

# schedule 2d

additional terms for the lease of dark fibre

## 1. SERVICE DESCRIPTION

The Interoute Dark Fibre Service ("Service") will comprise of the lease and maintenance of Dark Fibre between fixed points in Europe.

### DEFINITIONS AND INTERPRETATION

1.1.

In these Additional Terms

"**Acceptance Certificate**" means an acceptance certificate in the form set out in Appendix 2.

"**Acceptance Tests**" means the tests conducted on Dark Fibre as described in Clause 2 and Appendix 2.

"**Additional Terms**" means this document forming part of the Agreement, which describes the Products and Services, to be provided and the relevant service levels.

"**Agreed Delivery Date**" means the agreed date by both Parties in respect to the provision of Dark Fibre as set out in the Purchase Order.

"**Agreement**" means the Master Agreement, which includes these Additional Terms, Purchase Orders, Change Orders and Interoutes Standard Terms & Conditions.

"**Authorisations**" means all material and applicable authorisations, leases, licences, easements, rights of way, franchises, approvals, permits, orders, consents and other rights required for Interoute to operate and maintain the i-21 Network and provide Dark Fibre to Customer.

"**Charges**" means the charges payable by the Customer for the Dark Fibre Service as set out in the Purchase Order in accordance with Clause 4 and Appendix 1 of this schedule.

"**Co-location Facilities Charges**" means the charges for the Facilities set out in the Purchase Order.

"**Co-location Facilities**" means the in-line amplification sites and Points of Presence identified in the Purchase Order and provided for in the Additional Terms for Co-location Facilities.

"**Customer Equipment**" means all equipment (including spare parts) which is either owned or leased by the Customer or customers of the Customer.

"**Customer System**" means the telecommunications infrastructure, including cables and equipment owned or operated by the Customer or any of its Affiliates.

"**Dark Fibre**" means the dark fibre pairs on the i-21 Network identified in the Purchase Order and delivered by Interoute pursuant to Clause 2 and in respect of which Interoute grants to Customer the rights set out in these Additional Terms.

"**Demarcation Points**" means each demarcation point within optical distribution frames owned by Interoute, its agent or the Customer at a POP at which Customer shall have access to the Dark Fibre on the i-21 Network as illustrated in Appendix 2 and identified in the Purchase Order Form or at such other place or places as may be agreed between the Parties.

"**Effective Date**" means the date of this Agreement.

"**Force Majeure**" means War, acts of a public enemy revolution, civil commotion or riot, strikes (other than any strike involving predominantly employees of the Parties), epidemic, fire, flood, earthquake, explosion, material change in law, act of government, or act of God or any cause which is beyond the control and without the fault or negligence of the Party seeking to rely on the Force Majeure.

"**i-21 Network**" means Interoute's fibre optic cable system which consists of the Sections as more fully described in the Purchase Order. In the event there is more than one fibre optic on the i-21 Network, the term "i-21 Network" shall mean that cable containing Dark Fibre.

"**Interoute Equipment**" means all equipment (including spare parts) which is either owned or leased by Interoute or customers of Interoute.

"**Lease**" means lease(s) of the Dark Fibre granted by Interoute to the Customer under the terms and conditions of the Agreement.

"**Lease Charge**" means the charges associated with the lease of Dark Fibre for the Lease Term as set out in the Purchase Order.

"**Lease Term**" means the term specified in the Purchase Order commencing on the Agreed Delivery Date.

"**Maintenance Services**" means the maintenance services to be provided by Interoute pursuant to Clause 4.

"**Order Form**" means Interoute's order form for the lease of dark fibre as provided as Schedule 4 of the Agreement.

"**Purchase Order**" has the meaning given to it in Clause 2.1

"**Sections**" means those continuous portions of the i-21 Network between Cable System Interface Points described in the Purchase Order.

"**Service Commencement Date**" means, in respect of the Dark Fibre or any particular Section the date at which the Acceptance Tests have been successfully completed in respect of such Section as evidenced by the actual or deemed signature by Customer of an Acceptance Certificate in respect thereof and (if applicable) all snagging items have been remedied in accordance with Clause 2.7.

"**Service Level Targets**" means the service level targets set out in Appendix 5.

"**Specifications**" means the specification of the Dark Fibre as set out in Appendix 3.

"**Term**" means from the Effective Date until all Leases hereunder have expired or are terminated in accordance with the provisions of the Agreement.

