective and justifiable absence of technical or economic conditions to fulfil it. In these situations, grounds for the rejection must be sent to the OSP and to ICP - ANACOM. In any case, in these circumstances, PTC shall undertake every effort to increase, as soon as technically and economically possible, the available capacity in CAM and inter-islands lines, to meet any pending request.

D 13. PTC shall not reject any effective request for supply of CAM lines, in the scope of LLRO and RELLO, where OSP have included lines for those connections, in their forecast plan of line needs submitted in the terms provided for in points D 7 and D 8. Operators may have to compensate PTC for costs incurred by this company further to forecasts that are not fully met later (in this situation, and before any investment is made, PTC must inform the operator of additional costs in question). If these lines have not been included in OSP forecast plan, PTC may only reject a supply request in case of an objective and justifiable absence of technical or economic conditions to fulfil it, in which case the situation must be immediately justified to ICP - ANACOM.

²² According to the “market analysis”, at least until a new analysis is carried out or markets undergo a substantial change.

²³ Reasonable request, that is reasonably in line with forecasts covered in the plan previously submitted by the operator.

In addition to the measure above, and as referred in the “market analysis”, it is necessary to lay down conditions that are more appropriate at the level of indicators of quality of service in this specific segment, where conditions of competition are particularly restrictive.

This Authority thus takes the view that supply times referred in D 1 and D 2 must be guaranteed for all CAM lines requested by each OSP, assuming a situation where an appropriate PTC infrastructure has been already implemented for all these connections.

D 14. The deadline for supply of CAM and inter-island lines, in the scope of LLRO and RELLO, is 20 calendar days for 95% of cases and 40 calendar days for 100% of cases, being assessed on a monthly basis per OSP.

Given the relevance of these lines, other indicators, such as fault repair times and degree of availability, must also be assessed on a broken down basis for CAM lines per each OSP, in the situations where PTC has secured links that allow, in borderline cases of long malfunctions, the shifting of traffic to alternative connections, provided that they have available capacity.

D 15. Fault repair times and degree of availability shall be assessed, in LLRO and RELLO, on a broken down basis for CAM lines per each OSP, provided that CAM lines have available capacity in secured rings.

For prevention purposes, and given some significant delays that occurred when the transmission capacity at the level of CAM lines was increased, due to the lack of capacity in those connections to fulfil requests made by several OSP, ICP - ANACOM considers that the capacity of CAM and inter-islands must continue to be monitored, and that PTC must inform ICP - ANACOM as soon as the percentage of occupation of installed capacity, per section, both of SDH structures and of DWDM structures, reaches 80%. This percentage is to be assessed through the following factors:

- (a) Rate of occupation of SDH systems: ratio between the number of occupied VC4 and the number of installed VC4;
- (b) Rate of occupation of DWDM systems: ratio between the number of occupied lambdas and the number of installed lambdas.

D 16. PTC must inform ICP - ANACOM as soon as the percentage of occupation of installed capacity, per section, both of SDH structures and of DWDM structures, in CAM and inter-island lines, reaches 80%. This percentage is to be assessed through the following factors:

- (a) Rate of occupation of SDH systems: ratio between the number of occupied VC4 and the number of installed VC4;
- (b) Rate of occupation of DWDM systems: ratio between the number of occupied lambdas and the number of installed lambdas.

2.7. Ethernet lines

Further to the publication of RELLO by PTC, on 6 December 2010, comments on that offer were received by OniTelecom, Optimus, Verizon and Vodafone. A joint position on RELLO taken by Colt, OniTelecom, Optimus and Verizon was also received on 24 October 2011.

Although OSP generally agreed with RELLO, some OSP considered that the offer is somewhat limited and fails to fully meet ICP - ANACOM's determinations, thus requesting its review as far as some specific points were concerned.

The following comments must be stressed from those received on the issue:

(a) Levels of service and compensation for non-compliance

Indicators of levels of service defined in RELLO - namely, setup times, times to restore service and availability - are deemed to be unadjusted to the reality of the sector, this being the aspect which, for example, in Optimus' view is the most serious shortcoming of the offer.

Optimus suggests as follows:

- To establish a setup deadline of 50 days for 95% of cases and of 100 days for 100% of cases, and to define more demanding compensation amounts, with a deterrent effect on failures to comply, for the set of 95% (which shall not be lower than 50% the monthly fee per day of delay).
- To establish a service restore deadline of 4 consecutive hours for 95% of cases and of 12 consecutive hours for 100% of cases, and to define variable compensation amounts according to the extent of the delay, which shall not be lower than 12.5% of the line monthly fee per each hour of delay in the repair of the fault.

These proposals correspond to those included in the joint position taken on RELLO by Colt, OniTelecom, Optimus and Verizon.

As regards the degree of availability, Optimus, based on public tender data on RELLO and other European reference offers, supports that the service availability should be of at least 99.5%. The joint position taken on RELLO by Colt, OniTelecom, Optimus and Verizon proposes a level of at least 99.79%, with compensation amounts depending on the value of the deviation from the objective, and not lower than 0.5% of the total of monthly instalments per each one hundredth below the value defined.

Vodafone focuses more on fault repair times and availability than on supply times. According to this operator, as Ethernet lines tend to be used in high-speed connections, there is a greater need for ensuring more demanding parameters of

quality of service, bearing in mind the risk of loss of greater volumes of traffic. As such, Vodafone suggests fault repair times that vary between 4 hours, for 90% of situations, and 24 hours, for 100% of situations. The definition of a repair deadline for 100% of faults is in fact a critical point, in the view of Vodafone, because, otherwise, a selective performance by PTC is allowed, for fault repairs and other problems of service, and makes room for an absence of objective for some situations. As regards the degree of availability, Vodafone proposes values between 99.95% for 10M and 99.99% for 1G.

OniTelecom refers that setup deadlines are higher than those defined for LLRO and for the “PT Ethernet Network” commercial offer (the latter establishes in average 15 working days for budget and 30 working days for setup), and the same occurs as regards restore times, that exceed those laid down in LLRO.

OniTelecom highlights, as well as Optimus, that deadlines for 100% have not been defined, both for setup and service restore.

According to OniTelecom, the availability level (98%) is low - when compared, for example, with levels established in LLRO - and is calculated per set of lines, being insufficient for the business market standards. It seems also to OniTelecom that there is no technical reason for RELLO levels to be different from those in LLRO.

Lastly, OniTelecom supports the inclusion of a repetition limit for incidents of degradation of service, per line.

Both Optimus and OniTelecom showed comparisons with Ethernet offers provided by other European operators.

Verizon also focused on deadlines for setup, repair and service availability, establishing a comparison with times defined in Spain (for example, in Spain the setup deadline is 60 days for all cases, whereas in Portugal it is 60 or 120 days for 90% of cases; the repair deadline is 6 hours, whereas in Portugal it is 12 hours for 80% of cases; and the level of availability is 99.93%, whereas in Portugal it is 98%). According to Verizon, not only times are excessive, but it is problematic that they apply to a limited set (that is, to a percentage of situations).

(b) Compensation for non-compliance with levels defined and forecast plan

Optimus, OniTelecom and Vodafone, as well as remaining operators that subscribed the joint position on RELLO, advocate that payment of compensation in the scope of RELLO should no longer be dependent on the sending of forecast plans (e.g. LLRO and RUO) and that such compensation should be paid proactively by PTC.

Vodafone refers specifically to the absence of a relation between the supply of a forecast plan for engaging new services and PTC's performance in repairing faults of services already engaged and delivered and in complying with their degree of availability.

Vodafone refers further that, given the dynamics of a telecommunications network, it is hardly able to predict requirements for new services one year ahead, with details at the level of type, speed and termination points of each line, as specified in RELLO.

Vodafone thus believes that the forecast plan should cease being indexed to compensation for non-compliance with objectives defined, and deems it unacceptable for PTC to demand compensation for any costs incurred due to the lack of inaccuracy of the beneficiary.

