



Reference DSL Offer

Entreprise des Postes et Télécommunications

01/01/2009 – 31/12/2010

Prices in Euro

DOCUMENT SUBMITTED TO APPROVAL TO ILR AND NOT APPROVED BY ILR

| Date | Status |
|------------|---|
| 22.10.08 | Version dated October 08 transmitted to ILR for review and approval. |
| 15.01.09 | Version updated further to ILR's request dated 11.12.08. In order to conform to this request all the tariffs have been indicated in Schedule 7-Tariffs. |
| 19.02.09 | Version updated further to ILR's request dated 9.02.09 to amend in schedule 7 (i) point 7.1 "Tariffs Connect IP" |
| 23.02.10 | Version updated further to ILR's request dated 23.02.10 and introduction of VDSL. |
| 27.05.2010 | Document updated further to ILR's request dated 20.04.2010 |
| 15.06.2010 | Version updated further with increased upstream values. |
| 20.10.2010 | Version updated further with reviewed access prices (schedule 7, point 7.3) |
| 11.11.2010 | Version updated further to ILR's request dated 09.11.2010 to update prices (schedule 7, point 7.2) and make reference to the project plan (schedule 9). |

Table of content

| | |
|---|-----------|
| 1. Introduction | 4 |
| 1.1. Purpose | 4 |
| 1.2. Services covered | 4 |
| 1.3. Minimal terms | 4 |
| 1.4. No content liability | 5 |
| 1.5. Term | 5 |
| 1.6. Amendments | 5 |
| 1.7. Interpretation rules | 5 |
| 1.8. Prices | 6 |
| 2. Definitions | 7 |
| 3. The RDSLO Principles | 11 |
| 3.1. Service Description | 11 |
| 3.2. Responsibilities | 12 |
| 3.3. EPT's General Power | 13 |
| 3.4. Quality of Service – Service Level Agreement (SLA) | 14 |
| 3.5. System protection | 15 |
| 3.6. Configuration and technical constraints | 15 |
| 3.7. Scheduled System Alteration | 15 |
| 3.8. Works or intervention due to an EPT's network failure or an emergency case | 16 |
| 3.9. Coordination between the Parties | 17 |
| 3.10. Financial conditions | 17 |
| 3.11. Relations with End-Users and branding | 18 |
| 4. Property rights | 19 |
| 5. General terms and conditions | 20 |
| 5.1. Confidentiality | 20 |
| 5.2. Force Majeure | 20 |
| 5.3. Limitation of Liability | 21 |
| 6. Procedure for reaching a DSL Agreement | 22 |
| 7. Schedules 1 to 8 | 22 |
| Schedule 1 - Service Description - Connect IP | 23 |
| 1.1 Transport of HSI traffic for standard, professional and VDSL services | 23 |
| 1.2 Transport of Voice Traffic for VDSL services: | 25 |
| 1.3 Provisioning and Cessation | 27 |
| Schedule 2 - Service Description - DSL Access | 29 |
| 2.1 Description | 29 |
| 2.2 Standard DSL Services | 29 |
| 2.3 VDSL services | 30 |
| 2.4 Professional DSL Services | 31 |
| 2.5 End-User authentication and session management | 32 |
| Schedule 3 - Technical specifications for End-User access Equipment | 34 |
| 3.1 Active Equipment | 34 |
| 3.2 Passive Equipment | 34 |
| Schedule 4 - Planning, Ordering and Provisioning | 35 |
| 4.1 Forecasting | 35 |
| 4.2 Ordering procedure of Connect IP Services in the context of the RDSLO | 35 |
| 4.3 Ordering procedure of DSL Access services | 36 |
| 4.4 DSL Services installation | 37 |
| 4.5 Migration of a DSL Access | 41 |
| 4.6 Modification of DSL Services parameters | 43 |
| 4.7 Move request of a standard DSL Service | 43 |
| 4.8 Cancellation of a DSL Access | 43 |

| | | |
|------------|---|----|
| 4.10 | Relation with LLU and LLU Services..... | 44 |
| Schedule 5 | - Maintenance and Fault Repair | 45 |
| 5.1 | Fault Reporting And Repair..... | 45 |
| Schedule 6 | - Quality of Service – Service Level Agreement (SLA)..... | 48 |
| 6.1 | Service level..... | 48 |
| 6.2 | Standard SLA for DSL Services..... | 48 |
| Schedule 7 | - Tariffs..... | 50 |
| 7.1 | Connect IP | 50 |
| 7.2 | LuxDSL Access service – one-off charges..... | 50 |
| 7.3 | LuxDSL Access service – recurring charges..... | 51 |
| 7.4 | Subsequent change in applicable tariffs..... | 51 |
| 7.5 | Fault Repair | 51 |
| 7.6 | Manpower fees | 52 |
| Schedule 8 | - Parameter Schedule | 53 |
| 8.1 | Provisioning of DSL Services..... | 53 |
| 8.2 | Fault Reporting and Repair | 53 |
| 8.3 | Other | 53 |
| Schedule 9 | - Project Plan..... | 55 |

1. Introduction

1.1. Purpose

This Reference DSL Offer (“RDSLO”) defines the DSL access terms and conditions, which shall apply and be granted by EPT to Other Alternative Operators (“Operators”) for the provisioning of EPT’s (“Entreprise des P&T Luxembourg”) DSL access services (“DSL Services”) with the exclusive aim of enabling the Operator to provide IP-based services to its End-Users.

All Schedules attached to this RDSLO form an integral part hereof and detail the different DSL Services and their respective applicable provisioning terms offered by EPT under this RDSLO.

This RDSLO does not purport to diminish the rights of Operators to seek additional services, or EPT’s obligation to provide additional services under applicable law.

1.2. Services covered

The DSL Services do not include the access to the Internet for the Operator’s End-Users, which has to be provided by the Operator or another Internet service provider acting for or on behalf of the Operator.

Nevertheless, the scope of the DSL Services will be reviewed and amended from time to time to take into account and be adapted to the evolution of EPT’s retail DSL offers.

The DSL Services and this RDSLO are complementary to, as appropriate and/or need be, the applicable RLO, RCO, RIO and related implementation contacts executed by and between the Parties.

1.3. Minimal terms

This RDSLO defines the minimal DSL access terms and conditions which EPT will grant to other Operators. Nevertheless, EPT reserves the right to provide more beneficial terms and conditions, in accordance with the applicable regulatory framework, including the principle of non-discrimination.

1.4.No content liability

No Operator (including EPT) shall be responsible for the content of IP traffic or transactions passed through its network (including EPT's network) used by the Operator.

Laws and regulations regarding confidentiality and access by legal authorities to traffic or transactions on the Operator's and/or EPT's network will apply, it being nevertheless specified that the obligations of and relating to legal interception in relation to DSL Services shall be and remain under the sole Operator's responsibility.

For the purpose of the above, the Operator shall hold EPT free and harmless in respect to such obligations.

1.5.Term

This RDSLO is valid as from date of approval by ILR unless:

- A new RDSLO is approved or adopted by the ILR, as defined in Clause 1.6 below, or
- a material change occurs in the laws or regulations, governing telecommunications in Luxembourg.

1.6.Amendments

The content of this RDSLO may be timely reviewed and amended in order to comply with applicable rules and regulations.

Furthermore, ILR reserves the right to request or impose on EPT modifications to the applicable RDSLO or the adoption of a new RDSLO to be undertaken by EPT.

1.7.Interpretation rules

Unless expressly defined otherwise hereafter (in particular in article 2 – Definitions below), the terms used in this RDSLO shall be construed and interpreted in accordance with the Law of May 30, 2005 on Networks and Electronic Communication Services and its implementing regulations.

1.8. Prices

All prices mentioned in this RDSLO, including those specified in the Appendices attached hereto, are in EURO (€) and exclusive of Value-Added Tax (VAT) or any other legal taxes, which will be added where applicable.

2. Definitions

| Defined Terms | Meaning |
|-----------------------------------|---|
| Active Equipment | The equipment located in the End-User's premises and used for xDSL modulation (such as modems, routers, etc.), as well as the End-User's application equipment (such as e.g. personal computers). |
| ADSL | Asymmetric Digital Subscriber Line |
| BRAS | Broadband Remote Access Server. |
| Co-Location | The provision by EPT of physical space and technical facilities necessary to reasonably accommodate and connect the relevant equipment of an Operator. |
| Co-Location Equipment Room | Physical space in EPT site allocated for Co-Location purposes. |
| Commencement Date | Date at which a given DSL Service should be ready for commercial launch. |
| Confidential Information | Information that shall not be shared, in whole or in part, with third parties other than EPT and the relevant Operator, including in particular financial information, technical data, discoveries, know-how, techniques, designs, sketches, photographs, plans, drawings, blueprints, diagrams, specifications, marketing plans, studies, results, goals, sales figures, or other business information as well as any combination thereof. |
| Connect IP Service | Service to be provided by EPT in compliance with this RDSLO to handover the aggregated IP streams from the DSL Access lines to the Operator's telecommunication systems and necessary for the Operator to be provided with DSL Services. |
| Disclosing Party | The party in a DSL Agreement handing over Confidential Information. |
| Donor Operator | The Operator from which a DSL End-User is migrating to a Receiving Operator. |
| DSL Access | The access of the Operator's End-Users to the DSL Network, including traffic routing through the DSL Network to the relevant POI, for the purpose of the provisioning by the concerned Operator of broadband telecommunications service(s) to the said End-Users. |
| DSL Agreement | The agreement between EPT and the concerned Operator, including the schedules and – if relevant – amendments thereto, to be entered in for the provisioning of the DSL Services to the Operator in compliance with the applicable RDSLO, which forms an integral part thereof. |
| DSL Network | EPT's DSL network used for the provision of the DSL Services as well as EPT's corresponding DSL retail services. |
| DSL Professional Services | The DSL Services for professional End-Users, corresponding to EPT's professional DSL profiles: Professional 1 and Professional 2. |
| DSL Service(s) | xDSL service(s) provided as wholesale product by EPT to other Operators as specified in the present RDSLO and including DSL Access and as the case may be, DSL Standard Services and/or VDSL Services and/or DSL Professional Services. |
| DSL Standard | The DSL Services for standard or residential End-Users, corresponding |

| | |
|--|--|
| Services | to EPT's standard DSL profiles: Residential Light, Residential Medium and Residential Large and/or additional profiles as proposed in this RDSLO |
| End-User | Any natural or legal person with whom EPT or Operator(s) has entered into an agreement for the provision of publicly available telecommunication services. |
| EPT | Entreprise des Postes et des Télécommunications, an autonomous " <i>Etablissement public</i> " created by the " <i>Loi du 10 août 1992 portant création de l'Entreprise des Postes et Télécommunications</i> ". |
| EPT FCP | The Fault Contact Point provided by EPT to the relevant End-User and the Operator for addressing Fault Reports. |
| EPT's Web Site | EPT's interconnect Web site at: http://interconnect.ept.lu . |
| Fault Report | A written report sent by Operator to EPT in case of faults discovered within the DSL Services and/or on EPT's network in relation to the DSL Services. |
| Forecast | The rolling order forecast of both (i) DSL Services and of (ii) loops respectively contemplated to be requested by an Operator for the coming twelve (12) calendar months (" Forecast Period ") that has to provide to EPT on a quarterly basis, it being specified that the Forecast volumes applicable to the first three (3) calendar months of the relevant Forecast Period (" Firm Forecast Period ") shall be fixed, firm and precisely specified per month, while the ones applicable to the following three quarters (" Estimate Forecast Period ", each successive quarter thereof being respectively named Q2, Q3, and Q4) shall be only estimates to be specified per whole quarter. |
| HSI | High speed Internet |
| ILR - Institut Luxembourgeois de Régulation | The national regulatory authority in Luxembourg. |
| Incident Ticket | The written confirmation notice to be sent by EPT to Operator FCP (i) upon opening of an incident ticket after receipt of a valid Fault Report communicated by the Operator to relevant EPT FCP and specifying EPT's reference number of the concerned incident ticket (" Incident Ticket Opening ") and afterwards (ii) upon closing of the relating incident ticket, either after remedy of the concerned fault or after closure of the Fault Report for any other valid reason (" Incident Ticket Closing "). For the sake of clarity, the time computation relating to EPT's service level shall start to count as of the date and time of the Incident Ticket Opening and end at the date and time of the related Incident Ticket Closing. |
| IP - Internet Protocol | The protocol used to exchange information via the Internet network. |
| ISDN | Integrated Services Digital Network. |
| LLU Services | Unbundling services, including as the case may be metallic path facility, sub-loop unbundling services or shared local loop services. |
| L2TP | Layer 2 Tunnelling Protocol |

