



Office of the Director of  
**Telecommunications  
Regulation**

# **Service Levels Provided to Other Licensed Operators by Licensees with Significant Market Power:**

## **Report on the Consultation**

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**Document No. ODTR 99/48**

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## 1. INTRODUCTION

A consultation document was issued by the Director of Telecommunications Regulation (“the Director”) on 28 April 1999 entitled “Service Levels Provided to Other Licensed Operators (“OLOs”) by Licensees with Significant Market Power” (“the Consultation Paper”).<sup>1</sup> The paper sought comments from interested parties on the treatment of competitors by the incumbent operator, in terms of the telecommunications services provided to competing operators. The Director proposed ensuring non-discriminatory treatment of competitors by the incumbent through the use of Service Level Agreements (“SLAs”) between the parties.

The Director would like to thank all the organisations that responded to the Consultation Paper. Those comments have provided valuable input into the Director’s consideration of the issues raised in the consultation paper and have contributed to the positions set out in this paper which are in turn designed to maximise the potential benefit to Irish telecommunications users. Responses were received from the following organisations:

- Cable & Wireless
- Esat Digifone
- Esat Telecom
- Ocean Communications
- Telecom Éireann
- the Small Firms Association (SFA)
- Telecommunications Users Group (TUG).

The responses, excluding material that respondents specifically asked be withheld, are available for inspection at the ODTR’s office.

This document sets out the substantive issues raised in the responses. On some issues, there was broad agreement amongst respondents, whereas on others different perspectives or analysis led to quite different views. This document does not attempt to analyse all the arguments and counter-arguments raised during the consultation. Instead, it provides an overview of the responses to each set of questions, identifying the arguments and evidence the Director considers most relevant to making decisions regarding the instigation of Service Level Agreements and the standards which are to be set. Where different groups of respondents had markedly different views, this is noted.

Two of the responses were received from consumer organisations, who will by their nature have a different perspective on the importance of SLAs between the incumbent and its competitors. The Director is pleased that she is able to take into account the views of consumers in this consultation, as the end-user should be the net beneficiary of fair and equitable competition between the competitors in the market place.

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<sup>1</sup> Document No. ODTR 99/27

This document sets out the Director's current position on the provision of SLAs between Telecom Éireann and its competitors. The position set out in this paper may be reviewed by the Director in accordance with her duty to regulate the market generally.

The remainder of this paper is structured as follows:

- **Section 2** records relevant developments since the publication of the Consultation Paper in April;
- **Sections 3-8** provide an account of the responses to the Consultation Paper, and set out the Director's proposed course of action. Section 3 covers a number of key issues that were raised by respondents and affect the overall nature of the Director's position. The remaining sections provide analysis of the responses to the issues raised in the Consultation Paper and in the same order as in the Consultation Paper, with successive sections on.
  - Principles that should govern SLAs (Section 4);
  - Content of an SLA (Section 5);
  - Terms of the SLAs to be provided (Section 6)
  - Continuous improvement of SLA terms over time (Section 7); and
  - Determining SLAs for future applicable services (Section 8).
- **Section 9** sets out the conclusions and next steps.

In summary, this paper sets out how SLAs are to be applied in managing the relationship between the SMP operator and its competitors. An SLA "standard" is determined for a range of SLAs and the mechanisms for monitoring performance, penalising non-compliance and continuous improvement of the "standards" are addressed.

## 2. DEVELOPMENTS SINCE THE PUBLICATION OF THE CONSULTATION PAPER

As outlined in Section 2.5 of the Consultation Paper, this consultation has not taken place in isolation. Of particular importance are:

**Telecom Éireann's Reference Interconnect Offer: Consultation paper 99/16 issued on 22<sup>nd</sup> March 1999; Responses due by 23<sup>rd</sup> April (extended on request from 16<sup>th</sup> April); Report in August 1999.**

This paper solicits the views of interested parties on Telecom Éireann's Reference Interconnect Offer ("RIO"). The paper focuses on the outstanding issues from the interim RIO published in 1998. The RIO will address Service Level Agreements between TÉ and OLOs in relation to interconnect services and it is expected that the approach to SLAs offered for Interconnect and those offered for other carrier services (as set out in this report) should be consistent.

**Dispute Resolution: Consultation paper 99/13 issued on 18<sup>th</sup> March 1999; Responses due by 18<sup>th</sup> June (extended on request from 22<sup>nd</sup> April); Report in August 1999.**

This paper proposes a dispute resolution procedure operated by the ODTR and sets out the linkages to the dispute resolution procedures and service level agreements of operators. The paper seeks views on the proposed process, the scope of its application and the timescales set out. Disputes may arise between TÉ and OLOs regarding carrier services. Consequently, the dispute resolution procedure proposed should be considered in light of its applicability to the processes highlighted in this document.

In addition, subsequent to the publication of the consultation paper which is the subject of this report, the Director issued the following consultation document:

**Measuring Licensed Operators Performance: Consultation Paper 99/41 issued on 13<sup>th</sup> July; responses due by 31<sup>st</sup> August 1999. Report by end September 1999.**

The availability of impartial and comparable information on the performance of Licensed Operators will enable consumers to make informed purchasing decisions. This paper sets out proposals for the measuring of operators performance against their promises to customers. In addition to measuring performance on services to the public, the Director also proposes to monitor the performance of Telecom Éireann in the delivery of Carrier Services to OLOs. The proposals are of particular relevance to this consultation. The interrelation between the two consultations is explicitly identified in Section 3.4 of this document.

**Interconnect for calls destined for Internet services and number translation codes:  
Consultation paper 99/25 issued on 22<sup>nd</sup> April 1999; Responses by 4<sup>th</sup> June; Decision  
Notice 9/99 (ODTR Document 99/47) Published 30<sup>th</sup> July 1999.**

One respondent raised the issue of interconnection services for internet access. Decision 9/99 sets out the Director's position on interconnect services for dial-up internet access and maps out further work, including the establishment of an industry forum. The final details of such interconnect services will be included in the RIO and service levels will be addressed in the same context as other interconnect services (see section 3.2)

### **3. ISSUES WHICH SET THE FRAMEWORK WITHIN WHICH SLAS ARE USED**

#### **3.1 Operators that should provide SLAs**

In the summary to its response, one respondent raised the issue of the definition of an SMP operator particularly with regard to the scope of the consultation. The respondent wished to understand why the scope of the consultation had been defined having regard to “all licensed operators which are deemed to have SMP” rather than a more generic term such as “*dominant incumbent operator*”.