## 2. GRANT OF LEASE

2.1. The Customer may from time to time place orders to lease Dark Fibre from Interoute as follows:

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- a. To place an order, the Customer will complete the Order Form with all relevant details for the requirements and submit the completed Order Form to Interoute.
  - b. Within ten (10) Working Days of receipt of the Order Form from the Customer, Interoute will respond in writing to the Customer either:
    - i. notifying the Customer of the Agreed Delivery and Charges for the Dark Fibre identified in the Order Form and signing the Order Form; or
    - ii. informing the Customer that the Order Form is rejected, in which case no further action is required by either Party and the Order Form will lapse.
  - c. If the Customer wishes to proceed with the Order Form on the basis of the Charges and Agreed Delivery Date under Clause 2.1 (b)(i), it shall confirm this to Interoute by counter-signing the Order Form and returning it to Interoute within ten (10) Working Days of receipt of the information.
  - d. On receipt by Interoute of an Order Form which has been signed by Interoute and counter-signed by the Customer, such Order Form shall become a "Purchase Order", such Purchase Order shall be binding on both Parties and shall be subject to the terms and conditions set out in this Agreement.
- 2.2. Subject to the terms and conditions of the Agreement, Interoute grants to the Customer the Lease(s) with effect from Agreed Delivery Date and continuing for the Lease Term, unless this Agreement is terminated earlier under the terms of the Agreement, in which event the Lease shall terminate automatically.
- 2.3. Interoute shall ensure that Acceptance Tests are conducted in respect of the Dark Fibre and that the Acceptance Tests shall be completed prior to the delivery of such Dark Fibre.
- 2.4. On completion of the Acceptance Tests in respect of the Dark Fibre, Interoute shall deliver to Customer an Acceptance Certificate duly signed on behalf of Interoute together with a copy of the results of the Acceptance Tests.
- 2.5. Customer shall within five (5) Working Days following the date of the receipt of an Acceptance Certificate in accordance with Clause 2. 4, either:
  - a. confirm to Interoute its acceptance of the Dark Fibre by its counter signature of such Acceptance Certificate and indicating any "snagging items" (being items which do not materially affect the use of the Dark Fibre by Customer) identified during Acceptance Testing. The date of counter signature of the Acceptance Certificate shall be the Service Commencement Date; or
- b. notify Interoute of any material deviation or non compliance of the Dark Fibre with the Specification and provide to Interoute, together with such notice, the results of the testing conducted evidencing such material deviation or non compliance.
- 2.6. In the event that Customer shall notify Interoute:
  - a. of acceptance of the Dark Fibre in accordance with Clause 2.5(a) Interoute agrees to perform such works as it deems to be reasonably required to remedy such snagging items or defects as are notified to it as soon as reasonably possible;
  - b. of non acceptance of the Dark Fibre in accordance with Clause 2.5(b) Interoute agrees to perform good faith efforts to provide Dark Fibre to Specification in Appendix 2 and upon completion of such works the provisions of Clause 2.3 to 2.7 shall apply.
- 2.7. In the event that any snagging, deviation or non-compliance with the Specifications notified to Interoute in accordance with Clause 2.5 (a) or (b) shall be attributable to the Customer System or otherwise due to the act or omission of Customer, Interoute shall be entitled to invoice Customer for any costs reasonably incurred in investigating and remedying such snagging deviation or non-compliance in accordance with Clause 2.5, such invoice being payable in accordance with Clause 3 of Interoute's Terms and Conditions.
- 2.8. In the event that Customer shall fail within the timescale set out in Clause 2.5 to deliver a notice to Interoute, Customer shall be deemed to have accepted the Dark Fibre and to have countersigned the Acceptance Certificate on the date of signature of such Acceptance Certificate by Interoute. The date of signature of such Acceptance Certificate by Interoute shall be the Service Commencement Date of the Section to which it relates.
- 2.9. Customer will be entitled to terminate the Purchase Order upon thirty (30) days written notice to Interoute in the event Interoute fails to deliver Dark Fibre ordered by the Customer within ninety (90) days of the Agreed Delivery Date. Interoute shall otherwise have no liability to the Customer for delay in the delivery of Dark Fibre beyond the Agreed Delivery Date.
- 3. ACCESS AND AUTHORISATIONS**
- 3.1. Interoute shall obtain all required Authorisations with respect to the Purchase Order prior to the Agreed Delivery Date and shall maintain or renew all such Authorisations throughout the Term.
  - 3.2. If any Authorisations are modified or terminated, and the loss of such Authorisations threatens to cause or does cause material financial harm to Interoute, or prevents or materially interferes with Interoute's control, possession and/or use of the i-21 Network or its ability to provide the Dark Fibre, Interoute shall have the option to:

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- a. at no additional charge to the Customer to provide Customer with comparable dark fibres to the Dark Fibre on alternate portions of Interoute's then existing i-21 Network or on networks of third parties; or
- b. terminate Customer's Purchase Order and reimburse Customer a pro rata share of the Lease Charge paid by Customer in respect of the unexpired Term of the Purchase Order without further obligation or liability to Customer.

The foregoing will be Interoute's sole and exclusive liability and Customer's sole and exclusive remedy with respect to the loss of Authorisations.

- 3.3. If Interoute is required by any third party to relocate any segment of its i-21 Network, Interoute will provide Customer at least sixty (60) days prior written notice of any relocation unless prevented from doing so by the timing of the relocation. Prior to the relocation, Interoute will provide Customer an estimate of the cost of such relocation, and to the extent Interoute is not reimbursed for those costs by the requesting third party, Customer agrees to pay its pro rata share of the relocation costs in respect of the number of fibres leased by the Customer to the total number of fibres in that Section of the i-21 Network. Interoute will use its reasonable efforts to secure an agreement for reimbursement from the third party.

#### 4. OPERATION AND MAINTENANCE

- 4.1. In consideration of the Lease Charge, Interoute shall during the Term provide the maintenance as set out in this Clause 4 and as detailed in Appendix 4 of these Additional Terms.
- 4.2. Interoute shall use reasonable efforts to cause the i-21 Network to be maintained in efficient working order and in accordance with industry standards.
- 4.3. Interoute will have sole responsibility for negotiating, executing and administering the contracts related to the operation, maintenance and repair of the i-21 Network.
- 4.4. Should any condition exist that may impair the integrity of the i-21 Network, Interoute shall initiate and co-ordinate planned maintenance, which may include disconnection of all or any part of the Dark Fibre. Interoute shall, to the extent reasonably practicable, give the Customer sixty (60) days notice in writing (or such shorter period as may be necessary), prior to initiating a planned maintenance operation, of the timing and scope of such planned maintenance operation. Interoute shall use best efforts to conduct any planned maintenance of the i-21 Network during the hours of Sunday morning 00:00. to 06:00 Greenwich Mean Time.

- 4.5. In the event of disruption of service due to an event of Force Majeure or other emergency, Interoute shall cause service to be restored as quickly as reasonably possible.

#### 5. USE OF CO-LOCATION FACILITIES

- 5.1. Subject to the provisions of the Additional Terms for Co-location Facilities and the other terms of this Agreement and in consideration of payment by the Customer of the Co-location Facilities Charges in accordance with the terms of the Purchase Order and Clause 3 of Interoute's Terms and Conditions, Interoute hereby grants the Customer, a right to use the Co-location Facilities for the Term. The Parties agree that the ownership of the Facilities shall remain with Interoute or the suppliers of Interoute and that nothing in this Agreement confers or is intended to in any manner confer such ownership to the Customer.