| | |
|--|--|
| Migration | Process applicable when an End-User is migrating for any type(s) of electronic communication services whereby the electronic communication service(s) initially provided by the Donor Operator will be cancelled and then activated for further provision by the Receiving Operator. |
| NTP - Network Termination Point | The termination point of the raw copper section at the relevant End-User's premises at which point the EPT's access network ends. |
| Operator | Any legal or natural person exploiting telecommunications networks and/or providing telecommunications services in Luxembourg as approved by the ILR. |
| Operator FCP | The Fault Contact Point provided by the Operator for the relevant End-User and EPT. |
| Parties | EPT and the Operator with which a DSL Agreement for the provisioning of DSL Services is (being) concluded. |
| Party | As the case may be, either EPT or the Operator with which a DSL Agreement for the provisioning of DSL Services is (being) concluded. |
| Passive Equipment | The central splitters and distributed micro-filters as well as related cabling, required under this RDSLO for the purpose of the provisioning of DSL Services. |
| POI | Point of Interconnect between the Operator's network and EPT's network for the purpose of DSL Services, e.g. the BRAS. |
| PRI | Primary Rate Interface. |
| PSTN | Public Services Telephone Network. |
| RDSLO - Reference DSL Offer | The present reference offer for DSL Services. |
| Receiving Operator | The Operator receiving a migrated DSL End-User from a Donor Operator. |
| RCO | The applicable Reference Colocation Offer as approved by the ILR. |
| RIO | The applicable Reference Interconnect Offer as approved by the ILR. |
| RLO | The applicable Reference Line rental Offer as approved by the ILR. |
| RUO | The applicable Reference Unbundling Offer as approved by the ILR. |
| Schedule(s) | The schedule(s) attached to this RDSLO, as listed in its table of contents. |
| VDSL | Very-high bit rate Digital Subscriber Line. |
| VDSL Services | The DSL Services corresponding to EPT's VDSL profiles |
| VoE | Voice over Ethernet |
| WLR Service | The Wholesale Line Rental as specified in the RLO and the corresponding WLR Agreement signed between Parties. |
| xDSL | Digital subscribe line technologies using the copper access network to provide broadband services to customer premises. xDSL technologies supported by EPT include ADSL1, ADSL2, ADSL2+ and VDSL2 technologies depending on the available infrastructure between EPT's broadband backbone equipment and the concerned End-User premises. |

3. The RDSLO Principles

3.1. Service Description

3.1.1 The EPT DSL Services shall:

- (i) be provided by EPT to an Operator in accordance with the terms and conditions of this RDSLO;
- (ii) consist of and include the provisioning by EPT to an Operator of:
 - a) a DSL Access to enable the Operator to provide broadband telecommunications service(s) to End-Users, and
 - b) a related Connect IP Service to handover (at the POI) the aggregated IP streams from the Operator's DSL Access lines referred to in item sub a) above to the Operator's telecommunication systems;
- (iii) only be used for the delivery by the relevant Operator to End-Users of xDSL services, which are compliant with the specifications as referred to in the relevant Schedules; and
- (iv) only be provided on a line where EPT's DSL Network for standard or professional DSL or EPT's VDSL Network for EPT's VDSL are available.

3.1.2 The DSL Service shall be extended and adapted pursuant to the technical changes of EPT's corresponding retail services in order to enable the Operator to provide a service to its End-Users with the equivalent technical characteristics as the services provided by EPT to its retail End-Users.

3.1.3 By opting for the provisioning of DSL Services pursuant to this RDSLO and entering into a DSL Agreement, any Operator having priorly entered with EPT into an agreement on the provisioning of LuxDSL-Wholesale/Connect IP product, which is a non-regulated broadband access product commercialised by EPT before the entry into force of this RDSLO, automatically and expressly agrees to both (i) terminate the LuxDSL-Wholesale/Connect IP agreement with immediate effect as of the date of entry into force of the DSL Agreement and (ii) migrate

without undue delay any and all the said services to the new DSL Agreement. In such a case, a migration scenario and related timing shall be worked out by EPT for the concerned Operator and further complied with by the Parties.

3.2.Responsibilities

3.2.1 EPT's responsibilities

EPT shall be responsible for:

- (i) The access network used to provide the DSL Service from End-User's NTP to the POI;
 - (ii) Connecting or disconnecting DSL Access lines further to and in compliance with valid Operator's confirmed orders submitted to EPT in accordance with Schedule 4 – Planning, Ordering and Provisioning;
 - (iii) Informing the Operator on system alteration to be made in EPT's network and having a potential effect on the services offered by the Operator in compliance with Article 3.7 – Scheduled System Alteration below.
- EPT shall not be responsible for the performance and follow-up of any service that the Operator operates on a DSL Access and provided to the latter as part of the DSL Services.
 - EPT shall in no case be obliged to expand, modify or condition in any way EPT's DSL Network (or part of it, including new connections to existing and/or new buildings), to provide any part of the DSL Services, unless expressly agreed otherwise in the DSL Agreement and only to the strict extend as specifically agreed upon by and between the Parties.

3.2.2 Operator's Responsibilities

The Operator shall be responsible for:

- (i) Ordering or terminating, as the case may be, a DSL Service in accordance with Schedule 4 – Planning, Ordering and Provisioning. .
- (ii) Using exclusively telecommunications terminal equipment compliant to "*Règlement grand-ducal du 4 février 2000 concernant les équipements hertziens et les équipements terminaux de télécommunications et la reconnaissance mutuelle de leur conformité*".

- (iii) Conducting appropriate fault testing and timely producing associated Fault Reports to evidence faults in the EPT's network in accordance with this RDSLO and in particular with Schedule 5- Maintenance and fault Repair.
- (iv) Complying with any obligations of or related to legal interception.
- (v) Informing the relevant End-User about all technical modifications required on his/her existing installation and the service impacts that might occur and
- (vi) Tracking EPT's system alteration activities in order to make sure that the End-User's services are maintained.

3.3.EPT's General Power

- 3.3.1 EPT may refuse to grant access to any DSL Services to any Operator for justified technical constraints or the necessity to warrant EPT's network's integrity.
- 3.3.2 Occasionally, EPT, acting reasonably, may suspend in whole or in part the DSL Services as described in this RDSLO for any of the following reasons:
 - (i) If required by a national or regional authority duly authorised and empowered to do so, or
 - (ii) for the purpose of repair, maintenance and/or improvement of any of EPT's network, telecommunication systems and telecommunications apparatus.
- 3.3.3 Wherever possible, EPT will give the Operator reasonable written notice before performing any of the actions related to the above and EPT will do its best efforts to restore DSL Services as soon as possible after the concerned temporary suspension.
- 3.3.4 EPT shall have the right to disconnect the compliant equipment or any part of it without prior reference or notice to the Operator if at such time, in EPT's reasonable opinion it is exposing or could expose any person to any danger of death or injury.
- 3.3.5 Without prejudice to the foregoing clause, EPT shall have the right to request the Operator to disconnect any compliant equipment or any part of it within a reasonable time period, if, at such time, in EPT's reasonable opinion, it is causing, suspected of causing or could cause damage to the DSL Network or if such exposure or damage is or may be imminent, EPT will immediately notify the Operator of the circumstances in which such compliant equipment has to be

- disconnected. If the Operator has not disconnected the concerned equipment within a reasonable time period, EPT shall have the right to disconnect itself the concerned equipment after prior notification thereof to the Operator.
- 3.3.6 EPT shall not be liable to the Operator for any loss, damage or injury arising due to EPT's action in disconnecting the compliant equipment or for any interruption to the telecommunication service carried out by the Operator using the compliant equipment howsoever caused, except where the loss damage or injury is caused directly due to EPT's gross negligence.
- 3.3.7 In the event of a disconnection in accordance with the above, the Operator shall not reconnect the compliant equipment until the reasons for its disconnection have been fully remedied. In case the danger or threat referred to above is caused directly due to EPT's negligence, then EPT shall reimburse to the Operator the evidenced reasonable direct costs of reconnecting the compliant equipment.

3.4. Quality of Service – Service Level Agreement (SLA)

3.4.1 Service level

The Service level set out in Schedule 6 – Service Level Agreement attached hereto shall apply to the provision of the DSL Services and is in line with the service level granted by EPT to its retail End-Users for similar services, while the said Service level shall not apply in case of any Force Majeure event.

3.4.2 Specific case of Rush Order(s)

In case an Operator is willing that the DSL Agreement covers the specific case of urgent orders, whatever the type thereof (such as e.g. installation and/or modification orders), to be carried out with priority and within short periods upon Operator's express demand ("Rush Orders"), EPT will provide the said Operator upon written request with a commercial offer specifying the terms and conditions of acceptance and treatment by EPT of such Rush Orders, including in particular:

- (i) the list of services and/or products within DSL Services concerned by the possibility of Rush Orders,
- (ii) the hours of reception and treatment of such Rush Orders (normal business

hours or otherwise),

(iii) the lump price supplement to be paid specifically in such case, depending notably on the concerned maximum treatment time period and the hours (normal business hours or otherwise) during which a Rush Order can be treated by EPT, as well as

(iv) the procedure to be complied with by the Operator in case of Rush Orders.

Upon agreement of this specific commercial offer by the Parties, the corresponding provisions will be included in the respective DSL Agreement to be signed by and between the Parties.

3.5. System protection

Each Party is responsible for the safe operation of its respective system and shall take all reasonable and necessary steps and measures in its operation, implementation and maintenance to ensure that its system does not:

- (i) Endanger the safety or health of employees, contractors, agents or End-Users of the other Party, nor
- (ii) damage, interfere with or cause any deterioration in the operation of the other Party's system or a third party operator's system.

3.6. Configuration and technical constraints

3.6.1 DSL Access lines will be provided in accordance with the technical constraints specified in Schedule 3 – Technical specifications for End-User access Equipment.

3.6.2 EPT shall in no case be liable for any shortage of access lines or cable saturation, e.g. due to broadband usage.

3.7. Scheduled System Alteration

3.7.1 Scheduled system alteration with major impact

When EPT wants to make a system alteration which may reasonably have a major impact on the proper provision of the DSL Services under this RDSLO to one or several Operator(s), it shall give to the concerned Operator(s) and to the

ILR a minimum two (2)-month written notice prior to the foreseen date of the anticipated system alteration, which shall specify the technical details of the contemplated system alteration and the foreseen date of the said anticipated system alteration.

Following such notification, EPT shall provide to the Operator additional information, as the Operator may reasonably request, including, to the extent reasonably practicable, the potential impact thereof on the service(s) provided by the Operator to the End-Users.

Upon an Operator's express request, EPT will grant access to a special test platform where the said Operator can test the compatibility of its Active Equipments with the latest software version applied in EPT's DSL Network.

3.7.2 Scheduled system alteration without major impact

When EPT wants to make a system alteration which may reasonably not have a major impact on the proper provision of the DSL Services under this RDSLO to one or several Operator(s), it shall give to the concerned Operator(s) a prior notice having regards to the circumstances which shall in no case be less than three (3) business days prior to the foreseen date of the said anticipated system alteration. Such notification shall specify the technical details of the contemplated system alteration, the foreseen date of the related works and the reasonably foreseeable impact of the said works on the DSL Services provisioning.

3.8. Works or intervention due to an EPT's network failure or an emergency case

In case EPT has to intervene on its network further to a network failure or an emergency case, EPT will do its best efforts to limit the time of its intervention having a possible impact on the provisioning of the DSL Services to the reasonable minimum time having regards to the circumstances. In any case, EPT will inform the Operators of such an intervention as soon as reasonably possible, while the restoration of the service provisioning on EPT's network shall be the priority.

3.9.Coordination between the Parties

3.9.1 EPT will put into place entities in order to manage provisioning, maintenance and fault repair of the DSL Services, which will be accessible from 8 a.m. to 12 a.m. and from 1 p.m. to 5 p.m. from Monday to Friday, except on legal, public and usage holidays in Luxembourg.

The contact details of these entities will be published on the EPT's Web Site and shall be the exclusive contact points for any and all Operator's handling questions regarding the operational management of the DSL Services.

3.9.2 The Operator undertakes to (i) contact only the EPT's contact points as specified here above and to (ii) provide its own contact points for the management of DSL Services, including for questions regarding operational subjects.

3.9.3 The EPT's and the concerned Operator's respective contact points in relation to this RDSLO and to the provision and maintenance of the DSL Services are or, as the case may be, will be specified in the concerned DSL Agreement. In addition EPT will publish its contact points on EPT's Website, while the later version thereof shall always prevail over older ones.

3.10.Financial conditions

3.10.1 Applicable tariffs and billing modalities

In counterpart of the DSL Services provided by EPT under this RDSLO, the Operator shall pay the tariffs specified in Schedule 7 – Tariffs.

Billing procedures are or, as the case may be, will be described in the DSL Agreement between the concerned Operator and EPT.

3.10.2 Bank guarantee

Upon EPT's request, the Operator shall provide an irrevocable and unconditional bank guarantee issued in favour of EPT by an EU financial institution for an amount of 25.000,- €:

- before EPT's acceptance of any order in case the Operator's creditworthiness appears to be not sufficient for the DSL Services to be provided by EPT; or in case
- the Operator has had repetitive credit defaults in the past towards EPT,

whichever may be the type of services concerned;

- the Operator fails to make payment to EPT of any undisputed amount when due in relation to the DSL Services; or
- in case the Operator has a material, negative change in its financial conditions and/or creditworthiness.