As regards the amount of compensation, according to Vodafone, compensation for non-compliance with objectives related to fault repair times and degree of availability is clearly insufficient and inappropriate given the impact of damage arising for beneficiaries of RELLO from non-compliance with the referred parameters, which, as such, do not encourage compliance with levels of quality by PTC.

Vodafone deems it fundamental that a scheme of steps is established where the amount of compensation is proportional to the level of non-compliance, that is, the greater the failure to comply, the greater should be the compensation.

(c) OSI layer 2 services and technical characteristics

Optimus stresses that the RELLO is typically a layer 1 offer (of the OSI model), and does not include a set of relevant information associated to the service performance, namely latency, packet loss and jitter, which implies additional and significant costs of the interface with PTC and of equipment at the client. In this case, Optimus proposes that, like offers provided in other countries of the European Union, OSI layer 2 services are supplied, including the associated and above-mentioned relevant information (Optimus believes that the information on latency should be supplied regardless of the nature of the service to be provided and additionally, it should be lower than 1.5 ms, in order to meet the market's most common requirements; furthermore, the online provision of the quality of service monitoring should be guaranteed).

On the other hand, maximum MTU (Maximum Transmission Unit) values are, according to Optimus, below the requirements of specific markets, namely as regards requirements associated to Data Centers, so Optimus proposes that maximum MTU values of 1916 bytes or higher are introduced, where PTC makes them available in the scope of its retail offers.

OniTelecom also mentions that RELLO does not present a distinction according to classes of service, which would not be a problem in case available lines via RELLO guaranteed an appropriate quality of service to support the class of service with the desired best quality (which is the approach followed in Spain). According to OniTelecom, RELLO fails to present a comprehensive technical line specification, namely at the level of transmission parameters, thus it is not clear what their level of quality is. As such, the company suggests the introduction of the same parameters suggested by Optimus (that is, latency, jitter and packet loss).

The absence of references to higher level parameters (that is, latency, jitter and packet loss) was also highlighted by Verizon.

OniTelecom further comments the absence of sub-speeds (that exist only for CAM and inter-island lines - 1 Gbps sub-speeds - due to limitations of the available capacity in those routes, not at the option of the beneficiary operator).

Lastly, OniTelecom supports the inclusion of line testing mechanisms before lines are placed into service (acceptance testing).

The proposals above were also included in the joint position taken on RELLO by Colt, OniTelecom, Optimus and Verizon, having also been proposed the “guarantee of transparency of the PT Ethernet network to IP precedence information (IP PREC)”. This joint position further suggests that ICP - ANACOM launches an analysis of the introduction of a modality of access to RELLO based on a layer 2 model.

OniTelecom identifies a set of specific technical issues, which must be clarified at technical level between the two companies.

(d) Support infrastructure

Optimus, as well as other operators that subscribed a joint position on RELLO, refer that PTC does not guarantee the provision of lines in specific technologies (e.g. fibre optic), however some public tenders make specific demands on the infrastructure to be set up. For this reason, Optimus suggests that the introduction in RELLO of a service that identifies the infrastructure (i.e. fibre, copper...) underlying a given line, including the definition of response times and respective compensation to information requests made by OSP.

OniTelecom makes a similar claim, stating that in other countries this distinction is used, where appropriate, to differentiate prices and levels of service, which is more objective and transparent.

(e) Loyalty periods on account of upgrades or changes of network termination points (NTP)

Optimus takes the view that the introduction of loyalty periods of 12 months for any change of NTP or for service upgrades is abusive and disproportional, thus it proposes the removal of the 12-month loyalty obligation, in case NTP changes or upgrades are required.

Vodafone goes further than this, disagreeing with the loyalty period obligation as the tariff already includes service setup fees (and network dynamics are not consistent with such loyalty periods). Vodafone refers that the situation is even more serious given that RELLO provides that the change of any NTP or speed (even for upgrade purposes) implies a new minimum loyalty period.

Vodafone thus supports that all obligations in the offer concerning loyalty periods should be removed.

(f) Charging for cancelled lines

Optimus refers that there is no transparency as regards the charging of costs associated to cancelled lines (in particular, the absence of limits associated to such costs and the fact that cost elements incurred by the provider prior to and during the cancellation process fail to be identified).

Vodafone commented also this aspect of RELLO, referring that the amount charged for the cancellation of requests, even if PTC has not yet started the line setup, is completely inadequate.

(g) Advance notice on the dismantling of a line

Vodafone declares not to understand the reasons for the requirement to inform 30 days ahead of the dismantling of a line. According to Vodafone, in all leased transmission services, the cancellation of a line is only requested when it is no longer being used (to avoid any type of interruption and service failure). Provisions in the offer require beneficiaries, according to Vodafone, to bear another service monthly fee even when the line is not used.

As such, Vodafone is of the opinion that the period for communicating the dismantling of a line should be shortened and, at the same time, the obligation to pay the last monthly fee should be removed.

(h) Deadlines for claiming against invoices and compensation

According to Vodafone, there is a disparity between rights and obligations of PTC and those of RELLO beneficiaries, as regards deadlines for claiming against invoices and compensation for non-compliance.

Vodafone declares that the beneficiary has 90 days to present to PTC a claim against amounts invoiced or compensation and, on its turn, PTC is entitled to charge values due for set up and line monthly fees in the invoice of the month concerned or in the following months, without any type of limits to a possible retroactivity.

Vodafone deems it fundamental that differences at the level of deadlines binding each of the parties are corrected in the offer, so that the contractual relation is endowed with a healthy balance that is appropriate to its proper implementation.

(i) Securing lines

Vodafone refers that RELLO only includes unsecured lines, and given the absence of guarantee of quality of service and lack of redundancy, the confidence in the solution and its reliability is removed, making it impossible to use such lines in transport solutions for more sophisticated clients or in the network of operators themselves.

According to Vodafone, if the offer of secured solutions is possible (currently subject to specific viability and budgeting analysis), its exclusion from the offer gives PTC room to technically prevent the solution or to define such a high commercial price that it becomes devoid of interest for the beneficiary (forcing it to opt for another type of solution, less flexible and economically less interesting and competitive).

(j) Reasonable requests for access

Optimus stresses the need for intervention as regards the total absence of information in RELLO as regards the meaning of “reasonable requests for access, under transparent, fair and non-discriminatory conditions”²⁴, specifically concerning criteria for characterizing “reasonable requests for access”, as well as the description of conditions associated to the determination of costs of “unreasonable” requests.

Optimus states that this situation has taken an increasing relevance given that PTC is allegedly already using this regime of exception in the scope of requests submitted by Optimus, presenting values which are clearly excessive and without any detailed justification for costs incurred.

Each of the referred aspects is addressed below.

²⁴ Page 4 of RELLO (body of the document) states that “This Offer covers the entire national territory, excluding Ethernet lines with trunk segments in the so-called Competitive Routes, hereinafter Routes C. In the scope of this Offer, PTC shall meet all reasonable requests for access, under transparent, fair and non-discriminatory conditions.”

(a) Levels of service and compensation for non-compliance

– Setup time

Although PTC makes a distinction as far as the setup time is concerned according to the location of local exchanges serving the NTP and to the line capacity, there seems to be no reason for such extensive time limits, when compared to traditional leased line deadlines (LLRO). As Ethernet lines are typically supported on fibre optic, it is justified to define a longer period of time for areas where this infrastructure has not been yet implemented, when compared to setup times for traditional lines not exceeding 2 Mbps, typically supported in copper pairs and which practically have universal coverage.

The definition of a 60-day deadline for any type of Ethernet lines would be close to the setup deadline for 155 Mbps lines provided for in LLRO, which was lowered under point D 1 to 20 or to 40 calendar days, for 95% of cases, respectively for lines involving only Type A exchanges, defined as such in RELLO, and for the remaining cases, and under point D 2 to 40 or to 80 calendar days for 100% of cases, respectively for the referred connections.