#### 6. SERVICE LEVEL GUARANTEES AND MAINTENANCE

- 6.1. Interoute shall provide the Dark Fibre in accordance with the Service Level Targets. If the Dark Fibre fails to meet the Service Level Targets set out in Appendix 5 for three consecutive months or for any three (3) months in a rolling four (4) month period, the Customer may terminate the Purchase Order upon twenty (20) days written notice to Interoute.
- 6.2. Interoute or its agents shall perform all Maintenance Services in respect of the Dark Fibre, including preventative maintenance and periodic upgrades of operating system software, as Interoute deems necessary to ensure proper functioning of the i-21 Network.
- 6.3. Customer may not, without the express written consent of Interoute, perform any repairs or maintenance to the i-21 Network, or contract with any third party to perform any repairs or maintenance to the i-21 Network. Customer will not install any equipment to be used with the i-21 Network, or use any equipment in any manner, that damages or interferes with the i-21 Network.
- 6.4. If all or part of the Dark Fibre requires restoration, replacement or repair by reason of an act or omission of Customer, its employees, agents, or contractors, such repair, replacement and/or restoration may be made by Interoute, at Customer's sole expense, in accordance with Interoute's then current time and materials rates plus applicable taxes.
- 6.5. Customer may request Interoute to perform additional services including, without limitation, construction, lateral extensions and riser work. Interoute shall use good faith efforts to provide such services on terms acceptable to both Parties.

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### 7. USE OF THE DARK FIBRE

- 7.1. Subject to supervision by Interoute, the Customer shall have the right to access the Dark Fibre at pre-agreed points. Customer will use the Dark Fibre in full compliance with all applicable laws, rules and regulations and all applicable franchises, rights of way, leases, licences, franchises and contracts and other obligations to third parties with respect to the i-21 Network or Dark Fibre. At Customer's sole cost and expense, Customer will obtain and maintain in effect during the Term all rights, leases, licences, permits and governmental or non-governmental approvals necessary for use of the Dark Fibre by Customer.
- 7.2. Interoute is providing the Dark Fibre for Customer's exclusive use. Customer will not under any circumstances permit the use of or provide access to the Dark Fibre or i-21 Network in whole or part, to any third party, other than a customer of Customer in the ordinary course of Customer's business. For purposes of this Agreement, the ordinary course of Customer's business shall not include the sale, leasing or granting of any rights of use in "dark fibre", as such term is commonly understood in the telecommunications industry.
- 7.3. Customer may not sublease, assign, license, sublicense, sell, share or otherwise utilize in conjunction with a third party (including without limitation in any joint venture or as part of any outsourcing activity) the Dark Fibre or the i-21 Network, or any component thereof. Any breach of this Clause will be deemed a material breach of this Agreement, and in the event of such material breach, Interoute will have the right to immediately terminate this Agreement in addition to any and all rights and remedies. For the avoidance of doubt, nothing in this clause shall prevent Customer from providing SDH or wavelength services to its own customers using the Dark Fibre.
- 7.4. Interoute may subcontract to any third party any or all of its performance obligations (including without limitation maintenance) under this Agreement without the consent of Customer, provided that Interoute will remain obligated for such performance in accordance with the terms of this Agreement.
- 7.5. Interoute may from time to time during the Term, exchange the Dark Fibre(s) provided to Customer with alternative Dark Fibre(s) at no additional cost to the Customer.

### 8. NON-INTERFERENCE AND COMPLIANCE WITH LAW

- 8.1. The Customer shall ensure that its use of the Dark Fibre in the i-21 Network and any equipment associated with it shall not:
- a. interfere, interrupt or impair service over any part of the i-21 Network or any circuits or facilities of any other user of the i-21 Network;

- b. impair privacy of any communications over such circuits or facilities;
- c. cause damage of any nature to the i-21 Network; or
- d. create hazards to any persons or any of the aforementioned users of the i-21 Network or of any owner of the aforementioned circuits or facilities or to the public.

8.2. Customer shall bear the cost of any additional protective apparatus reasonably required to be installed because of the use of the Dark Fibre by the Customer or any customer of the Customer.

8.3. Customer shall be solely responsible for the use which it or any other person permitted to use the Dark Fibre makes of the Dark Fibre and shall indemnify and hold harmless Interoute and Interoute's officers, directors, employees, agents and sub-contractors from and against any and all losses, costs, claims, damages and liabilities whatsoever arising from:

- a. any defamatory, obscene or otherwise illegal content; or
- b. any claim asserted by any third party arising in any way from the use of the Dark Fibre by the Customer or any other person permitted by the Customer to use the Dark Fibre.

8.4. The Customer shall comply with all reasonable rules and instructions from time to time notified by Interoute to the Customer in relation to the use of the Dark Fibre.

### 9. INSURANCE

9.1. Each Party shall, at its own expense, secure and maintain in force, throughout the Term, public liability insurance, for a minimum amount of five million euros (€5,000,000) per occurrence (in so far as this is available in the market) and worker's compensation and employer's liability insurance as required by the laws of all applicable Governmental Authorities. Such insurance may be provided in a policy or policies, primary and excess, including the so-called umbrella or catastrophe forms. The undertaking with respect to insurance shall not relieve either Party of its obligations hereunder. In addition, each Party shall comply with the insurance requirements in any underlying Authorizations (provided that such Party has knowledge of such requirements).

9.2. Unless otherwise agreed or notified to the other Party, all insurance policies shall be obtained and maintained in so far as is available in the market with companies rated AX or better by Best's Key Rating Guide and each Party shall, upon request, provide an insurance certificate confirming compliance with the requirements of this Clause.

9.3. Subject to Clause 16, in the event any Party fails to maintain the required insurance coverage and a claim is made or suffered, the

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Party failing to provide such coverage shall indemnify and hold harmless the other Party from any and claims for which the required insurance would have provided coverage.