The above-mentioned guarantee shall be issued for a period equivalent to the duration of the DSL Agreement, but may be extended having regards to the circumstances upon EPT's request.

3.10.3 Reasonable doubts on an Operator's creditworthiness

When, and as long as serious and ascertained doubts exist regarding the Operator's creditworthiness or solvency, EPT may without prejudice to previous arrangements require payment in advance.

3.11.Relations with End-Users and branding

3.11.1 End-Users

Without prejudice to the applicable regulatory framework, EPT will not undertake customer handling/care of the Operator's End-Users.

3.11.2 Branding

The Parties agree not to offer any DSL Service under any brand, including any trademark, trade name or company name of the other Party unless the use of the brand(s) of the other Party is expressly agreed upon in writing between the Parties. Such use of the brand will then be strictly limited to the service at stake.

EPT is allowed to use, for all interventions in the context of this RDSLO, its normal vehicles and staff uniforms with all advertising on them as for its own products and services.

The Operator is not allowed to attach any branding or advertising signs on EPT's equipment and infrastructure, neither in EPT's sites nor in End-User's sites.

4. Property rights

All relevant infrastructures used for the provisioning of DSL Services to the Operator remains and shall remain the integral property of EPT.

Any software and/or user manuals provided or made available by EPT to the Operator in relation to any part the DSL Services:

- (i) are and shall remain protected by applicable copyright law and as such, any copy, translation, transcription, bearing, correction, integration modification thereof, whichever may be the type, support, way and/or extend thereof, either by the Operator or by an End-User, is strictly prohibited; and
- (ii) shall remain the exclusive property of, as the case may be, EPT or any third party having title thereto.

While the Operator expressly undertakes to take and/or cause to take all and all necessary or appropriate steps and measures to prevent any breach of the above provisions.

With the cessation of any part of the DSL Services either by the Operator or by a specific End-User, whatever the reason, any usage rights of the Operator on that relevant infrastructure, software and/or user manuals shall automatically expire on the effective cessation date of the DSL Services, without EPT having to carry out any specific steps in relation thereto and/or for that specific purpose.

5. General terms and conditions

5.1. Confidentiality

- 5.1.1 A Receiving Party shall keep in the strictest confidence all Confidential Information, whichever may be the way or support of its transmission (e.g. in writing, via e-mail or orally) and will not disclose such information to any third party unless the Disclosing Party expressly prior agrees in writing to the release or disclosure of that specific Confidential Information to the said third party. A Receiving Party shall exercise at least the same security level and degree of care than that Party applies to protect its own Confidential Information of an equivalent nature, and in no case less than reasonable care.
- 5.1.2 Confidential Information shall be used by the Receiving Party solely for the purposes for which it was disclosed.
- 5.1.3 The Operator has to inform the End-User that his/her personal data is being transferred to EPT, as specified and/or required by the national data protection legislation.

5.2. Force Majeure

- 5.2.1 Neither Party shall be liable for any breach of a DSL Agreement or delay in the implementation of any of its obligations under a DSL Agreement caused by a Force Majeure event, i.e. an unforeseeable and irresistible event beyond the Parties' reasonable control and which prevents the performance by the affected Party of its obligations under the DSL Agreement and/or this RDSLO.
- 5.2.2 For the sake of clarity, the following events shall construed as being a Force Majeure event, without this list being exhaustive: irresistible and unforeseeable natural phenomena (such as floods, hurricane, lightening, ...), war(s), invasion(s), revolution(s), riot(s), governmental act(s), general strike(s) or similar event(s), epidemics, major machinery and/or equipment breach, civil works and/or third party's intervention damaging in whole or in part EPT's network and/or equipment and impacting and/or interrupting any part of the DSL Services and/or related provisioning.
- 5.2.3 The Party affected by a Force Majeure event shall promptly notify the other upon

- occurrence thereof of the estimated extent and duration of such inability to perform its obligations and do its reasonable efforts to mitigate the detrimental consequences of the said Force Majeure event.
- 5.2.4 As soon as reasonably practicable after cessation of the said Force Majeure event, the concerned Party shall notify the other thereof and deliveries under and/or performance of a DSL Agreement shall be resumed without undue delay.
- 5.2.5 If, as a result of a Force Majeure event, the performance by either Party of its obligations under a DSL Agreement is only partially affected, such Party shall nevertheless remain liable for the performance of those obligations not affected by the said Force Majeure event.
- 5.2.6 To the extent that a Party is prevented, as a result of a Force Majeure event, from providing all or part of the services or facilities to be provided under a DSL Agreement, the other Party shall be released to the equivalent extent from its obligations to make payment for such services or facilities.

5.3. Limitation of Liability

- 5.3.1 Neither Party undertakes any liability for any act or omission of a third party provider of telecommunications services nor shall be held liable for such act or omission. As a consequence, the Party affected by such an act or omission shall carry out all appropriate rights and measures against the concerned third party provider of telecommunications services, without involving the other Party, while the latter will, if appropriate having regards to the circumstances, reasonably cooperate with the concerned other Party in relation to the above.
- 5.3.2 Neither Party excludes or restricts its liability for death or personal injury caused by its own negligence or liability.
- 5.3.3 Neither Party will be liable to the other for any claims, proceedings or actions brought or made against that Party by an End-User of services provided by that Party.
- 5.3.4 Neither Party shall be liable to the other in contract, tort (including gross negligence or breach of statutory duty) or otherwise for indirect or consequential damage or any other losses of profit whatsoever arising in connection with the execution and/or implementation of a DSL Agreement, howsoever caused.

6. Procedure for reaching a DSL Agreement

DSL Agreements will be negotiated and entered into, based on the standard terms and conditions approved by the ILR, pursuant to and in compliance with the applicable legislation.

These standard terms and conditions will be made available after signature of a non-disclosure agreement.

Requests for entering into a DSL Agreement with EPT under this RDSLO must be made in writing and per registered mail to the following address:

Entreprise des Postes et Télécommunications

Direction Générale

L-2020 Luxembourg

Tel: +352 47 65 1

Fax: +352 47 51 10

7. Schedules 1 to 8

Schedule 1 - Service Description - Connect IP

The Connect IP Service allows the Operator to connect to EPT's DSL Network. Therefore, an IP interconnection is established with the EPT's platform aggregating the DSL Access lines. Within the scope of this RDSLO two scenarios are possible depending which xDSL service is used.

1.1 Transport of HSI traffic for standard, professional and VDSL services

1.1.1 Description

Connect IP Service uses L2TP tunnelling between EPT's BRAS and the Operator's tunnelling termination equipment. The tunnels are initiated by EPT's BRAS(s), which ensure(s) the LAC (L2TP Access Concentrator) function. The equipment(s) of the Operator are terminating the tunnels and ensure as such the function of the LNS (L2TP Network Server).

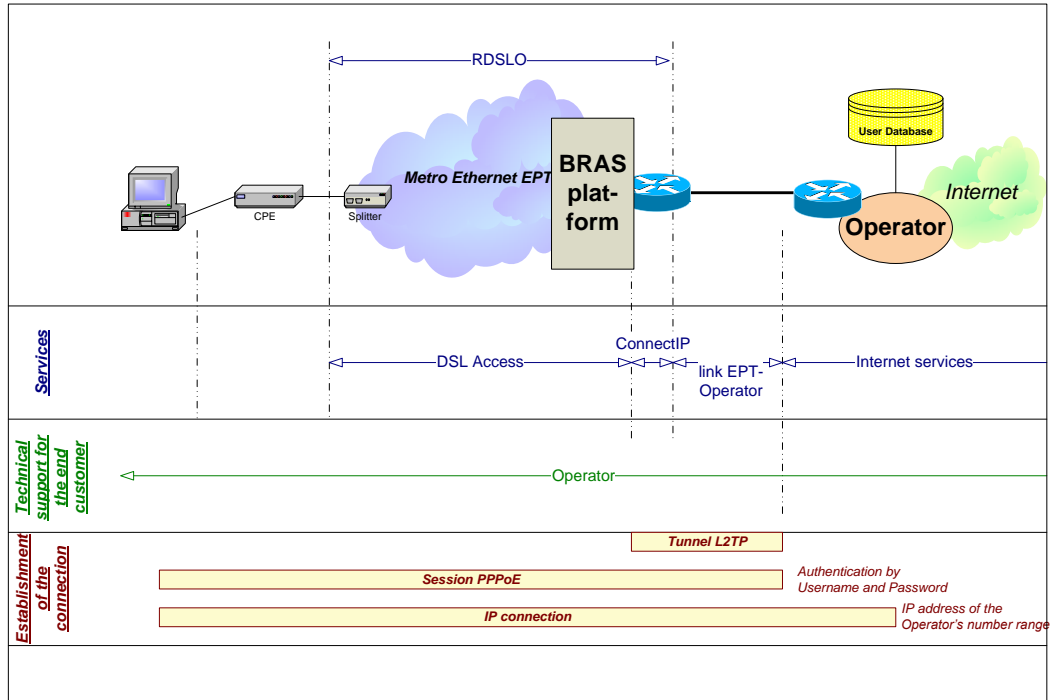
The Connect IP Service offered by EPT covers the Ethernet interface on EPT's BRAS, as well as the routing of the traffic of the Operator's End-Users from the BRAS to the said interface (POI).

All Operators' DSL access lines can be reached via one single Connect IP service. This is independent from the number of BRAS(s) used by EPT within its DSL Network. The necessary routing between the different BRAS(s) lies under EPT's responsibility.

The following bandwidths are available:

| Total bandwidth of the Connect IP Service | Interface |
|--|------------------|
| 100 Mbit/s | FastEthernet |
| 200 Mbit/s | GbitEthernet |
| 400 Mbit/s | GbitEthernet |
| 700 Mbit/s | GbitEthernet |
| 1 Gbit/s | GbitEthernet |

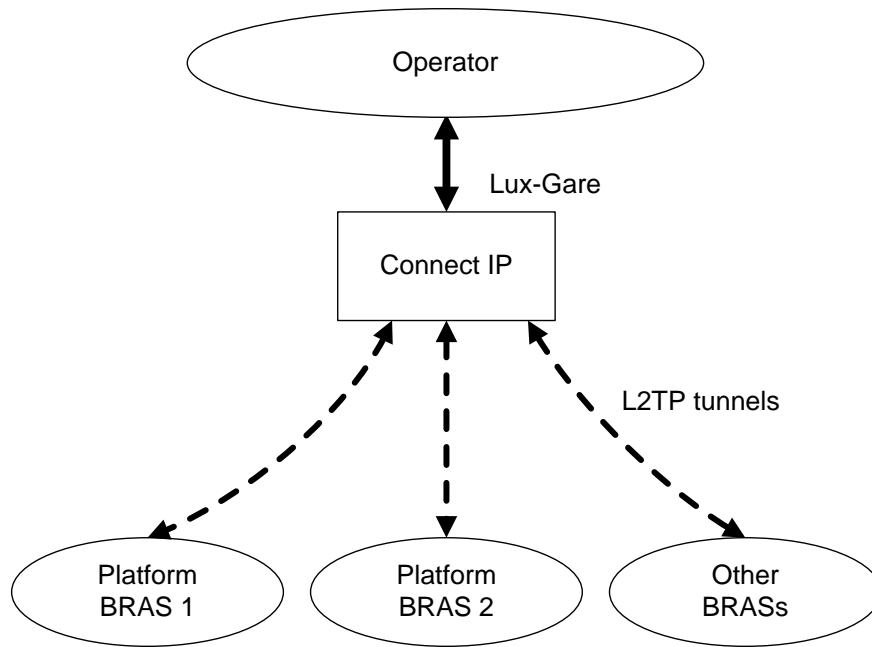
1.1.2 Overview



1.1.3 Connect IP tunnels

The Connect IP Service offer includes an unprotected Ethernet access to EPT's BRAS situated at its central exchange at Luxembourg-Gare on a Fast Ethernet or Gigabit Ethernet interface. The necessary IP-addresses used to establish the IP connectivity between End User's Active Equipment and the Operator's tunnelling terminating equipment are provided and owned by the Operator.