Table 3. Levels of service: RELLO vs. LLRO setup times

	Deadline	Universe
LLRO	33 days to 59 days	95%
RELLO	120 days (60 days for Type 1 < 1GB)	90%

Time-limits of 60 days (that is, two months), for the setup of 10M or 100M lines between PTC's main network exchanges (in which optic infrastructure already has been implemented for the most part) or 120 days (that is, four months), in other cases, are clearly excessive and must be lowered, and there are no reasons why they should not be in line with deadlines defined for LLRO.

Note that the fact that the SLA covers only 95% of the set of lines, thus leaving out the most problematic cases.

On the other hand, RELLO provides that the order request may “require a technical feasibility analysis”, and time limits for PTC responses have failed to be indicated. This situation is not reasonable, so deadlines for the technical feasibility analysis must be included in supply times.

As such:

D 17. The deadline for supply of leased lines in the scope of RELLO, regardless of the type concerned, shall be:

- 20 calendar days, for 95% of cases, and 40 calendar days, for 100% cases, for lines involving only exchanges of Type A, defined as such in RELLO;

- 40 calendar days, for 95% of cases, and 80 calendar days, for 100% cases, in remaining cases,

being assessed on a monthly basis for the set of lines supplied to a specific OSP, and including in that time-limit any periods related to a technical feasibility analysis.

In line with provision in D 3 as far as LLRO is concerned, it is considered also in the scope of RELLO that compensation currently defined for failures to comply with supply times for 95% of cases should also apply to failures to comply for 100% of cases.

D 18. PTC shall apply in the scope of RELLO determination **D 3** hereof.

– **Fault repair time and availability**

Given that the set of Ethernet lines is smaller than the traditional set of lines, there may be grounds, in certain situations, for a greater precaution in the definition of the degree of availability.

This is not clear as regards fault repair times, and it is not understandable why the fault repair time is in the scope of RELLO twice as high as that established for LLRO (or three times higher, in the case of 155 Mbps lines), which is aggravated by the fact that the set of covered situations is in RELLO lower than in LLRO where the term of comparison is 155 Mbps lines.

Table 4. Levels of service: RELLO vs. LLRO fault repair times

	Deadline	Universe
LLRO	6 hours (4 hours for 155 Mbps)	80% (90% for 155 Mbps)
RELLO	12 hours	80%

In this case, and compared to the “line network contract” (that is, operators with a set of more than 10 lines and less than 50 lines), the fault repair time-limit in RELLO should be at least equivalent to 155 Mbps end-to-end lines, which is 4 hours for 90% of cases.

However, and, as an indication, the specifications of the bid limited by pre-qualification for the conclusion of a framework agreement for the provision of voice and data communication services at a fixed location, for which PTC applied, provides for the restore of data services maximum values between 2 consecutive hours (for over 100 Mbps) and 4 consecutive hours (for 10 Mbps), even if on average and annual terms.

D 19. The deadline for leased line fault repair in the scope of RELLO shall be 4 consecutive hours for 90% of cases.

Also as regards compensation for non-compliance with repair times, there is no reason why different approaches should be adopted, according to whether repairs concern LLRO or RELLO. In fact, PTC's approach for RELLO was to adopt rules for compensation allocation similar to those provided for in LLRO.

As such:

D 20. PTC shall apply in the scope of RELLO determination **D 4** hereof.

Also in the scope of RELLO, and in line with provisions made in D 5 for LLRO, objectives that cover all occurrences are required, thus PTC must include in RELLO fault repair deadlines for 100% of cases, submitting the respective grounds to ICP - ANACOM.

D 21. PTC shall apply in the scope of RELLO determination **D 5** hereof.

As regards availability, the level set by PTC is lower to any of the levels established in LLRO, even for the basic contract lines (which apply to operators with a set of less than 10 lines, with a guaranteed availability of 99%).

An availability degree of 98% means that, in a quarter, for a 10-line operator, it is guaranteed that the accumulated fault repair time for the set of lines does not exceed 432 hours. This means that, in a monthly average, a line could be out of order for more than 14 hours, that is, each line would have in average more than one fault per month, even considering the fault repair time defined by PTC (12 hours for 80% of cases).

This situation is not admissible, nor compatible with market needs. Again, as an indication, it should be referred that the above-mentioned specifications defined annual degrees of availability of 99.90% (for connections at 10 Mbps) and 99.99% (for connections exceeding 100 Mbps) for the data service.

The degree of availability of 99.99% ensured in LLRO for "Line Network Contracts" and for 155 Mbps end-to-end lines seems excessive given the reduced set of lines which are under consideration here. In the situation referred to earlier, this would mean that in a quarter, a 10-line operator would only have two hours of non-availability for the whole set of lines.

Table 5. Levels of service: RELLO vs. LLRO degree of availability

LLRO	99.00% to 99.99%
RELLO	98.00%

In this case, taking by reference contracts of the wide line network and of the line network for 155 lines, it is deemed that an objective of 99.95% for the degree of availability for 1 Gbps lines is an appropriate value. Following a similar logic, the degree of availability for 10 Mbps and 100 Mbps lines is defined at 99.50% - value provided for in LLRO for lines of a capacity lower than 15 Mbps in the line network contract, and value proposed by Optimus.

D 22. The degree of availability applicable in the scope of RELLO is 99.50% for 10 Mbps and 100 Mbps lines and 99.95% for 1 Gbps lines.

(b) Compensation for non-compliance with levels defined and forecast plans

In this regard, the reasons laid down earlier, relatively to the dependency between the payment of compensation and the sending of demand forecast plans, apply as well, thus the amendments determined for LLRO should also be adopted for RELLO. Note as regards information to be included in the forecast plan that RELLO provides for the inclusion of the forecast of the number, type (Ethernet type 1, Ethernet type 2), speed (10M, 100M and 1G) and characterization of termination points of Ethernet lines, which is deemed to be reasonable and proportional, and therefore not subject to alteration.

D 23. PTC shall apply in the scope of RELLO determinations **D 6, D 8 and D 9** hereof.

(c) OSI layer 2 services and technical characteristics

RELLO was imposed by ICP - ANACOM in the scope of the assessment of the leased line market.

In this scope it should be referred that an offer of OSI layer 1, such as RELLO, is more appropriate than an offer of layer 2, as the PT Ethernet Network offer was. This is an offer similar to the traditional leased lines offer, but supported on a different technology - Ethernet - and the parameters of higher level must, at the beginning, be guaranteed by beneficiaries of the offer, even if additional costs of interface with PTC and of equipment at the client arise.

Consequently, PTC is not required to provide Layer 2 services, without prejudice to the inclusion, in RELLO, of information on all relevant parameters associated to the quality of service of an offer of the OSI model layer 1.

D 24. PTC must include in RELLO information on all relevant parameters associated to the quality of service of an offer of the OSI model layer 1, and it is recommended that the company takes into account proposals already put forward or to be submitted by OSP.

As regards maximum MTU (Maximum Transmission Unit) values provided for in the offer, it is deemed that PTC should additionally guarantee an MTU value of 1916 bytes, where required by OSP, and assess on a case-by-case basis other requirements for higher MTU values.

D 25. PTC must guarantee in RELLO an MTU value of 1916 bytes, where required by OSP, and assess on a case-by-case basis other requirements for higher MTU values.

(d) Support infrastructure

According to PTC's letter giving reasons for RELLO prices, Ethernet lines are always supported on fibre optic, thus the issue of whether the line may be supported on other infrastructures (e.g. copper pairs) will not be raised.

(e) Loyalty periods on account of upgrades or NTP changes

According to PTC, given the technology and investments required for the supply of Ethernet lines, which are always fibre optic lines, and that these costs are not reflected in the setup price, but in monthly fees, Ethernet lines should be subject to a minimum loyalty period of 12 months.