This issue is addressed in section 4.1 of the consultation paper and in a range of previous consultations held by the ODTR<sup>2</sup>. EU and national telecommunications legislation require the Director to designate operators having SMP in various telecommunications markets. This designation brings with it certain direct obligations. It also triggers licence conditions specific to SMP operators. The use of the categorisation of SMP operators is therefore consistent with the legislation, the licensing regime and the Director’s powers and obligations generally. At present, Telecom Éireann is the only operator in Ireland designated as having SMP in the fixed, interconnect and leased lines markets and therefore is the only operator currently subject to specific SMP conditions on those markets. For clarity this report identifies TE as the only SMP operator at present.

#### **3.2 Relationship Between This Consultation and The Reference Interconnect Offer**

The Reference Interconnect Offer (RIO) from Telecom Éireann is currently the subject of a separate consultation. In parallel with the RIO consultation, the Operations and Maintenance (O&M) Manual for Interconnect has been developed by an industry working group comprising representatives of the OLOs and Telecom Éireann. This O&M manual deals with the procedures between TÉ and OLOs for the planning, provision, operation, maintenance, cessation, invoicing and payment of interconnect links and services.

Therefore, although the Director is fully aware of the concerns raised by some respondents to this consultation regarding the development of SLAs for Interconnect, she feels that it is appropriate for these issues to be addressed within the scope of the O&M manual/RIO consultation.

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<sup>2</sup> See, *inter alia*, Decision Notice D4/99 (ODTR Document No 98/47) and Pro-Forma General Telecommunications Licence (ODTR Document 98/50R) and related documents

### 3.3 Services to Which SLAs Apply

In Section 4.2 of the Consultation Paper the ODTR proposed a range of services that should be classified as carrier services and for which SLAs should be provided by the SMP operator to OLOs. In its response, Telecom Éireann stated that it found this “*unacceptable*” on the basis that it was being required to treat OLO’s more favourably than retail customers and this constituted discrimination.

TÉ currently provides OLOs with the same level of service as it provides to retail customers and considers that this is non-discriminatory. Condition 23.2 of TÉ’s licence states that:

*“23.2 The Licensee shall not, in respect of a Relevant Market, show undue preference to or exercise unfair discrimination against any Other Licensed Operator in respect of the quality of any Licensed Service provided by the Licensee to such Other Licensed Operator. The Licensee may be deemed to have shown undue preference or to have exercised unfair discrimination if it favours a business carried on by it or by an Affiliate in relation to the quality of any Licensed Service provided to that business or Affiliate as compared with the Licensed Services provided to any Other Licensed Operator, so as to place the Other Licensed Operator at an unfair disadvantage.”*

Condition 23.2 requires TÉ to provide OLOs with the same SLA as TÉ’s own wholesale operation provides to TÉ’s retail operation. TÉ would not be discriminating against its own retail customers by offering a different level of service to OLOs, as the SLAs provided to OLOs are for **wholesale** services, and those provided to consumers are for **retail** services.

Therefore the Director does not accept TE’s argument. On the other hand, the Director considers that TE must provide SLAs to OLOs that are comparable with the service levels it provides to its own downstream operating arm. If the net effect is to improve the SLA provided by TÉ’s wholesale arm to its own retail operation then this is to be welcomed as it would allow TÉ’s retail operation the flexibility to determine the retail SLA in competition to OLOs retail services.

### 3.4 Monitoring and Performance Measurement Against SLAs

A number of respondents amongst the OLOs commented on the requirement for the ODTR to monitor compliance against Carrier Service SLAs by an SMP operator. The consultation paper 99/41 “**Measuring Licensed Operators Performance**” demonstrates the Director’s intentions in this area. It proposes the separate monitoring of the level of service provided to OLOs by the SMP operator in respect to the provision of:

- digital leased lines
- analogue leased lines
- basic exchange lines.

The proposed performance measurement programme will also be examining the performance of the SMP operator and OLOs towards their own customers, both business and residential.

The Director proposes that the performance provided to OLOs by an SMP operator in respect of these services should be directly comparable with that provided by the SMP operator towards its own consumers, in terms of its ability to meet the terms of any SLA provided i.e. if TÉ achieves 95% compliance towards its retail customers, then it should achieve 95% compliance towards OLOs.

A review is proposed every 6 months. The Director proposes to review the implementation of SLAs for Carrier Services and the SMP operators compliance to them within the same timeframe.

The TUG raised the issue of the SMP operator being in a position to provide an exceptional level of service to its major corporate customers, whilst not necessarily providing that level of service to OLOs or to its smaller customers. The proposed Performance Measurement Programme is designed to assess the actual SMP operator (and OLO) performance in relation to the SLA targets. Consequently the ODTR will have oversight of what is actually achieved by the SMP operator.

## 4. PRINCIPLES THAT SHOULD GOVERN SLAs (SECTION 3 OF THE CONSULTATION PAPER)

### 4.1 The Scope of the Consultation (Section 3.1 of the CP)

Respondents were invited to comment on whether the ODTR had selected an appropriate methodology for determining SLAs between the SMP operator and OLOs and if it was appropriate to identify a specific class of services as Carrier Services.

As discussed in 99/27, the Director considers the identification of a set of Carrier Services essential given the ability of the SMP operator, intentionally or unintentionally, to affect the commercial competitiveness of OLOs. There was general agreement that a set of services to carriers should be identified.

However, Telecom Éireann did not agree with the proposed description of carrier services as set out in section 4.2 of the consultation paper. TÉ suggested instead the identification of a category of services called “bottleneck services”, which TÉ described as “*the provision of a service to another network operator which is of vital importance in the creation of their retail service offering and which is either impossible to source elsewhere or could not be sourced elsewhere in an economically viable fashion*”.

OLOs, the TUG and SFA generally agreed with the identification of Carrier Services in the Consultation Paper. OLO respondents also considered that:

- Carrier Service SLAs should exist for services, even when no Retail SLA from TÉ exists
- the list of Carrier Services should be constantly reviewed by the ODTR to reflect the changing commercial and technological environment.

The Director considers the services described by TÉ would inevitably come within the description proposed in 99/27, but TÉ’s description is somewhat narrow, given the current stage of development of the Irish telecommunications market and the ubiquitous presence of TÉ’s network. The Director therefore intends to maintain the description of Carrier Services as proposed in 99/27 where it was stated that such services should:

- be used by the OLO as a constituent element of the OLO’s retail services, and
- facilitate the addition of value by the OLO to transform the Carrier Service into a retail service.