### 10. WARRANTIES

- 10.1. Interoute hereby represents and warrants to Customer that it has good title to the Dark Fibre, free and clear of any liens or encumbrances that may interfere with Customer's use and quiet enjoyment of the Dark Fibre.
- 10.2. Except as expressly set forth herein Interoute gives no warranties and specifically excludes any implied warranties, , with respect to the Dark Fibre and Maintenance Services including but not limited to any warranties of merchantability or fitness for a particular purpose.
- 10.3. Customer represents and warrants to Interoute
- a. Customer has obtained, and shall use commercially reasonable efforts to maintain in good standing, and shall ensure that all third parties with whom it has entered into an agreement for the purpose or use of part or all of the Dark Fibre have so obtained and so maintain all consents, approvals, licences, permits and other approvals, both governmental and private, as may be necessary (as at the date of performance) to permit Customer to perform its obligations under this Agreement and to permit Customer and such third parties to access, acquire and use the Dark Fibre.
  - b. Customer shall not create or permit to exist any liens, encumbrances or charges to be placed upon the Dark Fibre or Customer's rights under this Agreement save where a floating charge has been granted by Customer in favour of financial institutions or others against all Customer's assets generally in connection with financing arrangements of Customer.
- 10.4. The foregoing representations and warranties shall survive the execution and delivery of this Agreement.
- 10.5. Clause 11 and this Clause 10 shall continue in full force and effect notwithstanding termination of this Agreement.

### 11. LIABILITIES

The following provisions 11.1 to 11.6 take precedence over Clause 10 in the Interoute Terms and Conditions.

- 11.1. Subject to Clause 11.2 Interoute shall not be liable to the Customer for any loss or damage caused by or arising out of any temporary or permanent failure or disruption of the Dark Fibre or i-21 Network or any facilities associated herewith or for any interruption of service (without prejudice, in each case, to any respective rights or liabilities of the Parties under any other agreements relating to the i-21

Network), except as expressly provided in this Agreement.

- 11.2. Nothing in this Agreement shall exclude or limit either Party's liability for fraud or for death or personal injury caused by its negligence.
- 11.3. SUBJECT TO CLAUSE 11.2 AND WITHOUT LIMITING ANY OBLIGATIONS UNDER SECTION 11.6 AND NOTWITHSTANDING THE UNENFORCEABILITY OR INVALIDITY OF ANY OTHER PROVISION IN THE AGREEMENT, IN RESPECT OF EACH PURCHASE ORDER INTERROUTE'S LIABILITY IN CONTRACT, TORT (INCLUDING NEGLIGENCE OR BREACH OF STATUTORY DUTY) OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF INTERROUTE'S OBLIGATIONS UNDER THE AGREEMENT SHALL BE LIMITED TO THE HIGHER OF €500,000 (FIVE HUNDRED THOUSAND EUROS) OR TWICE THE AMOUNT PAYABLE BY THE CUSTOMER UNDER THAT PURCHASE ORDER.
- 11.4. SUBJECT TO CLAUSE 11.2 AND WITHOUT LIMITING ANY OBLIGATIONS UNDER SECTION 11.6 OR ANY OBLIGATION TO PAY AMOUNTS DUE UNDER INVOICES ISSUED PURSUANT TO THE TERMS OF THE AGREEMENT, AND NOTWITHSTANDING THE UNENFORCEABILITY OR INVALIDITY OF ANY OTHER PROVISION IN THE AGREEMENT, IN RESPECT OF EACH PURCHASE ORDER THE CUSTOMER'S LIABILITY IN CONTRACT, TORT (INCLUDING NEGLIGENCE OR BREACH OF STATUTORY DUTY) OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF CUSTOMER'S OBLIGATIONS UNDER THE AGREEMENT SHALL BE LIMITED TO THE HIGHER OF €1,000,000 (ONE MILLION EUROS) OR THREE TIMES THE AMOUNT PAYABLE UNDER THAT PURCHASE ORDER.
- 11.5. IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER THE AGREEMENT FOR ANY LOSS OF INCOME, DATA, PROFITS, SAVINGS, REVENUE, BUSINESS, GOODWILL OR CONTRACTS OR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL LOSS OR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGE OF ANY KIND, IN EACH CASE HOWSOEVER ARISING, AND WHETHER ARISING IN TORT (INCLUDING NEGLIGENCE), BREACH OF CONTRACT OR OTHERWISE PROVIDED THAT NOTHING IN THIS CLAUSE SHALL EXCLUDE OR LIMIT THE LIABILITY OF CUSTOMER TO:
- a. PAY THE CHARGES; OR
  - b. REPAIR (OR IF REPAIR IS NOT PRACTICABLE, REPLACE) ANY TANGIBLE PHYSICAL

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PROPERTY INTENTIONALLY OR NEGLIGENTLY DAMAGED BY THE CUSTOMER OR ITS EMPLOYEES WHILST ON INTERROUTE'S PREMISES.

11.6. Notwithstanding Clauses 11.3 and 11.4, each Party agrees to indemnify, defend and hold the other Party, its officers, directors, employees, agents and contractors harmless from and against all loss, damage, liability, cost and expense (including reasonable attorney's fees and expenses) by reason of any claims or actions by third parties for:

- (a) personal injury, including death;
- (b) damage, loss or destruction of any real or tangible personal property (including without limitation the Dark Fibre and the i-21 Network)

which third party claims arise out of or relate to (i) any negligent act or omission of the indemnifying Party's directors, agents, employees, contractors, representatives or invitees, or (ii) the indemnifying Party's or its customer's conduct of their respective businesses including without limitation the content of any video, voice or data carried by Customer or its customers on the Dark Fibre.

## 12. FORCE MAJEURE

12.1. Neither Party shall be deemed in default of any of its obligations under this Agreement, (including Interoute's obligation to provide the Dark Fibre by the Agreed Delivery Date), if, and to the extent that, performance of such obligation is prevented or delayed by an event of Force Majeure provided that such event of Force Majeure is not caused by the negligence of the Party claiming Force Majeure. The

Party claiming the Force Majeure will notify the other Party in writing of the Force Majeure. Such notice will specify the anticipated length of delay, the cause of the delay and a timetable by which any remedial measures will be implemented. An event of Force Majeure shall suspend the Purchase Orders affected, including, without limitation, Customer's applicable payment obligations, until the Force Majeure condition ceases.