Although in the case of additional investments not covered by the setup price, the requirement of a minimum loyalty period is understandable, so that investments already made may be recovered, this requirement is not admissible where there are no additional investments not covered by the setup price. As such, in the case of NTP changes, a new 12-month loyalty period may only be imposed in case there is a new external local extension to PTC's exchange. Otherwise, minimum loyalty periods shall not be applied. In the specific case of line speed upgrades, it is deemed that the minimum loyalty period should be shortened to 6 months, and if the upgrade is requested before one year has elapsed from the provision of the initial speed, PTC shall maintain the current practise, that is, the company must not invoice remaining monthly fees until 12 months from the initial connection have elapsed.

D 26. Minimum loyalty periods in the case of the change of location of an internal NTP to PTC's exchange shall be removed from RELLO. In the case of speed upgrades, the minimum loyalty period should be shortened to 6 months (if the upgrade is requested before one year has elapsed from the provision of the initial speed, PTC must not invoice remaining monthly fees until 12 months from the initial connection have elapsed).

(f) Charging for cancelled lines

This issue bears some resemblance to the previous one. For example, in case PTC begins to install optic fibre to meet a request for the setup of Ethernet lines and, later, the operator cancels the request, given that the setup price does not cover all investment costs, such costs should be passed on to the operator.

It is not possible, at the outset, to estimate limits associated to these costs (although they should not exceed 12 monthly fees, which correspond to the minimum loyalty period), as such costs depend on materials and labour used up to the cancellation. Without prejudice, PTC must inform the operator that the technical process for setting up the line has already begun and clearly identify to the beneficiary the elements of costs incurred and, in case ICP - ANACOM's action has been sought, this Authority shall be given justification on the basis of orders for materials or specific works developed to meet the specific request which in the mean time was cancelled.

Just as for LLRO, RELLO must also provide that in case the cancellation is due to a delay in the line setup attributable to PTC, exceeding 15 calendar days, the OSP shall not be liable to pay for any amounts.

D 27. PTC must inform the RELLO beneficiary that the technical process for setting up the line has already begun, so that the company may be compensated for costs incurred in case the setup is cancelled or changed, and clearly identify to the beneficiary the elements of costs incurred.

Where the cancellation is due to a delay in the line setup attributable to PTC, exceeding 15 calendar days, the OSP shall not be liable to pay for any amounts.

(g) Advance notice on the dismantling of a line

As regards VODAFONE's claim that the period for communicating the dismantling of a line should be shortened and, at the same time, that the obligation to pay the last monthly fee should be removed, ICP - ANACOM considers that there is no reason why time-limits defined in LLRO and RELLO should be any different, thus the 30-day deadline provided for in RELLO must be decreased to 15 days, as provided for in LLRO.

D 28. The time-limit for dismantling an Ethernet line shall not be less than 15 days, from the date of the request made by the OSP, except where PTC agrees otherwise.

(h) Deadlines for claiming against invoices and compensation

LLRO provides that *"The line monthly fee is invoiced in the civil month concerned. In the month the line is set up, the OSP must pay an amount that corresponds to the setup price plus 1/30 of the monthly fee, per day that elapses from the Starting Invoice Date until the end of that month. These amounts are invoiced after the date of conclusion of the setup and included in the invoice of the following civil month"*²⁵ (emphasis added).

RELLO, as referred by Vodafone, establishes no limit whatsoever as regards the moment on which the service is invoiced, stating that *"In the month the Ethernet line is set up, the OSP must pay an amount that corresponds to the setup price plus 1/30 of the monthly fee, per day that elapses from the Starting Invoice Date until the end of that month. These amounts are included in the invoice of the month concerned or in the following months"*²⁶ (emphasis added).

Although this issue is purely contractual, governed by private law which exceeds the competences of the Regulatory Authority as it does not concern the sector regulation scope, this Authority considers that it must recommend PTC to include in RELLO a provision on invoicing similar to the one in LLRO, that is:

ICP - ANACOM recommends that PTC includes the following provision in RELLO: The line monthly fee is invoiced in the civil month concerned. In the month the line is set up, the OSP must pay an amount that corresponds to the setup price plus 1/30 of the monthly fee, per day that elapses from the Starting Invoice Date until the end of that month. These amounts are

²⁵ Annex 7 of LLRO.

²⁶ Annex 7 of RELLO.

invoiced after the date of conclusion of the setup and included in the invoice of the following civil month.

(i) Securing lines

As in LLRO, RELLO does not give details of securitisation prices nor of the corresponding technical conditions. This is an already very specific solution which may be implemented in several ways, thus it is not deemed appropriate to define it completely in RELLO, technical and commercial conditions for securitisation been agreed on a case-by-case basis.

Without prejudice, there must be a minimum of predictability as far as this matter is concerned, so PTC must include in RELLO, as in LLRO, the general principles followed to define the technical and commercial conditions for securitisation, including main solutions and reference to the principle of non-discrimination.

D 29. PTC must include in RELLO the general principles followed in the definition of the technical and commercial conditions for securitisation, including main solutions and reference to the principle of non-discrimination.

(j) Reasonable requests for access

As regards the issue raised by Optimus on the need to include criteria for characterizing “reasonable requests for access”, ICP - ANACOM considers that it is relevant and should be duly clarified by PTC, as this could make the offer more transparent.

D 30. PTC must include in RELLO the characterisation of “reasonable requests for access”, specifically identifying what it means by “unreasonable requests”, including the description of conditions associated to the determination of costs of “unreasonable” requests.

2.8. Prices

ICP - ANACOM took the view, in the scope of the “market analysis”, that it was appropriate to maintain the principle of cost orientation of prices in the offer of traditional wholesale leased lines (that is, not including the “Ethernet line offer”), given that:

- (a) The majority of lines offered commercially in the market are made up of traditional lines and have been offered for various years, whereby their costs are relatively stable (as is the respective technology and entire set) and should be shown separately in PTC’s accounting system.
- (b) The prices of PTC’s (traditional) wholesale leased lines offer have been regulated so far according to the principle of cost orientation of prices. In applying this principle, ICP - ANACOM has based its cost estimates on PTC’s accounting system, audited annually, and also, additionally, by referring to current practices in the European

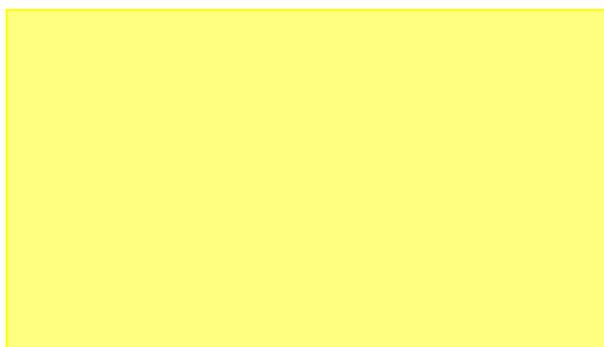
Union. In assessing the prices, criteria of economic efficiency are also taken into account.

- (c) The obligation of cost orientation of prices has objective justification, as it provides for the establishment of prices based on costs, preventing situations of excessive pricing and enabling the development of competition, while promoting, *ceteris paribus*, the application of reasonable prices in comparable competitive markets, thereby contributing to the protection of consumer interests.

According to the most recent data on costs of leased lines²⁷, there is room for the reduction of prices of traditional leased lines, for any capacity and for any distance (except for terminating segments of 64 and N×64 Kbps, where the margin is very slightly negative). Without prejudice, it is noted that the greater the capacity and the distance, the greater will the margin be in general.

Graphic 1. Margin of national digital leased lines

[Start confidential information]



[End confidential information]

In fact, as regards traditional digital lines, the total margin of the leased line service, including curtailment costs, is [Start confidential information] [End confidential information], which exists both for terminating segments and for trunk segments.

In this context, and bearing in mind the margin that this service allows, and notwithstanding the fact that reductions of time-limits adopted in this decision may have an impact, although a limited one, at the level of costs, there is room for the reduction of prices by PTC for each and every element of prices (including CAM lines) for 2 Mbps, 34 Mbps and 155 Mbps lines by at least 35%, 40% and 45%, respectively. With this reduction, everything else remaining

²⁷ PTC's cost accounting system, according to accounting values for 2010.

unchanged, the total margin of the leased line service would be [Start confidential information] [End confidential information].