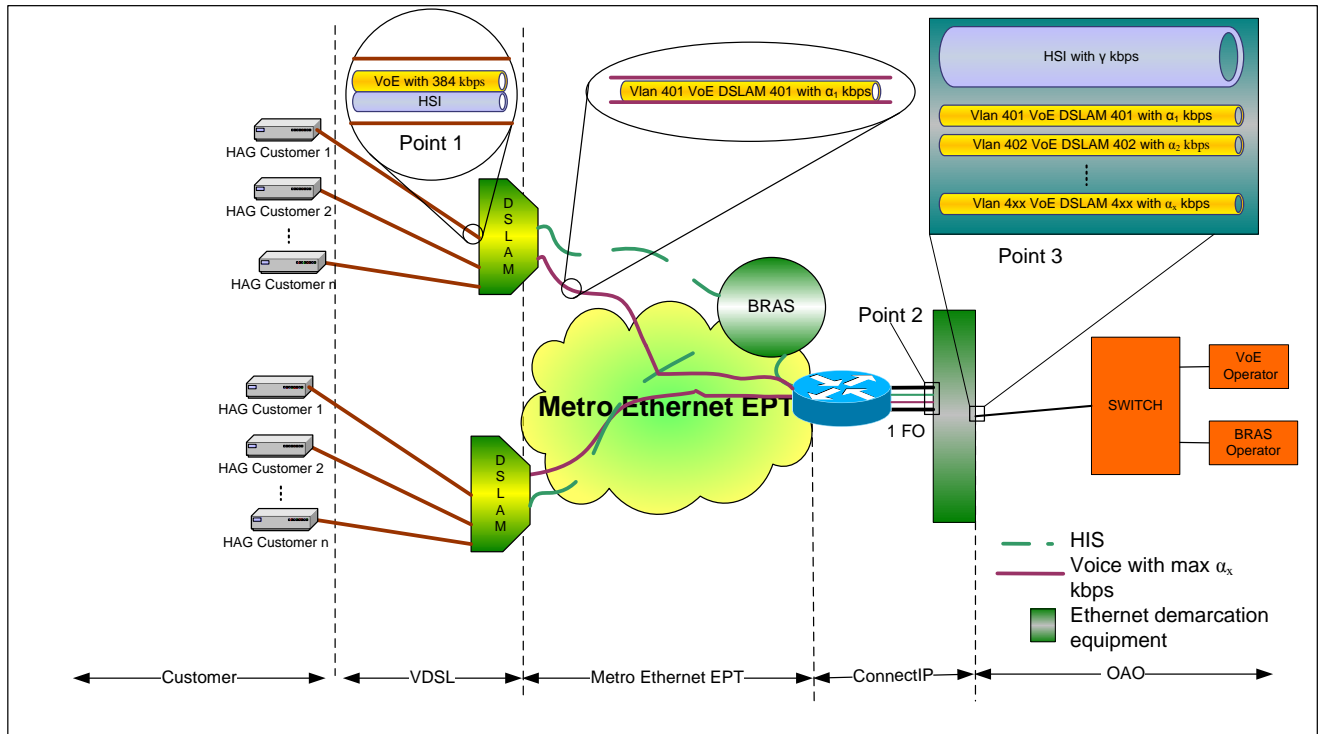
Via the said Connect IP access, a L2TP tunnel is established via an internal EPT trunking from each EPT's BRAS to the Operator.



1.2 Transport of Voice Traffic for VDSL services:

For VDSL lines, additional VLANs with Voice quality as described below are provided.

1.2.1 Description



The VLANs designated for VoE services, with a higher priority, are for the exclusive use of VoE protocols. For each DSLAM one VLAN is available (Point 1 to Point 2). The identification of each VLAN is done by the S-TAG, the C-TAG is for identification of the service, in this case VoE. For a VLAN between the ConnectIP demarcation point and each DSLAM a bandwidth of 3 Mbit/s is offered by default. Packets exceeding this limit will be rejected by EPT's network. However, based on justified reasons, the Operator can require additional bandwidth for those VLANs.

The overall capacity ordered at the Connect IP demarcation point (Point 3) is thus divided into two streams: (i) a VLAN for HSI traffic, (best effort quality), and (ii) one stream for VoE traffic (regrouping all VLANs VoE between the DSLAMs and the ConnectIP demarcation Point with priority bit).

With the Order fir the ConnectIP the Operator has to specify the capacity required for

- HSI traffic as well as the
- total needed traffic for VoE at Point 3. The ordered VoE capacity may differ from the sum of all VoE-VLANs ($\sum \alpha_i$)

In case of violation of the defined service parameters for the VLANs VoE, EPT will apply policing as defined by the MEF¹. The Operator has thus to guarantee that his IP-streams fulfil the defined service parameters.

¹ http://www.metroethernetforum.org/MSWord_Documents/MEF10.2.doc (last access 1.2.2010)

The configuration of the VLANs VoE between the ConnectIP demarcation point and the DSLAMs (Point 1 and Point 2) is as follows :

| | Network Control (NC) | Data VoE | Signalisation VoE | Traffic "Best Effort" |
|------------------|--------------------------------------|------------------------------------|--|-----------------------|
| « Priority Bit » | 6 | 7 | 5 | 0 |
| 3 Mbit/s | CIR: 0,15 Mbit/s CBS: 0,015 Mbyte | CIR: 2,1 Mbit/s CBS: 0,21 Mbyte | CIR: 0,15 Mbit/s EIR: 0,03 Mbit/s CBS: 0,015 Mbyte EBS: 0,003 Mbyte | EIR: 3 EBS: 0,3 |

The configuration of the VoE stream at the ConnectIP demarcation point (Point 3) is as follows :

| | Network Control (NC) | Data VoE | Signalisation VoE | Traffic "Best Effort" |
|------------------|--------------------------------------|------------------------------------|--|-------------------------|
| « Priority Bit » | 6 | 7 | 5 | 0 |
| 3 Mbit/s | CIR: 0,15 Mbit/s CBS: 0,015 Mbyte | CIR: 2,1 Mbit/s CBS: 0,21 Mbyte | CIR: 0,15 Mbit/s EIR: 0,03 Mbit/s CBS: 0,015 Mbyte EBS: 0,003 Mbyte | EIR: 3 EBS: 0,3 |
| 4 Mbit/s | CIR: 0,2 Mbit/s CBS: 0,02 Mbyte | CIR: 2,8 Mbit/s CBS: 0,28 Mbyte | CIR: 0,2 Mbit/s EIR: 0,04 Mbit/s CBS: 0,02 Mbyte EBS: 0,004 Mbyte | EIR: 4 EBS: 0,4 |
| 5 Mbit/s | CIR: 0,25 Mbit/s CBS: 0,025 Mbyte | CIR: 3,5 Mbit/s CBS: 0,35 Mbyte | CIR: 0,25 Mbit/s EIR: 0,05 Mbit/s CBS: 0,025 Mbyte EBS: 0,005 Mbyte | EIR: 5 EBS: 0,5 |
| 7 Mbit/s | CIR: 0,35 Mbit/s CBS: 0,035 Mbyte | CIR: 4,9 Mbit/s CBS: 0,49 Mbyte | CIR: 0,35 Mbit/s EIR: 0,07 Mbit/s CBS: 0,035 Mbyte EBS: 0,007 Mbyte | EIR: 7 EBS: 0,7 |
| 10 Mbit/s | CIR: 0,5 Mbit/s CBS: 0,05 Mbyte | CIR: 7 Mbit/s CBS: 0,7 Mbyte | CIR: 0,5 Mbit/s EIR: 0,1 Mbit/s CBS: 0,05 Mbyte EBS: 0,01 Mbyte | EIR: 10 EBS: 1,0 |
| 20 Mbit/s | CIR: 1 Mbit/s CBS: 0,1 Mbyte | CIR: 14 Mbit/s CBS: 1,4 Mbyte | CIR: 1 Mbit/s EIR: 0,2 Mbit/s CBS: 0,1 Mbyte EBS: 0,02 Mbyte | EIR: 20 EBS: 2,0 |
| 30 Mbit/s | CIR: 1,5 Mbit/s CBS: 0,15 Mbyte | CIR: 21 Mbit/s CBS: 2,1 Mbyte | CIR: 1,5 Mbit/s EIR: 0,3 Mbit/s CBS: 0,15 Mbyte EBS: 0,03 Mbyte | EIR: 30 EBS: 3,0 |
| 50 Mbit/s | CIR: 2,5 Mbit/s CBS: 0,25 Mbyte | CIR: 35 Mbit/s CBS: 3,5 Mbyte | CIR: 2,5 Mbit/s EIR: 0,5 Mbit/s CBS: 0,25 Mbyte EBS: 0,05 Mbyte | EIR: 50 EBS: 5,0 |
| 70 Mbit/s | CIR: 3,5 Mbit/s CBS: 0,35 Mbyte | CIR: 49 Mbit/s CBS: 4,9 Mbyte | CIR: 3,5 Mbit/s EIR: 0,7 Mbit/s CBS: 0,35 Mbyte EBS: 0,07 Mbyte | EIR: 70 EBS: 7,0 |
| 100 Mbit/s | CIR: 5 Mbit/s CBS: 0,5 Mbyte | CIR: 70 Mbit/s CBS: 7 Mbyte | CIR: 5 Mbit/s EIR: 1 Mbit/s CBS: 0,5 Mbyte EBS: 0,1 Mbyte | EIR: 100 EBS: 10,0 |
| 200 Mbit/s | CIR: 10 Mbit/s CBS: 1 Mbyte | CIR: 140 Mbit/s CBS: 14 Mbyte | CIR: 10 Mbit/s EIR: 2 Mbit/s CBS: 1 Mbyte EBS: 0,2 Mbyte | EIR: 200 EBS: 20,0 |
| 300 Mbit/s | CIR: 15 Mbit/s CBS: 1,5 Mbyte | CIR: 210 Mbit/s CBS: 21 Mbyte | CIR: 15 Mbit/s EIR: 3 Mbit/s CBS: 1,5 Mbyte EBS: 0,3 Mbyte | EIR: 300 EBS: 30,0 |
| 500 Mbit/s | CIR: 25 Mbit/s CBS: 2,5 Mbyte | CIR: 350 Mbit/s CBS: 35 Mbyte | CIR: 25 Mbit/s EIR: 5 Mbit/s CBS: 2,5 Mbyte EBS: 0,5 Mbyte | EIR: 500 EBS: 50,0 |
| 700 Mbit/s | CIR: 35 Mbit/s CBS: 3,5 Mbyte | CIR: 490 Mbit/s CBS: 49 Mbyte | CIR: 35 Mbit/s EIR: 7 Mbit/s CBS: 3,5 Mbyte EBS: 0,7 Mbyte | EIR: 700 EBS: 70,0 |
| 1000 Mbit/s | CIR: 50 Mbit/s CBS: 5 Mbyte | CIR: 700 Mbit/s CBS: 70 Mbyte | CIR: 50 Mbit/s EIR: 10 Mbit/s CBS: 5 Mbyte EBS: 1 Mbyte | EIR: 1000 EBS: 100,0 |

1.3 Provisioning and Cessation

The Connect IP Service can be ordered by the Operator to EPT after signature of the DSL Agreement, while relating ordering and provisioning shall be handled in compliance with Schedule 4 below.

For the avoidance of doubt, the Connect IP Service is required to be fully operational

before DSL Access tests can be performed by EPT with the Operator.

In any case, the Connect IP Service will terminate on the termination date of DSL Agreement entered into between the Parties, whichever may be the reason.

The Connect IP Service will be terminated onto the Operator's cabinet in the Co-Location Equipment Room at Luxembourg Gare. The Fiber optic cable for the connection towards the Operator's Cabinet is at charge of the Operator.

The Ethernet access line from the Operator's premises to the POI is excluded from the Connect IP Service offer.

However, upon the Operator's express request, an Ethernet service from any other Operator's premises to EPT's BRAS at Luxembourg Gare can be provided by EPT on a commercial basis.

Schedule 2 - Service Description - DSL Access

2.1 Description

EPT's DSL Network supports at present 9 profiles of DSL Access, whereas 7 are dedicated to the retail market (DSL Standard Services and VDSL services) and 2 for the professional market (DSL Professional Services), notwithstanding that they can be used by the Operator for any End-User segment.

The characteristics of the different profiles of the DSL Standard Services, the VDSL services and the DSL Professional Services respectively are specified below. The minimum and maximum bandwidth figures specified below shall be understood as bandwidths on xDSL transmission protocol level. The end-to-end bandwidth including the Internet is in no case guaranteed, as the overall performance also depends on the Operator's infrastructure and aggregation links, his Internet TransitLinks and the resources of the Internet (server resources, connectivity, number of connections, delay) as available at a given moment.

2.2 Standard DSL Services

a) Profiles available for the Operator and EPT's Retail branch:

| Standard DSL Services-profile: | Residential Light | Residential Medium | Residential Large |
|--|--------------------------|---------------------------|--------------------------|
| Downstream² - minimum: | 1 Mbit/s | 3 Mbit/s | 5 Mbit/s |
| - maximum: | 5 Mbit/s | 10 Mbit/s | 20 Mbit/s |
| Upstream³ - maximum: | 512 kbit/s | 640 kbit/s | 768 kbit/s |

b) Additional Profiles :

| Other DSL Services-profiles: | profile 1 | profile 2 | profile 3 |
|--|------------------|------------------|------------------|
| Downstream⁴ - minimum: | 2 Mbit/s | 3 Mbit/s | 4 Mbit/s |
| - maximum: | 8 Mbit/s | 12 Mbit/s | 15 Mbit/s |
| Upstream⁵ - maximum: | 576 kbit/s | 640 kbit/s | 704 kbit/s |

In case of DSL Standard Services, the maximum upstream and downstream capacities of the DSL Access lines are not guaranteed, while the effective bandwidth in any given situation depends, amongst other reasons, on the distance between the installation address of the End-User and EPT's central exchange, as well as the internal installations (cabling, equipment) in the relevant End-User's premises.