12.2. The Party claiming Force Majeure shall use reasonable endeavours to avoid or minimise the effects of a Force Majeure. Upon the occurrence of an event of Force Majeure, the time for performance shall be extended for the period of delay or inability to perform due to such occurrence.

12.3. Upon the cessation of the Force Majeure, the affecting Party shall promptly notify the other Party in writing of such cessation and shall resume its performance.

12.4. If following sixty (60) days from the date of notification under Clause 17.1 the event of Force Majeure persists the Party not claiming Force Majeure may terminate the applicable Lease by service of notice in writing to the other Party.

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### Appendixes follow these Additional Terms for the Lease of Dark Fibre:

- **Appendix 1** Charges and Payment Terms
- **Appendix 2** Acceptance Procedures and Tests
- **Appendix 3** Dark Fibre Specification
- **Appendix 4** Maintenance Description for Dark Fibre
- **Appendix 5** Service Level Agreement

# appendix 1

## charges and payment terms

### 1. CHARGES

The Charges shall be payable by Customer in accordance with Clause 3 of Interoute's Terms and Conditions or as otherwise provided for in the Purchase Order.

### 2. MANPOWER CHARGES

Other tasks undertaken by Interoute at the request of the Customer or activities undertaken by the Customer which require the attendance of Interoute personnel and which are not otherwise covered by this agreement (e.g. escorting, supervising Customer works, additional testing) will be charged at the hourly rates shown below:

Notice Given	48 hours notice (Euro)	24 hours notice (Euro)	4 hours notice (Euro) (Euro)
Monday-Friday, business hours	200	240	300
Monday-Friday, other times	270	325	400
Saturday	270	325	400
Sunday	345	410	515

These rates are for a trained telecommunications technician and include travel and subsistence but excludes any materials and are subject to annual review. A minimum call-out period of four (4) hours applies in the event of an emergency and forty-eight (48) hours in the event of a non-emergency.

# appendix 2

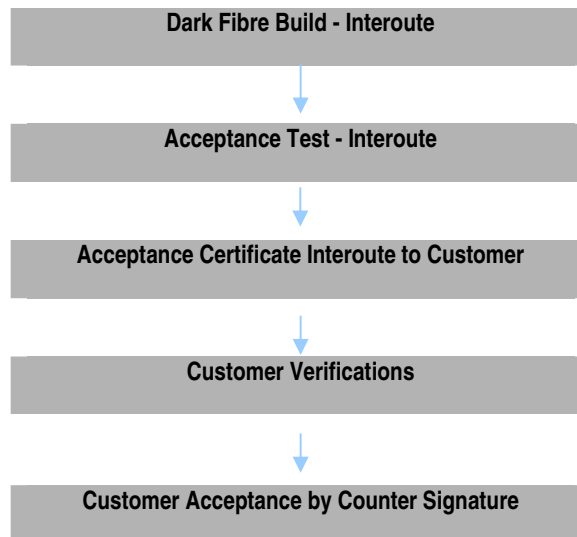
## acceptance test procedures

### 1. OBJECT

Interoute will provide Customer with Dark Fibre that has been prepared and tested according to standard Interoute guidelines as described in this Appendix 2. The Dark Fibre Section parameters shall be properly documented for hand-over to Customer.

### 2. ACCEPTANCE PROCEDURE

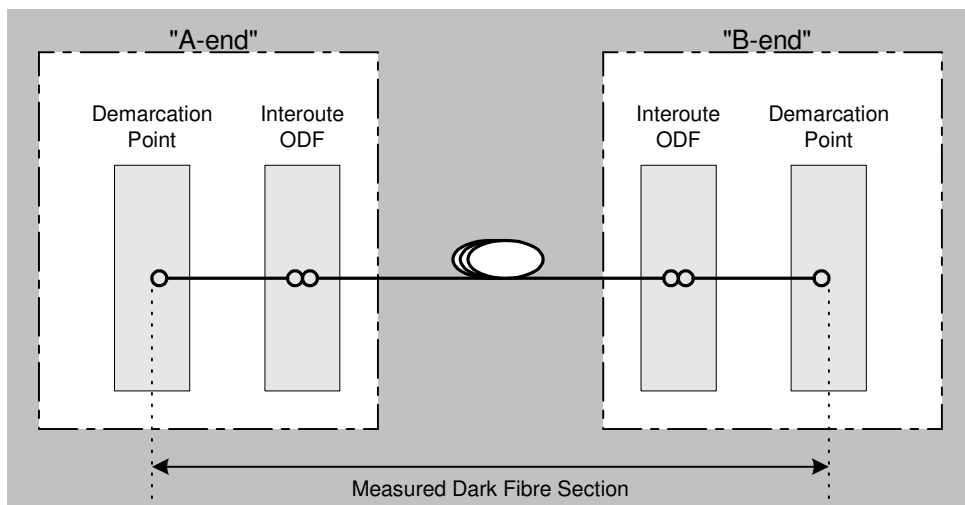
The overall procedure for the preparation, handover and acceptance of Dark Fibre is set out below:



- 2.1. Interoute will prepare the Customer's Dark Fibre requirements along the agreed Route and perform tests to determine optical performance of each Dark Fibre Section.
- 2.2. The test results will be recorded in the Acceptance Certificate and forwarded to Customer.
- 2.3. Customer's technical personnel will be given the opportunity to verify the results in accordance with Clause 2 of the Agreement.
- 2.4. Interoute Technical personnel shall be present during any testing executed by Customer in accordance with Clause 2.
- 2.5. Upon agreement of the performance of the Dark Fibre Section, the Customer and Interoute shall sign the Acceptance Certificate as the Service Commencement Date and following completion of any snagging items listed in the Acceptance Certificate shall sign the final Section Acceptance Certificate.

### 3. DARK FIBRE SECTION DEFINITION

**diagram 1: dark fibre section** illustrates the typical Dark Fibre Section and identifies the Demarcation Points between Interoute and the Customer and the Optical Distribution Frame (ODF)



**diagram 1: dark fibre section**

### 4. ACCEPTANCE LEVELS

Each Dark Fibre Section will conform to the specifications as set out in Annex 3 (Specification of the Dark Fibre)

### 5. OPTICAL ACCEPTANCE MEASUREMENTS

All testing is performed in accordance with ITU-T G.650, Definition and Test Methods for the relevant parameters of single mode fibres, namely

- Bi-directional OTDR Measurements; and
- Measure Attenuation.