Nevertheless, the adopted reduction does not correspond to a total suppression of the margin, as it is deemed to be prudent to leave room to accommodate any evolution that may have impact at the level of costs, as for example demand developments focused on more remote areas, where unit costs of line supply are higher and any impact arising from levels of service are more demanding.

<p>D 31. PTC must decrease in LLRO each and every element of prices (including CAM lines) for 2 Mbps, 34 Mbps and 155 Mbps lines by at least 35%, 40% and 45%, respectively.</p>

CAM lines

In the specific case of CAM lines, ICP - ANACOM referred in the “market analysis” and respective report, that it agreed with a significant price decrease, which would be analysed in greater detail in a separate determination.

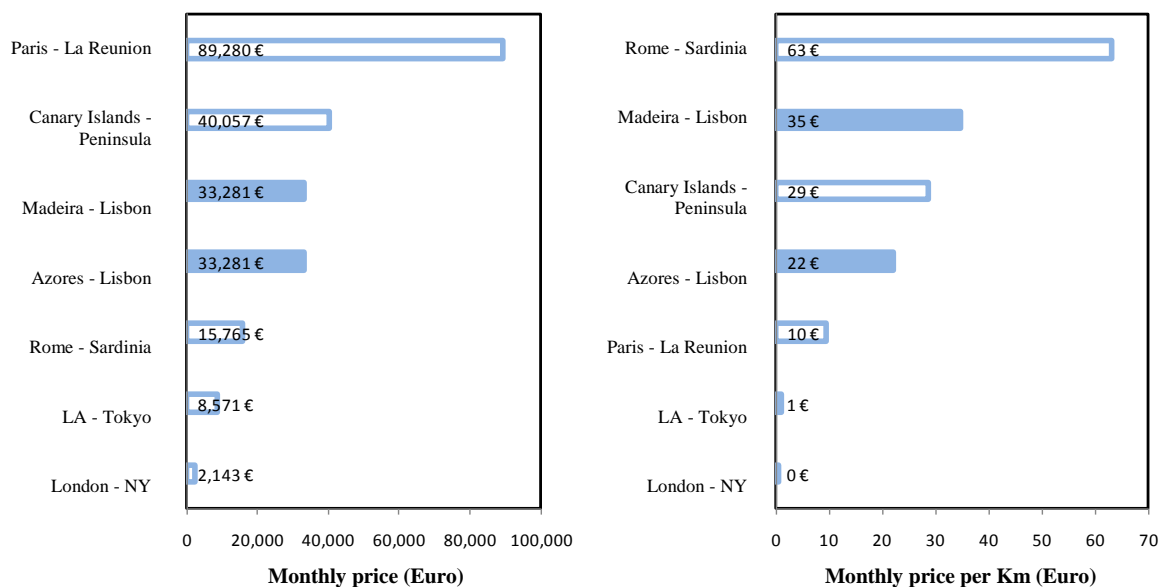
Although such significant decrease was possible for any capacity especially in the light of cost accounting data before 2009, according to data for 2010 this is not so clear, mainly due to the increase of costs of this service. According to PTC, this increase is mainly due to an increase in costs of submarine cables. Note that PTC increased, in 2008, the capacity of the CAM ring by around seven times.

On the other hand, available data suggest that the price of CAM connections in traditional lines is not out of line with the price of a line of the same capacity between the Spanish mainland and the Canary Islands, which is the closest situation for comparison purposes (taking into account the distances involved).

In fact, CMT included in a determination taken on 10.09.2008²⁸, a comparative analysis of prices of several connections in submarine cables for a speed of 155 Mbps. It may be concluded from this analysis, the results of which are shown in the graphic below (including already the price reduction imposed at the time by CMT, of 22.47%), that prices of CAM lines compare well with prices of a connection between the Spanish mainland and the Canary Islands, as well as with prices of a connection between the French mainland and French overseas regions.

²⁸ Available at http://www.cmt.es/en/documentacion_de_referencia/ofertas_mayoristas_reguladas/anexos/ORLA1.pdf.

Graphic 2. Monthly fee of 155 Mbps lines in submarine cables



In case the distance involved in the different connections is taken into account, the price of a connection Azores-Lisbon, for the same speed of 155 Mbps, is still lower (in 17%) than the price of a connection between the Spanish mainland and the Canary Islands, however the price of a connection Madeira-Lisbon is higher.

According to above data, ICP - ANACOM thus decides to maintain the reduction by 35%, 40% and 45% for the price of each and every element of the leased line tariff (LLRO), for line speeds of 2 Mbps, 34 Mbps and 155 Mbps, referred to in **D 31**.

In any event, it was deemed, at DD level, that PTC should submit to ICP - ANACOM detailed information on:

- (a) Tasks, materials and equipment used to expand the capacity of the CAM system, and date of implementation/purchase, with a particular attention to the conclusion of the ring expansion project in August 2008, and the impact in terms of variation of costs in the cost accounting for 2009;
- (b) Total costs and investment incurred in that expansion, duly detailed;
- (c) Depreciation period considered for the investment;
- (d) Form of allocation of costs to the various capacities of CAM lines, including traditional lines and Ethernet lines.

Further to the analysis of that information and to a new request and response by PTC, in which that operator informs that in preparing its response to ICP - ANACOM's requests, it

found that the entire set of installed lines was not being considered in the construction of the driver for allocation of cost of submarine cables landing in Portugal to PTC's various cost accounting products and services, it is deemed that PTC must review the price of CAM lines within 20 days from approval of the final decision, taking into account reviewed cost accounting results for 2010, and considering all lines supported in CAM connections, submitting to ICP - ANACOM a detailed reasoning for those prices.

D 32. Without prejudice to the preceding point, PTC must review the price of CAM lines within 20 days from approval of the final decision, taking into account reviewed cost accounting results for 2010, and considering all lines supported in CAM connections, submitting to ICP - ANACOM a detailed reasoning for those prices. Any subsequent review of those prices deemed by this Authority to be required will apply retroactively to the date of application of this point.

Ethernet lines

OSP did not make any comments as regards prices of Ethernet lines, except for ZON, which submitted a general remark concerning the price of CAM lines.

It should be referred in this regard that in the analysis of leased line markets, ICP - ANACOM referred that the prices for terminating segments of leased lines throughout the entire national territory and trunk segments of leased lines on "Routes NC" (including CAM) should be subject to a "retail-minus" rule.

In the same analysis, this Authority referred that, in a first stage, it was up to Grupo PT to demonstrate that there is no margin squeeze in the Ethernet offer, which would be assessed by ICP-ANACOM. Subsequently, after monitoring and evaluating the correct application of this rule, it will be possible for ICP-ANACOM to establish a more detailed specification of the "retail-minus" rule, including the level of effective margin to be guaranteed, which would always be subject to separate determination. For this purpose, Grupo PT would be required to provide ICP-ANACOM with details of the conditions of each and every retail Ethernet offer.

PTC substantiated RELLO prices taking essentially into account underlying costs. Without prejudice, PTC was requested to demonstrate to ICP - ANACOM that RELLO prices do not lead to a margin squeeze, and for this purpose the company was required to indicate the conditions of each and every Ethernet offer provided at retail level.

After having analysed information submitted by PTC, which was deemed to be insufficient, PTC was requested to submit missing information so that the issue could be properly assessed.

In case any issues that justify an intervention in this matter are identified, this Authority shall duly inform the market thereof.