The above-indicated minimum bandwidths represent the bottom level under which EPT shall accept a Fault Report issued by the Operator for lack of synchronisation speed on the line as defined in Schedule 5 - Maintenance and Fault Repair. In case the minimum capacity of a higher profile cannot be met for a specific DSL Access, a lower profile shall be chosen by the Operator for proposition to the End-User.

² downstream = transmission from the server to the End-User.

³ upstream = transmission from the End-User to the server.

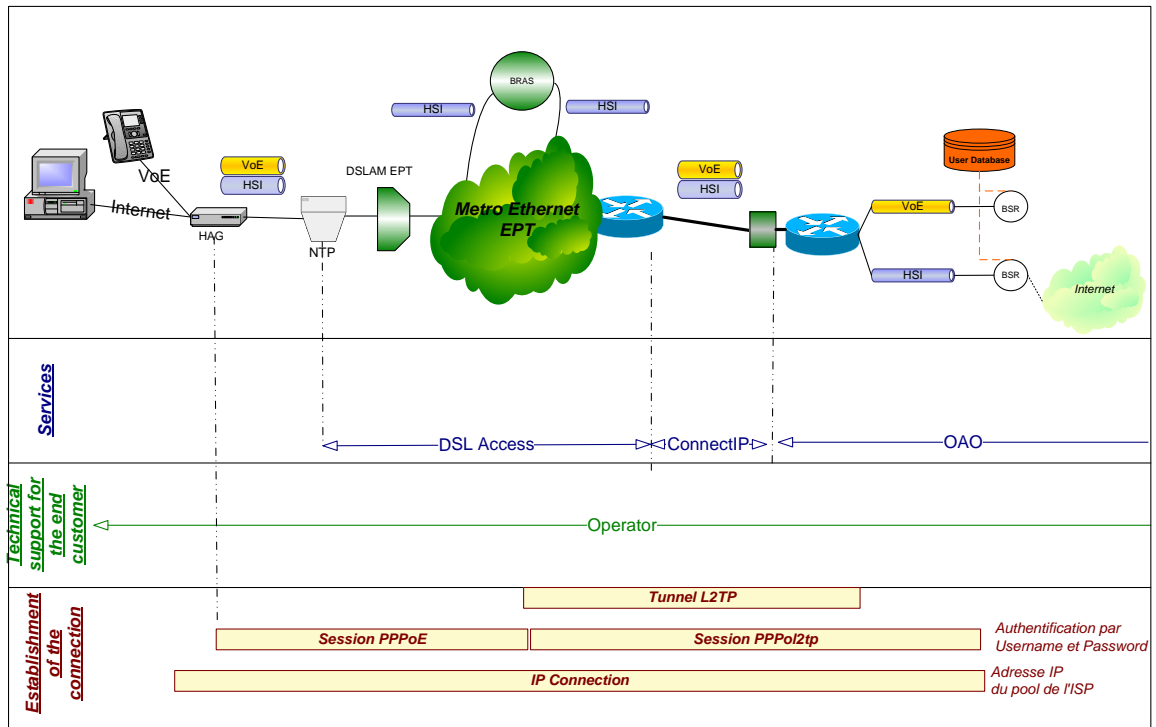
⁴ downstream = transmission from the server to the End-User.

⁵ upstream = transmission from the End-User to the server.

The DSL profiles related to DSL Standard Services are provided with Best Effort service quality. They are only provided on DSL Access lines where an EPT's PSTN or ISDN service already exists. PSTN or ISDN service can be provided by EPT to the End-User, or as WLR/RLO service provided by EPT to the Operator for the concerned telephony access line.

2.3 VDSL services

2.3.1 Service description



| VDSL Services -profile: | | |
|-------------------------|----------------------|------------|
| | Minimum ⁶ | Maximum |
| Downstream | 7 Mbit/s | 30 Mbit/s |
| Upstream | 1 Mbit/s | 10Mbit/s |
| VLAN VoE | See table below | 384 kbit/s |

For each VDSL access, one VLAN for VoE services is available. This VLAN has a capacity of max. 384 kbit/s included in the overall available bandwidth of the access, it is for the exclusive use of VoE protocols. Per access only one MAC address is accepted by EPT's Metro Ethernet network. No PSTN or ISDN line is required to activate this service, however to minimize any interferences with the signal on the line, the installation of an

⁶ This minimum value is a limit for broadband on the access infrastructure (before the backbone).

central splitter by the operator is mandatory.

In case of violation of the defined service parameters for the VLANs VoE, EPT will apply policing as defined by the MEF⁷. The Operator has thus to guarantee that his IP-streams fulfill the defined service parameters.

The configuration of the VLAN VoE is as follows :

| | Bandwidth | « Priority Bit » | Quality |
|------------------------|-----------|------------------|---|
| Network Control (NC) : | 5% | 6 | CIR 19,2 kbit/s ; CBS 1,92 kbyte, EIR 0 kbit/s |
| Data VoE | 70% | 7 | CIR 268 kbit/s ; CBS 26,8 kbyte, EIR 0 kbit/s |
| Signalisation VoE | 25% | 5 | CIR 19,2 kbit/s ; CBS 1,92 kbyte, EIR 76,8 kbit/s, EBS 7,68 kbyte |
| Trafic "Best Effort" | 0-100% | 0 | CIR 0 kbit/s; CBS 0 kbyte, EIR 384 kbit/s EBS 38,4 kbyte |

On request, the operator can order a PSTN or ISDN/PRI service on the VDSL infrastructure. This line, on which CPS services can be activated, is terminated on EPT's switching platform. General technical specifications of this line are as described in the applicable RLO. Terms and conditions, as well as the ordering procedure will be defined in a separate document upon request of the Operator.

2.3.2 Technical details

The CPE which the Operator intends to use must be compliant with EPT's DSL network. CPEs must be compatible with the specification ITU G.993.2.

The Operator can perform a compatibility test with his equipment on EPT's DSL network, prices are as defined in Schedule 7. EPT's contact point for this test is cpe_test_oao@ept.lu.

2.4 Professional DSL Services

| Professional DSL Services - profile: | Professional 1 | | Professional 2 | |
|--------------------------------------|----------------|-----------|----------------|------------|
| | Minimum | Maximum | Minimum | Maximum |
| Downstream | 5 Mbit/s | 20 Mbit/s | 5 Mbit/s | 20 Mbit/s |
| Upstream | 512 kbit/s | 1 Mbit/s | 1 Mbit/s | 2,5 Mbit/s |

The costs related to the corresponding PSTN or ISDN service are already included in the applicable DSL Access fees for any DSL Professional Services.

The DSL Professional Services profiles are provided with Committed Bitrate service

⁷ http://www.metroethernetforum.org/MSWord_Documents/MEF10.2.doc (last access 1.2.2010)

quality.

The DSL Professional Services profiles require an extended feasibility check and additional measurements after installation.

As a consequence, the following services are not available:

- the Do-It-Yourself Installation Kit;
- feasibility check using the Internet tool; and
- a guarantee as to the standard activation lead time.

With the first provisioning of DSL Professional Services, the Operator shall install a dedicated tunnel reserved exclusively for the DSL Professional Services between the Operator's tunnelling termination equipment and EPT's BRAS. This dedicated tunnel shall only be used for traffic with DSL professional service quality. For the avoidance of doubt, EPT is duly entitled to (i) control the effective usage made of the said dedicated tunnel and to (ii) block the traffic if it is used for the transmission of normal traffic with service quality applicable to DSL Standard Services.

2.5 End-User authentication and session management

The End-User's username and password shall be created and managed by the Operator itself under its own responsibility and in the boundaries of the below specifications and requirements.

The Operator can define up to three (3) domain names (e.g. @operator1.lu) which shall be used by the Operator's End-Users for the establishment of any and all L2TP sessions. The Operator shall duly and properly inform its End-Users thereof.

This domain names allows EPT to direct the sessions to the concerned Operator. At least one (1) domain name has to be determined by the Operator before the implementation of the L2TP tunnel. The activation of the first domain name is included in the Connect IP tariff set forth in point 7.1 of Schedule 7 – Tariffs attached hereto, while the activation fee for any supplementary domain name(s), "realms", specified in schedule point 7.2 of the said Schedule 7 – Tariffs shall apply.

The connection between the concerned End-User's access equipment and the Operator's tunnelling termination equipment is done via the protocol PPPoE³. The DSL Network foresees the establishment of one session PPPoE per DSL Access and by username, it being specified that legacy PPPoA⁴ is still supported.

In the End-User's access equipment, a PPPoE (or PPPoA, ass PPPoA is also supported for legacy services) session shall be established towards one of EPT's BRAS. Therefore, the End-User shall use the authentication under the following format:

UserName@domain (e.g. UserName@Operator1.lu)

For the sake of clarity, a different specific domain name has to be defined by the Operator for the routing of Professional DSL Services.

The BRAS recognizes via the extension @domain that the concerned PPP session needs to be directed to the concerned Operator, while the said PPP session has to be terminated on an Operator's tunnelling termination equipment.

End-User's authentication, IP address allocation as well as the account management are and shall remain under the Operator's sole liability.

³ PPPoE = Point to Point Protocol over Ethernet.

⁴ PPPoA = Point to Point Protocol over ATM.

It is explicitly specified that EPT doesn't and shall not proceed with any correspondence verification between (i) the DSL Access and (ii) the End-User's username nor the Operator's domain name. As a consequence, any username created by the Operator is and shall be technically available on each DSL Access of the DSL Network, even those, where the Operator has not subscribed to.

By opting for the DSL Services, the Operator expressly (i) accepts this technical constraint and (ii) shall be entitled, to prevent any abuse, to deactivate any username where the DSL Access is no more used or rented by the Operator. In case of a Migration, the Receiving Operator shall timely change or shall at least instruct its concerned End-User(s) to timely change the existing domain name in the concerned End-User's Active Equipment on the Migration due date as fixed between the Parties.

Schedule 3 - Technical specifications for End-User access Equipment

3.1 Active Equipment

The Active Equipment designates the equipment located in the End-User premises and used for xDSL modulation, such as modems, routers, etc., as well as the End-User's application equipment, such as e.g. Personal Computers (PC).

All Active Equipments have to be provided and properly maintained by the Operator. In order to prevent any disturbances of the DSL Network, Active Equipment have to comply at least with the minimal technical specifications applicable thereto and published by EPT on EPT's Web Site. As of the date hereof, the said document is titled "*Spécifications techniques du réseau*", while its title may change from time to time. The exact document's reference will be initially specified in the DSL Agreement.

3.2 Passive Equipment

Passive Equipement are necessary to allow different services, such as DSL Services and PSTN/ISDN service, to operate on the same copper network. Passive Equipment do not need any power supply.

The following two types of Passive Equipment shall be provided by EPT or the Operator as defined in Schedule 4:

- (i) central splitters, mainly for ISDN lines and occasionally for PSTN lines, and
- (ii) distributed micro-filters for the PSTN lines, as well as related cabling.

For VDSL services a central splitter is mandatory and has to be installed by the Operator in order to guarantee the functionality of the active equipment.

In case of breakdown, the Operator shall duly and properly ensure that all Passive Equipment will in no case be modified.

The DSL Network technical specifications are published on EPT's Web Site.

Schedule 4 - Planning, Ordering and Provisioning

4.1 Forecasting

Providing new DSL or VDSL services to Operators is a very labour intensive activity. The volume of activity depends mainly of the commercial activity of the different Operators without any direct influence of EPT. To allow proper planning of EPT's production capacity and of its work force allocation as well as to respond to the demand within the indicated time limits and to avoid bottlenecks, an accurate forecasting from the historical data of the systems used by EPT and in some cases from concerned Operators of the required provisioning is essential.

- 4.1.1 To dimension its work staff, EPT will use a rolling forecast based on the orders received during the last 3 months period. No committed forecasts have to be provided by the Operator or EPT retail. EPT will respect the installation time as specified in chapter 8.1 if the deviation of the before mentioned rolling forecast is less than 10%.
- 4.1.2 In case of major problems reported by an Operator EPT will provide, on request, to ILR the detailed figures regarding the Operator orders as well as the orders of EPT's retail branch. In such case, the reason of major variations in the number of orders placed either by an Operator or EPT's retail branch have to be provided, on request, to ILR.
- 4.1.3 In case an Operator foresees a substantial increase of DSL or VDSL orders, EPT will do every possible effort to respect the installation time as specified in chapter 8.1 by increasing the necessary workforce as far as the Operator informs EPT by mail hereof at least 3 months in advance.

4.2 Ordering procedure of Connect IP Services in the context of the RDSLO

Each order for a Connect IP Service has to be sent by the Operator to the following address bo_coloc@ept.lu, and shall contain at least the following information:

- Operator's name;
- Operator's contact point for this specific project including related e-mail address and telephone number;
- Bandwidth and interface to be used; and
- Operator's owned IP addresses necessary for the establishing of an IP connectivity between EPT's BRAS and the Operator's tunnelling terminating equipment.