#### 5.1. Bi-directional OTDR Measurements

A Bi-directional OTDR analysis is performed on each fibre of a Dark Fibre Section. Measurements are recorded for the A to B direction and the B to A direction using the same test equipment and setting. The OTDR analyser is connected to Interoute ODF via ITU-T G.652 launch lead that is >1.5km in length as illustrated in **diagram 2: bi-directional OTDR test method**. At the other end of the Dark Fibre Section a second ITU-T G.652 launch lead that is >1.5km in length is connected via the Interoute ODF.

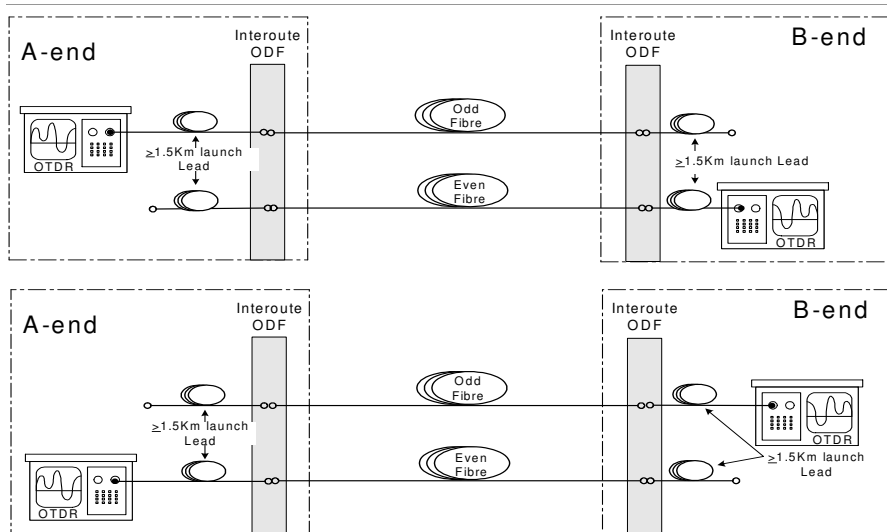


diagram 2: Bi-directional OTDR Test Method

Both short and long pulse widths are utilised to provide event and connector loss tables recorded in the Acceptance Certificate.

## 5.2. Measure Attenuation

The actual measured attenuation for a Dark Fibre Section is nominally measured utilising a 1550nm and 1625nm (1310nm can use upon Customer request) optical source and Optical Power Meter (OPM). A reference check is performed on all test equipment (optical Source, optical Power meter and test leads) to confirm they are within 0.3db of the transmit level prior to commencement of attenuation and insertion measurements.

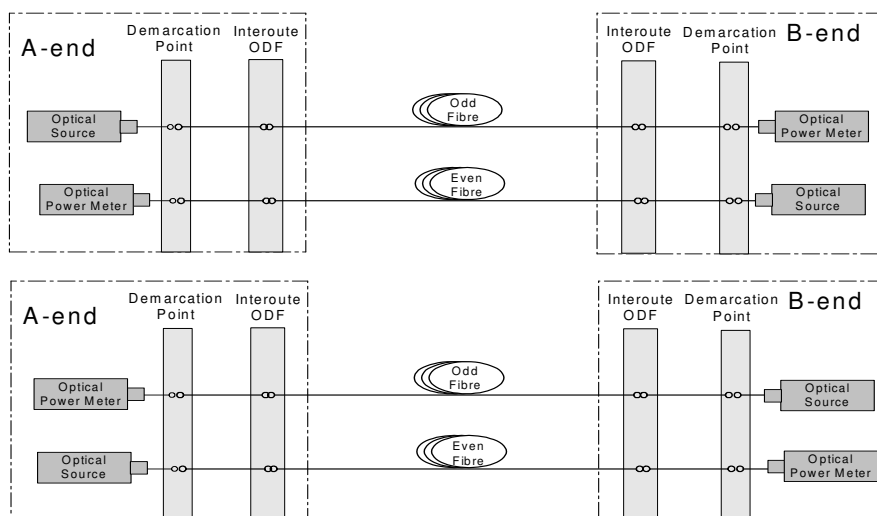


diagram 3: Attenuation Test Method

# appendix 2

## acceptance test procedures

The optical source lead is connected to the demarcation point of the Dark Fibre Section as illustrated in **diagram 3: attenuation test method**. The optical power meter is connected to the corresponding demarcation point of the Dark Fibre Section and the received level recorded. The attenuation of the Dark Fibre Section is calculated by subtracting the transmit power level from the received power level.

This measurement is repeated in the other direction on the same Dark Fibre Section with the optical source and power meter at the opposite end. Calculation of the average attenuation for each fibre of the Dark Fibre Section is based on the sum of both measurements divided by two. All results are recorded in the Acceptance Certificate.

### 6. DELIVERABLES (OR "AS BUILTS")

- Fibre Route Maps, Fibre Delivery Point Location (with maps), Co-location Room Plans
- Allocation Tables including Facilities, ODF points, fibre numbers
- Acceptance Certificate showing the Measured Results for Attenuation, Event and Connection Losses and OTDR traces.

### 7. DRAFT ACCEPTANCE CERTIFICATE

Connector loss directional table: by OTDR											
From:						To:					
Ring No:		Section No:		WP Number:		Connector Return Loss (db): Ref				<45	
Length of Launch cable				A (m):		B (m):					
Connector Insertion Loss < 0.5						Connector Return Loss					
Connector A		Connector B		Calculation		Measured		Calculation			
Measured in Direction				Average Loss				Compliant			
A to B	B to A	A to B	B to A	Conn A	Conn B	Conn A	Conn B	(Ref - A)	(Ref - B)	Y/N	
F1											
F2											
Fn											

# appendix 2

acceptance test procedures

Splice Register Table						
Ring Number		Section No				
Station A:		Station B:				
Splice Location						
	Manhole Number	Optical Distance (km) from Station A	Location			
001						
002						
00n						

Fibre Attenuation Table				
Optical Length of Route (km) =				
	Station: A to B	Station: B to A	Difference in Measured Attenuation	Average of Measured Attenuation
	(1550nm)	(1550nm)	(Between Directions)	
F1				
F2				
Fn				

## ACCEPTANCE

The undersigned states that the Dark Fibre handed over to the Customer comply with the above-mentioned values.