3. DETERMINATION

Taking into account the analysis above and whereas:

- (a) Grupo PT is subject, as regards the provision of leased lines, and as a consequence of the analysis of the retail market and wholesale markets of terminating and trunk segments on “Routes NC” of leased lines, among others, to the following obligations:
 - Access to and use of specific network resources.
 - Transparency in the publication of information, including the publication of reference offers.
 - Non-discrimination in the provision of access and interconnection.
 - Cost orientation of prices.
- (b) In the scope of the above-mentioned market analysis, ICP - ANACOM acknowledged that there were some aspects of LLRO which warranted a revision or update, in order to better align them with the interests of the market, with particular attention to access to CAM lines (and to other matters, such as operator interconnection, levels of quality of service - line supply times or Premium levels - or compensation for failures to comply with levels of quality of service, which would be detailed under a specific determination to be submitted to public consultation).
- (c) The leased line market analysis approved by ICP - ANACOM, with the involvement of the European Commission provided for in the law, requires now a development, specifically to make regulatory obligations laid down therein operational.
- (d) The quality of service is a relevant subject with repercussions in the service provided to the end user, and as such its interruption must be avoided and whenever this situation occurs it must be quickly restored, taking into account the requirements of the various services provided to end clients, a regulatory intervention being justified where the imbalanced negotiating power of parties does not allow satisfactory objectives to be met.
- (e) In order to comply with the principle of non-discrimination, in the scope of a SLA, time-limits that are at least reasonable and sufficient must be established, so that operators are able to compete with retail offers of Grupo PT, and to meet needs of various types of clients, namely through Premium services.

- (f) The leased line wholesale supply deadline currently provided for in LLRO does not allow OSP to ensure levels of service which companies of Grupo PT guarantee in the scope of public tenders, and there is room to decrease those wholesale time-limits.
- (g) Fault repair times have repeatedly failed to be complied with, and compensation defined in LLRO does not discourage this non-compliant behaviour.
- (h) LLRO is already relatively stabilized, both at the level of processes and of the total set of lines, so making the payment of compensation for non-compliance with defined objectives subject to the sending of forecasts by OSP is deemed to be disproportional, namely in the case of indicators that depend on the total set of lines, and it could harm the efficient development of wholesale offers.
- (i) The forecast plan of line needs requires a level of detail that is sufficient and strictly necessary to allow PTC to adjust resources to the demand and to be prepared to meet this demand.
- (j) There is no competition based on an alternative infrastructure to the backhaul service for access to submarine cables. Such competition would only be achieved in case PTC provided collocation in SCS, bearing in mind that, on the one hand, PTC must provide a service as broken down as possible, so that competitors do not incur in costs for services they do not require and that, on the other hand, a relevant accumulated experience already exists at the level of RUO, LLRO and RIO collocation services.
- (k) The supply of CAM and inter-island lines, the sole means of communication with and between the Autonomous Regions of the Azores and Madeira, showed some limitations in the past, which prevented the supply of lines to competing operators in those connections, so similar future situations should be addressed.
- (l) The first version of RELLO was published in December 2010, and was subject to various comments on the part of operators, objectives of quality of service being one of the aspects which requires a review so that operator needs and demands of business clients are met.
- (m) Costing data show that there is a margin between costs and revenues that fails to comply with the principle of cost-orientation of prices.
- (n) This determination involves measures with a significant impact on the relevant market.
- (o) According to paragraph 1 of article 57 of Law No 5/2004, of 10 February, as amended by Law No 51/2011, of 13 September, where the decisions to be adopted are likely to affect trade between Member States, the NRA must make the substantiated draft measure accessible to the European Commission, to the Body

of European Regulators for Electronic Communications (BEREC), and the national regulatory authorities in other Member States, in an appropriate form, indicating the information deemed to be confidential.

- (p) Pursuant to Commission Recommendation 2008/850/CE, of 15 October 2008, on notifications, time limits and consultations provided for in Article 7 of Directive 2002/21/EC of the European Parliament and of the Council, of 7 March 2002, on a common regulatory framework for electronic communications networks and services, draft measures that change the technical details of previously imposed regulatory remedies and do not have an appreciable impact on the market (e.g. annual updates of costs and estimates of accounting models, reporting times, delivery times) must be made available to the Commission by means of the short notification form contained in Annex II to the above-mentioned Recommendation.
- (q) By determination of 17 November 2011, the Management Board of ICP - ANACOM decided to conduct the prior hearing of interested parties and to launch the general consultation procedure on a draft decision it intended to take on amendments to LLRO and RELLO, comments received, the respective analysis and grounds for the decision being included in the “Report of the prior hearing and general consultation procedure on the draft decision on amendments to the leased lines reference offer (LLRO) and the reference Ethernet leased lines offer (RELLO)”.
- (r) By determination of 30 April 2012, the Management Board of ICP - ANACOM approved the draft decision to be submitted to the specific procedure of consultation of the European Commission, BEREC, and NRA of other Member States on amendments to LLRO and RELLO, having also been approved the report of the prior hearing and public consultation procedures to which the corresponding draft decision was submitted, further to the referred determination of 17 November 2011.
- (s) By letter dated 4 June 2012, the European Commission provided its response on the notified draft decision, making no comments thereon.

The Management Board of ICP - ANACOM, in the scope of powers provided for in points b), e), f), h) and n) of paragraph 1 of article 6 of Statutes approved by Decree-Law No 309/2001, of 7 December, in the exercise of competences provided for in points b) and g) of article 9 of the same Statutes, taking into account regulatory objectives provided for in points a) and c) of paragraph 1 and b) of paragraph 2, both of article 5 of Law No 5/2004, of 10 February, as amended by Law No 51/2011, of 13 September, and to implement measures determined further to the analysis of the retail market and wholesale markets of terminating and trunk segments of leased lines:

1. Hereby determines that PTC must amend LLRO and RELLO within 20 working days following notification of ICP - ANACOM's final decision, bearing in mind the following:

D 1. The deadline for supply of leased lines defined in the LLRO, for 95% of cases, and regardless of the type concerned, shall be:

- 20 calendar days, for lines involving only exchanges of Type A, defined as such in RELLO;

- 40 calendar days, in all other cases,

being assessed on a monthly basis for the set of lines supplied to a specific OSP.

D 2. The deadline for supply of leased lines defined in the LLRO, for 100% of cases, and regardless of the type concerned, shall be:

- 40 calendar days, for lines involving only exchanges of Type A, defined as such in RELLO;

- 80 calendar days, in all other cases,

being assessed on a monthly basis for the set of lines supplied to a specific OSP.

D 3. Compensation currently defined in LLRO for failures to comply with supply times for 95% of cases also apply to failures to comply for 100% of cases.

D 4. Compensation for non-compliance with fault repair deadlines defined in LLRO is as follows:

- $25\% \times \text{LMF}$, for a delay equal to or lower than 25% of the deadline objective;

- $50\% \times \text{LMF}$, for a delay exceeding 25% and equal to or lower than 50%;

- $75\% \times \text{LMF}$, for a delay exceeding 50% and equal to or lower than 75%;

- $[100\% + 2 \times (D - 75\%)] \times \text{LMF}$, for a delay exceeding 75%;

where LMF corresponds to the monthly fee of the non-compliant line and D corresponds to the delay in relation to the repair time (% of the objective)

D 5. PTC must include in LLRO fault repair deadlines for 100% of cases, submitting at the same time the respective grounds to ICP - ANACOM, compensation for non-compliance defined in D 4 being applied.

D 6. PTC must introduce in LLRO the obligation to pay, on its own initiative, any compensation for failure to comply with established quality of service objectives, by the end of the second month following the end of the half-year period concerned, without prejudice to a subsequent reassessment and adjustment in case different amounts have been established by the OSP. The LLRO shall also include a mechanism for the reconciliation of OSP data and PTC data. Moreover, PTC must submit to beneficiaries the range of situations taken into account in the analyses of indicators for calculating compensation.