The Director believes that the consumer will be the net beneficiary of the creation of Carrier Services, as it will enable more effective competition to take place in the market providing higher quality services to consumers from all players in the market. This net benefit was explicitly identified in the responses from the TUG and SFA consumer based organisations.

Given the dynamic and changing nature of the telecommunications market and the degree of competition in the market, the Director will keep this matter under review and may amend this position if she considers it appropriate.

## 4.2 The Construction of an SLA (Section 3.2 in the CP)

The Director asked respondents to comment on where any Carrier Service SLA should be documented. There was broad agreement that the RIO was not a suitable repository for such information because:

- it covers a specific set of Interconnect Services
- changes to any Carrier Service SLA would require revision of the RIO which would make the RIO unmanageable.

The Director feels that given that TÉ is the party that will have to administer the documentation of SLAs, its views are especially valuable. Consequently the Director considers that the provisions of the SLA for each Carrier Service should be documented in the Schedule<sup>3</sup> for that service.

There was unanimous agreement that the SLA should set a measurable “standard” level of service against which the SMP operator’s actual service delivery would be measured. The Director agrees that the use of the word “standard” rather than “minimum” is preferable to describe this service level.

TÉ commented that the caveats surrounding compliance against that “standard” would need to be agreed, specifically where circumstances are beyond the “*reasonable control*” of the SMP operator. Examples quoted as being outside reasonable control included where an exceptional number of circuits were ordered by an OLO or where orders are placed at locations which are inaccessible to Telecom Éireann’s network. The Director agrees that an SLA is not a blanket statement and that certain flexibility is required from all parties. However, the terms for the definition of “*reasonable*” proposed by TÉ are very broad and the Director is not persuaded that they are appropriate. It is considered that operators are in the best position to agree the scope of exemptions or caveats having regard to the reality in the marketplace and the Director expects this to be resolved between the parties. In any event, Telecom Éireann should identify any such problems to OLOs at the time of Notification of Order completion date.

## 4.3 Developments in Service (Section 3.3 of the CP)

One of the aims of the liberalisation of the telecommunications market is to improve the level of service provided to customers through the introduction of competitive forces. Retail SLAs are one tool which can be used by operators to differentiate themselves. Consequently it could be expected that, over time, operators will seek to improve the SLAs offered to customers.

The Director considers that:

- a lack of corresponding improvement in Carrier Service SLAs could inhibit the development of Retail SLAs, although all OLOs would be similarly and equally constrained

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<sup>3</sup> A document which describes the attributes of the service in detail; commercial, technical and operational.

- the SMP operator may wish to improve its own Retail SLAs and that consequently any related Carrier Service SLAs should show a corresponding improvement, such that the SMP operator is not placed at any competitive advantage by virtue of SMP.

Respondents were in broad agreement with this position. Therefore, the Director will actively monitor the performance of TÉ, through the Performance Measurement Programme<sup>4</sup> and ensure that TÉ's service levels both to consumers and OLOs show the expected improvement over time, in line with developments in Europe's "best practice" SMP operators.

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<sup>4</sup> See Consultation Paper 99/41

## **5. CONTENT OF AN SLA (SECTION 4 OF THE CONSULTATION PAPER)**

### **5.1 Processes to be Addressed (Section 4.1 of the CP)**

The Consultation Paper proposed that four main processes should be covered in an SLA for a particular Carrier Service:

- service provisioning : the provision of Carrier Services as a result of a request from an OLO
- in-service performance : the performance of the service whilst in operation
- fault management : the SMP operator's performance in managing its maintenance process
- billing and payment.

The OLO respondents were in agreement that these processes should be covered by any SLA. In addition, one respondent indicated that moves, changes and cessations should be added, because these can also affect the service level that OLOs can offer to consumers. The Director agrees with this and therefore concludes that two further processes should be included in the standard content of any SLA:

- service alteration : valid amendments that can be made to the configuration of the service, within the scope of the service purchased
- service cessation : the termination of a service, in accordance with the terms and conditions of the contract between the parties.

The Consultation Paper canvassed opinion on the most efficient way of documenting escalation procedures pertinent to any SLA. There was broad agreement from the respondents that the principles of the escalation procedure should be published in a stand-alone document. The documentation between the contracting parties for a particular service instance (i.e. a leased line, or a business exchange line purchased by an OLO) should include the appropriate contact details of individuals specifically identified as the contact points within the generic escalation procedure document.

### **5.2 What are Carrier Services? (Section 4.2 of the CP)**

Two tables are reproduced from the Consultation Paper showing the services which were proposed for inclusion in the RIO and separately for designation as Carrier Services.

**Table 1 : Proposed Carrier Services**

Service	Description
<i>Not included in Reference Interconnect Offer</i>	
Basic Exchange Lines	Analogue, ISDN BRA and ISDN PRA
Non-Geographic Number Services	Toll free, toll shared, premium rate
Analogue Leased Lines (national)	
Digital Leased Lines (national & international)	All data rates of digital leased line services.

**Table 2 : Reference Interconnect Offer Services**

Service	Description
<i>Interconnect Services in the Reference Interconnect Offer</i>	
Customer Sited Interconnect	
In Span Interconnect	
Carrier Access Codes	
Carrier Pre-selection	
<i>Traffic types included in Reference Interconnect Offer</i>	
International Access	00 + country code (note 1), (note 4) 00 800 + 8 digits (note 6)
Northern Ireland Access	080 (Note 5)
National Termination	01 – 09
National Transit	086, 087, 088
Freefone	
Normal traffic	180x all except level 8
Burst traffic	1800 8
LoCall	
Normal traffic	189x all except level 8
Burst traffic	1890 8

CallSave	
Normal traffic	185x all except level 8
Burst traffic	1850 8
Premium Rate Services	
Normal traffic	15xx all except level 8
Burst traffic	15xx 8
National Directory Inquiries	1190
National Operator Assistance	10
International Operator Assistance	114
Emergency Services	999, 112
Personal Numbering	0818
Universal Access No.	
Normal Traffic	0700 all except level 71
Burst Traffic	0700 71
Packet Access	1510, 1801
Paging Access	082
International Directory Inquiries	1198, 1197
Speaking clock	1191
BTE Customer Care Access	1901 to 1905
3 <sup>rd</sup> Party Customer Care Access	1907, 1909

General comments on the description of “Carrier Services” are addressed in section 4.1. In addition, respondents made the following comments on the specific contents of these two tables:

- Non-geographic number services are available from operators other than the SMP operator and are therefore not within the definition of a Carrier Service as previously stated; The Director agrees that this should be removed from Table 1. Insofar as interconnection for NGNS is provided, this is a service in the RIO and service levels will be addressed in that context.
- International leased lines; Similarly, these are available from sources other than the SMP operator – the Director agrees and has removed international leased lines from Table 1.