EPT shall confirm within five (5) business days the receipt of every firm order for Connect IP Services and shall indicate an estimated ready for service date.

When the concerned Connect IP Services are ready for service on EPT's side, EPT shall

inform the Operator thereof by mail

4.3 Ordering procedure of DSL Access services

4.3.1 Initial request, feasibility check and ordering

EPT provides to the Operator an electronic tool to check the feasibility and availability of the DSL Standard and VDSL Services for the End-Users.

In case of DSL Professional Services, a special feasibility check has to be achieved by EPT upon the Operator's request prior to any ordering process. Any order for DSL Professional Services placed without such priority check having been achieved shall be deemed as not valid.

The End-User shall directly order the service(s) to his/her Operator, which shall then order the DSL Access to EPT. EPT will in no case accept or handle any order issued directly by any Operator's End-User.

4.3.2 Order acceptance and processing

The exchange of information shall be done exclusively by means of electronic messaging transfer of XML files via Web service in SOAP (Simple Object Access Protocol) format.

To be accepted, the structure of the files transmitted shall comply with EPT's specifications and instructions. For this purpose, two complete documentations describing the Web service / SOAP interface and the procedures for message exchange between an Operator and EPT in relation to DSL (RDSLO) Services and in relation to VDSL (ATH) Services will be published and timely updated as appropriate on the EPT's Web Site (www.ept.lu/Telecom/Operators/Regulatory/Technical Info/Soap)

Before the first data transmission can take place, the Operator has to perform testing with EPT.

A period of maximum twenty (20) working days (T51) is foreseen between the Operator's declaration of interest in DSL Services and the first file to be accepted. EPT and the interested Operator shall establish a commonly agreed timing for the test period of the concerned DSL Services, while in order to meet the proposed deadline, the Operator shall fully cooperate with EPT during the said test period.

Orders will be deemed as invalid when they either do not include all required mandatory information as specified in the above-mentioned documentation and/or contain erroneous or incompatible information. Any invalid orders will be rejected and then not be handled by EPT, which shall inform the Operator thereof. In such case, EPT shall not be held liable for any delays so caused nor for any consequences arising out of or in relation to such an order rejection.

An order for a new DSL Access shall not be accepted if (i) a xDSL service is already active or ordered by another Operator for the concerned End-User on the concerned access line, (ii) another broadband service incompatible with the DSL Access is already active or (iii) the access line is already unbundled to another Operator.

In any such case of rejection, EPT will inform the Operator thereof, which shall refer to the procedures for a Migration request.

EPT will treat the Operator's new orders, cancellation and/or change requests in a non-discriminatory way and based on the principle of "first come - first served".

Incomplete and/or non compliant orders or requests will be rejected and consequently not handled by EPT, while similar requests may be grouped in order to allow mass processing.

4.4 DSL Services installation

4.4.1 DSL Services installation Description

Installation of DSL Access by EPT on behalf of the Operator expressly includes:

- (i) all works necessary to connect the DSL Services in the concerned central exchanges, including the installation of the required splitter;
- (ii) implementation of measures and controls required to guarantee the due operation of the DSL Access after installation, provided both Passive and Active Equipment are ready and in working mode in the End-User's premises at the agreed activation due date; and
- (iii) as well as on an optional basis, the delivery and installation of the micro-filters respectively splitters in the End-User's premises and preparation of the connection to the End-User's xDSL modem.

Installation of DSL Access by EPT on behalf of the Operator expressly excludes:

- (i) any installation of new cabling in any End-User's premises;
- (ii) activation of a new telephone line;
- (iii) installation of an additional connector in any End-User's premises;
- (iv) supply of an xDSL modem and/or of any related accessories;
- (v) the configuration in whole or in part of the End-User's Active Equipment; and
- (vi) any other task, works and/or duty not expressly included in the first list specified here above.

For each DSL Services installation in the End-User's premises, the Operator may alternatively opt, at its discretion, for the DSL Services being installed either (i) by an EPT's specialised team or (ii) by its staff or the End-User his/herself, using the Do-It-Yourself Installation Kit put at the Operator's disposal for this purpose, all this in compliance with the terms and conditions set forth below.

4.4.2 Service installation by EPT for standard DSL services

The Operator may opt for a DSL Services installation in the End-User's premises by an EPT's specialised team:

- (i) if it does not opt for an installation by itself using the Do-It-Yourself Installation Kit in case of standard DSL services, or
- (ii) if the configuration of the EPT's DSL Network or of EPT's telephone network in the concerned End-User premises have technical constraints, which do not allow the installation by the Do-It-Yourself Installation Kit.

The Operator shall opt for an installation in the End-User's premises by an EPT's specialised team for all DSL Professional Services, which cannot be installed via the Do-It-Yourself Installation Kit.

Installation will be handled in compliance with Schedule 4 – Planning, Ordering and Provisioning.

When installed by EPT, the DSL Service installation shall be achieved within twenty-one (21) working days (T5) after valid registration by the Operator of the intervention date fixed between the Operator and the End-user in the schedule maintained by EPT for all Operators.

The DSL Services installation by EPT will be invoiced as specified in Schedule 7 - Tariffs (point 7.2).

4.4.3 Service installation by the Operator using the Do-It-Yourself Installation Kit for standard DSL services

The Do-It-Yourself Installation Kit allows End-Users to proceed by themselves with the initial installation of the DSL Access in their premises.

In such case, the Operator shall make available to its End-Users the Do-It-Yourself Installation Kit, i.e. an installation kit composed by the required equipments and instructions for the installation by the End-User in its premises, eventually with the support of the Operator or a third party acting under the Operator's responsibility.

The Operator is solely responsible for providing the appropriate technical support to its End-Users and shall in all cases remain the single point of contact for the installation of the Do-It-Yourself Installation Kit and all questions and/or issues related thereto.

EPT shall in no case provide any support to the Operator's End-Users in relation to the DSL Access installation when the Operator has opted for it using the Do-It-Yourself Installation Kit.

The activation and operation of the DSL Access cannot be guaranteed as the xDSL technology strongly depends, among others, on the distance between the End-User's installation address and the central exchange as well as on the internal installations (cabling, equipment) at the End-User's premises.

The Operator shall inform the End-User accordingly and shall refund the Do-It-Yourself Installation Kit to its End-User in such cases, where due to the above-mentioned reasons the activation and operation of the DSL Access is not possible or the installation by an EPT specialised team is needed. When due to such limitations of the DSL Network, DSL Access installation failure shall not be considered nor construed as a network fault and EPT shall not be held liable for any additional costs incurred by the Operator or its End-User to properly achieve the DSL Access installation.

After DSL Access successful installation and activation by the Operator, EPT will ensure the related maintenance as defined in Schedule 5 – Maintenance and Fault Repair. Nevertheless, the Operator shall remain solely and fully responsible for errors and/or malfunctions detected after the above-mentioned activation date and which are directly or indirectly related to the wrongful installation, in whole or in part, by the Operator or by the End-User using the Do-It-Yourself Installation Kit.

As a consequence of the above, EPT shall not be held liable for any direct or indirect damages caused by or in relation to a DSL Services perturbation or delay caused in whole or in part by works done by the Operator or the End-User.

The Operator may still order EPT's intervention to install the DSL Access, after the End-User has already purchased the Do-It-Yourself Installation Kit, but failed to properly activate the installation himself. In such case EPT will charge the Operator with the applicable costs, which shall include:

- all works performed, including travel costs pursuant to applicable tariffs in Schedule 7 – Tariffs, except where the installation problems via the Do-It-Yourself Installation Kit were caused by EPT's DSL Network; and
- all additional equipment and material used to achieve the said installation.

4.4.4 Provision of the Do-It-Yourself Installation Kit for the standard DSL service

The Operator may order EPT's Do-It-Yourself Installation Kit for the standard DSL service.

Each Do-It-Yourself Installation Kit provided by EPT will include:

- (i) the components to be expressly used in relation to the installation of the concerned DSL Access in the End-User's premises (i.e. Passive Equipments); and
- (ii) when relevant, EPT's minimum instructions to be complied with when installing DSL Services ("Installation Instructions").

Based on EPT's Do-It-Yourself Installation Kit, the Operator may prepare and distribute to its DSL Services End-Users, under its sole liability and branding, its own Do-It-Yourself Installation Kit, it being specified that in any and all cases, the components referred to in item (i) above shall be duly and fully included in the said Operator's Do-It-Yourself Installation Kit.

Any other use, purpose or market segment is strictly prohibited.

In case the Operator wants to include complementary or additional components or material to its own Operator's Do-It-Yourself Installation Kit, it shall only include components or material fully compatible with EPT's DSL Network and of the same type as those provided by EPT, in order to prevent (i) any damages to and/or impacts on EPT's network or telephony services as well as (ii) any complications during eventual maintenance intervention on the installation in the End-User's premises.

Any End-User's and/or Operator's intervention on EPT's Infrastructure shall in no case go beyond the works and operations specified and described in EPT's Installation Instructions, while the Operator shall fully comply with all configuration types set forth in the said Installation Instructions, having regards to the ISDN or PSTN-type of the connexion.

In respect to and for the purpose this point 4.4.4, the Operator:

- (i) declares and recognizes to be duly informed that the intellectual property rights on or related to the software and Installation Instructions or any information made otherwise available to it by EPT are owned by EPT,
- (ii) undertakes not to change nor modify, in whole or in part, the pictures, drawings and/or schemes included in EPT's Installation Instructions, while it is entitled in respect to its own user-guides related to the DSL Services exclusively to delete inappropriate ones included in EPT's Installation Instructions and to replace them by its owns, as well as
- (iii) agrees that the provisions set forth in Article 4 – Property rights shall fully apply in relation to the Do-It-Yourself Installation Kits.

4.4.5 DSL Standard Service activation in case of using the Do-It-Yourself Installation Kit

The Tariff for DSL Standard Service activation in case of using the Do-It-Yourself Installation Kit is specified in Schedule 7

The passive equipment (e.g. filters, splitters) can be purchased by the Operator either as "Do-It-Yourself Installation Kit" from EPT following the tariff in Schedule 7, or the Operator can use his own passive equipment. However these equipment have to comply with the specifications published on EPT's WEB-site for Operator products.

The DSL Standard Services activation will be performed on the due date requested by the Operator in its valid DSL Access activation order. The earliest possible due date in this respect is on fifth (5) working day (T2) after valid order submission.

The Operator shall assure that the Do-It-Yourself Installation Kit and the Active Equipment (modem/router) are already and properly installed in the End-User's premises before the said due date.

The DSL Access activation will be proceeded automatically between 8 a.m. and 5 p.m. on the requested due date. During that time period, the End-User's Active Equipment shall be turned into working mode (power on), enabling thus EPT to control the well functioning of the related DSL Access and to carry out the necessary remote measurements.

EPT will endeavour to achieve on the Operator's requested due date at least 95% of all validly ordered DSL Access activations.

Despite any line control failure by EPT on due date due to the fact that the Active Equipments at the End-User's premises were not ready or were not in working mode, EPT will proceed with the automatic activation of the concerned DSL Access.

The invoicing of the DSL Access to the Operator shall start on the date at which EPT achieved DSL Access activation and an activation report will be sent to the Operator.

4.4.6 **VDSL Service provisioning**

As VDSL Services are provided on a stand alone basis (naked DSL) the provisioning requires installation works in EPT's access network. Therefore the ordering process is a multi-step procedure:

- 1) Submission of a valid Order by the Operator
- 2) EPT will reply with either a positive or negative answer depending on the technical constraints of the network
- 3) Fixing of an appointment date by the Operator via EPT's online booking manager.
- 4) Installation and Activation of the VDSL Service. This installation includes all works on EPT's DSL network from the POI to the NTP, EPT's termination point at the customer's premises.

In order to avoid any interferences, the installation of a central splitter at the customer premises is mandatory for each VDSL line. This splitter has to be installed by the Operator

The invoicing of the VDSL Service to the Operator shall start on the date at which EPT achieved the VDSL-Service activation. An activation report will be sent to the Operator.

As specified in chapter 4.3 detailed processes and file descriptions will be published on EPT's WEB-site for Operator products.

4.4.7 **Cancellation of a VDSL service order before activation**

If an Operator wants to abandon its request for VDSL service after submission of a formal order by the electronic messaging system, it shall send a cessation order by e-mail to EPT, which shall specify at least the following information:

- EPT reference number of the line
- Full End-User's name
- End-User's address

If the date of receipt of the order cancellation by EPT is more than one (1) working day ahead to the agreed appointment date with the End-User, EPT will cancel the order and the Operator will be charged with the tariff for cancellation of an order before activation as defined in schedule 7.2

In case EPT receives the cessation order less than one (1) working day before the agreed appointment date with the End-User, EPT will cancel the order and the Operator will be charged the full installation tariff for VDSL service as defined in schedule 7.2

4.5 **Migration of a DSL Access**

A Migration consists of the change of ownership of the DSL Access from one current Operator, as the case may be EPT (the "Donor Operator"), to a new Operator as the case may be EPT (the "Receiving Operator"). As such, the prerequisite of a Migration is that DSL Services already exist on the End-User's telephone line.