Interoute job title	Date
Name	Signature

The Customer acknowledges, agrees and confirms that the data set out above are hereby accepted unconditionally and irrevocably.

Company job title	Date
Name	Signature

# appendix 3

## specification of the dark fibre

### 1. FIBRE SPECIFICATION

All Dark Fibre Sections as defined in the Purchase Order shall at the time of acceptance comply with the optical and mechanical characteristics listed below:

Fibre Type	ITU-T recommendation G.655
The actual measured attenuation shall be less than or equal to the calculated attenuation for the Dark Fibre Section under test	Calculated Attenuation is $\{(0.25 \times \text{Length in Km}) + (0.06 \times \text{No. Of splices}) + (0.5 \times \text{number of connectors})\}$ dB @1550nm Calculated Attenuation is $\{(0.27 \times \text{Length in Km}) + (0.06 \times \text{No. Of splices}) + (0.5 \times \text{number of connectors})\}$ dB @1625nm
Average Splice loss	$\leq 0.06\text{dB}$
Maximum individual splice loss	$\leq 0.15\text{dB}$
Maximum individual connector loss	0.5dB
Reflectance of a connector	$<-45\text{dB}$
Polarisation Mode Dispersion	$<0.5 \text{ spec}/(\text{km})^{1/2}$
Chromatic Dispersion	2.0 to 6.0 spec/ (nm x km) @ 1550nm 4.5 to 11.2 spec/ (nm x km) @ 1625nm

Fibre Type	ITU-T recommendation G.652
The actual measured attenuation shall be less than or equal to the calculated attenuation for the Dark Fibre Section under test	Calculated Attenuation is $\{(0.35 \times \text{Length in Km}) + (0.06 \times \text{No. of splices}) + (0.5 \times \text{number of connectors})\}$ dB @ 1310nm Calculated Attenuation is $\{(0.25 \times \text{Length in Km}) + (0.06 \times \text{No. of splices}) + (0.5 \times \text{number of connectors})\}$ dB @ 1550nm
Average Splice loss	$\leq 0.06\text{dB}$
Maximum individual splice loss	$\leq 0.15\text{dB}$
Maximum individual connector loss	0.5dB
Reflectance of a connector	$<-45\text{dB}$

# appendix 3

## specification of the dark fibre

### 1.1. BEGINNING AND END OF LIFE (BOL AND EOL) SPECIFICATION

The Dark Fibre Section BOL specification is the actual measured attenuation at acceptance and recorded in the Acceptance Certificate.

The Dark Fibre Section EOL specification is considered to be an incremental margin expressed in dB per year and is calculated as following:

$$\text{Dark Fibre Section EOL} \leq \text{BOL} + \text{Repair Margin}$$

Where

Repair Margin = (Length of Dark Fibre Section/ Fibre MTBF) \* years since RFS \* Max Individual Splice Loss

Fibre MTBF = one failure/ 200km

Maximum Individual Splice Loss  $\leq 0.15\text{dB}$

# appendix 4

## maintenance description for dark fibre

### 1. DEFINITIONS

The following lists of definitions are in addition to the list of definitions given in Clause 1 of this Agreement. In case of discrepancy between definitions, the following definitions shall apply to this Agreement:

- “Non Service Affecting Fault”** means any fault, repair or condition that is not a Service Affecting Fault.
- “Service Affecting Fault”** means any fault, repair or condition (or threat of fault, repair or condition) affecting Customer service as registered by Customer or Interoute by issue of an incident report. Faults due to Force Majeure, failure of Customer’s equipment or acts or omissions of Customer or any third party employees or agents are Non Service Affecting Faults.

### 2. OBJECT

The purpose of this document is to set out the basis upon which Interoute shall provide the Customer with Maintenance Services.

### 3. MAINTENANCE SERVICES

Maintenance Services are included in the Purchase Price. The Maintenance Services include the following:

- Preventive Maintenance
- Remedial Maintenance
- Emergency Services

#### 3.1. Preventative Maintenance

Preventive maintenance includes all the activities aimed at preserving the Duct and Fibre Optic Cable from foreseeable damage. Preventive maintenance will be performed during Working Hours, unless there is an emergency or specific agreement between Customer and Interoute.

#### 3.2. Remedial Maintenance

Remedial maintenance includes all the preventive repairs required for the general upkeep of the i-21 Network following the discovery of faults or damage that do not yet affect Customer’s operations. Remedial Maintenance aims at repairing such fault or damage.

# appendix 4

## maintenance description for dark fibre

### 3.3. **Emergency Services**

Interoute will carry out the emergency services in respect of any fault, repair or condition which exposes fibre to immediate risk and where delay is likely to cause additional risk to Customer services, the Parties or third parties. Emergency services will be undertaken as soon as practically possible in co-ordination with Customer.

## 4. **FAULT REPORTING AND MANAGEMENT**

### 4.1. **Maintenance Coordinator**

Interoute will appoint a co-ordinator (the "Maintenance Co-ordinator") in charge of the implementation of Maintenance Services described in this Agreement.

### 4.2. **Customer Call Centre**

- a. Interoute will provide a "Customer Call Centre" which is an assistance service centre available 24 hours a day, 7 days a week where the Customer can report faults by telephone and confirm by fax and /or e-mail.
- b. The Customer Call Centre will:
  - receive and log calls from Customer;
  - call the on-duty maintenance manager; and
  - open and close a trouble ticket with the consent of Customer.

### 4.3. **Call Out Procedure**

- a. Customer shall report incidents to the Customer Call Centre. Customer will provide Interoute with a list of persons or entities entitled to make such a report (each an "Authorised Caller"). Detailed fault reporting procedures and contact numbers will be provided in the Customer Handover Book.
- b. Upon receipt of a call from Customer, Interoute will verify that the caller is an Authorised Caller and if so will open a trouble ticket and quote the trouble ticket reference number to Customer. This reference number will be needed to follow up the incident. Customer shall confirm the report in writing by fax or e-mail within 60 minutes of call. After notification of an incident, the Customer Call Centre will call the field maintenance manager on duty, who will co-ordinate the repair works.
- c. Customer shall provide all relevant information required by Interoute in order to locate and correct the incident.

### 4.4. **Reporting a Fault**

Following an incident, Interoute will issue an incident report detailing:

- the reference of the incident;
- the time when the incident was notified;
- the time when the Service was restored;
- the actions undertaken by Interoute; and
- the cost of the repairs if applicable.

# appendix 4

maintenance description for dark fibre

## 5. MISCELLANEOUS

### 5.1. Spare Parts

Interoute will provide generic spare parts. Specific spare parts will be provided and paid for by Customer.

## CLASSIFICATION OF INCIDENTS

### 5.2. Type of Fault

- Interoute will classify incidents according to their severity as either a Service Affecting Fault or Non Service Affecting Fault.
- Any other event, which has no adverse effect on Customer's operations, will be treated as "Planned Works".
- In case of a Service Affecting Fault, Interoute undertakes to dedicate full time resources at all times to solve the problem and the Customer undertakes to provide reasonable assistance to Interoute at all times.
- In case of Non Service Affecting Fault, Interoute undertakes to dedicate full time resources during Working Hours to solve the problem. Customer undertakes to provide reasonable assistance to Interoute during Working Hours.

### 5.3. Field Repair

Upon notification of an incident by the Customer Call Centre, the on-duty maintenance manager and field maintenance teams (including teams through subcontractors) shall perform the following activities where the incident is located:

- Identify as precisely as possible where the incident is located on the Section;
- Liase with the appropriate rights of ways owners and/or local authorities to obtain access to the Section, if applicable;
- Perform temporary repairs or final repairs as appropriate;
- Document the changes and feedback to the Customer Call Centre; and
- Propose permanent repairs if applicable.

### 5.4. Repair Intervention

The repair intervention shall be scheduled according to the following principles:

<b>Incident</b>	<b>Intervention</b>
Service Affecting Fault	Intervention available 24 hours 7 days
Non Service Affecting Fault	Intervention available within the next 96 hours

### 5.5. Planned Repairs

- Planned repairs will be organised by Interoute in order to minimise their impact on the Customer, on Interoute and their respective customers.

# appendix 4

## maintenance description for dark fibre

- Planned repairs that do not affect Customer's ability to operate the Customer Services will be performed during Working Hours and will be carried out as quickly as possible. Interoute will notify Customer of such repairs ten (10) days in advance if possible.
- Planned repairs that materially affect Customer's ability to operate the Customer Service will be performed in co-ordination with Customer with a minimum of thirty days prior notice except in case of emergency. In such an event, Interoute shall use its best commercial endeavours to mitigate the adverse effects on the use of Customer Fibre.

### 6. INSURANCE CLAIMS

Both Interoute's field maintenance team and Customer shall collect all information available (including, in the case of damage caused by a third party, the name of such third party, if identified) in order to allow Interoute's or Customer to make claims to its insurance companies.

### 7. PRICING PRINCIPLES

- All Maintenance Services are included in the Charges.
- Unnecessary interventions requested by Customer i.e. where no incident affecting customer service has been ascertained, will be invoiced to Customer based on Interoute's manpower hourly charges shown in the table below and the cost of any evidenced work undertaken plus 20%.

Notice given	48 hours notice	24 hours notice	4 hours notice
Time support required	(Euros)	(Euros)	(Euros)
Monday-Friday, Working Hours	200	240	300
Monday-Friday, other times	270	325	400
Saturday	270	325	400
Sunday	345	410	515

**Table Interoute's Manpower Charges (Hourly)**

These rates are for a trained telecommunications technician and include travel and subsistence but exclude any materials and are subject to an annual review. A minimum call-out period of four (4) hours applies.

### 8. CUSTOMERS OBLIGATIONS

Customer undertakes to provide Interoute with any information of any kind that may be necessary for the performance of the Maintenance Services under this Agreement, which it shall facilitate to the fullest extent. The Customer undertakes to:

- provide the information specified in paragraphs 4.3 and 6;
- co-operate with Interoute;
- mitigate the consequences of the incidents; and
- provide reasonable assistance to Interoute, as may be requested from time to time.

# appendix 5

## service level targets

### 1. SERVICE LEVEL TARGETS

The table below describes the service level targets Interoute will endeavour to achieve for the Products and/or Services provided. The time starts running at the moment the Customer has given notification of the problem to Interoute in accordance with this Agreement.

<b>Service</b>	<b>Activity</b>	<b>Service Level Target</b>
Customer Help Desk	Availability	24h/7d/365
Maintenance of Dark Fibre	Time to temporarily repair (exposed Cable) - Service Affecting Fault	< 12 hours
	Time to temporarily repair - Non Service Affecting Fault	< 10 days
	Time to final Repair of Dark Fibre – Non Service Affecting Fault	< 20 days
Reporting	Incident reporting	48 hours after incident
	Periodic reports	Quarterly on request

### 2. ESCALATION PROCEDURE

The Customer shall be entitled to escalate missed corrective maintenance times to Interoute management according to the escalation procedure below. The Customer Call Centre will contact the managers at the Customer's request.

<b>Elapsed Time (service affecting faults)</b>	<b>Escalation Contact</b>
12 hours	Interoute NOC or CSC shift leader
16 hours	NOC Manager
20 hours	Central Operations Director, Field Director
24 hours	VP Operations
48 hours	SVP Network and Operations

Details of the exact Escalation Procedure and contact numbers will be provided in the Customer Handover Book on the Service Commencement Date.