Respondents also suggested the inclusion of the following services:

- Internet access; As set out in section 2, interconnection for dial up internet access is addressed in Decision Notice 9/99 and service levels will be appropriate to the RIO.
- Satellite services; The Director is not persuaded that such services are currently appropriate for inclusion as Carrier Services, but may review this in the future,
- International toll free; This service is included in the RIO (Table 2) as International access 00 800
- Call origination; This was omitted in error from Table 2 – this service is included in the RIO
- Directory enquiries database access; This was omitted in error from Table 2 – this service is included in the RIO.

In conclusion, the Director does not propose to add any additional Carrier Services to Table 1 at this time. Table 3 below sets out the services that the Director classifies as Carrier Services;

**Table 3 : Carrier Services**

Service	Description
Basic Exchange Lines	Analogue, ISDN BRA and ISDN PRA
Analogue Leased Lines (national)	Ordinary (M.1040), Special (M.1020 / M.1025) <sup>5</sup>
Digital Leased Lines (national)	All data rates of digital leased line services.

### 5.3 Proposed Minimum SLA Content (Section 4.3 of the CP)

#### Service Provisioning Process

The proposed system of order and acknowledgement will require an auditable timestamp for the placement of an order or the completion of a step in the process. Orders should be acknowledged within 1 working day of receipt. Should an order be received outside of working hours then it should be acknowledged by the end of the next working day.

TÉ noted that notification of a completion date may, depending on the service, be contingent on a site survey. The Director accepts that this will need to be taken into account in some cases, when the standard for this attribute is set.

One respondent identified the requirement for the notification of a “completion date” should also include the notification of the “ready for test date”, where such testing is required by either or both parties.

The Director appreciates that the processes of the SMP operator may be dependent on the timely provision of information or material assistance from the OLO. Therefore the Director considers that the following guidelines should be used in such cases:

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<sup>5</sup> ETR 038

- the Schedule for the service shall denote the requirements that will be placed on the OLO for co-operation and material assistance, so that such resources can be identified and made available in a timely manner
- given such notification, should the OLO fail to provide the pre-determined material assistance then the ‘clock’ against which the SMP operator’s performance is being measured will be stopped until such time as the assistance is forthcoming from the OLO
- should the SMP operator fail to provide adequate notice of its requirements at the time of acknowledgement of order, it shall forfeit the right to ‘stop the clock’ for any reasonable consequential delay in material assistance from the OLO.

### **In-service Performance**

TÉ notes that In-service Performance is usually quoted for a network in general and not for a particular customer connection or service instance. TÉ believes that adequate controls are placed on it through the Fault Management attribute. Subject to the comments in the following paragraphs, the Director accepts this point at the present.

### **Fault Management (OLO Reported Fault)**

The consensus amongst the respondents to this consultation was that the minimum acceptable terms for this attribute will be a maximum **response** time. However, concern was expressed as to the visibility that OLOs would have that an appropriate “response” had been instigated. TÉ proposed a definition for “response” as follows:

A “response” shall mean either:

- a visit to the customer’s premises, or where this is not required
- the first indication to the customer (OLO) that activities are being undertaken to repair the fault.

The Director considers this definition to be appropriate. The inference of the second bullet is that TÉ puts in place a mechanism to provide timely information to OLOs about any faults they have reported.

The proposed Carrier Services all have a physical network element which involves access to the local loop and, as such, may require some detailed diagnostics before a fault is located and a repair process can begin. Consequently the Director accepts that a maximum **repair** time is not currently appropriate, given the demands on TÉ’s existing network infrastructure.

However, the Director notes that without the commitment to a maximum repair time or an in-service performance measure, there is little protection for the OLO against the possibility of repeated failures of a Carrier Service instance. In reviewing the impact of these SLAs, the Director will have regard to the level of repeat faults per service instance and, if considered necessary, shall institute additional measures to ensure that OLOs can receive sufficient quality of service in terms of “fault free” periods.

## Planned Maintenance

General consensus amongst the OLOs was that 10 to 14 days notice of planned works should be provided by the SMP operator. The requirement to undertake works on an “emergency” basis was recognised, however, TÉ should provide a detailed explanation of what it considers to be an “emergency” in the Schedule for Carrier Services.

The use of agreed time windows for planned maintenance was proposed by TÉ. The Director agrees with this approach, but would expect TÉ to show flexibility in the setting of these windows, as not all OLOs have customer profiles which allow for planned maintenance windows outside of office hours, e.g.:

- ISPs with a large residential customer base
- OLOs which are targeting residential customers.

Although TÉ felt that binding resumption times for planned maintenance were inappropriate, the Director considers that they must be provided by TÉ because:

- the very nature of “planned maintenance” should mean that its scope and requirements are well understood by the operator
- OLOs will find it hard to manage the expectations of their customers and hence provide an adequate quality of service if they are unable to make promises regarding service resumption. The best way to ensure that service resumption takes place on-time is the presence of a back-to-back SLA from the SMP operator.

TÉ notes a requirement for reciprocal procedures with OLOs conducting their own planned maintenance. The Director agrees with this requirement because TÉ must also be allowed to efficiently deal with enquires from its own customers which are indirectly affected by any action (e.g. TE customers which are calling a destination on the OLO network which is out-of-service).

## Billing and Payment

The consensus was that the billing and payment process was sufficiently well defined in the Consultation Paper, although TÉ questioned the inclusion of the process at all, given that the commercial imperative is on the SMP operator to recover revenues from the OLOs at their due time.

The Director considers that this attribute should be retained for completeness and to ensure that all parties are appraised of their commercial responsibilities for adequately detailed and accurate invoices and prompt payment thereof.

## Additional Processes

The additional processes which have been suggested for inclusion in SLAs as a result of this consultation will require further definition, following the guidelines below:

- service alteration : should be defined in a similar manner to service provisioning, whereby an alteration is ordered, confirmed as ordered, undertaken, tested and accepted by the OLO

- service cessation : should be defined in a similar manner.

#### 5.4 Escalation (Section 4.4 in the CP)

There was broad agreement both amongst OLOs and TÉ that the escalation procedures and metrics proposed in the Consultation Paper were appropriate and workable. However, some OLOs felt that two escalation levels may be a more practical solution, in the interests of reducing bureaucracy in the relationship between the parties. Some OLOs noted that the second level of escalation should have sufficient authority to expedite any remedial action required. Some OLOs felt that only intervention by the most senior managers within TÉ seemed to provide sufficient management impetus to solve problems.