D 7. In the scope of the forecast plan of line needs defined in the LLRO, PTC may demand at the most the following information:

- Number, type (analogue or digital), speed (equal to or lower than 2 Mbps or higher than 2 Mbps) and PTC network groups where termination points of leased lines are located (for end-to-end lines and partial lines, the breakdown between end-to-end lines or partial lines by operators not being required).
- In the case of inter-island lines, islands where termination points of leased lines are located must be identified.
- Number of lines for traffic interconnection (interconnection lines and traffic interconnection internal extensions) broken down by pair of geographic points of interconnection (PTC/OSP).
- Number of SC per PTC exchange.
- Number of lines for access to submarine cables and of CAM lines.

D 8. The forecast plan of line needs defined in LLRO shall be made available during the month of September of year N for year N + 1, with a six-month breakdown. Information for the second half of the year is provisional and may be reviewed up to March of year N + 1. If this review does not take place until March of year N + 1, the information on forecasts submitted in September of year N for the second half of year N + 1 becomes final.

D 9. PTC shall remove any restrictions in the LLRO that make the payment of compensation for non-compliance with fault repair times and degree of availability dependant on the presentation of the forecast plan of line needs.

D 10. PTC must provide the collocation service and associated services in SCE as currently determined for other exchanges of its network, namely in the scope of LLRO and RELLO, unless there is a technical constrain or otherwise, duly substantiated by PTC and accepted by this Authority, that prevents the provision in these terms of any of the services concerned in any of the SCE. OSP that use the collocation service have access to submarine cables of any operator making landfall in SCE and have room for installing the necessary optical interfaces for installing the capacity lines they require, provided that the technical and safety conditions are duly safeguarded.

D 11. PTC must break down prices of the underwater and not underwater (backhaul) segments of CAM lines, and OSP may opt or not for using PTC's backhaul, for access to this type of lines.

D 12. In the absence of constraints referred in the preceding point, PTC shall make available services associated to collocation, such as transport of the signal and connection between OSP equipment in the collocation space and PTC and/or consortium's equipment, and the possibility of extending fibre-optic of OSP from the manhole to the collocation space shall also be provided for.

D 13. PTC shall not reject any effective request for supply of CAM lines, in the scope of LLRO and RELLO, where OSP have included lines for those connections, in their forecast plan of line needs submitted in the terms provided for in points D 7 and D 8. Operators may have to compensate PTC for costs incurred by this company further to forecasts that are not fully met later (in this situation, and before any investment is made, PTC must inform the operator of additional costs in question). If these lines have not been included in OSP forecast plan, PTC may only reject a supply request in case of an objective and justifiable absence of technical or economic conditions to fulfil it, in which case the situation must be immediately justified to ICP - ANACOM.

D 14. The deadline for supply of CAM and inter-island lines, in the scope of LLRO and RELLO, is 20 calendar days for 95% of cases and 40 calendar days for 100% of cases, being assessed on a monthly basis per OSP.

D 15. Fault repair times and degree of availability shall be assessed, in LLRO and RELLO, on a broken down basis for CAM lines per each OSP, provided that CAM lines have available capacity in secured rings.

D 16. This percentage is to be assessed through the following factors:

- (a) Rate of occupation of SDH systems: ratio between the number of occupied VC4 and the number of installed VC4;
- (b) Rate of occupation of DWDM systems: ratio between the number of occupied lambdas and the number of installed lambdas.

D 17. The deadline for supply of leased lines in the scope of RELLO, regardless of the type concerned, shall be:

- 20 calendar days, for 95% of cases, and 40 calendar days, for 100% cases, for lines involving only exchanges of Type A, defined as such in RELLO;
- 40 calendar days, for 95% of cases, and 80 calendar days, for 100% cases, in remaining cases,

being assessed on a monthly basis for the set of lines supplied to a specific OSP, and including in that time-limit any periods related to a technical feasibility analysis.

D 18. PTC shall apply in the scope of RELLO determination D 3 hereof.

D 19. The deadline for leased line fault repair in the scope of RELLO shall be 4 consecutive hours for 90% of cases.

D 20. PTC shall apply in the scope of RELLO determination D 4 hereof.

D 21. PTC shall apply in the scope of RELLO determination D 5

D 22. The degree of availability applicable in the scope of RELLO is 99.50% for 10 Mbps and 100 Mbps lines and 99.95% for 1 Gbps lines.

D 23. PTC shall apply in the scope of RELLO determinations D 6, D 8 and D 9

D 24. PTC must include in RELLO information on all relevant parameters associated to the quality of service of an offer of the OSI model layer 1, and it is recommended that the company takes into account proposals already put forward or to be submitted by OSP.

D 25. PTC must guarantee in RELLO an MTU value of 1916 bytes, where required by OSP, and assess on a case-by-case basis other requirements for higher MTU values.

D 26. Minimum loyalty periods in the case of the change of location of an internal NTP to PTC's exchange shall be removed from RELLO. In the case of speed upgrades, the minimum loyalty period should be shortened to 6 months (if the upgrade is requested before one year has elapsed from the provision of the initial speed, PTC must not invoice remaining monthly fees until 12 months from the initial connection have elapsed).

D 27. PTC must inform the RELLO beneficiary that the technical process for setting up the line has already begun, so that the company may be compensated for costs incurred in case the setup is cancelled or changed, and clearly identify to the beneficiary the elements of costs incurred.

Where the cancellation is due to a delay in the line setup attributable to PTC, exceeding 15 calendar days, the OSP shall not be liable to pay for any amounts.

D 28. The time-limit for dismantling an Ethernet line shall not be less than 15 days, from the date of the request made by the OSP, except where PTC agrees otherwise.

D 29. PTC must include in RELLO the general principles followed in the definition of the technical and commercial conditions for securitisation, including main solutions and reference to the principle of non-discrimination.

D 30. PTC must include in RELLO the characterisation of “reasonable requests for access”, specifically identifying what it means by “unreasonable requests”, including the description of conditions associated to the determination of costs of “unreasonable” requests.

D 31. PTC must decrease in LLRO each and every element of prices (including CAM lines) for 2 Mbps, 34 Mbps and 155 Mbps lines by at least 35%, 40% and 45%, respectively.

D 32. Without prejudice to the preceding point, PTC must review the price of CAM lines within 20 days from approval of the final decision, taking into account reviewed cost accounting results for 2010, and considering all lines supported in CAM connections, submitting to ICP - ANACOM a detailed reasoning for those prices. Any subsequent review of those prices deemed by this Authority to be required will apply retroactively to the date of application of this point.

2. Recommends that PTC includes the following in RELLO:

The line monthly fee is invoiced in the civil month concerned. In the month the line is set up, the OSP must pay an amount that corresponds to the setup price plus 1/30 of the monthly fee, per day that elapses from the Starting Invoice Date until the end of that month. These amounts are invoiced after the date of conclusion of the setup and included in the invoice of the following civil month.

QUALITY OF SERVICE IN 2010 AND 1ST QUARTER OF 2011

[illegible]

LINE SETUP TIMES:

4th Quarter 2010	Objective	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B					
		Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			
			Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec		Oct	Nov	Dec	Oct
Leased lines (end-to-end and partial ¹)																																		
64 kbps	33																																	
N x 64 kbps	37				<10										>50; <100			>50; <100						<10				>10; <50			<10			
2 Mbps	37	<10													>10; <50			>50; <100						>10; <50				>10; <50			<10			
34 Mbps	62																																	
155 Mbps	59																	<10																
Traffic interconnection lines																																		
Traffic interconnection internal extensions																																		
OSP - Grupo PT	37																																	
OSP - OSP	22																																	
Submarine cable access lines																																		
2 Mbps	37																																	
34 Mbps	62																																	
45 Mbps	62																																	
155 Mbps	59																																	

1st Quarter 2011	Objective (days)	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B					
		Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			
			Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar		Jan	Feb	Mar	Jan
Leased lines (end-to-end and partial ¹)																																		
64 kbps	33																																	
N x 64 kbps	37				<10				<10						>50; <100			>50; <100						<10				>10; <50			<10			
2 Mbps	37	<10													>10; <50			>100						>10; <50				<10			<10			
34 Mbps	62																																	
155 Mbps	59																																	
Traffic interconnection lines																																		
Traffic interconnection internal extensions																																		
OSP - Grupo PT	37																																	
OSP - OSP	22																																	
Submarine cable access lines																																		
2 Mbps	37																																	
34 Mbps	62																																	
45 Mbps	62																																	
155 Mbps	59																																	