The Migration aim is to change ownership of the DSL Access without extended service interruption for the End-User. Therefore, Migration is treated as a special case different from a cancellation request followed by a new order.

The main Migration process steps are as follows:

1. The Receiving Operator has to prior agree in writing with the End-User upon the Migration and the End-User has to confirm in writing to the Receiving Operator that it cancels the current DSL Access provided by the Donor Operator in compliance with applicable contractual obligations between the said End-User and the Donor Operator. The End-User has to expressly specify to the Receiving Operator that the case of a Migration applies as well as the name of the Donor Operator. The Receiving Operator shall provide within maximum of five (5) working days (T6) upon the Donor Operator's and/or EPT's request, notably in case of doubt or claim, to the latter with a copy of the above-mentioned confirmation.
2. The Receiving Operator will send a Migration request to the Donor Operator.
3. The Donor Operator will reply in writing or by electronic means to the Receiving Operator within maximum of ten (10) working days (T7) by specifying that:
 - (i) the End-User is authorized to migrate, or that
 - (ii) the End-User is still bounded by fixed contractual term, while it shall in such case formally specify to the Receiving Operator in the said reply the first date when the End-User is duly allowed to migrate.

Failing to formally and validly reply to the Receiving Operator within the applicable timeframe, the Donor Operator shall be deemed as having duly confirmed to the Receiving Operator that the End-user can migrate.

4. After due compliance with the respective principles of both Step 1 to Step 3 set forth here above, the Receiving Operator may send electronically a Migration request to EPT as specified in EPT's procedures applicable to DSL Services.
5. A Migration request shall be rejected in any of the following cases:
 - the DSL Access does not exist or is not active on the given telephone line;
 - the given telephone line is inactive or currently disturbed or disrupted;
 - the given telephone line is unbundled or used for shared access as defined in the applicable RUO;
 - another DSL Access order for the same telephone line is already being processed;
 - the related Migration request is incomplete, incoherent and/or not conforming to the ordering process described in EPT's procedures applicable to DSL Services.
6. Further to its acceptance by EPT, the DSL Services order will be processed by EPT within five (5) working days (T3), without any supplementary authorization from the Donor Operator being required or necessary in this respect.
7. After execution of the Migration, the Receiving Operator as well as the Donor Operator will be informed by electronic means about the outcome of the DSL Access Migration.

As specified in chapter 4.3 detailed processes and file descriptions will be published on EPT's WEB-site for Operator products.

4.5.1 Disputes in relation to a Migration:

In case any dispute between the Donor Operator and the Receiving Operator, involving or not the concerned End-User, in relation to a DSL Access Migration arose, the said dispute shall be exclusively settled between the Receiving Operator and the Donor Operator, as well as if relevant the concerned End-User.

In case a dispute cannot be amicably settled between the concerned parties as specified here above or in case of difficulties faced by either concerned Operators and provided it duly justifies its request, the Donor Operator is entitled to request in writing to EPT a copy of the Migration request submitted by the Receiving Operator, while EPT is duly authorized to transfer the concerned request as well as the Receiving Operator's identity to the Donor Operator.

In addition, EPT is entitled to request correlatively, for control, to the Receiving Operator due evidence of the End-User's agreement as to the Migration, while the Receiving Operator shall provide such evidence within five (5) working days (T6) working days after the said EPT's request.

EPT shall in no case be held responsible by the Donor Operator for the implementation of a valid Migration request completed by the Receiving Operator and shall be kept free and

harmless by both the Donor Operator and the Receiving Operator.

4.5.2 **Billing in relation to a Migration:**

The Donor Operator will continue to be invoiced for the DSL Services until the last day before the effective Migration date, whereas the invoicing of the Receiving Operator will correlatively start as from the said effective Migration date.

4.6 **Modification of DSL Services parameters**

During service operations, all change requests from an End-User in relation to the DSL Access have to be collected by the Operator as single point of contact and passed over to EPT

A request for modification of DSL Services parameters can be sent at any time by the Operator to EPT by means of electronic messaging transfer of XML files via Web service in SOAP (Simple Object Access Protocol) format according to the relevant procedures.

Any compliant order for modification will be executed within five (5) working days (T4).

4.7 **Move request of a standard DSL Service**

In case of a move request from (i) an End-User to EPT for a PSTN/ISDN telephone line where a DSL Access is active or from (ii) another Operator to EPT for a WLR line where a DSL Access is active, the concerned DSL Access will be automatically moved with the related telephone line on the same day. EPT will charge to the Operator the fees relating to the moving of the DSL Access to the Operator in compliance with the tariffs mentioned in Schedule 7 - Parameter Schedule (point 7.2).

In case of any change of the billing address of a PSTN/ISDN telephone line where DSL Services are active, the Operator shall manage exclusively by itself the billing address of its End-Users and proceed with appropriate steps to appropriately change the related billing information, while it shall not involve nor inform EPT thereof.

4.8 **Cancellation of a DSL Access**

In case of cancellation of a PSTN/ISDN telephone line or of a WLR Service where a DSL Access is active, the DSL Access will be automatically cancelled together with the concerned PSTN/ISDN telephone service or WRL Service. EPT will send a DSL Access cancellation report to the Operator.

A DSL Access cancellation request may only be sent by the Operator to EPT if so requested expressly by the End-User or in case of contractual breach by the End-User.

In addition, the Operator undertakes not to send a cancellation request to EPT in case it has prior received a valid Migration request from another Operator.

A DSL Access cancellation will be carried out within the timeframe agreed between the Parties.

In case the applicable minimum contractual term is not yet expired at the time of the cancellation date, the Operator will be charged for the entire remaining period.

4.10 Relation with LLU and LLU Services

DSL Access cannot be offered by EPT on an unbundled or shared line.

As a consequence, in case of a third party's request for LLU Services on a telephone line where DSL Access is provided, EPT will have, upon receipt of such an Operator's request for LLU Services to cancel the existing DSL Access prior to activate LLU Services and will inform the concerned Operator thereof.

For the avoidance of doubt, the concerned Operator may not request any cancellation fees to EPT as a consequence of the above, irrespective of its eventual contractual obligations with its End-User.

Schedule 5 - Maintenance and Fault Repair

EPT is responsible for the maintenance of the DSL Services for the Operator's End-Users between the POI with the Operator and the Passive Equipment (splitter) in case the splitter was installed by EPT or the NTP in case of the splitter was installed by the Operator in the concerned End-User's premises with the same quality level as offered to its retail End-Users.

Referring to the product description set forth in Schedule 2 – Service Description – DSL Access (point 2.1), EPT shall only accept Fault Reports issued by the Operator if the synchronisation speed on the DSL Access is below the minimum capacity threshold of the concerned DSL Access profile.

EPT reserves the right to interrupt or limit the DSL Services for maintenance reasons, network adaptations and/or in case of any usage creating perturbations or disruptions of any part of the DSL Services or of any other service(s) using the same infrastructure.

EPT will take care to reduce the time required for the works to be performed as much as reasonably possible, but EPT shall in no case be liable or be held liable for any direct, indirect or consecutive damages or indemnity, whichever may be the reason and/or nature, for any interruptions, perturbations and/or limitations occurring in relation to the above.

The Operator shall reasonably co-operate with EPT in order to locate and if possible resolve and cure any fault.

5.1 Fault Reporting And Repair

5.1.1 EPT Fault contact point (EPT FCP), fault acceptance and billing

The Operator shall send a Fault Report to EPT's FCP at the following email address:

BO_ACC_DER@ept.lu.

Upon receipt of a valid Fault Report compliant to the minimum terms set forth below, EPT shall send an email to the Operator at the Incident Ticket Opening and at the Incident Ticket Closing related to a valid Fault Report. To do so, the Operator shall provide EPT with an email address for the exchange of these notification messages.

All related phone calls should be directed via the EPT's FCP: +352 4991 5868.

Operator's Fault Reports will be accepted by EPT 24/7.

Fault clearance will be performed during normal working days from Monday - Friday from 8 a.m. to 12 a.m. and from 1 p.m. to 5 p.m.

Special conditions shall be applied for fault clearance on Saturdays, Sundays and/or legal and public holidays.

Fault clearance interventions will be billed by EPT to Operator as defined in Schedule 7 – Tariffs..

Any Fault Report and fault repairs shall be performed in compliance with the conditions and time schedules specified hereafter.

Only valid Fault Reports and accepted faults will be treated by EPT.

To be valid, a Fault Report shall contain the minimum information and data requested in the below paragraphs.

5.1.2 **Fault reporting to EPT by the Operator**

Prior to submitting a Fault Report, the Operator shall have to ensure that a genuine fault exists and that every effort has been made in advance to check that the fault resides within EPT's area of responsibility.

In the Fault Report, the Operator shall provide sufficient information to allow the diagnosis of the reported fault and to enable the progression of the fault until resolution. Therefore, all Fault Requests shall be done using a predefined Fault Report form that can be downloaded from EPT's Web Site. Fault Reports are nevertheless also accepted via simple email containing at least the following data:

1. EPT's reference number of the line
2. Contact point and phone number of the End-User
3. Address of the End-User
4. Contact point and phone number of the Operator
5. Type of service affected
6. Description of the reported fault
7. Date and description of the intervention of the Operator's technician.

The Operator may pass any additional information it considers relevant to the Fault Report while EPT shall not be obliged to use such additional information, whichever may be the reason.

Upon receipt of a valid Fault Report, EPT will send an Incident Ticket Opening to the Operator as well as afterwards the Incident Ticket Closing. This automatically sent notification messages are triggered by the EPT's reference number of the line. If this field is not indicated in the Operator's Fault Report, no Incident Ticket will be sent to the Operator, while the concerned Fault Report will be deemed as invalid.

5.1.3 **Fault reporting to EPT by the End-User**

The Operator has to inform the End-User about the Operator's responsibility and timely communicate the Operator FCP to the End-User in order to prevent any abuse of EPT's support services.

EPT will not accept any Fault Report from the Operator's End-Users. EPT has no obligation to report to the Operator a fault that an End-User would have directly reported to EPT.

5.1.4 **EPT and Operator liabilities for the fault clearance**

If the Operator's Fault Report received by EPT is valid and contains all minimum information requested, EPT will issue an Incident Ticket Opening and starts fault localization and fault clearance process during normal working hours. Upon detection of a fault on the DSL Access, EPT will use all reasonable endeavours to repair the fault as soon as reasonably practicable.

The fault clearance is to be achieved within two (2) working days (T40). The applicable tariffs are specified in Schedule 7 – Tariffs.

The Operator shall cooperate with EPT's reasonable requests in an effort to locate and if possible resolve any fault. EPT reserves the right to contact and make an appointment with the Operator's End-User for repair of the DSL service. In case where contact with the End-User is necessary for repair and the Operator failed to give this information, the related Fault Report will be rejected and be deemed as wrongful.

When EPT believes that a fault has been cleared, an Incident Ticket Closing will be sent to the Operator and the measurement of the fault repair time will automatically cease with that sending. Except if the Operator rejects the concerned Incident Ticket Closing within one (1) hour after receipt, the Incident Ticket and the related Fault Report will be closed automatically by EPT.

If the Operator rejects the Incident Ticket Closing as specified above, it shall specifically provide the following information:

- The reason why the Operator reasonably believes that the circuit is unsuitable for use as DSL,
- All additional information that the Operator reasonably considers suitable to assist in understanding and diagnosing any underlying fault in the DSL.

The Operator shall cooperate with EPT to carry out further tests, even on Operator's equipment when reasonably requested to do so. At its sole discretion, EPT may carry out additional works upon the Operator's request, while the costs thereof shall be invoiced to the Operator.

Both Parties recognize and acknowledge that the fault repair time will commence when EPT issues the Incident Ticket Opening and will end when EPT issues the Incident Ticket Closing.

5.1.5 **Wrongful repair request**

A wrongful Fault Report occurs when EPT has done all necessary measurements on the concerned line and test results prove that the quality of the DSL Services concerned by the Fault Report is not the cause of service interruption or service degradation.

In case of a repair where the detected fault lies outside the scope of EPT's responsibility under this RDSLO or in case of a wrongful Fault Report, all the costs related to works and travelling already performed by EPT in relation to such Fault Report will be charged to the Operator.

5.1.6 **End-User's liabilities**

The Operator shall cause that the concerned End-User(s) will timely grant EPT's field-force access to the NTP within his/her premises as often as this is necessary for the clearance of the concerned fault. In case of any problems, EPT will report this to the Operator, who will have to contact forthwith the End-User and take the necessary arrangements to grant access to EPT.

In case the End-User is absent during EPT's workforce visit, EPT will drop a card in the mailbox requesting the End-User to contact EPT's helpdesk to convene an appointment. In such case, the normal intervention periods cannot be respected and the intervention time computation shall be automatically suspended until the End-User contacts EPT's helpdesk and an arrangement has been achieved for a new visit.