The Director notes these comments and expects that when TÉ reviews its procedures in light of this consultation that sufficient decision making power will be delegated to second level escalation points. The Director will review the effectiveness of TÉ's escalation procedures as part of the periodic review of SLA performance.

#### 5.5 Penalties (Section 4.5 in the CP)

There was broad agreement amongst the OLOs that the penalty attributes identified in the Consultation Paper were appropriate. These are shown below in Table 4.

**Table 4 : Penalties to be applied to SLAs**

SLA Attribute	Penalty Applicable?	Guidelines
Acknowledgement of order	No	
Notification of Order Completion date	No	
Ready for Test at notified date <sup>6</sup>	Yes	A value proportionate to the lateness in achieving a implementation which is "Ready for Test", when compared with the promised "Ready for Test" date.  Proposal : a percentage of the installation charge.
Order completion <sup>7</sup>	Yes	A value proportionate to the lateness in completing the order, when compared with the promised date of order.  Proposal : a percentage of the installation charge.  Note : in light of the inclusion of a Ready for Test penalty, this penalty should not place a double penalty on the lateness to complete the order.

<sup>6</sup> New attribute added as a result of the responses to the consultation.

Minimum level of in-service performance	Yes	A value proportionate to the amount by which the stated performance level was underachieved.  Proposal : refund of rental.
Maximum response time	Yes	A value proportionate to the amount of time by which the response time is missed.  Proposal : refund of rental.

In its response to the Consultation Paper, TÉ accepts that penalties should be proportionate to the shortfall in quality provided to the OLO. However, it wished to cap penalties to ensure that they are not disproportionate to the value of the service purchased. Similarly, the OLOs accepted the requirement for proportionality, but propose a sliding scale of penalties which increases to reflect the rising impact of late delivery or late repair to a Carrier Service.

TÉ raises the issue of cancellation of service orders by OLOs subsequent to collecting penalty payments from TÉ. It is assumed that TÉ is referring to the placement of “speculative” orders by the OLO, rather than cancellation of a “firm” order which has been the result of an unacceptable delay from TÉ. The second case is unlikely to take place because the nature of Carrier Services means that they cannot be sourced from another party, thus cancellation will be for reasons pertaining to the OLO-customer contract and not the result of alternative supply by the OLO.

In the first case, there is a danger that OLOs could be encouraged to place “speculative” orders or over-order based on an expectation of poor service from TÉ and thus the accruing of penalty payment revenue from TÉ. The Director notes that:

- “speculation” will only take place as long as the level from TÉ is consistently poor enough to make an adequate return for the OLO on any such “speculation”
- consequently, the onus should remain on TÉ to remove this distortion in the market by attaining the “standard” levels of service determined as a result of this consultation at the earliest opportunity. The Director’s proposed “standard” SLAs are set at a level which she feels is achievable by TÉ in light of its submissions and the prevailing “best practice” in the EU Member States.

Taking these issues into account, and in light of the submissions of all the responding parties, the Director considers the levels of penalty shown in Table 5 to be fair, proportionate and appropriate.

The Director proposes that any penalties should be added as “service credits” to the account of the OLO.

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<sup>7</sup> As appropriate (see note).

**Table 5 : Penalties**

<b>SLA Attribute</b>	<b>Penalty Applicable</b>	<b>Conditions</b>
Ready for Test at notified date	<p>For every working week of delay in the provision of a service as “Ready for Testing”, against a previously notified date, the SMP operator shall pay a sliding scale of penalty that would provide a complete refund of installation charge if the circuit is delivered at a date which is equal to or greater than 1.5 times the contracted delivery time. This could be achieved by the following type of equation:</p> $\sum_{1}^n XnI/D \text{ where}$ <p>“I” is the installation charge</p> <p>“n” is the number of days after the ready for test date</p> <p>“D” are the number of days set as the standard in the SLA</p> <p>“X” is a constant<sup>8</sup></p>	The OLO <sup>9</sup> has not been responsible for any delay in provision of information or site access requested by the SMP operator under the standard terms and conditions for the Carrier Service.
<b>SLA Attribute</b>	<b>Penalty Applicable</b>	<b>Conditions</b>
Order completion	<p>As above if there is no “Ready for Test” date associated with the service. With “n” and “D” referring to the Order Completion date.</p> <p>If a test takes place at the appointed time, but the SMP subsequently induces a delay in completion of the order then the formula will also apply.</p> <p>If both the RfT date and the Order Completion date are late then the penalty will be payable for the figure calculated for the delayed Order Completion date.</p> <p>If the RfT date is late but the subsequent Order Completion date is met, then the penalty will be calculated using the RfT formula.</p>	
Maximum response time	If no response is provided within the “standard” response time then the SMP operator shall refund the monthly rental for the service purchased, up to a maximum of £1000.	Response is defined as stated earlier in this Consultation Paper.

The Director proposes to review the level of penalties as part of the Carrier Service review cycle to ensure that TĒ has sufficient incentive to provide an adequate level of service to OLOs, and at the same time that the level of penalties does not move TĒ’s focus towards contesting SLA penalties and away from delivering a good quality of service to OLOs.

<sup>8</sup> “X” is constant in each equation and is related to the number of days “n” and “D” and will vary according to the values of “n” and “D”.

<sup>9</sup> This is taken to mean the OLO or the OLOs customer, for which the OLO is the agent if it is ordering the circuit on behalf of the end customer.

## 6. TERMS OF THE SLAs TO BE PROVIDED (SECTION 5 OF THE CONSULTATION PAPER)

### 6.1 Determining the SLA “Standards”

In their responses to the Consultation Paper, both OLOs and TÉ recognised the requirement for the “standard” SLA terms for the identified attributes to be:

- realisable by the SMP operator in the short-term
- improved towards European “best practice” in the medium term
- maintained at a level which is favourable comparable to that “best practice” going forward.

In order to address the needs of the most demanding customers in the Irish market, the OLOs will require a “standard” SLA that matches the best available from the SMP operator.

As previously stated, The Director proposes the following services as Carrier Services:

1. Basic Exchange Lines: Analogue, ISDN BRA and ISDN PRA
2. Analogue Leased Lines (national) : “Ordinary voice quality” and “Special quality voice circuits”<sup>10</sup>
3. Digital Leased Lines (national) All data rates of digital leased line services.

For items 2 and 3 it is possible to use published information to validate the SMP operator’s performance against European “best practice”.

The Director believes that in order for Ireland to fully benefit from a liberalised telecommunications market the SMP operator should appear within the upper quartile of performance when compared against SMP operators in other EU Member States. In October each year DGXIII of the European Commission publishes an “Annual Report on the Performance of Leased Lines in Relation to Supply Conditions” in accordance with the Council Directive 92/44/EEC. The most recent figures available are for 1997 and relevant information from that year is set out in Appendix 1.

Respondents noted that SLAs were only worthwhile if they were achievable. The Director does not wish to set SLAs that TÉ is currently unable to practically achieve. The first step must be for the SMP operator to provide an OLO with a suitably guaranteed level of service, as a result of which the OLO can provide an SLA to its customer, a so-called back-to-back SLA.

Telecom Éireann has recently advised the Director that the company has introduced a programme to overhaul its existing operational processes and system to improve the delivery and repair of data services. The initial objective of Telecom Éireann is to set interim goals of 26 days and 20 days respectively for delivery at each six month interval during the

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<sup>10</sup> As described in EU Directive 92/44/EC subsequently modified by Directive 97/51/EC

programme which will be completed by September 2000. The company goals are to reduce delivery times by then from 40 to 10 days and repair times from 12 hours to 4 hours.

The Director welcomes this commitment from Telecom Éireann and considers that the achievement of the challenging targets set by Telecom Éireann will result in greatly improved services to OLO's and to its own retail arm. The achievement of these targets will also mean that Telecom Éireann should compare very favourably with other incumbent operators in the EU. The provisioning times set out in table 6 reflect the targets now proposed by Telecom Éireann.

**Table 6 : Service Provisioning “Standards” for Leased Lines Supplied to OLOs by the SMP Operator, 1999-2000 (based on 1997 data)**

Service	Service Provisioning “Standard” for Delivery			
	Current Offer	By 31.12.99	30.6.00	30.9.00 onwards
Ordinary Quality Voice Bandwidth	40 days	26 days	20 days	10 days
Special Quality Voice Bandwidth	40 days	26 days	20 days	10 days
64kbit/s leased line	50 - 60 days	26 days	20 days	10 days
2 Mbit/s leased line (unstructured)	50 - 60 days	26 days	20 days	10 days
2 Mbit/s leased line (structured)	50 - 60 days	26 days	20 days	10 days

In its response to the consultation, TÉ notes that it would be impractical to offer a maximum repair time (rather than a response time), as the nature of the fault would need to be determined before a repair time could be estimated. The Director considers this is reasonable if the typical response times of Telecom Éireann compare favourably with other EU operators (as outlined in the Appendix), and Telecom Éireann meets its recent commitment to reduce repair times. The Director will monitor Telecom Éireann's progress in this regard and may review her position as appropriate.

TÉ has not disagreed with the “standard” for the Maximum Response Time attribute and the Director considers that the “standard” should be set at that proposed in the Consultation Paper.

Basic exchange lines (Analogue, ISDN BRA and ISDN PRA) are not covered by the DGXIII report used to determine the “standards” for leased lines. In the absence of directly comparable information, and given the similarity between the local loop requirements of digital leased lines and ISDN circuits, the Director considers that ISDN exchange lines should be provisioned within similar target times to those quoted for digital leased lines.

**Table 7 : Service Provisioning “Standards” for Basic Exchange Lines Supplied to OLOs by the SMP Operator, 1999-2000 (based on 1997 data)**

Service	Service Provisioning “Standard” for Delivery			
	Current Offer	By 31.12.99	30.6.00	30.9.00 onwards
Analogue exchange line	10 days	10 days	in line with “best practice”	in line with “best practice”
ISDN Basic Rate Access	50 - 60 days	26 days	20 days	10 days
ISDN Primary Rate Access	50 - 60 days	26 days	20 days	10 days

The Maximum Response Time “standard” currently quoted by TÉ is also acceptable and should be maintained in line with European “best practice” amongst comparable SMP operators.

The Director accepts that currently no “standard” should be set for the in-service performance metric. However, should OLOs provide documentary evidence of consistently poor levels of service quality at the first review of the “standards” by the ODTR, the Director will review this position.

## **6.2 Summary of SLA Attributes to be Guaranteed and the “Standards” for Those Guarantees**

The following tables present the attributes and “standards” that the Director considers should be guaranteed by the SMP operator for Carrier Services. The previous **Table 5** shows the penalties that should apply if the guaranteed “standards” are not met by the SMP operator. In order to allow Telecom Éireann sufficient time to put in place the necessary procedures and processes, the Director considers that SLAs on the current standards set out in the tables 8 -15 should be developed by Telecom Éireann and be in place by 1 November 1999. SLAs on the new standards should be developed and be in place in accordance with the timeframes set out in these tables (see section 9 for next steps and timetable).

Ready for Test (“RfT”) dates may be required for these services, depending on the agreement between the parties. TÉ shall notify the OLO of the RfT date with the Notification of Order completion.

**Table 8 : SLA Attributes for Basic Exchange Lines (Analogue)**

SLA Attribute	Standard			
Acknowledgement of order	Within 1 working day			
Notification of Order Completion date	Within 1 working day			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 10 working days for analogue exchange lines  Penalty factor X=0.67	Within 10 working days for analogue exchange lines  Penalty factor X=0.67	In line with “best practice”  Penalty factor to be determined based on “best practice”	In line with “best practice”  Penalty factor to be determined based on “best practice”
Maximum response time	4 working hours			
Maximum repair time	1 working day (as promised to retail customers)			

**Table 9 : SLA Attributes for Basic Exchange Lines (ISDN Basic Rate Access)**

SLA Attribute	Standard			
Acknowledgement of order	Within 1 working day			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 50–60 working days  Penalty factor X= 0.13	Within 26 working days  Penalty factor X= 0.29	Within 20 working days  Penalty factor X=0.36	Within 10 working days  Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 10 : SLA Attributes for Basic Exchange Lines (ISDN Primary Rate Access)**

SLA Attribute	Standard			
Acknowledgement of order	Within 1 working day			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 50-60 working days Penalty factor X= 0.13	Within 26 working days Penalty factor X= 0.29	Within 20 working days Penalty factor X=0.36	Within 10 working days Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 11 : SLA Attributes for Analogue Leased Line (Ordinary Quality)**

SLA Attribute	Standard			
Acknowledgement of order	Within 2 working days			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 40 working days Penalty factor X= 0.19	Within 26 working days Penalty factor X= 0.29	Within 20 working days Penalty factor X=0.36	Within 10 working days Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 12 : SLA Attributes for Analogue Leased Line (Special Quality)**

SLA Attribute	Standard			
Acknowledgement of order	Within 2 working days			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 40 working days	Within 26 working days	Within 20 working days	Within 10 working days
	Penalty factor X= 0.19	Penalty factor X= 0.29	Penalty factor X=0.36	Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 13 : SLA Attributes for Digital Leased Line (64Kbit/s)**

SLA Attribute	Standard			
Acknowledgement of order	Within 2 working days			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 50-60 working days	Within 26 working days	Within 20 working days	Within 10 working days
	Penalty factor X= 0.13	Penalty factor X= 0.29	Penalty factor X=0.36	Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 14 : SLA Attributes for Digital Leased Line (2 Mbit/s Unstructured)**

SLA Attribute	Standard			
Acknowledgement of order	Within 2 working days			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 50-60 working days	Within 26 working days	Within 20 working days	Within 10 working days
	Penalty factor X= 0.13	Penalty factor X= 0.29	Penalty factor X=0.36	Penalty factor X=0.67
Maximum response time	4 working hours			

**Table 15 : SLA Attributes for Digital Leased Line (2 Mbit/s Structured)**

SLA Attribute	Standard			
Acknowledgement of order	Within 2 working days			
Notification of Order Completion date	Within 10 working days (after survey)			
Order completion	From 1.11.99	From 31.12.99	From 30.6.00	From 30.9.00
	Within 50-60 working days	Within 26 working days	Within 20 working days	Within 10 working days
	Penalty factor X= 0.13	Penalty factor X= 0.29	Penalty factor X=0.36	Penalty factor X=0.67
Maximum response time	4 working hours			

## **7. CONTINUOUS IMPROVEMENT OF SLA TERMS OVER TIME (SECTION 6 OF THE CONSULTATION PAPER)**

The issue of continuous improvement has been raised in Section 6 of this report. The Director is particularly pleased to note Telecom Éireann's constructive approach to improving service levels and welcomes the commitments given by TE to the service standards set out in tables 7 and 8.

As stated in Section 3.4 the Director intends to monitor the performance of the SMP operator in terms of its ability to meet the promises made in the Carrier Service SLAs. The Director notes with interest that the OLOs are very supportive of this measure and looks forward to their full involvement in the proposed Performance Measurement Programme, the subject of Consultation Paper 99/41

## **8. DETERMINING SLAs FOR FUTURE APPLICABLE SERVICES (SECTION 7 OF THE CONSULTATION PAPER)**

As liberalisation of the telecommunications market continues and technology develops, new carrier services may be offered or required from SMP operators - for example, unbundled local loop and number portability.

The Director considers that all new carrier services from SMP operators should include a proposed SLA, which is in line with those set out in this report. In the light of the rapidly changing nature of the telecommunications market, the development of competition and the evolution of new services, the Director may review existing or new carrier services from SMP operators and reserves the right to consult on any such issues if she considers it appropriate.

## 9. CONCLUSIONS

### 9.1 General

In this report, the Director has come to the conclusion that the definition of Carrier Services and the provision of associated SLAs is the best route to ensure that OLOs receive the same level of service from the SMP operator's wholesale arm as its own retail arm receives. The Director has set out her position on a number of key implementation issues for a framework of SLAs. These are summarised below:

- The following three classes of Licensed Services should form the Carrier Service portfolio:
  - basic exchange lines (analogue, ISDN BRA and ISDN PRA),
  - analogue leased lines (ordinary and special quality),
  - digital leased lines (all available data rates at and above 64kbit/s).
- The following attributes should be quoted for each of these Carrier Services in an SLA:
  - Acknowledgement of order,
  - Notification of Order Completion date,
  - Ready for Testing date (where required),
  - Order completion date,
  - Maximum response time.
- The following attributes should attract penalties for non-compliance by the SMP operator to the “standards” set out in the SLA:
  - Ready for Testing date (where required),
  - Order completion date,
  - Maximum response time.
- The method of calculating such penalties should accord with that set out in Table 4.
- The “standards” for these attributes which should be adhered to by the SMP operator should accord with those set out in section 6 of this paper.
- TÉ should seek to continuously improve its service standards such that it moves into the upper quartile of comparable European SMP operators, in terms of its service provisioning and fault repair performance.

- The Director intends to monitor the actual performance of TÉ on a six monthly basis and to adjust the SLA attributes and “standards” depending on the level of performance.
- The Director intends to monitor the requirement for inclusion or exclusion of services from the Carrier Services portfolio as the market develops.

## 9.2 Next Steps

Having concluded an extensive consultation with interested parties, including TE, and having come to the conclusions set out in this report, this section sets out the further steps which are required to implement these conclusions.

- In accordance with Condition 18 of its General Telecommunications Licence, TE is required to submit to the Director, a draft statement setting out service levels for the Carrier Services portfolio described in this report. The Director requires this to be submitted by **15<sup>th</sup> September 1999**.
- The Director will review the draft in the context of the conclusions arrived at in this report. If the draft submitted does not accord with those conclusions the Director will consider any differences and justification thereof and may consult as appropriate.
- A final statement of service levels shall be published by TE by **15<sup>th</sup> October 1999**, having regard to any directions given by the Director in accordance with Condition 18 of TE’s licence or otherwise as appropriate.
- The new SLAs shall come into effect no later than **1<sup>st</sup> November 1999**, with revised targets being implemented in accordance with tables 8 to 15.
- The Director will review the service levels as described in this report, and in accordance with the outcome of the consultation on Measuring Licensed Operators Performance (ODTR 99/41) with a view to ensuring continuous improvement and development of service levels.

**/ENDS**

## APPENDIX I

**Data from European Commission publication on “Annual Report on the Performance of Leased Lines in Relation to Supply Conditions”**

**Table 1 : SMP Operator Performance in the EU Member States 1997 – Ordinary Quality Voice Leased Lines (Service Provisioning)**

<b>SMP Operator</b>	<b>Typical Delivery Time (working days)<sup>11 12</sup></b>
Finland	3 days
Portugal	9 days*
UK	10 days*
Denmark	15 days
Netherlands	15 days
Spain	21 days
Belgium	30 days
Sweden	30 days
Luxembourg	32 days
France	33 days
Austria	28-42 days
<b>Current offer from TĚ<sup>13</sup></b>	<b>40 working days</b>
Germany	46 days

<sup>11</sup> Typical Delivery Time is defined in accordance with Article 4 of Directive 92/44/EEC and refers to the time (in days) measured from the date of “firm request” to complete putting through to the customers of 95% of all of the application for leased lines of the same type during the monitoring period.

<sup>12</sup> Where the operator quotes metric for national and international circuits combined this is denoted by a \*

<sup>13</sup> From submission in response to the Consultation Paper.

**Table 2 : SMP Operator Performance in the EU Member States 1997 – Special Quality Voice Leased Lines (Service Provisioning)**

<b>SMP Operator</b>	<b>Typical Delivery Time (working days)<sup>14</sup></b>
Finland	5 days
Portugal	8 days*
UK	10 days*
Denmark	15 days
Netherlands	15 days
Spain	24 days
Belgium	30 days
Luxembourg	32 days
France	33 days
Austria	28-42 days
Sweden	40 days
<b>Current offer from TĚ</b>	<b>40 working days</b>
Germany	47 days

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<sup>14</sup> See footnotes 11 and 12

**Table 3 : SMP Operator Performance in the EU Member States 1997 – 64 Kbit/s Digital Leased Lines (Service Provisioning)**

<b>SMP Operator</b>	<b>Typical Delivery Time (working days)<sup>15</sup></b>
UK	7 days*
Portugal	7 days*
Italy	13 days*
Netherlands	15 days
Denmark	20 days
Luxembourg	27 days
Finland	28 days
Germany	29 days
Belgium	36 days
Sweden	40 days
Spain	41 days
France	45 days
Austria	42-56 days
<b>Current offer from TĚ</b>	<b>50-60 working days</b>

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<sup>15</sup> See footnotes 11 and 12

**Table 4 : SMP Operator Performance in the EU Member States 1997 – 2 Mbit/s  
Unstructured Digital Leased Lines (Service Provisioning)**

<b>SMP Operator</b>	<b>Typical Delivery Time (working days)<sup>16</sup></b>
Portugal	12 days*
Netherlands	15 days
UK	19 days*
Finland	21 days
Denmark	30 days
Belgium	30 days
Sweden	40 days
Germany	41 days
<b>Current offer from TĚ</b>	<b>50-60 working days</b>
Spain	64 days
France	83 days
Austria	56-84 days

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<sup>16</sup> See footnotes 11 and 12

**Table 5 : SMP Operator Performance in the EU Member States 1997 – 2 Mbit/s Structured Digital Leased Lines (Service Provisioning)**

<b>SMP Operator</b>	<b>Typical Delivery Time (working days)<sup>17</sup></b>
Portugal	12 days*
Italy	23 days*
Finland	25 days
Denmark	30 days
Belgium	30 days
Sweden	40 days
Germany	58 days
<b>Current offer from TĚ</b>	<b>50-60 working days</b>
Spain	72 days
France	83 days
Austria	56-84 days

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<sup>17</sup> See footnotes 11 and 12

**Table 6 : SMP Operator Performance in the EU Member States 1997 – Ordinary Quality Voice Leased Lines (Repair)**

SMP Operator	Typical Repair Time (working hours) <sup>18 19</sup>
UK	1.5 hours*
Portugal	2.6 hours
Italy	3 hours*
Spain	4.4 hours
Netherlands	4.5 hours
France	5.1 hours
Belgium	6.8 hours
Denmark	8 hours
Luxembourg	8 hours*
Germany	8.8 hours
Sweden	10 hours
Finland	20.1 hours
<b>Current offer from TĚ</b>	<b>TE does not make an offer for Max. Repair Time, rather Max. Response Time. of 4 hours</b>

<sup>18</sup> For highest level of available maintenance contract.

<sup>19</sup> Typical Repair Time is defined in defined in accordance with Article 4 of Directive 92/44/EEC and refers to the time duration (hours) within which 80% of all leased lines are repaired. (The time duration starts when a failure is given to the responsible unit within the leased line provider, and finishes when the line is re-established, and in appropriate cases, notified back in operation to the user.)

**Table 7 : SMP Operator Performance in the EU Member States 1997 – Special Quality Voice Leased Lines (Repair)**

<b>SMP Operator</b>	<b>Typical Repair Time (working hours)<sup>20</sup></b>
UK	1.5 hours*
Portugal	2.7 hours
Finland	3 hours
Italy	3 hours*
Spain	3.4 hours
Netherlands	4.5 hours
France	5.1 hours
Belgium	6.8 hours
Denmark	8 hours
Luxembourg	8 hours*
Sweden	10 hours
Germany	16.5 hours
<b>Current offer from TĚ</b>	<b>TE does not make an offer for Max. Repair Time, rather Max. Response Time. of 4 hours</b>

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<sup>20</sup> See footnotes 18 and 19

**Table 8 : SMP Operator Performance in the EU Member States 1997 – 64 Kbit/s Digital Leased Lines (Repair)**

<b>SMP Operator</b>	<b>Typical Repair Time (working hours)<sup>21</sup></b>
UK	1.3 hours*
Portugal	2.4 hours
Italy	3 hours*
France	4.2 hours
Netherlands	4.5 hours
Spain	4.7 hours
Belgium	5.3 hours
Germany	5.9 hours
Denmark	8 hours
Luxembourg	8 hours*
Sweden	10 hours
Finland	20.1 hours
<b>Current offer from TÉ</b>	<b>TE does not make an offer for Max. Repair Time, rather Max. Response Time. of 4 hours</b>

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<sup>21</sup> See footnotes 18 and 19

**Table 9 : SMP Operator Performance in the EU Member States 1997 – 2 Mbit/s  
Unstructured Digital Leased Lines (Repair)**

<b>SMP Operator</b>	<b>Typical Repair Time (working hours)<sup>22</sup></b>
Portugal	2.4 hours
Italy	3 hours*
Finland	3 hours
Netherlands	4.5 hours
Spain	4.7 hours
France	5 hours
Germany	7 hours
Denmark	8 hours
Luxembourg	8 hours*
Sweden	10 hours
Belgium	11 hours
<b>Current offer from TĚ</b>	<b>TE does not make an offer for Max. Repair Time, rather Max. Response Time. of 4 hours</b>

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<sup>22</sup> See footnotes 18 and 19

**Table 10 : SMP Operator Performance in the EU Member States 1997 – 2 Mbit/s Structured Digital Leased Lines (Repair)**

<b>SMP Operator</b>	<b>Typical Repair Time (working hours)<sup>23</sup></b>
Italy	3 hours*
Spain	4.4 hours
Netherlands	4.5 hours
France	5.1 hours
Belgium	6.75 hours
Denmark	8 hours
Luxembourg	8 hours*
Germany	8.8 hours
Sweden	10 hours
Finland	20.1 hours
<b>Current offer from TĚ</b>	<b>TE does not make an offer for Max. Repair Time, rather Max. Response Time. of 4 hours</b>

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<sup>23</sup> See footnotes 18 and 19