2nd Quarter 2011	Objective	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B					
		Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			Amount	Achieved			
			Apr	May	Jun		Apr	May	Jun		Apr	May	Jun		Apr	May	Jun		Apr	May	Jun		Apr	May	Jun		Apr	May	Jun		Apr	May	Jun	Apr
Leased lines (end-to-end and partial ¹)																																		
64 kbps	33													<10											>10; <50				>10; <50					
N x 64 kbps	37				<10				<10						>100			>50; <100						>10; <50				>10; <50						
2 Mbps	37	<10													>10; <50			>50; <100						>50; <100				>10; <50			<10			
34 Mbps	62																																	
155 Mbps	59																																	
Traffic interconnection lines																																		
Traffic interconnection internal extensions																																		
OSP - Grupo PT	37																																	
OSP - OSP	22																																	
Submarine cable access lines																																		
2 Mbps	37																																	
34 Mbps	62																																	
45 Mbps	62																																	
155 Mbps	59																																	

Legend:

Objective fulfilled

Objective not fulfilled

Not applicable

FAULT REPAIR TIMES:

1st Quarter 2010			Objective	Occurrence	Achieved																																															
					OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			OSP I			OSP J			OSP L			OSP M			Set of OSP			Grupo PT A			Grupo PT B			Grupo PT		
					Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar						
Wide Line Network Contracts																																																				
Leased lines (end-to-end and partial) - < 155 Mbps	4 hours	80%																																																		
	24 hours	98%																																																		
Leased lines (end-to-end and partial) - 155 Mbps	4 hours	90%																																																		
	4 hours	90%																																																		
Traffic interconnection lines	4 hours	90%																																																		
	12 hours	98%																																																		
Submarine cable access lines (< 155 Mbps)	6 hours	80%																																																		
	4 hours	90%																																																		

2nd Quarter 2010			Objective	Occurrence	Achieved																																															
					OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			OSP I			OSP J			OSP L			OSP M			Set of OSP			Grupo PT A			Grupo PT B			Grupo PT		
					Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun						
Wide Line Network Contracts																																																				
Leased lines (end-to-end and partial) - < 155 Mbps	4 hours	80%																																																		
	24 hours	98%																																																		
Leased lines (end-to-end and partial) - 155 Mbps	4 hours	90%																																																		
	4 hours	90%																																																		
Traffic interconnection lines	4 hours	90%																																																		
	12 hours	98%																																																		
Submarine cable access lines (< 155 Mbps)	6 hours	80%																																																		
	4 hours	90%																																																		

3rd Quarter 2010			Objective	Occurrence	Achieved																																															
					OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			OSP I			OSP J			OSP L			OSP M			Set of OSP			Grupo PT A			Grupo PT B			Grupo PT		
					Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep	Jul	Aug	Sep						
Wide Line Network Contracts																																																				
Leased lines (end-to-end and partial) - < 155 Mbps	4 hours	80%																																																		
	24 hours	98%																																																		
Leased lines (end-to-end and partial) - 155 Mbps	4 hours	90%																																																		
	4 hours	90%																																																		
Traffic interconnection lines	4 hours	90%																																																		
	12 hours	98%																																																		
Submarine cable access lines (< 155 Mbps)	6 hours	80%																																																		
	4 hours	90%																																																		




4th Quarter 2010			Objective	Occurrence	Achieved																																															
					OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			OSP I			OSP J			OSP L			OSP M			Set of OSP			Grupo PT A			Grupo PT B			Grupo PT		
					Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec						
Wide Line Network Contracts																																																				
Leased lines (end-to-end and partial) - < 155 Mbps	4 hours	80%																																																		
	24 hours	98%																																																		
Leased lines (end-to-end and partial) - 155 Mbps	4 hours	90%																																																		
	4 hours	90%																																																		
Traffic interconnection lines	4 hours	90%																																																		
	12 hours	98%																																																		
Submarine cable access lines (< 155 Mbps)	6 hours	80%																																																		
	4 hours	90%																																																		

1st Quarter 2011			Objective	Occurrence	Achieved																																															
					OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			OSP I			OSP J			OSP L			OSP M			Set of OSP			Grupo PT A			Grupo PT B			Grupo PT		
					Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar						
Wide Line Network Contracts																																																				
Leased lines (end-to-end and partial) - < 155 Mbps	4 hours	80%																																																		
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Leased lines (end-to-end and partial) - 155 Mbps	4 hours	90%																																																		
	4 hours	90%																																																		
Traffic interconnection lines	4 hours	90%																																																		
	12 hours	98%																																																		
Submarine cable access lines (< 155 Mbps)	6 hours	80%																																																		

DEGREE OF AVAILABILITY:

[illegible]

Legend:

	Objective fulfilled
	Objective not fulfilled
	Not applicable

VALUES ACHIEVED GIVEN AN OBJECTIVE OF 21 CALENDAR DAYS FOR EACH TYPE OF LINE

VALUES ACHIEVED GIVEN AN OBJECTIVE OF 21 CALENDAR DAYS FOR EACH TYPE OF LINE

4th Quarter 2010	Objective	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B			
		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved					
			Oct	Nov		Dec	Oct		Nov	Dec		Oct	Nov		Dec	Oct		Nov	Dec		Oct	Nov		Dec	Oct		Nov	Dec	Oct	Nov	Dec	Oct
Leased lines (end-to-end and partial ¹)																																
64 kbps	33																															
N x 64 kbps	37					<10									>50; <100				>50; <100					<10								
2 Mbps	37	<10													>10; <50				>50; <100					>10; <50					>10; <50			
34 Mbps	62																															
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Submarine cable access lines																																
2 Mbps	37																															
34 Mbps	62																															
45 Mbps	62																															
155 Mbps	59																															

1st Quarter 2011	Objective (days)	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B			
		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved					
			Jan	Feb		Mar	Jan		Feb	Mar		Jan	Feb		Mar	Jan		Feb	Mar		Jan	Feb		Mar	Jan		Feb	Mar	Jan	Feb	Mar	Jan
Leased lines (end-to-end and partial ¹)																																
64 kbps	33																															
N x 64 kbps	37					<10				<10					>50; <100				>50; <100					<10					>10; <50			
2 Mbps	37	<10													>10; <50				>100					>10; <50					<10			
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OSP - Grupo PT	37																															
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Submarine cable access lines																																
2 Mbps	37																															
34 Mbps	62																															
45 Mbps	62																															
155 Mbps	59																															

2nd Quarter 2011	Objective	OSP A			OSP B			OSP C			OSP D			OSP E			OSP F			OSP G			OSP H			GRUPO PT A			GRUPO PT B			
		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved		Amount	Achieved					
			Apr	May		Jun	Apr		May	Jun		Apr	May		Jun	Apr		May	Jun		Apr	May		Jun	Apr		May	Jun	Apr	May	Jun	Apr
Leased lines (end-to-end and partial ¹)																																
64 kbps	33														<10																	
N x 64 kbps	37					<10				<10					>100				>50; <100					>10; <50					>10; <50			
2 Mbps	37	<10													>10; <50				>50; <100					>50; <100					>10; <50			
34 Mbps	62																															
155 Mbps	59																															
Traffic interconnection lines																																
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OSP - Grupo PT	37																															
OSP - OSP	22																															
Submarine cable access lines																																
2 Mbps	37																															
34 Mbps	62																															
45 Mbps	62																															
155 Mbps	59																															

Legend:

Achieved in less than 21 (inclusive) calendar days for 95% of cases
 Achieved between 21 and 27 calendar days for 95% of cases
 Achieved in more than 27 (inclusive) calendar days for 95% of cases
 Not applicable