Schedule 6- Quality of Service – Service Level Agreement (SLA)

6.1 Service level

The quality of the DSL Services as well as the effective usable bandwidth on a DSL Access depend on the length/distance of the access line as well as the cable fill rate. With increasing cable fill with broadband services, the quality of service may be reduced up to an extend constraining EPT to find remedies to prevent further service degradation (such as keeping new orders on hold, modifying the network characteristics of existing DSL Access or, in extreme cases, to cancel existing DSL Services, which disturb unreasonably a significant part of the cable).

EPT reserves the right to limit temporarily the bandwidth or a connection in order to ensure the general availability of the DSL Services. In case of perturbations of other End-Users' DSL Access, or perturbations of other telecommunication services due to the DSL Services, EPT reserves the right to take measures to re-establish the quality of the disturbed services.

6.2 Standard SLA for DSL Services

Being in line with the service level granted by EPT to its retail End-Users for similar services, the Service level set out in this point 6.2 shall apply to the DSL Services, it being specified among other things that:

- (i) if EPT fails to provide the above-mentioned connection in compliance with Schedule 4 – Planning, Ordering and Provisioning, the Operator will be granted in the benefit of the concerned End-User of a financial indemnity equivalent to a one-month fixed fee of the concerned DSL Service(s), while should this delay fall beyond fifteen (15) calendar days, the said indemnity will be increased to be equivalent to a two-month fixed fee of the concerned DSL Service(s).

The above provision shall not apply in case:

- (a) of a Force Majeure event;
 - (b) the Operator fails to claim for the above-mentioned financial indemnity within thirty (30) calendar days as from the day after which the warranted connection time has been elapsed; or
 - (c) EPT has been prevented in whole or in part to intervene in due time to comply with the warranted restoration time, notably due to the Operator's and/or the concerned End-User's act or omission.
- (ii) Subject to the specific terms and conditions of this RDSLO, EPT will re-establish DSL Standard Services and DSL Professional Services before the end of the first working day following the day at which a Fault Report has been validly submitted, except where the required clearance works are of such importance that they need substantial works to be carried out (e.g. civil works) or that an appointment with the End-User is to be made;

If EPT fails to re-establish one or several DSL Services within the above-mentioned time period while either the concerned fault and/or the restoration delay are within EPT's sole responsibility, the Operator will be granted upon written express request with a financial indemnity equivalent to a one-month fixed fee of the concerned DSL Services.

The above provision shall not apply in case:

- (a) of a Force Majeure event;
- (b) the Operator claims for the above-mentioned financial indemnity later than thirty (30) calendar days as from the day after which the warranted restoration time elapsed; or
- (c) EPT has been prevented in whole or in part to intervene in due time to comply with the warranted restoration time, notably due to the Operator's and/or the concerned End-User's act or omission.

Fault clearance outside EPT's business hours or with priority handling is possible for exceptional cases, provided the Operator has:

- (i) prior accepted, for each relevant exceptional case, the special conditions applicable thereto and the respective fees set out in Schedule 7 - Tariffs; and
- (ii) duly contacted EPT at the following phone number: +352 4991 5868.

In such case, the terms and conditions of the Standard SLA shall not apply, while, according to the fault concerned, the Parties will agree upon a reasonable time schedule applicable to such fault clearance.

Schedule 7- Tariffs

All tariffs herein are specified in € VAT excluded.

7.1 Connect IP

HSI:

| Total bandwidth of the HSI traffic | Interface | Installation charges | Total monthly rental charges |
|---|------------------|-----------------------------|-------------------------------------|
| 100 Mbit/s | FastEthernet | 2814,80 | 445 |
| 200 Mbit/s | GbitEthernet | 2814,80 | 811 |
| 400 Mbit/s | GbitEthernet | 2814,80 | 1178 |
| 700 Mbit/s | GbitEthernet | 2814,80 | 1474 |
| 1 Gbit/s | GbitEthernet | 2814,80 | 1663 |

VoE traffic (using the same port as HSI traffic (without installation charges) or using a dedicated port (with installation charges)):

| Total bandwidth of the VoE traffic | Interface | Installation charges* | Total monthly rental charges (per Mbit/s) |
|---|------------------|------------------------------|--|
| 0-100 Mbit/s | FastEthernet | 2814,80 | 8,08 |
| 101-200 Mbit/s | GbitEthernet | 2814,80 | 7,37 |
| 201-400 Mbit/s | GbitEthernet | 2814,80 | 5,35 |
| 401-700 Mbit/s | GbitEthernet | 2814,80 | 3,83 |
| 701-1000 Mbit/s | GbitEthernet | 2814,80 | 3,02 |

* only applicable in case a dedicated port is requested by the Operator or in case the total ordered capacity (HSI+VoE) exceeds the existing port capacity.

7.2 LuxDSL Access service – one-off charges

| Item | Euro |
|--|-------------|
| Installation charges for DSL Standard Service | 34,45 |
| Installation charges for DSL Professional Service | 195,00 |
| Activation of an EPT's xDSL Service | 10,79 |
| Installation charges for VDSL Service | 74,35 |
| Negative Answer to a VDSL Order* or cancellation of an order before activation | 14,98 |
| Fee for moving a DSL Standard Service to a new address | 34,45 |
| Fee for moving a DSL Professional Service to a new address | 195,00 |
| Fee for moving a VDSL Service to a new address | 74,35 |
| Migration of a Standard DSL or a VDSL Service (inclusive EPT's retail DSL service) to the Receiving Operator | 16,91 |

| | |
|---|----------------|
| Migration of a standard or professional LUXDSL service to VDSL | 74,35 |
| Change of the profile of given standard DSL Services - upgrade or downgrade | free of charge |
| Provisioning of Splitter for End-User site | 3,9 |
| Fee per activation of supplementary realm | 346,30 |
| Compatibility Test of Operator Equipment on EPT's testplatform (per hour; in case of a scheduled system alteration with major impact the first four hours are for free) | 156,90 |

* Only in case EPT's search engine showed clearly that the specific address is not yet served by EPT's VDSL network

7.3 LuxDSL Access service – recurring charges

A minimum contract term of 6 months shall apply in all cases whichever may be the DSL Services concerned and for all profiles.

| DSL Services Profile | Euro |
|----------------------|--------|
| Residential Light | 15,54 |
| Residential Medium | 20,00 |
| Residential Large | 21,00 |
| Additional Profile 1 | 19,00 |
| Additional Profile 2 | 20,30 |
| Additional Profile 3 | 20,60 |
| Professional 1 | 134,06 |
| Professional 2 | 171,30 |
| VDSL | 29,22 |

7.4 Subsequent change in applicable tariffs

All tariffs set forth in this RDSLO and/or in the DSL Agreement shall be automatically revised downwards or upwards as EPT will do for its own retail DSL offer(s).

7.5 Fault Repair

| Time of intervention, (working days, from Monday to Friday) | Origin of the fault is situated | Price |
|--|---------------------------------|----------|
| 8am-5pm | On EPT's side | For free |
| 8am-5pm | On Operator's side | Price A |

7.5.1 The Operator wishes that the fault repair be done prior to another End-

User's request or outside working hours. In this case, the following prices are applicable:

| <i>Time of intervention</i> | <i>Origin of the fault is situated</i> | <i>Price</i> |
|---|--|--------------|
| Priority from 7am-7pm (Monday to Friday) and 8am-12pm (Saturday) | On Operator's or on EPT's side | Price B |
| From 7pm-7am from Monday to Friday, Saturday from 12am on and Sunday | On Operator's or on EPT's side | Price C |

7.5.2 **Manpower fees**

- Price A = Actual EPT manpower fee - per hour plus surcharges following the table below
- Price B = Actual EPT manpower fee - per hour plus surcharges following the table below with a minimum of 250 Euros per intervention
- Price C = Actual EPT manpower fee - per hour plus surcharges following the table below with a minimum of 500 Euros per intervention.

For the avoidance of doubt, the prices A, B and C are not applied if a general fault takes place.

| <i>Time:</i> | <i>6h00-7h00</i> | <i>07h00-19h00</i> | <i>19h00-22h00</i> | <i>22h00-6h00</i> |
|--------------------------|------------------|--------------------|--------------------|-------------------|
| Monday to Friday | 50% | 0% | 50% | 65% |
| Saturday | 50% | | | 65% |
| Sunday | 70% | | | 85% |
| Legal and public holiday | 200% | | | 215% |

7.6 **Manpower fees**

| | |
|--|-------|
| | Euro |
| Actual EPT manpower fee - per hour | 65,71 |
| All manpower fees are based on the Luxembourgian price index 702,29. They will be updated following the evolution of this price index. | |

Schedule 8 - Parameter Schedule

| Timer | Designation | |
|-------|--|---------|
| T0 | Minimum contractual term per WS/DSL connexion. | 6 month |

8.1 Provisioning of DSL and VDSL Services

| Timer | Value | Description |
|-------|--|---|
| T1 | 3 working days | Response time to the activation request |
| T2 | 5 working days | Earliest possible activation date of a DSL line from the date of submission of the activation request on. EPT endeavours the realisation of 95% of the activation requests on the due date demanded by the operator |
| T3 | 5 working days | Time period to realise 95 % of migration requests from EPT to receiver OAO or from donor OAO to receiver OAO |
| T4 | 5 working days | Time period to realise 95 % of requested modifications of DSL lines |
| T5 | 15 working days, beginning one (1) working day after reception of the order by EPT | maximum time period for the installation of a DSL line by an EPT technical team upon request from the operator or the installation of a VDSL service with provisioning type "new line" |
| T6 | 5 working days | Delivering by Operator to EPT of the original DSL request form signed by the End-User in case of doubt |
| T7 | 10 working days | Response time of the Donor Operator to a Migration request introduced by an Receiving Operator |

8.2 Fault Reporting and Repair

| Timer | Value | Description |
|-------|--|---|
| T40 | Before end of the first working day following the issuance day of a Fault Report | Time period to achieve 95% of fault repair requests for DSL Standard Services |
| T41 | Before end of the first working day following the issuance day of a Fault Report | Time period to achieve 95% of fault repair requests for DSL Professional Services |

8.3 Other

| Timer | Value | Description |
|-------|-------|-------------|
|-------|-------|-------------|

| | | |
|------------|-----------------|--|
| T51 | 20 working days | Maximum period between the declaration of an Operator that it is interested in Local Loop Broadband Services and the acceptance of first electronic exchanged file |
|------------|-----------------|--|

Schedule 9- Project Plan

The Reference DSL Offer (RDSLO) is part of a planning agreed between EPT and ILR. The general planning is joined hereunder. Thematic appendixes dealing with the different offers of this planning can be found on the EPT's website under www.ept.lu --> TELECOM --> OPERATORS --> REGULATORY --> ATH/FTTH.

| PLANNING PREVISIONNEL DOSSIER OFFRES TRES HAUT DEBIT 2010/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|-------|------|-----|------|------|------|---------|------|------|------|-----------|------|---------|------|----------|------|----------|------|---------|------|---------|------|------|------|-------|------|-----|------|------|------|---------|------|------|--|--|--|--|--|
| | 2010 | Mars | Avril | 2010 | Mai | 2010 | Juin | 2010 | Juillet | 2010 | Août | 2010 | Septembre | 2010 | Octobre | 2010 | Novembre | 2010 | Décembre | 2011 | Janvier | 2011 | Février | 2011 | Mars | 2011 | Avril | 2011 | Mai | 2011 | Juin | 2011 | Juillet | 2011 | Août | | | | | |
| Offre RDSLO (technologie VDSL/FTTN) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Publication d'une offre incluant le VDSL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Publication du contrat reposant sur la RDSLO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transmission à l'ILR des éléments de preuve tarifaire | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Délai estimatif pour valider les éléments tarifaires | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Délai estimatif pour consultation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clarification des derniers éléments suite à la consultation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date d'entrée en service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offre Accès très haut débit (technologie FTTH) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Publication de l'offre de référence ATH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Publication du contrat reposant sur l'offre ATH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transmission à l'ILR des éléments de preuve tarifaire | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Délai estimatif pour valider les éléments tarifaires | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Délai estimatif pour consultation publique | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clarification des derniers éléments suite à la consultation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date d'entrée en service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Option Mono-VC en plus du modèle Multi-VC offert | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyse préliminaire par EPT et validation avec OAO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elaboration de l'offre EPT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mise en oeuvre de la solution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disponibilité de la configuration pour les opérateurs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offre d'un accès BB permettant le transport IPTV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyse technique | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elaboration d'un projet d'offre type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annexe à l'offre RDSLO: option PSTN sur VDSL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elaboration du projet d'offre EPT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transmission à l'ILR des éléments de preuve tarifaire | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Délai estimatif pour consultation principes de base | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clarification des derniers éléments suite à la consultation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date d'entrée en service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offre d'accès Bitstream | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elaboration de l'offre commerciale | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date d'entrée en service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offre de dégroupage de la boucle locale en fibre | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyse préliminaire et élaboration d'un projet d'offre | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Publication de l'offre | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |