

# Telecommunications Services of Trinidad and Tobago Limited

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Ref. No. 00153/26/12

30<sup>th</sup> March, 2012

Mr. Cris Seecheran Chief Executive Officer Telecommunications Authority of Trinidad and Tobago #5 Eighth Avenue Extension Off Twelfth Street **BARATARIA**.

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02April 2012

Form No. 050586

Dear Mr. Seecheran,

# Re: Lisa Communications Interconnection Agreement

Please find enclosed a copy of the Interconnect Agreement made between the Telecommunications Services of Trinidad and Tobago (TSTT) and Lisa Communications dated 23rd March, 2012.

The enclosed documents are being submitted in accordance with PART III section 18(1) of the Telecommunications (Interconnect) Regulations, 2006.

Should you have any questions concerning the enclosed Agreement, we remain available to discuss and explain any element that may require clarification. Please do not hesitate to contact the undersigned to schedule any such discussions.

Yours sincerely,

Ed Duke Head Regulatory & Policy Affairs Regulatory & Policy Affairs Department

Encl.



# Interconnection Agreement

Lisa Communications

Legal Framework



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# **Interconnection Agreement**

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# Between

# Lisa Communications and TSTT

Legal Framework

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This Agreement is made this  $3^{2}$  day of March 2012.

#### BETWEEN

- A) Lisa Communications, a limited liability company duly incorporated and existing under the laws of the Republic of Trinidad and Tobago, having its principal place of business at 50 Gordon Street, Port of Spain, Trinidad (the "Telco"); and
- B) Telecommunications Services of Trinidad and Tobago Limited, a limited liability company duly incorporated and existing under the laws of the Republic Trinidad and Tobago having its principal office situate at 1 Edward Street, Port of Spain, Trinidad ("TSTT"),

each a Party to this Agreement, and collectively referred to as "the Parties".

#### RECITALS

- A) Pursuant to Concessions issued by the Minister, the Telco is entitled to operate a Public Domestic and Public International Telecommunications Network and to provide domestic and international Public Telecommunications Services in Trinidad and Tobago.
- B) TSTT is entitled by its concessions to operate its Public Telecommunications Network and to provide Public Telecommunications Services in Trinidad and Tobago.
- C) The Parties entered into an Interconnection Agreement dated 20th June 2007 as well as an Amendment Agreement effective from 16th October 2008 (hereinafter referred to as "the Original Agreements") under which the parties' respective networks were interconnected.
- D) The Parties are desirous of terminating the Original Agreements and replacing them with this Agreement and to continue the interconnection of their respective networks in accordance with the terms and conditions of their respective Concessions issued by the Minister, under the Telecommunications Act, 2001, any relevant promulgated regulations, and on the terms and conditions set out herein

It is hereby agreed as follows:

- 1. **Definitions and Applicability**
- 1.1 In this Agreement, unless the context otherwise requires or explicitly states, the terms used shall have the meanings assigned to them in the Definitions schedule.
- 1.2 In this Agreement, unless the context otherwise requires or explicitly states:
  - a) The singular includes the plural and vice versa;
  - b) Reference to an agreement or other instrument includes any variation or replacement to or of either of them;

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- c) Reference to any Clause, Schedule, Annex or other Attachment is a reference to a clause of, or schedule, annex or attachment to this Agreement and any reference to this Agreement includes any such Schedule, Annex or other Attachment. Reference to any Paragraph is a reference to a paragraph of a Schedule, Annex or Attachment.
- d) Reference to any statute, ordinance, code or other law includes regulations and other instruments under it and any consolidations, amendments, re-enactments or replacements thereof at any time;
- e) The expression "person" includes any individual, firm or company;
- f) All references to \$TT or other payable amounts refer to Trinidad and Tobago Dollars unless otherwise stated; and
- g) If a day on which payment of money falls due is not a Business Day, the due day for such payment shall be deemed to be the next following Business Day.
- 1.3 References in this Agreement to either Party shall include any legitimate successors or assigns of that Party pursuant to Clause 32.
- 1.4 Headings are included for convenience and do not affect the interpretation of this Agreement.
- 1.5 In the event of any inconsistency between the numbered Clauses of this Agreement and the Schedules, Annexes or other Attachments, the numbered Clauses of this Agreement shall prevail. In any other event the following order of priority will apply:
  - a) Definitions
  - b) Service Descriptions
  - c) Joint Working Manual
  - d) Service Schedule and Parameter Schedule
  - e) Tariff Schedule
- 2. Duration

This Agreement takes effect on the 1st April 2012 and continues in full force and effect for a period of five (5) years, unless terminated in accordance with Clause 23, otherwise varied in accordance with the provisions of Clause 22, or replaced with a new Agreement agreed to by the Parties in writing. In the event of any variation pursuant to Clause 22, the Agreement as amended shall continue in full force and effect unless terminated in accordance with Clause 23, further otherwise varied in accordance with the provisions of Clause 23, further otherwise varied in accordance with the provisions of Clause 23, further otherwise varied in accordance with the provisions of Clause 22, or replaced with a new Agreement. At any time within the year prior to the expiration of the five year term referenced

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above, either Party may request that the Parties commence negotiations for an agreement to replace this Agreement.

- 3. Interconnection
- 3.1 Subject to the provisions of this Agreement, TSTT shall connect and keep connected the TSTT System to the Telco System and the Telco shall connect and keep connected the Telco System to the TSTT System in the manner described in this Agreement in order to convey Calls and Messages to, from or in transit over their respective Systems.
- 3.2 Subject to Clause 15, Points of Connection shall be established between the TSTT Interconnect Points of Presence and Telco Interconnect Points of Presence specified in the Service Schedule in accordance with the Joining Service as more particularly described in the Service Descriptions.
- 3.3 Each Party shall ensure that any Telecommunications Apparatus necessary to the provision of interconnection pursuant to this Agreement conforms to the technical requirements set out in the Joint Working Manual.
- 4. Forecasting, Ordering and Provision of Interconnect Capacity
- 4.1 The Parties will exchange Forecasts for each Service as required in the Service Descriptions in accordance with the procedures set out in the Joint Working Manual and shall comply with all the applicable provisions of the Joint Working Manual relating to forecasting.
- 4.2 The Parties will order and provision capacity in accordance with the procedures set out in the Joint Working Manual and comply with all applicable provisions of the Joint Working Manual relating to ordering and provisioning.

# 5. Testing

- 5.1 The Parties will carry out the Acceptance Testing and commissioning procedures described in the Joint Working Manual, or as agreed by both Parties in writing.
- 6. **Operation and Maintenance**
- 6.1 Subject to Clause 9.1, each Party shall be responsible for planning, providing, operating and maintaining all Telecommunications Apparatus located on its side of the Point of Connection.
- 6.2 Each Party shall manage traffic on its System so as to avoid disruption to the other Party's System to the maximum extent reasonably practicable and each Party shall take all necessary steps as are reasonably practicable to minimise service failures and congestion and signalling system disturbances within its own System which would affect the ability of the other Party to carry Calls across such other Party's System in

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accordance with the routing principles set out in the Joint Working Manual and the Parameter Schedule.

- 6.3 Each Party shall advise the other Party of any Faults or planned maintenance in accordance with the procedures set out in the Joint Working Manual and shall resolve the Faults or conduct the maintenance in accordance with the Joint Working Manual.
- 6.4 Each Party may make reasonable tests and inspections of any services and Telecommunications Apparatus it provides to the other, and may upon reasonable notice temporarily interrupt Services carried on the Telecommunications Apparatus being tested or inspected in accordance with the provisions of the Joint Working Manual relating to planned maintenance. Where a test or inspection will affect telecommunications traffic originating or terminating on or transiting the other Party's System, the testing or inspection shall be carried out in such a way as to minimise disruption to the other Party's System.

# 7. System Changes

- 7.1 Either Party shall notify the other Party on a timely basis of developments within its System that may require a System change, which is likely to impact on the provision of Services to the other Party upon finalization of a decision to make such a change.
- 7.2 Neither Party shall make or permit to be made any alteration, adjustment or addition to its System in such a way as to materially impair the operation of the other Party's System or otherwise to materially affect the conveyance of Calls over a Point of Connection unless the Party provides reasonable prior written notice to enable the other Party to make modifications to its own System which are necessary to maintain interconnection at the agreed standards. Each Party shall take appropriate and reasonable steps to minimise the impact on the other Party of such alteration, adjustment or addition (including the costs). In the event that a System change initiated by a Party pursuant to this clause results in the other Party being without Services for a period in excess of seven days, the Party initiating such System change shall, subject as provided in Clause 26.3 hereof, be liable to the other Party remains without Services beyond the period of seven days.
- 7.3 In the event that at any time either Party proposes to change any standards or implement additional standards or standards with different features which may affect the operation of the other Party's System, the Party shall make all reasonable efforts to so notify the other Party as soon as practicable. When giving such notice the Party shall, where possible, give at least six (6) months written notice in advance, so that the other Party has a reasonable opportunity to attempt to meet such standards or adjust its System accordingly, but will not be liable in the event that six (6) months is not possible. Each Party shall take appropriate and reasonable steps to minimise the impact on the other Party of such alteration, adjustment or addition (including the costs).

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- 7.4 Subject to Clauses 7.2 and 7.3, nothing in this Agreement shall limit either Party's ability to upgrade its System through the incorporation of new equipment, new software or otherwise or to change, in part or in whole, the design, function, operation or layout of its System.
- 7.5 The applicable standards of operation of each Party's System for the purpose of the Services will be those specified in the Joint Working Manual and, in the absence of any specified standards, will be such prevailing international industry standards as agreed to by the affected parties, such agreement not to be unreasonably withheld or delayed.
- 8. Telecommunication Services
- 8.1 Each Party shall provide the other with the Services for which that Party is indicated as being the Service Supplier in the Service Schedule, provided that each Party's System and all relevant Points of Connection are suitable for the conveyance of Calls pursuant to the relevant Service Description. Subject to Clause 15 the Services shall be provided in accordance with the Service Descriptions and the Joint Working Manual.
- 8.2 For the avoidance of doubt, and notwithstanding the interconnection of the Parties' Systems, neither Party shall hand over to the other Party, nor have an obligation to convey, or continue to convey, Messages or Calls of any category, unless the Parties have agreed to convey Messages or Calls of that category pursuant to a Service Description. In the event that Messages or Calls not expressly provided for are handed over and accepted for conveyance, the following supplementary charges will be applied: (i) where the Message or Call is of a type described in a Service Description, the charges for that Service as set out in the Tariff Schedule, and (ii) where the Message or Call is of a type not described in a Service Description, such amount as is reasonable having regard to all of the circumstances.
- 8.3 Each Party shall be solely responsible for the switching and routing of all telecommunication services on its System and shall not be liable for telecommunications services provided by a Third Party Telecom Provider. Such switching and routing shall be consistent with the principles in the Joint Working Manual.
- 9. Charges and Payment
- 9.1 Each Party shall pay to the other the relevant Charges applicable to each Service as more particularly described in the Service Descriptions and tariffed in the Tariff Schedule.
- 9.2 Unless otherwise stated, Charges payable by each Party to the other Party for the same Service shall be the same. In the event that either Party's Charges for a Service are varied pursuant to Clause 10, the other Party will vary its Charges for the same Service to ensure they remain the same.

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- 9.3 Payments shall be made in an agreed form and will be deemed made on the date of receipt of such payments in cleared funds.
- 9.4 Subject to Clause 9.6, all Charges payable under this Agreement shall be payable within thirty (30) days of deemed receipt of an invoice. In the event that either Party shall fail to pay any amount due hereunder within such thirty (30) day period, (i) the payee shall be entitled to charge and receive interest at the rate of 1.5% per month or the maximum lawful rate, whichever is the less, from and including the day following the due date for payment until the date of payment in full, and whether before or after any court judgement or other award, and (ii) the payee may, subject to agreement made pursuant to Clause 9.5, deduct the amount it is owed from any amount it owes the other Party. Lisa Communications shall be liable for all reasonable costs and expenses (including, without limitation, reasonable legal fees) incurred by TSTT, in collecting any outstanding sums due hereunder.
- 9.5 The Parties may agree in writing to make payments on a "net" basis. If one Party is owed an undisputed amount by the other Party, the first Party may deduct such undisputed amount it is owed from the amount it owes the other Party and pay only the "net" amount. The Parties agree to issue invoices showing full amounts owing by the other Party.
- 9.6 In the event that either Party disputes the specific amount of any invoice delivered by the other Party under this Agreement the Parties shall resolve the dispute in accordance with the investigation and determination procedures set out in the Joint Working Manual. Notwithstanding any dispute as to any payment, the Parties shall remain obliged to continue to observe and perform the provisions of this Agreement including, but not limited to, continuing, subject to the provisions of Sections 23 and 24 herein, to provide Service to each other.
- 9.7 Any amount in dispute shall, for the purposes of this Clause, be deemed not payable pending resolution of the dispute under Clause 9.6. Nothing in this Clause shall be taken as permitting a Party to withhold payment of an amount that is not in dispute. For the avoidance of doubt, where an invoice consists of a payment that is partly in dispute, the undisputed amount shall be paid. Where the amount in dispute exceeds (TT(1)), that amount shall be paid into a separate interest bearing account pending resolution of the dispute; provided however that the amount to be paid into the interest bearing account shall not exceed the monthly undisputed charge for the month of highest traffic in the preceding twelve (12) month period, or (TT(1)) (TT(1)) (TT(1))) where a month has not elapsed since interconnection was effected.
- 9.8 Where appropriate, any value added or other applicable tax shall be added to all or any part of the Charges under this Agreement, and shall be paid by the Party responsible for making such payment.
- 10. Variation of Charges

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- 10.1 Either Party may from time to time notify the other of new Charges or changes to specific Charges,
  - i) where the Authority has approved new Charges or changes to specific Charges; or
  - ii) where a third party Telecom Provider has made changes to its charges, and these charges form part of the specified Charges.

Such notice shall specify the date on which the variation is to become effective. In the case of changes falling within (i) above, the changes will take effect from the effective date approved by the Authority. In the case of changes falling within (ii) above, evidence of the change by the third party Telecom Provider or confirmation of that change shall be provided to the other Party, and the changes will take effect from the date set out in the notice as being the effective date, such date being at least 5 weeks from the date such notice is deemed to be received unless, in the case of changes falling within (ii) above, the Party notifying the change does not receive sufficient notice from the Third Party Telecom Provider. In the case of changes falling within (ii) above, to the extent that the notifying Party does not receive sufficient notice from the Third Party Telecom Provider to give at least 5 weeks' notice of any changes that Party will give as much notice is as reasonably practicable.

# 11. Billing

- 11.1 Each Party shall be responsible for invoicing its own Subscribers.
- 11.2 Each Party shall be entitled to invoice the other Party for the relevant Usage Charges and Monthly Recurring Charges following the expiration of each Billing Period. Each Party shall use reasonable endeavours to deliver invoices in a timely manner in accordance with the Joint Working Manual.
- 11.3 Subject to Clauses 11.2 and 11.4, each Party shall be entitled to invoice the other Party for applicable One-off Charges and any other amounts expressed as being payable in accordance with the specific provisions of this Agreement.
- 11.4 Invoicing for the Joining Service shall be carried out in accordance with the relevant Service Description and all reasonable characteristics shall be used to onstare that all information necessary to produce a complete invoice for such Services is obtained in a timely manner.
- 11.5 Any failure to delight accounted in accounted that characterized in the failed of a material obligation of the invoicing Party's rights in respect of payment or a breach of a material obligation of the invoicing Party.
- 11.6 For the purpose of reconciling accounts, each Party shall use all reasonable endeavours to provide the other with Billing Data in respect of Calls conveyed from its System and handed over to the other Party at the Point of Connection in accordance with the Joint Working Manual.

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- 11.7 Notwithstanding the above, in the event that:
  - a) Billing Data is temporarily or permanently unavailable;
  - b) in the first twelve (12) months following signature of this Agreement, a billing error is discovered that occurred in the previous three (3) Billing Periods; or
  - c) at any time after the first twelve (12) months following signature of this Agreement, a billing error is discovered that occurred in the previous Billing Period

the Parties shall follow the procedures set out in the Joint Working Manual.

# 12. Infrastructure Sharing

- 12.1 Nothing in this Agreement shall be taken as requiring a Party to share Telecommunications Facilities or to provide co-location.
- 12.2 Co-location or sharing of a Party's Telecommunications Facilities may be provided under a separate agreement between the Parties.

# 13. CLI/ANI

- 13.1 The Parties will pass CLI in accordance with the Joint Working Manual and any agreed code of practice for CLI from time to time in force. For the avoidance of doubt, neither Party is required to pass CLI for any Call in respect of which CLI is not available.
- 13.2 No Party shall alter or amend ANI or permit or accept the alteration or amendment of ANI unless such alteration or amendment is agreed in advance in writing by both Parties. Without in any way restricting any other breaches of this Agreement being deemed to be material breaches, a breach of this Clause 13.2 shall be deemed a material breach of the Agreement.

## 14. Numbering

- 14.1 Each Party shall make the necessary adjustments to its System in a timely manner to route Calls to the other Party's System in accordance with the number ranges and other numbers assigned to the other Party under the Mational Numbering Plan and in accordance with the Service Descriptions and the Service Schedule.
- 14.2 Each Party shall use numbers in accordance with the National Numbering Plan.
- 15. Service Performance and Standards
- 15.1 Subject to Clause 15.3, the Parties shall use all reasonable endeavours to comply with the provisions relating to quality of service set out in the Joint Working Manual and the Parameter Schedule. Where a Party fails to comply with the foregoing quality of

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service provisions for a period of more than two calendar months within a period of twelve consecutive months, and such failure is fully attributable to such Party and arises other than due to material degradation of such Party's own telecommunications networks or services, then subject to Clause 26.3 hereof, the other Party shall be entitled to claim compensation for any of its fully-documented costs, including but not limited to, one-off operating costs and carrying charges, capital charges and depreciation, arising out of or in connection with its inability to receive the agreed quality of service.

- 15.2 Subject to Clause 15.3, the Parties shall use all reasonable endeavours to at all times apply standards (including signalling standards) and operating guidelines which are consistent with the Joint Working Manual.
- 15.3 Save as is set out in Clause 15.1 and 15.2, the Parties provide no other warranties, representations, undertakings or commitments in respect of quality of service including, but not limited to, warranties, representations, undertakings or commitments in respect of difficulties or faults which result in a failure to establish service, in-service interruption or loss of or distortion of communication, and all implied warranties are hereby excluded.

#### 16. Safety and System Protection

- 16.1 Each Party shall be responsible for the safe operation of its System and shall take all steps reasonably necessary or required by law to ensure that such operation and the implementation of this Agreement:
  - a) comply with any specific safety and protection requirements contained in this Agreement (including, without limitation, the Joint Working Manual);
  - b) do not endanger the safety or health of the officers, employees, contractors, representatives, agents, invitees or Subscribers of the other Party;
  - c) do not damage, interfere with or cause any impairment to or deterioration in the operation of the other Party's System;
  - d) do not interfere with the use or provision of licensed telecommunication services provided by the other Party, provided that this principle shall not preclude the taking of action by either Party in the normal operation of its System to protect its System, on condition that any such action is in compliance with the Joint Working Manual.
- 16.2 In the event that it is agreed to be necessary or desirable for representatives of a Party to access the premises of the other Party, each Party shall use its reasonable endeavours to comply with all reasonable security and safety practices and procedures applicable to access to and operations on the premises of the other Party notified to it by the Party whose premises are being visited. Subject to the indemnified Party complying with Clause 26.6 each Party shall indemnify and keep indemnified the

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other against all risks and damages, costs, claims and expenses arising out of any breach by the indemnifying Party of this Clause 16.2.

## 17. **Prevention of Fraud**

- 17.1 A Party shall not be obliged to convey, receive or terminate Calls or Messages (i), where the volume of such Calls or Messages materially exceeds that which could reasonably be expected and such traffic impedes the transmission of other Calls or Messages, or (ii) such Calls or Messages are otherwise harmful to the integrity of the Party's System.
- 17.2 A Party shall not be restrained from taking any reasonable actions, including not conveying, receiving or terminating Calls or Messages, in the event of (i) payment not being received from a Third Party in respect of Calls or Messages, or (ii) fraud being carried out against the Party, provided that the same action is taken in respect of all affected Calls or Messages.
- 17.3 To the extent permitted by law, the Parties will promptly upon becoming aware of fraudulent use, theft or misuse of the Parties' respective Services and associated Telecommunications Apparatus inform the other of such circumstances.
- 17.4 If requested, the Parties shall co-operate in the provision of information to the Authority or to other relevant regulatory bodies, in relation to fraudulent use, theft or misuse of the Parties' respective Services and associated Telecommunications Apparatus.

## 18. Confidentiality

- 18.1 Subject to the following provisions of this Clause 18, a Receiving Party shall keep in confidence Confidential Information and will not (and will use its best efforts to ensure that its directors, employees, agents, representatives, affiliates and professional advisers will not) disclose such information to any third party.
- 18.2 A Receiving Party shall exercise no lesser security or degree of care over Confidential Information than that Party applies to its own Confidential Information and in any event such security or degree of care shall be no less than would be exercised by a reasonable person with knowledge of the confidential nature of the information.
- 18.3 A Receiving Party shall restrict disclosure of Confidential Information relating to the other Party to those who have a reasonable need to know, and to the Authority. Confidential Information shall be used solely for the purposes for which it was disclosed. Unless otherwise agreed in writing, a Receiving Party shall not use the other Party's Confidential Information, including information in respect of a Party's subscribers, to provide commercial advantage to its Customer Facing Divisions.
- 18.4 A Receiving Party may disclose Confidential Information to a contractor or agent, subject to the contractor or agent having a reasonable need to know and undertaking to comply in writing with obligations equivalent to those contained in this Clause 18.

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#### Legal Framework

- 18.5 A Receiving Party may disclose Confidential Information to an Associated Company, subject to the Associated Company having a reasonable need to know and undertaking to comply with obligations equivalent to those contained in this Clause 18.
- 18.6 All Confidential Information is acknowledged by the Receiving Party to be the property of the Disclosing Party and the disclosure of the Confidential Information shall not be deemed to confer any rights to that Confidential Information on the Receiving Party.
- 18.7 The Disclosing Party may request in writing at any time any written Confidential Information (and/or Confidential Information in machine readable form) disclosed pursuant to the terms and conditions of this Clause 18 and any copies thereof be returned with a written statement to the effect that upon such return the Receiving Party has not knowingly retained in its possession or under its control, either directly or indirectly, any Confidential Information or copies thereof and the Receiving Party shall comply with any such request within seven (7) days of receipt of such request.

# 19. Third Party Equipment

19.1 Use by the Telco of equipment shared with, or owned or operated by, a third party for the purposes of offering services under this Agreement, shall not relieve the Telco of its obligations under this Agreement. Any delay in the provisioning, offering, maintenance or repair of any equipment or Service or in the resolution of any fault, which is attributable to the use by the Telco of equipment owned by or shared with a third party shall be the sole responsibility of the Telco, and the Telco shall take all necessary steps to (i) ensure that such equipment is operated to the standards set out in this Agreement, and (ii) ensure that any faults in, or delays associated with such equipment are mitigated immediately. TSTT shall have no obligation to take measures beyond those in this Agreement to assist in remedying any such faults or delays.

# 20. Intellectual Property Rights

- 20.1 Where any IPR is developed in connection with performance of this Agreement then, in the absence of any other Agreement between the Parties, the owner of the IPR shall be the Party who developed the IPR. Each Party grants to the other a non-exclusive, royalty free licence to use any IPR for the purposes of this Agreement and for its term subject to the other provisions in this Clause 20.
- 20.2 Each Party ("the IP Indemnifying Party") agrees to indemnify the other Party ("the IP Indemnified Party") against all liability or loss arising from, and all reasonable costs, charges and expenses incurred in connection with, any claim, action, suit or demand alleging infringement by the IP Indemnified Party of the rights in Trinidad and Tobago of a third person arising from the use by the IP Indemnified Party of IPR disclosed or licensed by the IP Indemnifying Party under this Agreement except where such IPR has been modified or used other than in accordance with this Agreement subject to the IP Indemnified Party complying with Clause 26.6.

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- 20.3 If a Party becomes aware of an infringement or threatened infringement of IPR belonging to the other Party ("the IP Owner") disclosed or licensed by the IP Owner under this Agreement, then that Party shall promptly notify the IP Owner of all the relevant details relating to the infringement, or threatened infringement.
- 20.4 The IP Owner may take such steps and proceedings as it considers necessary or desirable to protect its rights in respect of the IPR, and any rights of the other Party in the IPR, and the other Party must render all reasonable assistance to the IP Owner in this regard at the IP Owner's expense.
- 20.5 If a Party ("the Infringing Party") licenses or otherwise provides IPR to the other Party for the purposes of this Agreement and that IPR infringes the rights of a third Party, then the Infringing Party must:
  - a) at its own expense take such steps as are necessary to cure the infringement, or
  - b) if a) is unreasonable having regard to the likely costs and other relevant matters, provide alternative technology as soon as reasonably practicable.
- 20.6 The Parties acknowledge that this Clause sets out the only remedies and forms for compensation available in respect of any infringement of third Party rights by IPR licensed for the purpose of this Agreement.
- 20.7 A Party must not use a trademark or service mark belonging to another Party without the prior written consent of that other Party.

## 21. Authorised Representatives

- 21.1 Each Party shall appoint the representatives referred to in the Joint Working Manual to be responsible for the matters indicated in the Joint Working Manual. Each Party shall notify the other of the identity of the representative(s) in writing no later than five (5) Business Days following signature of this Agreement.
- 21.2 Except as otherwise provided herein, all correspondence, meetings and other communications (including notification of matters in dispute) pertaining to issues pertaining arising from their responsibilities shall be directed to and conducted by and through those representative(s). The representative(s) shall keep an appropriate record of all communication with their counterpart(s).
- 21.3 Each party is entitled to change the representative(s) by notice in writing to the other Party.

# 22. Review and Amendment

- 22.1 Without prejudice to the provisions of Clause 10, either Party may seek to amend this Agreement by serving on the other a review notice if:
  - a) a material change occurs in the laws, regulations, or policy governing telecommunications which affects Trinidad and Tobago (including, without Page 15 of 28

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limitation, licence changes, concession changes, Authority determinations, and court decisions that necessitate the amendment of this Agreement);

- b) a RIO or revised RIO submitted by TSTT is approved in whole or in part;
- c) a requirement arises that is not technically feasible;
- d) a requirement arises for space that is not available; or
- e) both Parties agree in writing that there should be a review.
- 22.2 A review notice shall set out in reasonable detail the events giving rise to the review required by the notice and the nature of the amendments sought by the Party serving the notice.
- 22.3 With the exception of reviews arising under Clause 22.1(c), a Party must serve a review notice within three (3) months of the event giving rise to the review. On service of a review notice, the Parties shall forthwith negotiate the matters to be resolved with a view to agreeing the relevant amendments to this Agreement.
- 22.4 If, after a period of thirty (30) days from commencement of such review, the Parties fail to reach Agreement, the Parties shall resolve the dispute through the arbitration process outlined in Clauses 34.1.3 to 34.1.8 of this Agreement.
- 22.5 For the avoidance of doubt, the Parties agree, that the terms and conditions for this Agreement shall remain in full force and effect during such review until the Parties complete an agreement replacing or amending this Agreement or until such time as this Agreement is terminated in accordance with its terms.

#### 23. Suspension and Termination

- 23.1 Either Party may suspend or terminate this Agreement or the provision of any Service or Services on notice in writing in the following situations on the following terms. References to "suspension" and "termination" not only include suspension or termination of this Agreement, but also specific Services.
  - a) Either Party may suspend where suspension is necessary to deal with a material degradation of either Party's telecommunications network or services;
  - b) Either Party may suspend where the other Party fails to pay any undisputed invoice or payable undisputed portion of an invoice within sixty (60) days of receipt of an invoice, and may terminate where the other Party fails to pay any undisputed invoice or any undisputed portion of an invoice when due and has failed to remedy such non-payment within three (3) months of receipt of a notice from the billing Party that the Agreement will be terminated for non-payment;
  - c) Either Party may suspend on twenty four hours notice where it reasonably believes that the other Party is engaged in acts or omissions which impair the

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integrity or security of the Party's network or services, and may suspend on five days' notice where the other Party is engaged in acts or omissions which will impair the integrity or security of the Party's network or services and has failed to take reasonable steps during that period to ensure that such impairment does not result;

- d) Either Party may terminate this Agreement where Services have been suspended under the terms of Clause 23.1(c) above for at least sixty (60) days, and the suspended Party fails to remedy the acts or omissions giving rise to the suspension within sixty (60) days of notice under Clause 23.1(c) being given;
- e) Either Party may suspend where the other Party is in breach of any material obligation contained in this Agreement and may terminate where the other Party fails to remedy such breach within thirty (30) days of notice being given;
- f) Either Party may suspend where it reasonably believes that the other Party knowingly engages in conduct which is harmful to the Party, and which is unlawful or interferes with the obligations of the Party under its Concessions or Licences, the Act or Regulations, and may terminate if the conduct does not cease within two (2) days of notice being given;
- g) Either Party may suspend where the other Party engages in conduct that would endanger life or safety, or damage the property of the Party, and may terminate if such conduct is not ceased within two (2) days of notice being given;
- h) Either Party may suspend or terminate if either Party's Public Telecommunications Network Concession and/or Public Telecommunications Services Concession and/or relevant Spectrum Licence necessary to entitle the Party to interconnection or to enable the Party to carry out its obligations at any time expires and is not immediately replaced or re-issued within ninety (90) days, or immediately if either Party's Public Telecommunications Network Concession and/or Public Telecommunications Services Concession and/or Public Telecommunications Services Concession and/or Public Telecommunications Services Concession and/or relevant Spectrum Licence necessary to entitle the Party to interconnection or to enable the Party to carry out its obligations is revoked by the Minister in the case of a Concession or by the Minister or the Authority, as the case may be, in respect of a Spectrum Licence;
- i) Either Party may suspend or terminate if the other Party ceases to carry on business, enters into liquidation (other than for the purpose of merger or reconstruction where the emergent company assumes its obligations hereunder) or is dissolved or becomes bankrupt or insolvent or takes or suffers any similar action in consequence of debt;
- j) Either Party may upon giving 90 days prior written notice to the other Party where possible, if circumstances arise whereby it is no longer technically feasible for that Party to provide that service, such technical infeasibility to be either agreed by the other Party or determined by an independent expert

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agreed to by both Parties and in default of agreement of an independent expert, to be determined by the Telecommunications Authority of Trinidad and Tobago; provided, however, that prior to a Party taking such action to suspend or terminate a Service, such Party shall have exhausted all options for continuing to provide the Service through changes to its own System; or

- k) Either Party may terminate with the agreement of the Other Party, on reasonable notice as agreed by the Parties.
- 23.2 In each case where service is suspended pursuant to Clauses 23.1, the Party suspending the service shall use its best efforts to restore the service, as soon as may be reasonably practicable once the circumstances warranting suspension have ceased to apply. Exercise of a right to suspend under Clause 23.1 shall not prejudice the suspending Party's right to exercise any other existing right to terminate pursuant to Clause 23.1. The Party whose service is suspended shall remain liable for any Charges in respect of the suspended Service throughout the period of suspension.
- 23.3 Notwithstanding Clause 23.1, neither Party may suspend or terminate this Agreement during a dispute in respect of any Service unless authorised to do so by the Authority, a dispute settlement arbitrator or a court of law.

#### 24. Effects of Termination

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- 24.1 Termination or expiry of this Agreement shall be without prejudice to the rights and obligations of the Parties accruing prior to such termination and such termination shall not affect the continuance in force of any provision of this Agreement which is expressly or by implication intended to continue in force (including but not limited to Clauses 1, 9, 11, 18, 20, 24, 26 and Paragraph 2.3.2.6 of the Joint Working Manual).
- 24.2 Termination or expiry of this Agreement shall not operate as a waiver of any breach by a Party of this Agreement and shall be without prejudice to any rights, liabilities or obligations of either Party which have accrued up to the date of termination.

# 25. Force Majeure

- 25.1 Neither Party shall be liable to the other for any delay or failure to perform or observe any provision of this Agreement by reason of Force Majeure if the Party experiencing the Force Majeure circumstance makes reasonable efforts to remove or overcome the effects of such circumstance. A Party shall be relieved of its obligations under this Agreement by reason of Force Majeure only for the period of time during which the Force Majeure circumstance applies.
- 25.2 The Party affected by any Force Majeure shall promptly notify the other of the estimated extent and duration of its inability to perform its obligations under this Agreement. Upon cessation of the delay or failure resulting from Force Majeure, the Party affected shall promptly notify the other of such cessation.

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- 25.3 If, as a result of Force Majeure, performance by either Party of its obligations under this Agreement is only partially affected, that Party shall nevertheless remain liable for the performance of those obligations not affected by Force Majeure.
- 25.4 If the Force Majeure lasts for six months or less from the date of any notification under Clause 25.2, any obligation outstanding shall be fulfilled by the Party affected as soon as possible after cessation of the Force Majeure, save to the extent that such fulfilment is no longer practically possible or is not required by the other Party.
- 25.5 If the Force Majeure lasts for more than six months from the date of any such notification and notice of cessation has not been given and such Force Majeure prevents the affected Party from performing its obligations in whole or in part during that period, the unaffected Party shall be entitled (but not obliged) to terminate this Agreement by giving not less than thirty (30) days written notice to the other after expiry of such six month period, unless notice of cessation of the Force Majeure is received by the unaffected Party prior to the expiry of such thirty (30) days notice. If this Agreement is not so terminated under the provisions of this Clause 25, any obligations outstanding shall be fulfilled by the Party affected by the Force Majeure as soon as possible after the Force Majeure has ended, save to the extent that such fulfilment is no longer possible or is not required by the other Party.

# 26. Liability

- 26.1 Neither Party excludes or restricts its liability for death or personal injury resulting from its own negligence or the negligence of its employees or agents while acting in the course of their employment or agency.
- 26.2 In the performance of its obligations under this Agreement, each Party shall exercise all the reasonable care and skill of a competent operator.
- 26.3 Subject to sub clause 26.1, the liability of each Party to the other in contract, tort (including negligence and breach of statutory duty) or otherwise arising by reason of or in connection with this Agreement shall be limited, to the extent permitted by law, to **Contract**. United States Dollars (USCOMMEND) for any one incident or series of events arising from a single incident and to **Contract**. United States Dollars (USCOMMEND) for all incidents or series of events occurring within any twelve month period. Such limitation shall not apply to the obligations of either Party to make payments to the other in the ordinary course of business.
- 26.4 Subject to sub clause 26.1, neither Party shall be liable to the other in contract, tort (including negligence and breach of statutory duty) or otherwise for indirect or consequential loss or damage. For these purposes, the expression "indirect or consequential loss or damage" shall include but not be limited to loss of revenue, profit, anticipated savings or business.
- 26.5 Notwithstanding the provisions of this Clause 26 nothing in this Agreement shall exclude or limit the liability of one Party to the other arising out of that Party's fraud or fraudulent misrepresentation, wilful act or wilful omission.

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- 26.6 Subject to Sub Clause 26.1, neither Party (for the purposes of this clause, the "First Party") shall be liable to the other Party for any losses, demands, damages or liabilities arising from any claims, proceedings or actions brought or made against that other Party by any person pursuant to a contractual or other relationship of that person with that other Party. The provisions of this sub clause shall apply notwithstanding that such claims, proceedings or actions arise through the acts or omissions of the First Party
- 26.7 Subject to Clause 26.8, each Party ("the Indemnifying Party") shall indemnify the other ("the Indemnified Party") against all liability or loss arising directly from, and any reasonable cost, charge or expense incurred in connection with:
  - a) damage to or loss of any Telecommunications Apparatus or other property of the Indemnified Party caused by the negligence or wilful acts or omissions of the Indemnifying Party or its employees, directors, representatives or agents arising out of or in connection with this Agreement; and
  - b) any action, claim, suit or demand by any person against the Indemnified Party in respect of or arising out of any negligence of the Indemnifying Party in the course of providing services to the Indemnified Party.
- 26.8 If any action, claim, suit or demand ("claim") is made by any person against the Indemnified Party which, if satisfied or paid by the Indemnified Party, would result in liability by the Indemnifying Party under the indemnity set out in Clause 26.7:
  - a) the Indemnified Party must give written notice of the claim to the Indemnifying Party as soon as practicable after the making of the claim; and
  - b) within thirty (30) days after receipt of that notice, the Indemnifying Party must:
    - i) cause the Indemnified Party to be put in sufficient funds to satisfy or pay the claim; or
    - ii) give notice the such action field Party directing it to take such action in the such action in respect of the claim as notified at the Indemnifying Party's expense; and
  - c) the Indemnifying Party must cause the Indemnified Party to be put, and therefore maintained, in sufficient funds in sufficient time to pay all reasonable costs and expenses of any action or settlement directed by the Indemnifying Party under Clauses 26.6(b) and 26.6(d) and
  - d) the Indemnified Party:
    - i) must take such action as the Indemnifying Party reasonably directs to avoid, dispute, defend, appeal, settle or compromise ("deal with") the claim and any adjudication thereof; and

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ii) must not deal with the claims except as directed by the Indemnifying Party.

# 27. Relationship of the Parties

- 27.1 In giving effect to this Agreement, the relationship of the Parties to each other shall be that of independent contractors. Nothing in this Agreement shall be construed as or shall constitute the relationship of the Parties as an agency, partnership, franchise, employment, joint venture or other joint venture relationship between the Parties.
- 27.2 No Party shall have the right to enter into contracts or pledge the credit of or assume or incur expenses or liabilities or any obligation of any kind (including but not limited to the making of any representation or warranty), express or implied, on behalf of the other Party unless otherwise expressly permitted by such other Party, in writing.
- 27.3 The only Parties to this Agreement are the Telco and TSTT.
- 27.4 Subject to the Act, the Parties' Concessions, and any regulations in force, this Agreement confers benefits and imposes burdens only upon the Parties to this Agreement and does not confer any benefit of any kind whatsoever or impose any burden of any kind whatsoever upon any person or entity who is not a Party.
- 27.5 Subject to any express provision of this Agreement to the contrary, this Agreement does not provide any person or entity who is not a Party with any remedy, defence, claim, action, claim of action or other right of any kind, or impose any liability upon such person that that person did not have before this Agreement commenced.

# 28. Representations of the Parties

- 28.1 Each Party represents that it is now and will remain in compliance with all laws, regulations, and orders applicable to its performance of its obligations under this Agreement. Each Party shall promptly notify the other Party in writing of any governmental or regulatory action that suspends, cancels, withdraws, limits or otherwise materially affects its ability to perform its obligations under this Agreement.
- 28.2 Each Party represents and warrants to the other that it:
  - a) is a limited liability company duly incorporated or continued and validly existing under the laws of Trinidad and Tobago and has all necessary corporate power and capacity to own its properties and carry on its business in Trinidad and Tobago as presently carried on and is duly licensed, registered or qualified under the relevant company or corporate legislation in all jurisdictions where the character of its property owned or leased or the nature of the activities conducted by it makes such licensing, registration or qualification necessary or desirable;

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- b) has all necessary corporate power, authority and capacity to enter into this Agreement and to carry out its obligations in accordance with their terms subject to necessary regulatory approval, and that the execution and delivery of this Agreement have been duly authorised by all necessary corporate action on its part; and
- c) is duly qualified to act as a Public Telecommunications Network Concessionaire under the Act and shall hold all valid concessions, licences or permits as deemed or granted under the Act to establish and operate telecommunications networks, and to provide the Services as specified in this Agreement.

## 29. Severability

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- 29.1 The individuality or enforceability for any reason of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement.
- 29.2 If further lawful performance of this Agreement or any part hereof shall be rendered impossible by the final judgement or final order of any court of competent jurisdiction, Authority or governmental agency or similar authority having jurisdiction over either Party, the Parties undertake that they will exert their best efforts to agree on an amendment or amendments to this Agreement or on modifications of their practices hereunder in such manner as will fully comply with such judgement or Order and render further performance lawful.
- 29.3 The enforceability of all rights or obligations of the Parties under this Agreement or the portion thereof judged invalid, illegal or otherwise unenforceable by such judgement or Order, shall be suspended as from the date thereof pending the outcome of negotiations between the Parties as aforesaid though without prejudice to all or any accrued rights of the Parties in respect of the past performance or observance thereof.
- 30. No Waiver
- 30.1 Failure or delay by either **Parameters** time to enforce any of the provisions of this Agreement shall not be construed by the other as a waiver of any such provision nor in any way affect the validity of this Agreement or any part thereof.
- 30.2 Subject to Clause 22.4, no variation, modification or waiver of any provisions of this Agreement shall in any event be of any force or effect, unless the same is in writing signed by each of the Parties hereto.
- 30.3 No forbearance, delay or indulgence by either Party in enforcing the provisions of this Agreement shall prejudice or restrict the rights of such Party nor shall any waiver of its rights operate as a waiver of any subsequent breach and no right, power or remedy herein conferred upon or reserved for either Party is exclusive of any right, power or remedy available to such Party and each such right, power or remedy shall be cumulative.

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#### 31. Entire Agreement

31.1 This Agreement and to the extent applicable governmental regulations, tariffs or rules, constitutes the entire Agreement and understanding between the Parties and supersedes all previous Agreements, understandings and representations between the Parties, whether oral or written, as it relates to interconnection.

#### 32. Assignment

- 32.1 Neither Party may assign the whole or any part of this Agreement or its rights or obligations hereunder other than with the prior consent in writing of the other Party, such consent not to be unreasonably withheld or delayed. Notwithstanding the foregoing, neither Party shall require the consent of the other Party to assign the whole or any part of this Agreement or its rights or obligations hereunder to a subsidiary, parent or Associated Company.
- 32.2 A Party may only perform an assignment under Clause 32.1 if:
  - a) the assignee is granted all applicable Public Telecommunications Network Concessions by the Minister and Spectrum Licences by the Authority with respect to the ownership and operation of all or part of the Telecommunications Apparatus of the assigning Party and the provision of all or part of the telecommunications services of the assigning Party;
  - b) in cases where the assignee is an Associated Company of the assigning Party and ceases to be a Associated Company, the assigning Party shall give prior notification of that fact to the other Party hereto and shall procure that prior to such cessation such assignee reassigns such rights and obligations to it; and
  - c) the assigning Party shall procure that the assignee enters into an agreement with the other Party whereby the assignee agrees to observe all of the terms and conditions of this Agreement and, if required by the other Party, the assigning Party shall join in such agreement to guarantee the performance of it by the assignee.
- 32.3 Either Party may subcontract for the provision of its services or obligations under this Agreement, provided that, in such case, it will not be relieved of its obligations as specified in this Agreement.

## 33. Notices

33.1 Any notice which may be given by either Party under this Agreement shall be deemed to have been duly given if left at or sent by registered mail, courier or facsimile transmission (confirming the same by courier) or, where the Parties expressly agree, by electronic mail (confirmed by registered mail or courier), to an address to which notices, invoices or other documents may be sent under Clause 33.3 below, or, if no such notification is given, its principal place of business as set out herein.

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- 33.2 Any such notice shall be deemed to have been made to the other Party on the day on which such communication ought to have been received in due course by registered mail or facsimile transmission. Any communication by electronic mail shall be deemed to have been made on the day on which the communication is first stored in the receiving Party's electronic mailbox.
- 33.3 All notices under this Agreement shall be sent:

To TSTT -

Telecommunications Services of Trinidad and Tobago Limited

1 Edward Street, Port of Spain, Trinidad

Attention: CEO

To the Telco --

Lisa Communications

50 Gordon Street

Port of Spain, Trinidad

Attention: Managing Director/CEO

#### 34. Dispute Resolution

- 34.1 Should a dispute or disagreement of any kind (a "Dispute") arise with respect to the interpretation or application of this Agreement which is not otherwise settled under the terms of this Agreement, the Parties agree to use the following procedures to resolve the Dispute prior to referring the Dispute to the Authority under the Interconnection Regulations and terms of the Concession held by each Party:
  - 34.1.1 A Party that wishes to invoke dispute resolution procedures shall indicate its intention to do so by notice in writing to the other Party. Such notice shall contain all relevant details including the nature and extent of the dispute, and the Party in receipt of the written notice shall acknowledge receipt of such notice within two (2) Business Days.
  - 34.1.2 Within five (5) Business Days of receipt of the dispute notice pursuant to Clause 34.1.1, the Parties shall commence good faith negotiations with the objective of resolving the dispute. If the Dispute is not resolved within fifteen (15) calendar days of receipt of the dispute notice, either Party may escalate the dispute pursuant to Clause 34.1.3.

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- 34.1.3 If the dispute is not resolved pursuant to the process in Clause 34.1.2, either Party may request in writing that the dispute be escalated, identifying the Party's representative to whom that Party has escalated the dispute. The Party in receipt of such notice shall acknowledge receipt of the notice within two (2) Business Days, and will identify its representative to whom it has escalated the dispute.
- 34.1.4 The Parties shall continue to negotiate in good faith to try to resolve the dispute at the level of the appropriate senior managers.
- 34.1.5 Nothing herein shall prevent a Party from:
  - 34.1.5.1 Using other dispute resolution procedures agreed to by the Parties in writing;
  - 34.1.5.2 Seeking (including obtaining or implementing) interim relief in circumstances where the Party is, or will immediately be, subject to a pressing and substantial harm due to the conduct of the other Party. Notwithstanding any application for interim relief, the Parties shall resolve the substantive issue in dispute in accordance with Paragraphs 34.1.1 to 34.1.9 of this Clause;
- 34.2 For greater certainty, this process shall not apply to the resolution of faults pursuant to Paragraph 2.5.4 of the Joint Working Manual.

## 35. Publicity

35.1 Neither Party shall without the prior approval in writing (such approval not to be unreasonably withheld) of the other, make any public announcement or give any release or statement to the print, television, radio or other media relating to or in any way connected with this Agreement. The Party whose approval is sought shall reply to any request to make such an announcement within five (5) business days.

## 36. Insurance Provisions

- 36.1 Each Party must maintain during the term of this Agreement a valid and enforceable public and product liability insurance policy providing coverage of at least
  - a) United States Dollars (US (US)) in respect of any one incident and (US) United States Dollars (US) (US) in the aggregate for public liability; and

in respect of any twelve month period.

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- 36.2 The policy shall cover those insurable liability risk exposures arising under or in respect of this Agreement, including liability with respect to intellectual property rights infringement as more fully described in clause 20.
- 36.3 A separate policy of fidelity coverage for losses incurred as a result of dishonesty on the part of the Party's employees, agents, contractors or other personnel shall also be maintained.
- 36.4 Such insurance shall be effected with a reputable insurance company authorised to carry on business in Trinidad and Tobago and reasonably satisfactory to the Parties, in the joint names of the Telco and TSTT for their respective interests.
- 36.5 Whenever requested by either Party, the other Party shall promptly provide a certificate issued by the relevant insurer stating that a policy in the amounts set forth in this agreement for the named insured is in effect.
- 37. Governing Law and Jurisdiction
- 37.1 This Agreement shall be governed by and construed and interpreted in accordance with the laws of Trinidad and Tobago.
- 38. Counterparts
- 38.1 This Agreement may be executed in counterparts, all of which shall constitute one agreement, and each such counterpart shall be deemed to have been made, executed and delivered on the date set out at the head of this Agreement, without regard to the dates or times when such counterparts may actually have been made, executed or delivered.

# 39. Reference Interconnect Offer

39.1 To the extent that the terms of this Agreement depart from those included in a RIO lodged with the Authority, the agreement to the inclusion of any such terms in this Agreement shall not be taken as acceptance by TSTT that the terms of this Agreement are appropriate for inclusion in the RIO or that the equivalent terms in the RIO are inappropriate, pending approval of the RIO by the Authority.

#### 40. Deposits

40.1 TSTT may require the provide a security dependence of the amount of any security deposit shall not exceed the security deposit (3) months Usage Charges for all Services used, or forecast to be used by the Telco as set out in the Final Forecast. Any security deposit furnished under this clause shall be returned to the Telco with intervention of the deposit shall also be returned to the Telco has paid all undisputed Charges, or payable disputed Charges when due for a period of twenty-four (24) months.

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- 40.2 The amount of any security deposit required pursuant to Clause 40.1 may be increased where the Telco's current usage pattern of all Services indicates that Charges due in the current Billing Period will exceed, or have exceeded, the amount of any existing security deposit in respect of an equivalent period of time held by TSTT by twenty (20) percent.
- 40.3 Any increase to the security deposit pursuant to Clause 40.2 shall be limited to the difference between the existing security deposit, and the sum of three (3) months Usage Charges for all Services based on the Telco's current usage pattern, and such increase shall be paid within thirty (30) days of receipt of notice from TSTT. Failure to provide the increased security deposit within this timeframe shall be deemed to be a material breach of an obligation under this Agreement.

## 41. New Services

41.1 Where TSTT introduces a new retail service which the Telco may wish to provide to its customers, TSTT shall provide any underlying interconnection service necessary to provide that retail service by the date the retail service is first made available to a customer. However, this obligation will only apply where there is objectively verifiable market based demand for the underlying interconnection service.

(Signature page follows)

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Legal Framework

Signed as an Agreement on the 3 day of March 2012

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By:

Signed for and on behalf of Telecommunications Services of Trinidad and Tobago Limited

Mua Mario LIST MOTTRD V. P. LEGATZ

Signed for and on behalf of Lisa Communications By: (E JERRY CHIN LEE MANAGING DIRECTOR

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**Definitions – Schedule 1** 



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# Definitions

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# Definitions

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Acceptance Testing	The process described in Paragraph 2.4 of the Joint Working Manual.
Act	The Telecommunications Act, 2001.
Answer Message	An ISUP answer message (ANM)
Answered Call	A call where an Answer Message has been received
Associated Company	An "affiliated company" as that term is defined in section 5 of the Companies Act.
Authority	The Telecommunications Authority of Trinidad and Tobago
Automatic Call Distributor or ACD System	A switch that queues and distributes incoming Calls so that the Call which has been waiting the longest is sent to the next available operator and the operator who has been waiting the longest is sent the next available Call.
Automatic Number Identification (ANI)	The billing telephone number associated with the access line from which a call originates. ANI and CLI are usually the same.
Billing Data	Information in respect of Calls passed across the Point of Connection during the relevant Billing Period as more particularly described in the Joint Working Manual.
Billing Period	The monthly period ending on the last day of every month.
Business Day	A day, Monday through Friday, that is a normal working day for Government offices in Trinidad and Tobago.
TSTT System	The System established and operated by TSTT under its Concession.
Call	The set-up, holding and ending of a transmission path through the System of either Party into the System of the other Party for conveyance of Messages within 3.1 Khz speech service in accordance with the technical specifications set out in Joint Working Manual and reference to the conveyance of Calls by a Party means the establishment by that Party of a transmission path through that Party's System and the conveyance by that Party in accordance with this Agreement of a Message (if any) over such transmission path.
Call Availability	Has the meaning given to it in Paragraph 1.6.5.1 of the Joint Working Manual
Call Duration	Period between Call Start and Call End
Call End	The point during a Call at which an ISUP release message (REL) is received by the Service Supplier System or Service Taker System, as the context requires.
Call Setup	The signalling activities required to set up a Call
Call Setup Charge	The charge to perform a Call Setup
Call Start	The point during a Call Setup at which an Answer Message is received by the Service Supplier System or Service Taker System, as the context requires.
Carrier System	A point to point transmission facility operating at 155 Mbit/s whose sole purpose is to provide T1, 1.544Mbit/s, Network Links between a Service Supplier Circuit Termination Unit and a Service Taker Circuit Termination Unit. It incorporates the multiplexing and de-multiplexing of T1 bearer services.
Carrier System Fault	Has the meaning given to it in Paragraph 2.5.2.1 of the Joint Working Manual
CCS	The unit of telecommunications traffic measurement, amounting to one hundred call seconds.
CDRs	Call Data Records
Charges	The amounts specified in the Tariff Schedule and described in the Service Descriptions which are payable pursuant to Clause 9.

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Circuit Termination Unit or CTU A technical unit at which the Optical In-Span Joining Service is terminated and which has the technical specifications set out in the Joint Working Manual.

The SS7 out of band signalling parameter which automatically transmits the

directory number associated with the Subscriber Connection from which a Call is

Claim

CLI (Calling Line Identification)

Concession

Concessionaire

Confidential Information Any information, in whatever form, which: (i) in the case of written or electronic information is clearly designated as confidential and which in the case of information disclosed orally is identified at the time of disclosure as being confidential or (ii) is by its nature confidential (including but not limited to all information (excluding CLI), know-how, ideas, concepts, technology, manufacturing processes, industrial processes, billing information, marketing and commercial knowledge of a confidential nature (whether in tangible or intangible form) relating to or developed in connection with or in support of the business, of either Party within Trinidad and Tobago) and including such Confidential Information already disclosed by either Party to the other prior to the date of this Agreement, but excluding any information:

- (a) Which is or becomes part of the public domain (other than through any breach of this Agreement or any obligation of confidence); or
- (b) Rightfully received by one Party from a third person without a duty of confidentiality being owed by the other Party to the third person, except where the other Party knows or ought reasonably to know that the third person has obtained that information either directly or indirectly as a result of a breach of a duty of confidence owed to the first mentioned Party; or
- (c) Which has been independently developed by another Party; or
- (d) Which is in the possession of or is known by the Receiving Party prior to its receipt from the Disclosing Party;
- (e) Which is disclosed to satisfy a legal demand by a court of competent jurisdiction or by a government agency, provided;
- the Disclosing Party requests to the court or the government agency that it keep such information confidential; and
- informs the other Party of such demand as soon as reasonably possible to permit said Party to take such actions (including seeking injunctive relief) to protect the confidentiality of all or part of such information and disclosure is only made to the extent required; or
- (f) which is authorised to be disclosed by the Disclosing Party in writing to the Receiving Party to the extent of that authority; or
- (g) which is disclosed to obtain or maintain any listing on a recognised stock exchange subject to the Receiving Party informing the Disclosing Party as soon as reasonably practicable after such disclosure.

Critical Link FailureHas the meaning given to it in Paragraph 2.5.2.4 of the Joint Working Manual.Critical Route FailureHas the meaning given to it in Paragraph 2.5.2.4 of the Joint Working Manual.CTU Patch PanelThe interface between the CTU multiplexing equipment and the respective<br/>Service Supplier/Service Taker switch.Customer Facing<br/>DivisionA division which deals directly with Subscribers and includes those responsible<br/>for sales and marketing of TSTT services, including TSTT mobile services.Deal withHas the meaning given to it in Clause 26.8

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**Definitions – Schedule 1** 

Has the meaning given to in Clause 26.6

Has the meaning ascribed to it in the Act

generated, to the called customer.

The holder of a Concession

**Definitions – Schedule 1** 

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Dial Set-up Delay	Has the meaning given to it in Paragraph 1.6.6 of the Joint Working Manual.
Disclosing Party	A Party disclosing Confidential Information to the other Party.
Domestic Fixed to Mobile Service	The service of that name more particularly described in the Service Descriptions.
Early Termination Charge	The amount chargeable pursuant to Paragraph 2.3.2.6 of the Joint Working Manual.
Electromagnetic Compatibility (EMC)	A set of requirements more particularly described in Paragraph 1.3.5 of the Joint Working Manual that define the maximum radiation for equipment against international standards.
Emergency Centre	The various call centres operated by the police, ambulance service and fire service for the handling of Calls to those services conveyed pursuant to the Emergency Services Access Service.
Emergency Services Access Service	The service of that name more particularly described in the Service Descriptions.
Erlang	A unit used to denote the utilisation of a telecommunications system expressed as a single hour measurement or a total of single hour measurements, usually during a busy hour.
Error Free Seconds	A second which is not an Errored Second or a Severely Errored Second.
Errored Second	Has the meaning given to it in Paragraph 1.4.1.3 of the Joint Working Manual.
Fatal Fault	Has the meaning given to it in Paragraph 4.8.1.2 of the Joint Working Manual.
Fault	A fault on a Party's System
Fault Control Centre or FCC	The fault control centre more particularly described in Paragraph 2.5.3.1 of the Joint Working Manual.
Fault Control Manager	A person with the responsibilities outlined in Paragraph 2.2.1.1 of the Joint Working Manual.
Fault Log Number	A log number given to a Fault in accordance with Paragraph 2.5.3.2 of the Joint Working Manual.
Fault Owner	The Party who is responsible for clearing a Fault
Fault Receiving Party	The Party who is in receipt of a Fault report
Fault Reporting Party	The Party who has reported a Fault
Fault Restoration Times	The times for restoration of a service as more particularly described in the Joint Working Manual and Parameter Schedule.
Final Forecast	A Forecast accepted and signed off by both parties.
Final Test Report	The log of interconnection tests produced in accordance with Chapter 4 of the Joint Working Manual.
First Live Traffic	The third phase of interconnect testing as more particularly described in Chapter 4 of the Joint Working Manual.
Fixed to Mobile Call	A Call from the PSTN to a PLMN in Trinidad and Tobago.
Force Majeure	Any circumstances outside the reasonable control of a Party, including (without limitation), officially declared national disasters, insurrection or civil disorder, war or military operations, national or local emergency, currency fluctuations, acts or omissions of government, act of God, fire, earthquake, hurricane, flood, lightning or explosion, outbreak of pestilence or epidemics, government rationing of electricity and embargos or trade restrictions.
Forecast	A quantitative prediction made by the Service Taker for the Services required from the Service Supplier over an agreed period in accordance with the provisions of the Joint Working Manual.

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Forecasting Meetings	The meetings more particularly described in Paragraph 2.2.2.3 of the Joint Working Manual.
Imperfections	Faults identified in testing which are more particularly described in Paragraph 4.8.1.6 of the Joint Working Manual.
Inadmissible Fault	A fault identified in testing which is more particularly described in Paragraph 4.8.1.3 of the Joint Working Manual.
Incoming International Call Termination to PLMN Service	The Service of that name more particularly described in the Service Descriptions.
Incoming International Call Termination to PSTN Service	The Service of that name more particularly described in the Service Descriptions.
Incoming International Tariffs	The charges levied on a Third Party International Telecom Provider for the conveyance of Calls to valid number ranges associated with the Service Supplier PLMN and/or PSTN Subscriber Connections.
Incoming International to Mobile Cost	The current International Conveyance Assumption plus the current Incoming International to Mobile Termination Charge and applicable Transit Charges paid to the Service Supplier.
Incoming International to Mobile Termination Charge	The Charge of that name as specified in the Tariff Schedule.
Indemnified Party	Has the meaning given to it in Clause 26.7.
Indemnifying Party	Has the meaning given to it in Clause 26.7.
Individual Location Tests	The first phase of testing as more particularly described in chapter 4 of the Joint Working Manual.
Intellectual Property Rights (IPR)	Letters patent, utility models, semi-conductor topographies, registered designs, design rights and copyrights, trade and service marks, trade names, rights in logos and get up, inventions, trade secrets and know-how, all rights of whatsoever nature in computer software and data, all rights of privacy and all intangible rights and privileges of a similar nature, in every case in any part of the world and whether or not registered and including all granted registrations and all applications for registration in respect of any of the same.
Interconnect Access Area	The set of TSTT PSTN network numbering prefixes specified in the Service Schedule which are supported by the TSTT Interconnect Switch Location and designated other switches.
Interconnect Point of Presence (IPOP)	A location which is part of the Telco System and which is specified in the Service Schedule as a location at which the Telco will connect to the TSTT System.
Interconnect Resolution Log	A log of interconnection issues that is used to keep track of interconnect issues and their status as more particularly described in Paragraph 2.2.5 of the Joint Working Manual.
Interconnect Specific Charge	Charges that represent overhead recurring costs of interconnection, except for depreciation charges which have been deferred.
Interconnect Switch Location (ISL)	A switch location which is part of TSTT's System and which is specified in the Service Schedule as a location at which TSTT will connect to the Telco System.
Internally Detected Faults	Faults that a Party detects within its own network.
International Call Origination Service	The Service of that name more particularly described in the Service Descriptions.
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Definitions – Schedule 1

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International Conveyance Assumption	A nominal figure negotiated by the Parties for use in the determination of the Incoming International to Mobile Termination Charge. The International Conveyance Assumption is to be used only to determine the appropriate Incoming International to Mobile Termination Charge, and is not a valid figure to be used for any other purpose.
International Directory Database	The database that is used to provide the International Directory Enquiries service.
International DQ Call Centre	The Call Centre that is responsible for providing the International Directory Enquiries service.
International DQ Operator	An operator working in the International DQ Call Centre.
International DQ Service	The service of that name more particularly described in the Service Descriptions.
International Mobile Conveyance Cost	In respect of each Carrier Route, the sum of (i) the Service Taker's cost of conveyance of an Incoming International PLMN Termination Call from the Point of Handover with the Third Party International Telecom Provider to the Point of Connection, and (ii) the Mobile Termination Rate, or the Alternative Rate as applicable.
IP Indemnified Party IP Indemnifying Party IP Owner	Has the meaning given to it in Clause 20.2. Has the meaning given to it in Clause 20.2. Has the meaning given to it in Clause 20.3.
Joining Service	Optical In -span Joining Service.
Joint Box	A lockable box located between the Service Supplier and Service Taker's respective Interconnect Switch Location and Interconnect Point of Presence provided by the Service Taker of the Optical In -span Joining Service to the specifications for which are set out in the Joint Working Manual.
Joint Working Manual	The name given to the document at Schedule 5 of this Agreement.
Liaison Manager	The representative with the role set out in Paragraph 2.2.1.1 of the Joint Working Manual.
Maintenance Party	Has the meaning given to it in Paragraph 2.6.1.2 of the Joint Working Manual.
Major Link Failure	Has the meaning given to it in Paragraph 2.5.2.4 of the Joint Working Manual.
Major Route Failure	Has the meaning given to it in Paragraph 2.5.2.4 of the Joint Working Manual.
Messages	3.1Khz speech and the associated CCSS7 protocol used to convey the call setup, cleardown and supplementary service information for such messages together with SMS Messages and Roaming Messages.
Minister	The Minister to whom responsibility for telecommunications is assigned as specified in the Act.
Minor Route Failure	Has the meaning given to it in section 2.5.2.4 of the Joint Working Manual.
Mobile Termination Part	The Mobile Termination Part of the Usage Charges for Calls from a PLMN Subscriber Connection to a PLMN Subscriber Connection pursuant to the PLMN Terminating Access Service, as set out in the Tariff Schedule.
Monthly Recurring Charge	A Charge, set out in the Tariff Schedule, that is payable monthly in accordance with Clause 9 and the relevant Service Description.
National Directory Database	The database that is used to provide the National Directory Enquiries (DQ) service.
National DQ Call Centre	The Call Centre that is responsible for providing the National DQ Service.
National DQ Operator	An operator working in the National DQ Call Centre.
National DQ Service	The service of that name more particularly described in the Service Descriptions.

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**Definitions – Schedule 1** 

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National Numbering Plan	The numbering regime for Trinidad and Tobago geographic and non-geographic numbers including the NXX national prefixes and local number portion.
Network Fault	A Fault of the type more particularly described in Paragraph 2.5.2.1 of the Joint Working Manual.
Network Integration Tests	The second phase of interconnect testing described in Chapter 4 of the Joint Working Manual.
Network Link	Uni-directional T1 transmission facilities within a 155 Mbit/s Carrier System.
Network Link Availability	Has the meaning given to it in Paragraph 1.4.1.2 of the Joint Working Manual.
Non –Service Affecting or NSA	The Faults more particularly described in Paragraph 2.5.2.3 of the Joint Working Manual.
NPA	A geographic division within which no two (2) telephones will have the same seven (7) digit number.
NXX	The current general configuration for exchange codes within each NPA.
One-off Charges	Charges that are generally non-recurring and specified in the Tariff Schedule.
One-Switch Rate Tariff	The One-Switch Rate Charges specified in the Tariff Schedule.
Operational Field Trial	The third phase of interconnect testing as described in Chapter 4 of the Joint Working Manual.
Operational Meetings	The meetings more particularly described in Paragraph 2.2.2.8 of the Joint Working Manual.
Operations Manager	The representative with the responsibilities referred to in Paragraph 2.2.1.1 of the Joint Working Manual.
Operator Service	A service that includes input from an operator in a Call Centre.
Optical Fibre	A high capacity transmission medium used for telecommunications transmission.
Optical In-span Joining Service	The service of that name more particularly described in the Service Descriptions.
Order	A request for the provision of services pursuant to this Agreement and in the format set out in the Joint Working Manual.
Order Plan	A plan detailing the ordered services for a period of a Quarter, agreed and signed by both Parties in accordance with the Joint Working Manual.
Order Planning Meetings	The meetings more particularly described in Paragraph 2.2.2.4 of the Joint Working Manual.
Other Affected Party	Has the meaning given to it in Paragraph 2.5.3.5 of the Joint Working Manual.
Overall Test Manager	The representative with the responsibilities outlined in Paragraph 4.9.1.3 of the Joint Working Manual.
Parameter Schedule	The name given to the document in Schedule 4 of this Agreement.
Party	Either the Telco or TSTT in this Agreement, according to context.
Penalty Charger	Has the meaning given to it in Paragraph 2.3.7.1 of the Joint Working Manual.
Penalty Payer	Has the meaning given to it in Paragraph 2.3.7.1 of the Joint Working Manual.
Performance Reports	The reports submitted on a monthly basis more particularly described in section 2.2.4 of the Joint Working Manual.
	Maintenance falling within the description in Paragraph 2.6.1.1 of the Joint Working Manual.

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Planning Manager	A representative with the responsibilities outlined in Paragraph 2.2.1.1 of the Joint Working Manual.
PLMN	Public Land Mobile Network.
Point of Connection	A physical point between the Systems of the Parties to this Agreement at which the provision of and responsibility for a Service starts or ends.
Point of Handover	A physical point between the System of one of the Parties to this Agreement and the System of a Third Party Telecom Provider at which the provision of and responsibility for a Service starts or ends.
Project Manager	A representative with the responsibilities outlined in Paragraph 2.2.1.1 of the Joint Working Manual.
Propagation Delay	Has the meaning given to it in Paragraph 1.6.7.1 of the Joint Working Manual.
Provisional Forecast	A forecast for all services that a Party requires in the role of Service Taker from the other Party in the role of Service Supplier for the ensuing two year period, covering the Joining Service requirements, and traffic forecasts for all other requested services. Forecasts will be divided into eight quarters. The Provisional Forecast becomes a Final Forecast once agreed with the other Party.
PSTN	The public switched telephone network.
PSTN Subscriber Connection	The point connected to the PSTN where a telecommunications service is made available to a Subscriber.
PSTN Transit Service	The service of that name as more particularly described in the Service Descriptions.
Public Telecommunications Network	Has the meaning ascribed to it in the Act.
Public Telecommunications Network Concession	A concession issued by the Minister to the operator of a Public Telecommunications Network in accordance with Part III of the Act.
Public Telecommunications Service	Has the meaning ascribed to it in the Act.
Public Telecommunications Services Concession	A concession to provide Public Telecommunications Services issued by the Minister in accordance with Part III of the Act.
Public Telecommunications Services Concessionaire	The holder of a concession to provide Public Telecommunications Services issued by the Minister in accordance with Part III of the Act.
Quality of Service	The standard to which a service will be provided.
Quarter	The three month period commencing on 1 January, 1 April, 1 July and 1 October respectively.
Ready for Service Date	The date, specified in the Order Plan or as otherwise agreed between the Parties, on which a Service will be ready for use.
Ready for Test Date	The date, specified in the Order Plan or as otherwise agreed between the Parties, on which a Service will be ready for Network Interconnection Testing.
Receiving Party	A person receiving Confidential Information.
Release Message	Has the meaning given to it in ETS 300 008.
Response Time	Has the meaning given to it in Paragraph 2.5.4.4 of the Joint Working Manual.

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Definitions – Schedule 1

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Restoration Times	The times for restoration of a Fault detailed on a service by service basis in the Joint Working Manual and Parameter Schedule.
RIO	A Reference Interconnection Offer submitted by TSTT.
Service	One of the services more particularly described in the Service Descriptions under the category of "Joining Services", "Termination Services", "Specia Access Services", "PSTN Transit Services", and "International Cal Origination Service".
Service Affecting or SA	The Faults more particularly described in Paragraph 2.5.2.3 of the Join Working Manual.
Service Descriptions	The name given to the document in Schedule 2.
Service Implementation Meetings	The meetings more particularly described in Paragraph 2.2.2.2 of the Join Working Manual.
Service Quality Manager	A representative with the responsibilities outlined in Paragraph 2.2.1.1 of the Joint Working Manual.
Service Schedule	The name given to the document in Schedule 3.
Service Supplier	The Party who provides a Service as specified on a service by service basis in the Service Schedule.
Service Switching Point	A CCSS7 signalling facility in the Service Supplier/Service Taker System.
Service Taker	The Party who requests a Service as specified on a service by service basis in the Service Schedule.
Severely Errored Second	Has the meaning given to it in Paragraph 1.4.1.4 of the Joint Working Manual.
Short Message Service (SMS) Message	Up to 150 alphanumeric characters that can be sent/received from suitably equipped mobile phones on a suitably configured mobile network.
Signalling Links	A 64 kbit/s transmission path provided exclusively for the exchange of signalling messages between Service Switching Points of the Service Taker and the Service Supplier as more particularly described in the Joint Working Manual.
SNC-P	Sub-Network Connection Protection conforming to G.841.
Spectrum Licence	A licence to use spectrum issued by the Minister in accordance with Part IX of the Act.
Subscriber	An end user with whom one of the Parties to this Agreement or a Third Party Telecom Provider has entered into an agreement for the provision of publicly available telecommunication services.
Subscriber Connection	The point at which a Subscriber connects to the PSTN or a PLMN as the case may be.
Switch	A facility which performs the function or is capable of performing the function of switching and routing Messages between two or more points.
System	Telecommunications apparatus, including but not limited to switches, routers and network links.
Fariff Period	A period of hours during which specific tariffs are applied namely peak rate, off-peak rate and weekend.
Fariff Schedule	The name given to the document in Schedule 6 of this Agreement.
Telco System	The telecommunications System established and operated by the Telco pursuant to its Concession.
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## Definitions - Schedule 1

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Telecommunications Apparatus	Any facility, apparatus or other thing that is used or capable of being used for telecommunications or for any operation directly connected with telecommunications, and includes a transmission facility.
Termination Services	The services more particularly described in Part 2 of the Service Descriptions.
Test Control Board	Has the meaning given to in chapter 4 of the Joint Working Manual.
Test Guidelines	Has the meaning given to in chapter 4 of the Joint Working Manual.
Test Report	Has the meaning given to in chapter 4 of the Joint Working Manual
Test Sheet	Has the meaning given to in chapter 4 of the Joint Working Manual.
Test Specification	Has the meaning given to in chapter 4 of the Joint Working Manual.
Test Suite	Has the meaning given to in chapter 4 of the Joint Working Manual.
Third Party International Telecom Provider	A Telecom Provider licensed in a country outside of Trinidad and Tobago and providing services outside Trinidad and Tobago, other than a Service Supplier or Service Taker.
Third Party Mobile Telecom Provider	A Telecom Provider providing mobile services in Trinidad and Tobago that holds the necessary concessions, other than a Service Supplier or Service Taker.
Third Party National Telecom Provider	A Telecom Provider licensed to provide services in Trinidad and Tobago, other than a Service Supplier or Service Taker.
Third Party Telecom Provider	A licensed provider of telecommunication services other than the Parties to this Agreement, including (without limitation) a Third Party International Telecom Provider, a Third Party National Telecom Provider, a Third Party Mobile Telecom Provider, a National Freephone Service Provider and an International Freephone Service Provider.
Time Unit	The accuracy to which the Call Duration is measured, which is one tenth of a second.
Transit Services	The services more particularly described in Part 4 of the Service Descriptions.
Trunk Group	An assignment of service traffic into dedicated routes, having the characteristics described in Paragraph 1.6.2 of the Joint Working Manual.
Unsuccessful Call Attempt	A Call that has not been successfully Answered.
Usage Charges	The usage related charges that are specified in the Tariff Schedule.
Verification Time	Has the meaning given to it in Paragraph 2.5.4.7 of the Joint Working Manual.

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# Service Descriptions

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## PART 1. JOINING SERVICES

## 1 Optical In-Span Joining Service

## 1.1 Description

- 1.1.1 The Optical In-Span Joining Service will be provided by the Service Supplier and the Service Taker in accordance with the terms and conditions of this Agreement.
- 1.1.2 The Service will comprise a single Optical Fibre cable run from Lisa Communications IPOP to the TSTT ISL within the same Interconnect Access Area.
- 1.1.3 A Carrier System comprises a Service Taker CTU, the matching Service Supplier CTU for the relevant route, and the point to point Optical Fibre.
- 1.1.4 The Service Supplier of the Optical In-Span Joining Service can be either **TSTT** or Lisa **Communications**. The Service Taker will be responsible for providing a Joint Box. The Joint Box will comply with the specification referred to in the technical specifications of the Joint Working Manual.
- 1.1.5 The Carrier System more particularly described in the Joint Working Manual will provide T1, 1.544 Mbit/s, Network Links for Services contained within the Service Schedule in accordance with the configuration described in Paragraph 1.4 of this Service Description.

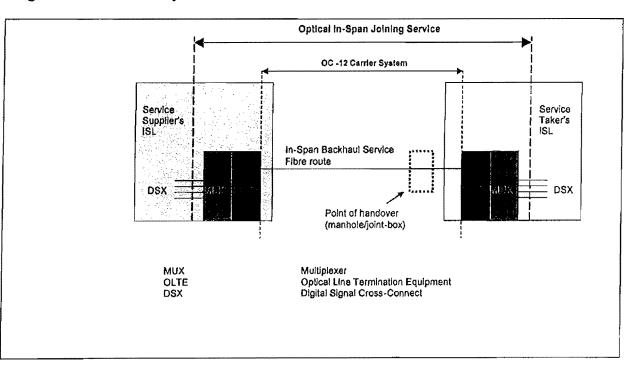


Figure 1 – The Carrier System

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#### 1.2 Responsibilities

- 1.2.1 Without prejudice to the rights and obligations described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 1.2.2 In accordance with Clause 6.1 of the Legal Framework, the Service Supplier will be responsible for planning, providing, operating and maintaining the Optical In-Span Joining Service up to the Joint Box and the Joint Box shall be the Point of Connection for the purposes of this Agreement. The Service Taker will be responsible for pulling the Optical Fibres from the Joint Box to the Service Taker CTU in the Service Taker ISL/ IPOP. Service Taker is responsible for connecting the Optical Fibres to the Service Taker CTUs and connecting the latter to the Service Taker System.
- 1.2.3 In accordance with Clause 16 of the Legal Framework, Service Taker will ensure that all equipment connected to the Service Taker CTU meets the safety standards and other equipment approval requirements set out in the Joint Working Manual.
- 1.2.4 The CTUs shall conform to the standards set out in and other applicable provisions of the Joint Working Manual.
- 1.2.5 Notwithstanding Paragraph 1.2.2 of this Service Description, the Service Supplier will be responsible for monitoring the quality of service, managing and providing management information about the Optical In-Span Joining Service from the Service Supplier CTU up to but excluding the corresponding Service Taker CTU in accordance with the Joint Working Manual and Parameter Schedule. Service Taker will be responsible for monitoring the quality of service, managing and providing management information for the Service Taker CTU, in accordance with the Joint Working Manual and Parameter Schedule. Service Taker will be responsible for the Service Taker CTU, in accordance with the Joint Working Manual and Parameter Schedule. For the avoidance of doubt, this does not include the provision of access to the Service Supplier's or Service Taker's management systems and does not extend or limit the responsibility for planning, providing, operating and maintaining the service referred to in Paragraph 1.2.2 of this Service Description.
- 1.2.6 Each Party will be responsible for agreeing to an Order Plan for the T1 (1.544 Mbit/s) Network Links within the Optical In-Span Joining Service based on a Final Forecast and for provisioning and testing those Network Links in accordance with the Joint Working Manual both at the commencement of this Agreement and on an ongoing basis. For the avoidance of doubt, a new Joining Service will need to be added to the Service Schedule if an agreed Order Plan requires a new Carrier System or new Joining Service to be installed.

#### 1.3 Quality of Service

- 1.3.1 In accordance with Clause 15, Service Supplier will provide the Optical In-Span Joining Service twenty four (24) hours per day, every day to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 1.3.2 Quality of Service levels and Fault Restoration Times for the Optical In-Span Joining Service will be measured and reported by Service Supplier in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved Quality of Service levels in accordance with the Joint

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Working Manual.

## 1.4 Configuration

- 1.4.1 The Optical In-Span Joining Service will be available at the **TSTT** ISL and Lisa Communications IPOP(s) specified in the Service Schedule.
- 1.4.2 The Optical In-Span Joining Service comprises:
  - i) One Service Supplier CTU;
  - ii) One Optical Fibre cable in ducts;
  - iii) One Service Taker CTU; and
  - iv) Two or more Service Supplier 64 kbit/s Network Signalling Links subject to there being a minimum of two such links in total in place between the Service Supplier System and the Service Taker System.
- 1.4.3 A Carrier System is capable of supporting methods. T1 1.544 Mbit/s Network Links.
- 1.4.4 For the avoidance of doubt, not all of the T1 Network Links in the Carrier System need to be commissioned initially and it will not be necessary to order the full capacity. The number of T1 Network Links that are required from time to time will be dependent on the Final Forecast and resulting Order Plan for the relevant Quarter. Any minimum number of Network Links that need to be commissioned in a relevant Carrier System is specified in the Service Schedule. Where this figure is absent, the default minimum number of Network Links per Carrier System equals the Carrier System capacity.

## 1.5 Charges

- 1.5.1 The tariffs for the aggregate Charges for the initial implementation of the Optical In-Span Joining Service, together with amendments to it from time to time, are specified in the Tariff Schedule.
- 1.5.2 The Charges for the Optical In-Span Joining Service are payable pursuant to Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable One-off and Monthly Recurring Charges.
- 1.5.3 One-off Charges may include applicable installation and testing charges for Services in connection with the implementation of an Order Plan from time to time.
- 1.5.4 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.
- 1.5.5 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by either Party as a result of inaccurate forecasts and delays to provisioning and testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual.

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#### 1.6 Billing

- 1.6.1 In accordance with Clause 11.4 of the Legal Framework, the billing arrangements set out below will apply to the Optical In-Span Joining Service.
- 1.6.2 **TSTT** shall be entitled to invoice **Lisa Communications** for the Charges specified in the Tariff Schedule for the Optical In-Span Joining Service. **TSTT** shall be entitled to invoice **Lisa Communications** for monthly recurring charges following the expiration of each Billing Period.
- 1.6.3 **TSTT** shall be entitled to invoice Lisa Communications for One-off Charges for installation and testing of any Termination Service, Special Access Services, Transit Service or Wholesale Service.

- End of Service Description -

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## PART 2. TERMINATION SERVICES

### **1 PSTN Terminating Access Service**

#### 1.1 Description

- 1.1.1 The PSTN Terminating Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 1.1.2 The PSTN Terminating Access Service will provide conveyance of Calls originating on Service Taker Subscriber Connections via the Service Supplier PSTN from the Point Of Connection defined by the Joining Service to the applicable Service Supplier PSTN Subscriber Connections in Trinidad and Tobago. Such Calls must be addressed to valid number ranges associated with the Service Supplier PSTN Subscriber Connections.
- 1.1.3 The valid number ranges associated with the Service Supplier PSTN Subscriber Connections and associated ISL / IPOPs are listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 1.1.4 For the avoidance of doubt, Calls to numbers associated with Special Access Services are not conveyed pursuant to this Service Description. Calls originating or ultimately terminating outside of Trinidad and Tobago are not conveyed pursuant to this Service Description.
- 1.1.5 The PSTN Terminating Access Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 1.1.6 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.

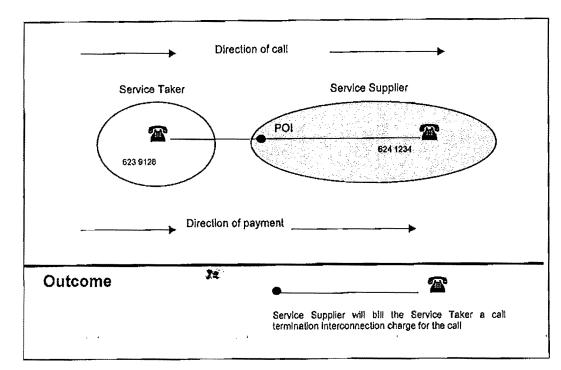


Figure 2 - Call originating in Service Taker's Network and terminating in Service Supplier's PSTN

#### **1.2** Service Specific Responsibilities

- 1.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 1.2.2 Service Supplier will be responsible for the metering and billing necessary to charge Service Taker for all Calls passed by Service Taker to the Service Supplier PSTN using the PSTN Terminating Access Service in accordance with the Joint Working Manual.
- 1.2.3 Service Supplier will be responsible for monitoring the service quality, managing and providing management information about the PSTN Terminating Access Service from the Point of Connection to the Service Supplier PSTN Subscriber Connection, in accordance with the Joint Working Manual. Service Taker will be responsible for monitoring the service quality, managing and providing management information about the PSTN Terminating Access Service from the Service Taker Subscriber Connection to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management systems will not be provided.
- 1.2.4 Service Taker will be responsible for forecasting usage of the PSTN Terminating Access Service in accordance with the Joint Working Manual.
- 1.2.5 Service Taker will be responsible for validating the called number according to the

National Numbering Plan and the valid number ranges associated with the PSTN Subscriber Connections in the Service Schedule. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not part of the applicable Service Supplier Numbering Ranges.

1.2.6 Service Taker will be responsible for managing any end-to-end services provided by Service Taker to Service Taker Subscriber Connections that use the PSTN Terminating Access Service.

## 1.3 Quality of Service

- 1.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the PSTN Terminating Access Service twenty four (24) hours per day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 1.3.2 Quality of Service levels and Fault Restoration Times for the PSTN Terminating Access Service will be measured and reported in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.

## 1.4 Configuration

- 1.4.1 The PSTN Terminating Access Service will be available at the TSTT ISL and Lisa Communications IPOP(s) specified in the Service Schedule.
- 1.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the PSTN Terminating Access Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.

## 1.5 Charges

- 1.5.1 The tariffs for Charges for the PSTN Terminating Access Service are specified in the Tariff Schedule.
- 1.5.2 The charges for the PSTN Terminating Access Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges.
- 1.5.3 Usage Charges include:
  - Call Duration Charges depending on duration.
- 1.5.4 The Tariff for Usage Charges will apply to Answered Calls where Service Taker routes the Call to a Service Supplier ISL / IPOP in the Interconnect Access Area where the Service Supplier PSTN Subscriber Connection is located.
- 1.5.5 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by the Service Supplier. The number of Time Units that shall apply will be calculated by the Service Supplier. For each

Answered Call, the duration will be measured to an accuracy of a Time Unit.

- 1.5.6 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.
- 1.5.7 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by Service Taker as a result of inaccurate forecasts of the PSTN Terminating Access Service and for delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

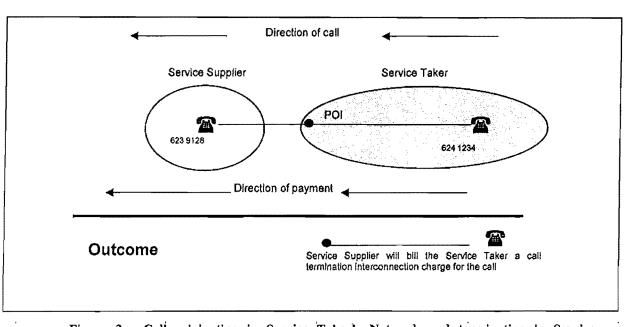
End of Service Description –

#### 2 PLMN Terminating Access Service

#### 2.1 Description

- 2.1.1 The PLMN Terminating Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 2.1.2 The PLMN Terminating Access Service will provide conveyance of Calls which originate on a Service Taker PLMN or PSTN Subscriber Connection from the Point of Connection defined by the Joining Service to Service Supplier PLMN Subscriber Connections in Trinidad and Tobago, via the Service Supplier PLMN, and PSTN where appropriate. The PLMN Terminating Access Service will provide conveyance of Calls originating on Service Taker Subscriber Connections in Trinidad and Tobago, or from Subscriber Connections of a Third Party National Telecoms Provider in Trinidad and Tobago conveyed pursuant to the PSTN Transit Service. Calls must be addressed to valid number ranges associated with the Service Supplier PLMN Subscriber Connections in Trinidad and Tobago. Calls originating or ultimately terminating outside of Trinidad and Tobago are not conveyed pursuant to this Service Description.
- 2.1.3 The valid number ranges associated with the Service Supplier PLMN Subscriber Connections are listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 2.1.4 The PLMN Terminating Access Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the relevant Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 2.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.

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Figure 3 - Call originating in Service Taker's Network and terminating in Service Supplier's PLMN

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#### 2.2 Service Specific Responsibilities

- 2.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 2.2.2 Service Supplier will be responsible for the metering and billing necessary to charge Service Taker for all Calls passed by Service Taker to the Service Supplier PLMN using the PLMN Terminating Access Service in accordance with the Joint Working Manual.
- 2.2.3 Service Supplier will be responsible for monitoring service quality, managing and providing management information about the PLMN Terminating Access Service from the Point of Connection to the Service Supplier PLMN Subscriber Connection and Service Taker will be responsible for monitoring the service quality, managing and providing management information about the PLMN Terminating Access Service from the Service Taker Subscriber Connection or Point of Handover (as the case may be) to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management systems will not be provided.
- 2.2.4 Service Taker will be responsible for forecasting usage of the PLMN Terminating Access Service in accordance with the Joint Working Manual.
- 2.2.5 Service Taker will be responsible for validating the called number according to the National Numbering Plan and the valid number ranges associated with the PLMN Subscriber Connections in the Service Schedule. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not part of the applicable Service Supplier Numbering Ranges.
- 2.2.6 Service Taker will be responsible for managing any end-to-end Services provided by Service Taker to Service Taker Subscriber Connections that use the PLMN Terminating Access Service.

#### 2.3 Quality of Service

- 2.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the PLMN Terminating Access Service 24 hours/day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 2.3.2 Quality of Service levels and Fault Restoration Times for the PLMN Terminating Access Service will be measured and reported in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.
- 2.3.3 For Calls that have been transited through the Service Taker network, Service Taker is not responsible for the quality of the Third Party Fixed Telecoms Provider or the Third Party Mobile Telecom Provider involved in conveyance of the Call prior to the Point of Handover.

#### 2.4 Configuration

- 2.4.1 The PLMN Terminating Access Service will be available at the Service Supplier ISL/IPOP(s) specified in the Service Schedule.
- 2.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the PLMN Terminating Access Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.

## 2.5 Charges

- 2.5.1 The tariffs for the charges for the PLMN Terminating Access Service are specified in the Tariffs Schedule.
- 2.5.2 The Charges for the PLMN Terminating Access Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges.
- 2.5.3 Usage Charges include:
  - Transit Charges, where applicable, which shall include: - Call Duration Charges depending on duration
  - Payment of the Mobile Termination Part to the Mobile provider based on duration.
- 2.5.4 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by Service Supplier and the number of Time Units that shall apply will be calculated by Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.
- 2.5.5 If the provision of Signalling Links is consistent with the dimensioning rule specified in Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.
- 2.5.6 For the avoidance of doubt, the Tariffs Schedule does not include any sums that may be payable by the Service Taker as a result of inaccurate forecasts of the PLMN Terminating Access Service and for delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums payable pursuant to Clause 8.2 of the Legal Framework. For greater certainty, and notwithstanding Clause 9.2 of the Legal Framework, Calls from Service Supplier PLMN Subscriber Connections to Service Taker Subscriber Connections incur the Charges set out in the Interconnection Agreement for PSTN Terminating Access Service.
  - End of Service Description -

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## 3 Incoming International Call Termination to PLMN Service

#### 3.1 Description

- 3.1.1 The Incoming International Call Termination to PLMN Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 3.1.2 The Incoming International Call Termination to PLMN Service will provide conveyance of Calls which originate on the System of a Third Party International Telecom Provider and conveyed via the Service Taker's System, from the Point of Connection defined by the Joining Service to the applicable Service Supplier PLMN Subscriber Connections. Calls must be addressed to valid number ranges associated with the Service Supplier PLMN Subscriber Connections.
- 3.1.3 The valid number ranges associated with the Service Supplier PLMN Subscriber Connections are listed in the Service Schedule. The list may be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual. For the avoidance of doubt, Calls to numbers associated with Special Access Services, including Audiotext Services, are not conveyed pursuant to this Service Description.
- 3.1.4 The Incoming International Call Termination to PLMN Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the relevant Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 3.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.
- 3.1.6 All Calls pursuant to this Service Description must be presented by the Service Taker to the Point of Connection as conventional circuit switched voice traffic. Calls conveyed pursuant to this Service Description are for ultimate termination on Service Supplier's Subscriber Connections within Trinidad and Tobago only.

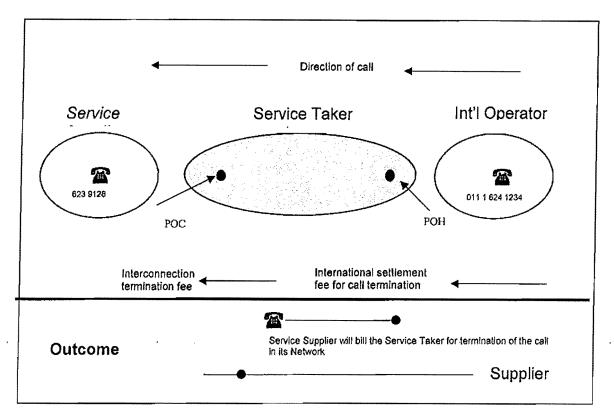


Figure 4: Call originating on Third Party International Telecom Operator, transiting the Service Taker's Network and terminating on the Service Supplier's PLMN subscribers

#### 3.2 Service Specific Responsibilities

- 3.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 3.2 of this Service Description.
- 3.2.2 Service Supplier will be responsible for the metering and billing necessary to charge Service Taker for all Calls passed by the Service Taker to the Service Supplier using the Incoming International Call Termination to PLMN Service in accordance with the Joint Working Manual. The Service Supplier shall be responsible for conveying Calls from the Point of Connection defined by the Joining Service to the applicable Service Supplier PLMN Subscriber Connections.
- 3.2.3 Service Supplier will be responsible for monitoring the service quality, managing and providing management information about the Incoming International Call Termination to PLMN Service, from the Point of Connection to the Service Supplier's PLMN Subscriber Connections. The Service Taker will be responsible for monitoring the service quality, managing and providing management information about the Incoming International Call Termination Call Termination to PLMN Service from the Point of Handover to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's and Service Taker's management systems will not be provided.
- 3.2.4 Service Taker will be responsible for forecasting usage of the Incoming International Call Termination to PLMN Service in accordance with the Joint Working Manual. For the

Purposes of this Service Description, in Section 2.3 (Forecasting Ordering and Provisioning) of the Joint Working Manual the phrase "Service Supplier" shall be substituted for "Service Taker" and the phrase "Service Taker" shall be substituted for "Service Supplier".

- 3.2.5 Service Taker will be responsible for validating the called number in accordance with the National Numbering Plan and the valid number ranges associated with Service Supplier' PLMN Subscriber Connections in the Service Schedules. In accordance with Clause 8.2 of the Legal Framework, Service Taker will be under no obligation to convey, and Service Supplier will be under no obligation to Terminate, Calls pursuant to this Service Description: (a) that are not part of the applicable Service Supplier numbering ranges associated with the Service Supplier's PLMN Subscriber Connections; (b) that do not originate on the System of a Third Party International Telecom Provider; and (c) that do not meet the technical requirements set out in the Joint Working Manual; and (d) pursuant to 3.2.15 and 3.2.16 below.
- 3.2.6 The Service Taker shall not insert and shall not permit a third party to insert a CLI into a Call that originated outside of Trinidad and Tobago, which indicates that the call originated inside Trinidad and Tobago. The Service Taker shall not insert and shall not permit a third party to insert a CLI into a Call which originated inside Trinidad and Tobago, which would make the Call appear as if the Call originated outside of Trinidad and Tobago.
- 3.2.7 Calling Line Identity for network and presentation purposes shall, where available, be made available by Service Taker to Service Supplier for all Calls presented for delivery to the Service Supplier System pursuant to this Service Description.
- 3.2.8 Subject to the provisions of Paragraph 3.2.9 and 3.2.10 below and provided that the Service Taker does not discriminate between the Service Supplier and its own PLMN Subscribers (for the avoidance of doubt, it shall not be discriminatory for the Service Taker to refuse to convey Calls to the Service Supplier in the circumstances covered in this paragraph, while still conveying Calls to its PLMN Subscribers, provided that the same circumstances existing on the Service Supplier's System do not exist on the Service Taker's System), the Service Taker may chose not to convey Calls under this service description:
  - i) where the volume of Calls materially exceeds that which could be reasonably be expected and where such traffic impedes the transmission of other Calls;
  - ii) where such Calls are otherwise harmful to the integrity of the Service Taker's System; or
  - iii) in the event of fraud being carried out against the Service Taker.
- 3.2.9 Where the conditions in Paragraph 3.2.8 (i) above occur, the Service Taker shall notify the Service Supplier in writing as to the precise details of the condition that exist and upon receipt of the prior written approval of the Service Supplier, the Service Taker may temporarily suspend the conveyance of those Calls that resulted in one or more of the Conditions set out in Paragraph 3.2.8 (i) occurring. The approval referenced in this Paragraph shall not be unreasonably withheld, and shall be given as soon as possible, and in any event no later than twenty-four (24) hours, after notification is given.

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- 3.2.10 Where the condition in Paragraph 3.2.8 (ii) and (iii) above occurs, the Service Taker may immediately suspend the conveyance of those Calls, and will notify the Service Supplier in writing that conveyance of Calls has been suspended, and give a description as to the nature of the condition that is occurring.
- 3.2.11 Notwithstanding Paragraph 3.2.9 and 3.2.10 above, the representatives of the parties shall meet as soon as reasonably practicable in order to agree in good faith and without delay a solution that will, if possible, allow for the conveyance of the suspended Calls to resume as soon as reasonably practicable.
- 3.2.12 For the avoidance of doubt, until such time as the parties agree a solution in accordance with the provisions of Paragraph 3.2.11 above, the Service Taker shall be under no obligation to resume the conveyance of the suspended Calls provided always that Service Taker does not discriminate between the Service Supplier and its own PLMN Subscribers in the resumption of the suspended Calls.
- 3.2.13 Provided that the Service Taker does not discriminate between the Service Supplier and its own PLMN Subscribers, nothing in this Agreement shall be interpreted as requiring the Service Taker to enter into, or continue any correspondent relationship with a Third Party International Telecom Provider for termination to PLMN Subscribers. Similarly, nothing in this Agreement shall be interpreted as requiring the Service Taker to use this service where the Incoming International Tariffs to the Service Supplier's PLMN Subscribers is lower than the Service Supplier's Incoming International to Mobile Termination Charge plus the International Conveyance Assumption and, if applicable, Transit Charges.
- 3.2.14 Nothing in this Agreement shall prohibit the Service Supplier from making its own arrangements to receive Calls from Third Party International Telecom Providers. Notwithstanding anything in this Agreement, the Service Supplier may elect not to receive and terminate Calls on its System pursuant to this Service Description at an Incoming International to Mobile Termination Charge which is lower than the Mobile Termination Charge.

#### 3.3 Quality of Service

- 3.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the Incoming International Call Termination to PLMN Service 24 hours/day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule. Service Taker is responsible for Quality of Service on its System.
- 3.3.2 Quality of Service levels and Fault Restoration Times for the Incoming International Call Termination to PLMN Service will be measured and reported in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual. The Service Taker is not responsible for the service quality of Third Party International Telecom Providers, in relation to the relevant Calls conveyed pursuant to this Service Description prior to the Point of Handover.

## 3.4 Configuration

3.4.1 The Incoming International Call Termination to PLMN Service will be available at the

Service Supplier ISL(s)/IPOP(s) specified in the Service Schedule.

- 3.4.2 Service Taker will deliver traffic in a dedicated Trunk Group at each Point of Connection where the Incoming International Call Termination to PLMN Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.
  - 3.5 Charges
- 3.5.1 The tariffs for the charges for Incoming International Call Termination to PLMN Service are specified in the Tariff Schedule.
- 3.5.2 The Charges for the Incoming International Call Termination to PLMN Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and Paragraph 3.6 below and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges. For the avoidance of doubt, the Tariff Schedule does not include any sums payable pursuant to Clause 8.2 of the Legal Framework.
- 3.5.3 Usage charges include:
  - Transit Charges, where applicable, which shall include:
    - Call Duration Charges depending on duration;
  - The Incoming International to Mobile Termination Charge
- 3.5.4 For each Answered Call, the Incoming International to Mobile Termination Charge will be applicable when Call Start occurs.
- 3.5.5 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by Service Supplier, and the number of Time Units that shall apply will be calculated by Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.
- 3.5.6 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual the tariffs will include all charges for the handling of signalling messages required based on the specifications of this Service.
- 3.5.7 For the avoidance of doubt, the Tariffs Schedule does not include any sums that may be payable by Service Supplier as a result of inaccurate forecasting of the International Incoming PLMN Terminating Access Service and for delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual.

- End of Service Description-

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## 4 Incoming International Call Termination to PSTN Service

## 4.1 Description

- 4.1.1 The Incoming International Call Termination to PSTN Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 4.1.2 The Incoming International Call Termination to PSTN Service will provide conveyance of Calls which originate on the System of a Third Party International Telecom Provider and conveyed via the Service Taker's System, from the Point of Connection defined by the Joining Service to the applicable Service Supplier PSTN Subscriber Connections. Calls must be addressed to valid number ranges associated with the Service Supplier PSTN Subscriber Connections.
- 4.1.3 The valid number ranges associated with the Service Supplier PSTN Subscriber Connections are listed in the Service Schedule. The list may be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual. For the avoidance of doubt, Calls to numbers associated with Special Access Services, including Audio-text Services, are not conveyed pursuant to this Service Description.
- 4.1.4 The Incoming International Call Termination to PSTN Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the relevant Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 4.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.
- 4.1.6 All Calls pursuant to this Service Description must be presented by the Service Taker to the Point of Connection as conventional circuit switched voice traffic. Calls conveyed pursuant to this Service Description are for ultimate termination on Service Supplier's Subscriber Connections within Trinidad and Tobago only.

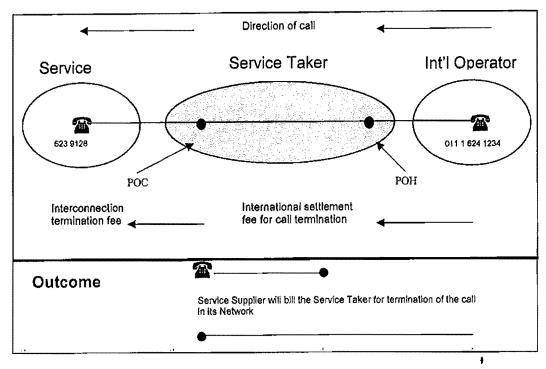


Figure 4: Call originating on Third Party International Telecom Operator, transiting the Service Taker's Network and terminating on the Service Supplier's PSTN subscribers

#### 4.2 Service Specific Responsibilities

- 4.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 4.2 of this Service Description.
- 4.2.2 Service Supplier will be responsible for the metering and billing necessary to charge Service Taker for all Calls passed by the Service Taker to the Service Supplier using the Incoming International Call Termination to PSTN Service in accordance with the Joint Working Manual. The Service Supplier shall be responsible for conveying Calls from the Point of Connection defined by the Joining Service to the applicable Service Supplier PSTN Subscriber Connections.
- 4.2.3 Service Supplier will be responsible for monitoring the service quality, managing and providing management information about the Incoming International Call Termination to PSTN Service, from the Point of Connection to the Service Supplier's PSTN Subscriber Connections. The Service Taker will be responsible for monitoring the service quality, managing and providing management information about the Incoming International Call Termination to PSTN Service from the Point of Handover to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's and Service Taker's management systems will not be provided.
- 4.2.4 Service Taker will be responsible for forecasting usage of the Incoming International Call Termination to PSTN Service in accordance with the Joint Working Manual. For the Purposes of this Service Description, in Section 2.3 (Forecasting Ordering and Provisioning) of the Joint Working Manual the phrase "Service Supplier" shall be

substituted for "Service Taker" and the phrase "Service Taker" shall be substituted for "Service Supplier".

- 4.2.5 Service Taker will be responsible for validating the called number in accordance with the National Numbering Plan and the valid number ranges associated with Service Supplier' PSTN Subscriber Connections in the Service Schedules. In accordance with Clause 8.2 of the Legal Framework, Service Taker will be under no obligation to convey, and Service Supplier will be under no obligation to Terminate, Calls pursuant to this Service Description: (a) that are not part of the applicable Service Supplier numbering ranges associated with the Service Supplier's PSTN Subscriber Connections; (b) that do not originate on the System of a Third Party International Telecom Provider; and (c) that do not meet the technical requirements set out in the Joint Working Manual; and (d) pursuant to 4.2.15 and 4.2.16 below.
- 4.2.6 The Service Taker shall not insert and shall not permit a third party to insert a CLI into a Call that originated outside of Trinidad and Tobago, which indicates that the call originated inside Trinidad and Tobago. The Service Taker shall not insert and shall not permit a third party to insert a CLI into a Call which originated inside Trinidad and Tobago, which would make the Call appear as if the Call originated outside of Trinidad and Tobago.
- 4.2.7 Calling Line Identity for network and presentation purposes shall, where available, be made available by Service Taker to Service Supplier for all Calls presented for delivery to the Service Supplier System pursuant to this Service Description.
- 4.2.8 Subject to the provisions of Paragraph 4.2.9 and 4.2.10 below and provided that the Service Taker does not discriminate between the Service Supplier and its own PSTN Subscribers (for the avoidance of doubt, it shall not be discriminatory for the Service Taker to refuse to convey Calls to the Service Supplier in the circumstances covered in this paragraph, while still conveying Calls to its PSTN Subscribers, provided that the same circumstances existing on the Service Supplier's System do not exist on the Service Taker's System), the Service Taker may chose not to convey Calls under this service description:
  - iv) where the volume of Calls materially exceeds that which could be reasonably be expected and where such traffic impedes the transmission of other Calls;
  - v) where such Calls are otherwise harmful to the integrity of the Service Taker's System; or
  - vi) in the event of fraud being carried out against the Service Taker.

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- 4.2.9 Where the conditions in Paragraph 4.2.8 (i) above occur, the Service Taker shall notify the Service Supplier in writing as to the precise details of the condition that exist and upon receipt of the prior written approval of the Service Supplier, the Service Taker may temporarily suspend the conveyance of those Calls that resulted in one or more of the Conditions set out in Paragraph 4.2.8 (i) occurring. The approval referenced in this Paragraph shall not be unreasonably withheld, and shall be given as soon as possible, and in any event no later than twenty-four (24) hours, after notification is given.
- 4.2.10 Where the condition in Paragraph 4.2.8 (ii) and (iii) above occurs, the Service Taker may immediately suspend the conveyance of those Calls, and will notify the Service Supplier in writing that conveyance of Calls has been suspended, and give a description as to the nature of the condition that is occurring.
- 4.2.11 Notwithstanding Paragraph 4.2.9 and 4.2.10 above, the representatives of the parties shall meet as soon as reasonably practicable in order to agree in good faith and without delay a solution that will, if possible, allow for the conveyance of the suspended Calls to resume as soon as reasonably practicable.
- 4.2.12 For the avoidance of doubt, until such time as the parties agree a solution in accordance with the provisions of Paragraph 4.2.11 above, the Service Taker shall be under no obligation to resume the conveyance of the suspended Calls provided always that Service Taker does not discriminate between the Service Supplier and its own PSTN Subscribers in the resumption of the suspended Calls.
- 4.2.13 Provided that the Service Taker does not discriminate between the Service Supplier and its own PLMN Subscribers, nothing in this Agreement shall be interpreted as requiring the Service Taker to enter into, or continue any correspondent relationship with a Third Party International Telecom Provider for termination to PSTN Subscribers. Similarly, nothing in this Agreement shall be interpreted as requiring the Service Taker to use this service where the Incoming International Tariffs to the Service Supplier's PSTN Subscribers is lower than the Service Supplier's Incoming International to Mobile Termination Charge plus the International Conveyance Assumption and, if applicable, Transit Charges.
- 4.2.14 Nothing in this Agreement shall prohibit the Service Supplier from making its own arrangements to receive Calls from Third Party International Telecom Providers. Notwithstanding anything in this Agreement, the Service Supplier may elect not to receive and terminate Calls on its System pursuant to this Service Description at an Incoming International to Mobile Termination Charge which is lower than the Mobile Termination Charge.

## 4.3 Quality of Service

- 4.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the Incoming International Call Termination to PSTN Service 24 hours/day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule. Service Taker is responsible for Quality of Service on its System.
- 4.3.2 Quality of Service levels and Fault Restoration Times for the Incoming International Call Termination to PSTN Service will be measured and reported in accordance, with the Joint

Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual. The Service Taker is not responsible for the service quality of Third Party International Telecom Providers, in relation to the relevant Calls conveyed pursuant to this Service Description prior to the Point of Handover.

#### 4.4 Configuration

- 4.4.1 The Incoming International Call Termination to PSTN Service will be available at the Service Supplier ISL(s)/IPOP(s) specified in the Service Schedule.
- 4.4.2 Service Taker will deliver traffic in a dedicated Trunk Group at each Point of Connection where the Incoming International Call Termination to PSTN Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.

#### 4.5 Charges

- 4.5.1 The tariffs for the charges for Incoming International Call Termination to PSTN Service are specified in the Tariff Schedule.
- 4.5.2 The Charges for the Incoming International Call Termination to PSTN Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and Paragraph 4.6 below and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges. For the avoidance of doubt, the Tariff Schedule does not include any sums payable pursuant to Clause 8.2 of the Legal Framework.
- 4.5.3 Usage charges include:
  - The Incoming International PSTN Call Termination Charge.
- 4.5.4 For each Answered Call, the Incoming International PSTN Call Termination Charge will be applicable when Call Start occurs.
- 4.5.5 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by Service Supplier, and the number of Time Units that shall apply will be calculated by Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.

- 4.5.6 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual the tariffs will include all charges for the handling of signalling messages required based on the specifications of this Service.
- 4.5.7 For the avoidance of doubt, the Tariffs Schedule does not include any sums that may be payable by Service Supplier as a result of inaccurate forecasting of the International Incoming PSTN Terminating Access Service and for delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual.

## - End of Service Description-

## PART 3. SPECIAL ACCESS SERVICES

- 5 Emergency Services Access Service
  - 5.1 Service Description
- 5.1.1 The Emergency Services Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 5.1.2 The Emergency Services Access Service will provide conveyance of Calls addressed to the valid emergency services access number from Service Taker Subscriber Connections from the Point of Connection through the Service Supplier PSTN to the specific Emergency Centre indicated by the called number.
- 5.1.3 The valid numbers for the Emergency Services Access Service are stated in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 5.1.4 The Emergency Services Access Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 5.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.

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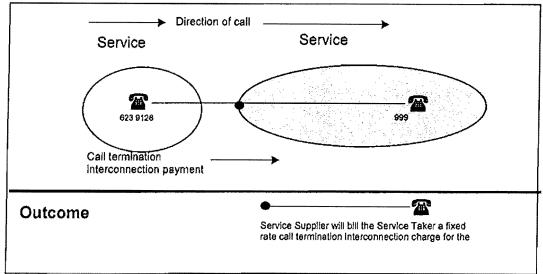


Figure 5: Call Originating in Service Taker's Network, passing through the Service Supplier's PSTN and Terminating in specific Emergency Centre.

#### 5.2 Specific Responsibilities

- 5.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 5.2.2 Service Supplier will be responsible, in accordance with the Joint Working Manual, for the metering and billing necessary to charge Service Taker for all Calls passed by Service Taker to the Emergency Centre via the Service Supplier PSTN using the Emergency Services Access Service.
- 5.2.3 Service Supplier will be responsible for monitoring the service quality, managing and providing management information about the Emergency Services Access Service from the Point of Connection to the Emergency Centre, in accordance with the Joint Working Manual. Service Taker will be responsible for monitoring the service quality, managing and providing management information about the Emergency Services Access Service from the Subscriber Connection to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's and Service Taker's management systems will not be provided.
- 5.2.4 Service Taker will be responsible for forecasting usage of the Emergency Services Access Service in accordance with the Joint Working Manual.
- 5.2.5 Service Taker will be responsible for validating the called number against the valid emergency service numbers. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not addressed to numbers listed in the Service Schedule as valid numbers for the Emergency Services Access Service.

- 5.2.6 Service Taker will be responsible for communicating the valid numbers for access to the emergency services to their Subscribers and for keeping their Subscribers informed of any changes.
- 5.2.7 Service Taker will be responsible for handling all enquiries and complaints from an Emergency Centre about Calls conveyed via the Emergency Services Access Service.
- 5.2.8 Each Emergency Centre shall take responsibility for the management of and action taken as a consequence of a Call when the Call has been handed over by Service Supplier. The Service Supplier is not responsible under this Agreement for any acts or omissions of the Emergency Centre in dealing with the Call.
- 5.2.9 The Parties will co-operate to comply with any directions from appropriate Ministerial departments that may affect this service.

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#### 5.3 Quality of Service

- 5.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the Emergency Services Access Service twenty four (24) hours per day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 5.3.2 Quality of Service levels and Fault Restoration Times for the Emergency Services Access Service will be measured and reported in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.

## 5.4 Configuration

- 5.4.1 The Emergency Services Access Service will be available at the TSTT ISL and Lisa Communications IPOP(s) specified in the Service Schedule.
- 5.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the Emergency Services Access Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.
- 5.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

## 5.5 Charges

- 5.5.1 The tariffs for Charges for the Emergency Services Access Service are specified in the Tariff Schedule.
- 5.5.2 The Charges for the Emergency Services Access Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges.
- 5.5.3 Usage charges include:
  - Call Duration Charges depending on duration
- 5.5.4 The usage charges will apply to Answered Calls where the Service Taker routes the Call to a Service Supplier ISL / IPOP which is in the same Interconnect Access Area as the Service Taker ISL / IPOP.
- 5.5.5 For each Answered Call, the Call Charge will be applicable when Call Start occurs.
- 5.5.6 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by the Service Supplier. The number of Time Units that shall apply will be calculated by the Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.

- 5.5.7 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.
- 5.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by Service Taker as a result of inaccurate forecasting of the Emergency Services Access Service and delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

- End of Service Description -

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## 6 National DQ Service

#### 6.1 Service Description

- 6.1.1 The National DQ Service will be provided by Service Supplier to Service Taker, in accordance with the terms and conditions of this Agreement.
- 6.1.2 The National DQ Service will provide conveyance of Calls originating from Service Taker Subscriber Connections addressed to the valid national DQ numbers from the Point of Connection to a Service Supplier National DQ Call Centre via the Service Supplier PSTN. The Service includes the provision of number information by Service Supplier DQ Call Centre from the Service Supplier National Directory Database.
- 6.1.3 The valid national DQ number is listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 6.1.4 The National DQ Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 6.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual
- 6.1.6 The call greeting will be specified in the Parameter Schedule.
- 6.1.7 Calls may be handled by an ACD system located at a Service Supplier DQ Call Centre and Calls may be queued. If a queue place is not available, the Service Taker Subscriber Connection will receive busy tone.
- 6.1.8 One telephone number per Call, or such amount that are given to the Service Supplier's own subscribers, may be requested. The minimum information needed for a request from the Service Taker Subscriber is name and (partial) address.
- 6.1.9 If a listing is found, the applicable telephone number will be read back through an Interactive Voice Response (IVR) system or by the agent. Where more than one listing is found, telephone numbers relating to the primary two listings only, or such number of listings that are given to the Service Supplier's own subscribers, will be given out. If the listing that is found is ex-directory, the IVR or agent will state that the requested number is unlisted, or that the requested telephone numbers cannot be disclosed. Where no listings are found, the IVR or agent dialogue will state that the requested number is unlisted or cannot be found.
- 6.1.10 The information available in the Service Supplier National Directory Database will depend on agreements with the Third Party Telecom Providers (and the Service Taker) for inclusion of applicable Subscriber information and Service Supplier is not responsible for any omissions or inaccuracies. Such information is not provided or included pursuant to this Service Schedule.

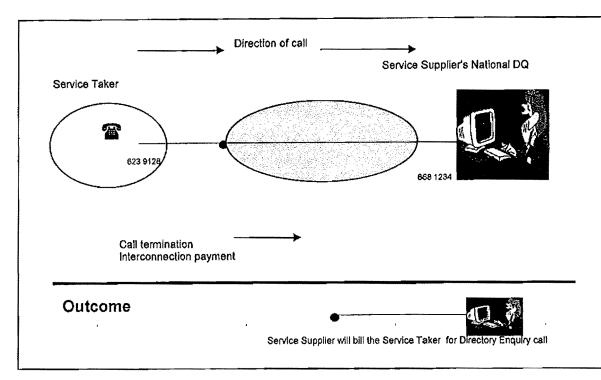


Figure 6: Call Originating in the Service Taker's Network and Terminating in Service Supplier's Directory Service via the Service Supplier's PSTN

#### 6.2 Specific Responsibilities

- 6.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 6.2.2 Service Supplier will be responsible, in accordance with the Joint Working Manual, for the metering and billing to charge Service Taker for all Calls using the National DQ Service passed by Service Taker to the Service Supplier DQ call centre via the Service Supplier PSTN.
- 6.2.3 Service Supplier will be responsible for managing, operating and maintaining the Service Supplier Standard National Directory Database and associated computer systems and providing training for the DQ Operators and the necessary working environment.
- 6.2.4 Service Supplier will be responsible for monitoring the quality, managing and providing management information about the National DQ Service from the Point of Connection to the Service Supplier DQ call centre in accordance with the Joint Working Manual. Service Taker will be responsible for monitoring the quality, managing and providing management information about the National DQ Service in accordance with the Joint Working Manual. For the avoidance of doubt, no access to the Service Supplier's or Service Taker's management systems will be provided.

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- 6.2.5 Service Taker will be responsible for forecasting usage of the National DQ Service in accordance with the Joint Working Manual
- 6.2.6 Service Taker will be responsible for validating the called number against the valid national DQ number. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not addressed to a number listed in the Service Schedule as a valid number for the National DQ Service.
- 6.2.7 Service Taker will be responsible for managing any end-to-end Services provided by Service Taker to Service Taker Subscribers that use the National DQ Service.

#### 6.3 Quality of Service

- 6.3.1 In accordance with Clause 15 of the Legal Framework, Service Supplier will provide the National DQ Service twenty four (24) hours per day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 6.3.2 Quality of Service levels and Fault Restoration Times for the National DQ Service will be measured and reported by Service Supplier in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.

#### 6.4 Configuration

- 6.4.1 The National DQ Service will be available at the Service Supplier ISL / IPOP(s) specified in the Service Schedule.
- 6.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the National DQ Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.
- 6.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

#### 6.5 Charges

- 6.5.1 The tariffs for Charges for the National DQ Service are specified in the Tariff Schedule.
- 6.5.2 The Charges for the National DQ Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges.
- 6.5.3 Usage Charges will include
  - Call Setup Charges.

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- 6.5.4 The Tariff for Usage Charges will apply to Answered Calls where the Service Taker routes the Call to a Service Supplier ISL / IPOP in the Interconnect Access Area for the Service Supplier DQ Call Centre.
- 6.5.5 For each Answered Call, the Call Setup Charges will be applicable when Call Start occurs.
- 6.5.6 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by the Service Supplier. The number of Time Units that shall apply will be calculated by the Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.
- 6.5.7 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual, the tariffs will include all charges for the handling of signalling messages as required based on the specification of this Service.
- 6.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by Service Taker as a result of inaccurate forecasting of the National DQ Service and delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums payable pursuant to Clause 8.2 of the Legal Framework.

End of Service Description -

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#### 7 International DQ Service

#### 7.1 Service Description

- 7.1.1 The International DQ Service will be provided by Service Supplier to Service Taker, in accordance with the terms and conditions of this Agreement.
- 7.1.2 The International DQ Service will provide conveyance of Calls originating on Service Taker Subscriber Connections from the Point of Connection to a Service Supplier International DQ Call Centre via the Service Supplier PSTN. The Service includes the provision of number information by the Service Supplier International DQ Call Centre from the Service Supplier International Directory Databases.
- 7.1.3 The valid international DQ numbers are stated in the Services Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 7.1.4 The International DQ Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 7.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.
- 7.1.6 The call greeting will be specified in the Parameter Schedule.
- 7.1.7 Calls may be handled by an ACD system located at a Service Supplier International DQ Call Centre and Calls may be queued. If a queue place is not available, the Service Taker Subscriber will receive busy tone.
- 7.1.8 A search for one telephone number per Call, or such amount that are given to the Service Supplier's own subscribers, may be requested. The minimum information needed from the Service Taker Subscriber is country, name and (partial) address.
- 7.1.9 If a listing is found, the applicable telephone number will be read back through an Interactive Voice Response (IVR) system or by the agent. Where more than one listing is found, telephone numbers relating to the primary two listings only, or such number of listings that are given to the Service Supplier's own subscribers, will be read back through an IVR system or by the agent. If the listing that is found is ex-directory, the IVR or agent will state that the requested number is unlisted, or that the requested number cannot be disclosed. Where no listings are found, the IVR or agent will state that the number is unlisted or cannot be found.
- 7.1.10 The information available in the Service Supplier International DQ Database will depend on agreements with International DQ Database Providers outside of Trinidad and Tobago and Service Supplier is not responsible for any omissions or inaccuracies.

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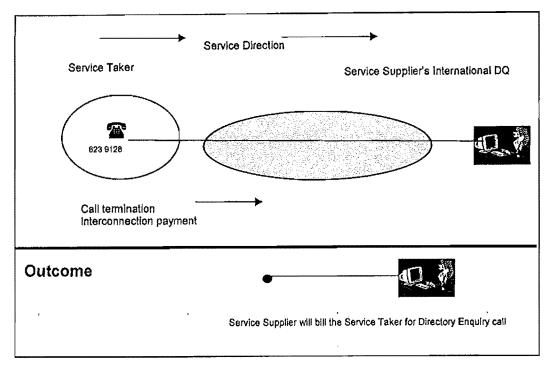


Figure 7: Call Originating in the Service Taker's Network and Terminating in Service Supplier's International Directory Service via the Service Supplier's PSTN

#### 7.2 Specific Responsibilities

- 7.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 7.2.2 Service Supplier will be responsible, in accordance with the Joint Working Manual, for the metering and billing to charge Service Taker for all Calls using the International DQ Service passed by Service Taker to the Service Supplier International DQ Call Centre via the Service Supplier PSTN.
- 7.2.3 Service Supplier will be responsible for managing, operating and maintaining the Service Supplier International DQ Database and associated computer systems and providing training for the International DQ Operators and the necessary working environment.
- 7.2.4 Service Supplier will be responsible for monitoring the quality, managing and providing management information about the International DQ Service from the Point of Connection to the Service Supplier International DQ Call Centre in accordance with the Joint Working Manual. Service Taker will be responsible for monitoring the quality, managing and providing management information about the International DQ Service from the Subscriber Connection to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management systems will not be provided.

- 7.2.5 Service Taker will be responsible for forecasting usage of the International DQ Service in accordance with the Joint Working Manual.
- 7.2.6 Service Taker will be responsible for validating the called number against the valid international DQ number. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not addressed to a number listed in the Service Schedule as valid numbers for the International DQ Service.
- 7.2.7 Service Taker will be responsible for managing any end-to-end Services provided by Service Taker to Service Taker Subscribers that use the International DQ Service.

#### 7.3 Quality of Service

- 7.3.1 In accordance with Clause 15, Service Supplier will provide the International DQ Service twenty four (24) hours per day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 7.3.2 Quality of Service levels and Fault Restoration Times for the International DQ Service will be measured and reported by Service Supplier in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.

#### 7.4 Configuration

- 7.4.1 The International DQ Service will be available at Service Supplier ISL / IPOP(s) specified in the Service Schedule.
- 7.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the International DQ Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule.
- 7.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

#### 7.5 Charges

- 7.5.1 The tariffs for Charges for the International DQ Service are specified in the Tariff Schedule.
- 7.5.2 The Charges for the International DQ Service are payable in accordance with Clause 9 of the Legal Framework, can be varied in accordance with Clause 10 of the Legal Framework and are in addition to any other Charges payable for Services provided pursuant to this Agreement. Charges are the sum of applicable Usage Charges.
- 7.5.3 Usage Charges will include:
  - Call Setup Charges
- 7.5.4 The Tariff for Usage Charges will apply to Answered Calls where the Service Taker routes the Call to a Service Supplier ISL / IPOP in the Interconnect Access Area for the

Service Supplier International DQ Call Centre.

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- 7.5.5 For each Answered Call, the Call Setup Charge will be applicable when Call Start occurs.
- 7.5.6 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by the Service Supplier and the number of Time Units that shall apply will be calculated by the Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.
- 7.5.7 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of the Service.
- 7.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by Service Taker as a result of inaccurate forecasting of the International DQ Service and delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

- End of Service Description -

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# 8 SMS Termination Service Not applicable

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- End of Service Description -

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#### 9 National Freephone Access Service

#### 9.1 Description

- 9.1.1 The National Freephone Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 9.1.2 The National Freephone Service Access Service will enable Calls originating on the Service Taker's network via the Point Of Connection defined by the Joining Service to a reach National Freephone Numbers on the National Freephone Service Provider platform, via the Service Taker PSTN.
- 9.1.3 The valid national freephone number ranges are listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 9.1.4 Calls will only be conveyed pursuant to this Service Description where the National Freephone Service Provider accepts Calls from Service Taker Mobile Subscriber Connections. The Service Taker Mobile Subscriber will be informed through a voice announcement if a National Freephone Service Provider does not accept calls from Service Taker Mobile Subscriber Connections.
- 9.1.5 The National Freephone Access Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the relevant Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 9.1.6 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual

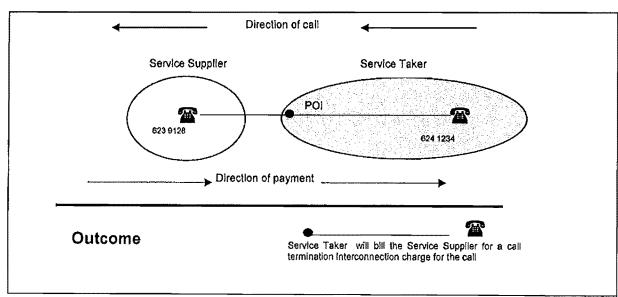


Figure 8 - Call originating in Service Taker's Network and terminating in Service Supplier's PSTN (Freephone)

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#### 9.2 Specific Responsibilities

- 9.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 5.2 of this Service Description.
- 9.2.2 Service Taker will be responsible for the metering necessary to monitor usage of all Calls passed by Service Taker to the Service Supplier PSTN using the National Freephone Access Service in accordance with the Joint Working Manual.
- 9.2.3 Service Supplier will be responsible for monitoring the quality, managing and providing management information about the National Freephone Access Service from the Point of Connection to the valid National Freephone Service Provider and Service Taker will be responsible for monitoring the quality, managing and providing management information about the National Freephone Access Service from the Mobile Subscriber Connection to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's and Service Taker's management information systems will not be provided.
- 9.2.4 The Service Taker will be responsible for forecasting usage of the National Freephone Access Service in accordance with the Joint Working Manual.
- 9.2.5 The Service Taker will be responsible for validating the called number against the valid national freephone numbers. In accordance with Clause 8.2 of the Legal Framework, the Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are addressed to numbers not listed in the Service Schedule as valid numbers for the National Freephone Service Access Service.
- 9.2.6 The Service Taker will be responsible for managing any end-to-end Services provided by Service Supplier to Service Taker Subscribers that use the National Freephone Terminating Access Service.
- 9.2.7 Service Supplier will only convey Calls pursuant to this Service Description where the National Freephone Service Provider accepts Calls from Service Taker Mobile Subscriber Connections.
- 9.2.8 The National Freephone Service Provider shall take responsibility for the content and management of a Call when the Call has been handed over by the Service Taker. The Service Taker is not responsible under this Agreement for any such content.

#### 9.3 Quality of Service

- 9.3.1 In accordance with Clause 15 Service Supplier will provide the National Freephone Access Service 24 hours/day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 9.3.2 Quality of Service levels and Fault Restoration Times for National Freephone Service Access Service will be measured and reported by Service Supplier in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.

#### 9.4 Configuration

- 9.4.1 The National Freephone Service Access Service will be available at Service Supplier ISLs specified in the Service Schedule.
- 9.4.2 Service Supplier will deliver traffic in Trunk Groups at each Point of Connection where the National Freephone Access Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual and the Parameter Schedule
- 9.4.3 The Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

#### 9.5 Charges

- 9.5.1 The tariffs for Charges for the National Freephone Service Terminating Access Service are specified in the Tariff Schedule. Payment will be made from the Service Supplier to the Service Taker to cover the Service Taker's costs of originating the call, where the National Freephone Service Provider accepts calls from Service Taker Mobile Subscriber Connections.
- 9.5.2 The charges for the National Freephone Service Access Service can be varied in accordance with Clause 10, at which time appropriate wording to explain any tariffs and to make provision for billing will be added to this Service Description.
- 9.5.3 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.

Note: 1. Where, in this Part, any reference is made to a "Service Taker", this term is deemed to include a Third Party Fixed Provider and a Third Party Mobile Provider.

Note: 2 Where, in this Part, any reference is made to "Service Taker Fixed Subscriber Connections", the terms "Service Taker Third Party Fixed Subscriber Connections" and Service Taker Third Party Mobile Subscriber Connections" shall immediately follow.

- End of Service Description -

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#### 10 International Freephone Access Service

#### 10.1 Description

- 10.1.1 The International Freephone Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 10.1.2 The International Freephone Service Access Service will provide conveyance of Calls addressed to valid international freephone number ranges from Service Taker Mobile Subscriber Connections from the Point Of Connection defined by the Joining Service destined for International Freephone Service Provider platforms and Home Country Direct Operator platforms via the Service Supplier PSTN and Third Party International Telecom Providers.
- 10.1.3 The valid international freephone number ranges are listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 10.1.4 Calls will only be conveyed pursuant to this Service Description where the International Freephone Service Provider accepts Calls from Service Taker Mobile Subscriber Connections. The Service Taker Mobile Subscriber will be informed through a voice announcement if the International Freephone Service Provider does not accept calls from mobile networks.
- 10.1.5 The International Freephone Service Access Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the relevant Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 10.1.6 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual

#### 10.2 Specific Responsibilities

- 10.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 10.2.2 Service Supplier will be responsible for the metering necessary to monitor all Calls passed by the Service Taker to an International Freephone Service Provider platform or a Home Country Direct Operator platform via the Service Supplier PSTN and Third Party International Operators using the International Freephone Service Access Service in accordance with the Joint Working Manual.
- 10.2.3 Service Supplier will be responsible for monitoring the quality and managing and providing management information about the International Freephone Service Access Service from the Point of Connection to the Point of Handover and Service Taker will be responsible for monitoring the quality and managing and providing management information about the International Freephone Access Service from the Mobile Subscriber Connection to the Point of Connection in accordance with the Joint Working

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Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management information systems will not be provided.

- 10.2.4 Service Taker will be responsible for forecasting usage the International Freephone Service Access Service in accordance with the Joint Working Manual.
- 10.2.5 Service Taker will be responsible for validating the called number against the valid international freephone numbers. In accordance with Clause 8.2, Service Supplier will be under no obligation to convey Calls pursant to this Service Description that are addressed to numbers not listed in the Service Schedule as valid numbers for the International Freephone Service Access Service.
- 10.2.6 Service Taker will be responsible for managing any end-to-end Services provided by Service Taker to Service Taker Subscribers that use the International Freephone Service.
- 10.2.7 The International Freephone Service Provider shall take responsibility for the content and management of a Call when the Call has been handed over by the Service Supplier. The Service Supplier is not responsible under this Agreement for any such content or management. The Home Country Direct Operator shall take responsibility for the management of a Call when the Call has been handed over the Service Supplier. The Service Supplier is not responsible under this Agreement for any such content.
  - 10.3 Quality of Service
- 10.3.1 In accordance with Clause 15, Service Supplier will provide the International Freephone Service Access Service 24 hours/day, every day, to the Quality of Service levels set out in the Joint Working Manual and Parameter Schedule.
- 10.3.2 Quality of Service levels and Fault Restoration Times for the International Freephone Service Access Service will be measured and reported by Service Supplier in accordance with the Joint Working Manual and Parameter Schedule. Service Supplier and Service Taker will periodically review the achieved quality parameters in accordance with the Joint Working Manual.
- 10.3.3 Service Supplier is not responsible for the quality of the Third Party International Telecom Provider involved in conveyance of the Call nor for the service quality of other Third Party Telecom Providers involved in conveyance of the Call beyond the Point of Handover.

#### 10.4 Configuration

- 10.4.1 The International Freephone Service Access Service will be available at the Service Supplier ISLs specified in the Service Schedule.
- 10.4.2 Service Taker will deliver traffic in Trunk Groups at each Point of Connection where the International Freephone Access Service is offered and required and will route Calls in accordance with the routing scheme and principles described in the Joint Working Manual.
- 10.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

10.5 Charges

- 10.5.1 The tariffs for Charges for the International Freephone Service Terminating Access Service are listed in the Tariff Schedule.
- 10.5.2 The Charges for the International Freephone Service Access Service are can be varied in accordance with Clause 10 at which time appropriate wording to explain any tariffs and to make provision for billing will be added to this Service Description.
- 10.5.3 If the provision of Signalling Links is consistent with the dimensioning rule specified in Joint Working Manual, the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service.

Note: 1. Where, in this Part, any reference is made to a "Service Taker", this term is deemed to include a Third Party Fixed Provider and a Third Party Mobile Provider.

Note: 2 Where, in this Part, any reference is made to "Service Taker Fixed Subscriber Connections", the terms "Service Taker Third Party Fixed Subscriber Connections" and Service Taker Third Party Mobile Subscriber Connections" shall immediately follow.

- End of Service Description -

#### PART 4. PSTN TRANSIT SERVICES

#### 11 **PSTN Transit Service**

#### 11.1 Description

- 11.1.1 The PSTN Transit Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.
- 11.1.2 The PSTN Transit Service will provide conveyance of Calls from Service Taker Subscriber Connections destined for (a) a Third Party National Telecom Provider Subscriber Connection in Trinidad and Tobago which for avoidance of doubt includes TSTT's mobile network. from the Point of Connection defined by the Joining Service via the Service Supplier PSTN to the Point of Handover in Trinidad and Tobago for collection by TSTT or the Third Party National Telecom Provider. Calls originating or ultimately terminating outside of Trinidad and Tobago are not conveyed pursuant to this Service Description.
- 11.1.3 Valid number ranges for TSTT Mobile Subscriber Connections and Third Party National Telecom Provider Subscriber Connections are listed in the Service Schedule. The list will be amended from time to time to include any additional numbers to which Calls are to be conveyed pursuant to this Service Description or to remove numbers. The process for adding or removing numbers is specified in the Joint Working Manual.
- 11.1.4 The PSTN Transit Service can only be provided in conjunction with a Joining Service. Sufficient dedicated capacity must be in place within the Joining Service to handle the traffic in accordance with the Joint Working Manual.
- 11.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.

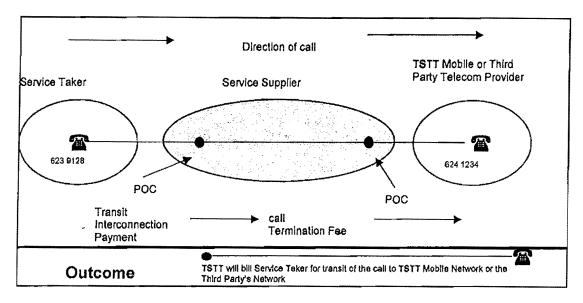


Figure 9: Service Supplier Transits call between Service Taker and TSTT Mobile or Third Party Telecom Provider

- 11.2 Specific Responsibilities
- 11.2.1 Without prejudice to the responsibilities described elsewhere in this Agreement, each Party shall have the responsibilities set out in this Paragraph 1.2 of this Service Description.
- 11.2.2 Service Supplier will be responsible for the metering and billing necessary to charge Service Taker for all Calls passed by Service Taker to a Third Party National Telecom Operator or a Paging Provider via the Service Supplier PSTN using the PSTN Transit Service in accordance with the Joint Working Manual
- 11.2.3 Service Supplier will be responsible for monitoring the service quality, managing and providing management information about the PSTN Transit Service from the Point of Connection to the Point of Handover in accordance with the Joint Working Manual. Service Taker will be responsible for monitoring the service quality, managing and providing management information about the PSTN Transit Service from the Subscriber Connection to the Point of Connection in accordance with the Joint Working Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management systems will not be provided.
- 11.2.4 Service Taker will be responsible for forecasting usage of the PSTN Transit Service in accordance with the Joint Working Manual.
- 11.2.5 Service Taker will be responsible for validating the called number against the valid Third Party National Telecom Provider numbers and the valid Paging Provider numbers in accordance with the Numbering Scheme. The Service Taker will cooperate with the Service Provider settlement of Transit traffic number disputes with Third Parties by allowing Third Party's Call Record verification. In accordance with Clause 8.2 of the Legal Framework, Service Supplier will be under no obligation to convey Calls pursuant to this Service Description that are not listed in the Service Schedule as valid numbers for

- 11.5.4 The Tariff for Usage Charges will apply to all Answered Calls where the Service Taker, routes the Call to a Service Supplier ISL / IPOP in the Interconnect Access Area where the Point of Handover is located.
- 11.5.5 For each Answered Call, the Call Setup Charge will be applicable when Call Start occurs.
- 11.5.6 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call will be logged by the Service Supplier, and the number of Time Units that shall apply will be calculated by the Service Supplier. For each Answered Call, the duration will be measured to an accuracy of a Time Unit.
- 11.5.7 If the provision of Signalling Links is consistent with the dimensioning rule specified in the Joint Working Manual the tariffs will include all charges for the handling of signalling messages required based on the specification of this Service. For the avoidance of doubt, this does not include Roaming Messages and SMS messages.
- 11.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable by Service Taker as a result of inaccurate forecasting of the PSTN Transit Service and delays to provisioning and acceptance testing. Any such sums will be calculated and charged for in accordance with the Joint Working Manual. Neither does it include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

- End of Service Description-

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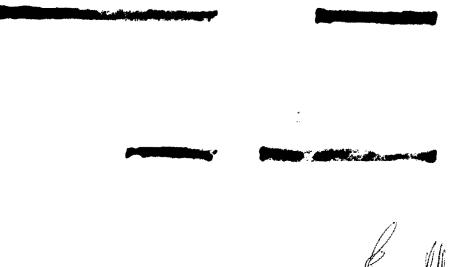
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# Service Schedule

# Offer of Terms and Conditions For Interconnection



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### 1. Schedule of Services PART 1. JOINING SERVICE 1.1 Optical In-Span Joining Service

# Option Service Supplier Service Taker

Option	Service Supplier	Service Taker
A	TSTT	LISA COMMUNICATIONS
В	LISA COMMUNICATIONS	TSTT

TSTT service supplied within the following Interconnect Access Area, at the following TSTT Interconnect Switch Location (ISL) for connection at the LISA COMMUNICATIONS Interconnect Point(s) of Presence (IPOP(s)):

#	Interconnect Access Area	TSTT ISL	IPOP(s)	Minimum # Network Links for Year 1
1	Trinidad and Tobago		LISA COMMUNICATIONS IPOP	<b>T</b> 1s

LISA COMMUNICATIONS's service supplied within the following Interconnect Access Area, at the following IPOP(s) for connection at the TSTT ISL:

#	Interconnect Access Area	IPOP(s)	TSTT ISL	Minimum # Network Links for Year 1
1	Trinidad and Tobago	LISA COMMUNICATIONS IPOP		TIS

#### PART 2. TERMINATION SERVICES

#### 1.2 PSTN Terminating Access Service

Option	Service Supplier	Service Taker
A	TSTT	LISA COMMUNICATIONS
В	LISA COMMUNICATIONS	TSTT

TSTT service supplied at the following TSTT ISL. Service taken at LISA COMMUNICATIONS's IPOP(s):

#	TSTT ISL	LISA COMMUNICATIONS IPOP
1		

List of Service Supplier Codes: 610, 612 - 619, 621 - 640, 642 - 660, 662 - 677, 679, 690 - 698, 821 - 822

LISA COMMUNICATIONS service supplied at the following LISA COMMUNICATIONS IPOP. Service taken at the following TSTT ISL:

	1	
#	Telco IPOP	TSTT ISL
1		

List of Service Supplier Codes: 607

#### **1.3 PLMN Terminating Access Service**

Option	Service Supplier	Service Taker
A	TSTT	LISA COMMUNICATIONS

TSTT service supplied at the following TSTT ISL. Service taken at LISA COMMUNICATIONS IPOP(s):

#	TSTT ISL	Telco IPOP
1		

List of Service Supplier Codes: 460 - 499, 620, 678, 680 - 689, 701 - 799

#### 1.4 Incoming International Call Termination to PLMN Service

Option	Service Supplier	Service Taker
Α	TSTT	LISA COMMUNICATIONS

TSTT service supplied at the following TSTT ISL. Service taken at the following LISA COMMUNICATIONS IPOP(s):

	#	TSTT ISL	Telco IPOP
ĺ	1		P

List of Service Supplier Codes: 460 - 499, 620, 678, 680 - 689, 701 - 799

#### 1.5 Incoming International Call Termination to PSTN Service

Option	Service Supplier	Service Taker
A	TSTT	LISA COMMUNICATIONS
В	LISA COMMUNICATIONS	ISTI

TSTT service supplied at the following TSTT ISL. Service taken at the following LISA COMMUNICATIONS IPOP(s):

#	TSTT ISL	LISA COMMUNICATIONS IPOP
1		

List of Service Supplier Codes: 610, 612 - 619, 621 - 640, 642 - 660, 662 - 677, 679, 690 - 698, 821 - 822

LISA COMMUNICATIONS service supplied at the following LISA COMMUNICATIONS IPOP. Service taken at the following TSTT ISL:

#	LISA COMMUNICATIONS IPOP	TSTT ISL
l		

List of Service Supplier Codes: 607

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### PART 3. SPECIAL ACCESS SERVICES

#### 1.6 Emergency Services

т<sup>\*</sup>

Police 999 Fire & Ambulance 990 Coast Guard 634-4440

Option	Service Supplier	Service Taker
A	TSTT	LISA COMMUNICATIONS

Service supplied at the following TSTT ISL:

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	#	-			en 🖌			
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1	1							
1	*						 	

Service taken at the following LISA COMMUNICATIONS IPOP(s):

#	ІРОР	
1	LISA COMMUNICATIONS IPOP	

Valid Emergency Services number: 999, 990, 634-4440

#### 1.7 National DQ Service

Option	Service Supplier	Service Taker
Α	TSTT	LISA COMMUNICATIONS

Service supplied at the following 1511 TSL:

		1.43	C	•	
#	TSTT Interconnect Switch Location				
1					

Service taken at the following LISA COMMUNICATIONS IPOP(s):

#	IPOP
1	
**. 11 1 3 7	

Valid National DQ Service number: 6411

#### **1.8 International DQ Service**

Option	Service Supplier	Service Taker
Α	TSTT	LISA COMMUNICATIONS

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location	
1		

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Service taken at the following LISA COMMUNICATIONS IPOP(s):

#	IPOP
1	LISA COMMUNICATIONS IPOP

Valid International DQ Service number: 0

#### **1.9 National Freephone Access**

Option			Service Supplier	Service Taker
A			TSTT	Lisa Communications
В	3	1 - <b>4</b> .	Lisa Communications	TSTT ••••

TSTT service supplied at the following TSTT ISL. Service taken at the following Lisa Communications IPOP(s)

	#	TSTT ISL	Lisa Communications IPOP
	1		Lisa Communications POP
•		,	site

Lisa Communications service supplied at the following Lisa Communications IPOP. Service taken at the following TSTT ISL

#	a and the second second second	Lisa Communications IPOP	TSTT IShows :
1			

#### **1.10 International Freephone Access**

Option	Service Supplier	Service Taker
A	TSTT	Lisa Communications

TSTT service supplied at the following TSTT ISL. Service taken at the following Lisa Communications IPOP(s).

1 de restances and the second	-	
#	TSTT ISL	Lisa Communications IPOP
1		Lisa Communications POP
		site

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# PART 4. PSTN TRANSIT SERVICES

Option	Service Supplier	Service Taker	3 <sup>rd</sup> Party National Telecom Provider including TSTT Mobile				
A	TSTT	LISA COMMUNICATIONS	Mobile Telecom Provider				
В	TSTT	LISA COMMUNICATIONS	Fixed Telecom Provider				
С	LISA COMMUNICATIONS	TSTT	Fixed Telecom Provider				
D	LISA COMMUNICATIONS	TSTT	Mobile Telecom Provider				

#### 1.11 PSTN Transit Service \*

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location
1	

Service taken at the following LISA COMMUNICATIONS IPOP(s):

#	IPOP
1	LISA COMMUNICATIONS IPOP

## 2. Points of Connection

	TSTT Interconnect Switch Location
Interco	ISL
Trinidad and Tobago	4. 5 <sup>-1</sup>

	Interconnect Point of Presence
Interconnect Access Area	IPOP
Trinidad and Tobago	LISA COMMUNICATIONS IPOP

#### The Point of Connection will be at the Joint Box of the Joining Service

- \*Note 1: Subject to the provisions of the Telecommunications Act, 2001 neither Party to this Agreement is obligated to use the Transit Services provided by the other Party.
- "Note 2: Where one Party ("the Service Taker") utilizes the Transit Services offered by the other Party ("the Service Supplier") and an alternative interconnection route, whether direct or indirect, to a Third Party
  - Network is subsequently established, the Service Taker shall not be obliged to continue utilizing the Transit Services of the Service Supplier.

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# 3. Interconnect Access Areas

Trinidad and	Tobago	IAA:	Number Range	•
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2	612		32	644		1	62	676	
3	613		33	645		1	63	677	
4	614		34	646		1	64	679	]
5	615		35	647		1	65	690	]
6	616		36	648		1	66	691	]
7	617	-	37	649		1	67	692	]
8	618		38	650			68	693	
9	619		39	651		1	69	694	
10	621		40	652		Ī	70	695	
11	622		41	653		1	71	696	J
12	623		42	654		1	72	697	J
13	624	-1	43	655			73	698	
14	625		44	656		1	74	821	
15	626		45	657	<b>\$</b>	·~ 20	75+	822-in-th- 14	
16	627		46	658			76	824	
17	628		47	659					
18	629	_	48	660					
19	630		49	662					1
20	631	-	50	663					ļ
21	632		51	664					
22	633	7	52	665	du,				- <b>-</b> -
23	634		53	667					
24	635		54	668		ļ			
25	636		55	669					
26	637		56	670					
27	638		57	671					
28	639		58	672					
29	640	_	59	673					

## Lisa Communications Limited IAA: Number Range

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# 4. National Freephone Number Ranges

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1	8000002	51	8000688	101	8002636	151	8003666	201	8004467	251			8007265	351	8008627	
2	8000090	52	8000690	102	8002637	152	8003683	202	8004476	252		302	8007274	352	8008683	
3	8000111	53	8000691	103	8002653	153	8003728	203	8004477	253	8005459	303	8007283	353	8008687	ĺ .
4	8000598	54	8000692	104	8002655	154	8003733	204	8004488	254	8005463	304	8007290	354	8008722	
5	8000599	55	8000694	105	8002662	155	8003742	205	8004532	255	8005464	305	8007291	355	8008725	
6	8000600	56	8000696	106	8002664	156	8003745	206	8004567	256	8005481	306	8007297	356	8008746	
7	8000604	57	8000698	107	8002666	157	8003778	207	8004622	257	8005483	307	8007323	357	8008748	
8	8000608	58	8000700	108	8002667	158	8004000	208	8004633	258		308	8007335	358	8008785	
9	8000610	59	8001000	109	8002672	159	8004011	209	8004638	259		309	8007363	359	8008824	
10	8000619	60	8001034	110	8002676	160	8004123	210	8004658	260	8005559	310	8007368	360	8008827	
11	8000620	61	8001035	111	8002678	161	8004222	211	8004662	261	8005566	311	8007378	361	8008832	
12	8000624	62	8001047	112	8002679	162	8004225	212	8004663	262	8005626	312	8007447	362	8008842	
13	8000625	63	8001120	113	8002739	163	8004227	213	8004664	263	8005627	313	8007467	363	8008888	
14	8000627	64	8001121	114	8002742	164	8004229	214	8004673	264		314	8007469	364	8008898	
15	8000628	65	8001122	115	8002772	165	8004232	215	8004685	265	8005683	315	8007473	365	8009000	
16	8000629	66	8001190	116	8002777	166	8004236	216	8004687	266	8005750	316	8007526	366	8009255	
17	8000630	67	8001232	117	8002788	167	8004238	217	8004722	267	8005865	317	8007626	367	8009283	
18	8000631	68	8001234	118	8002793	168	8004240	218	8004742	268	8006111	318	8007629	368	8009287	
19	8000632	69	8001675	119	8002847	169	8004242	219	8004743	269	8006245	319	8007665	369	8009355	
20	8000633	70	8001887	120	8002852	170	8004267	220	8004744	270	8006294	320	8007673	370	8009366	
21	8000635	71	8002000	121	8002862"	171	8004277	221	8004763	271	8006298	321	8007678	371	8009367	
22	8000636	72	8002020	122	8002886	172	8004278	222	8004772	272	8006328	322	8007684	372	8009377	
23	8000637	73	8002121	123	8002946	173	8004282	223	8004773	273	8006337	323	8007700	373	8009622	
24	8000638	74	8002222	124	8003000	174	8004283	224	8004774	274	8006342	324	8007723	374	8009663	
25	8000639	75	8002235	125	8003131	175	8004289	225	8004775	275	8006376	325	8007727	375	8009675	
26	8000640	76	8002255	126	8003222	176	8004321	226	8004777	276	8006378	326	8007762			
27	8000641	77	8002267	127	8003223	177	8004327	227	8004782	277	8006388	327	8007777			
28	8000642	78	8002273	128	8003247	178	8004328	228	8004786	278	8006397	328	8007827			
29	8000643	79	8002277	129	8003267	179	8004333	229	8004825	279	8006427	329	8007829			
30	8000644	80	8002278	130	8003278	180	8004342	230	8084826	280	8006428	330	8007837			
31	8000645	81	8002284	131	8003279	181	8004345	231	8004829	281	8006455	331	8007845		:	
32	8000646	82	8002288	132	8003282	182		232	8004842	282	8006600	332	8007867			
33	8000647	83	8002289	133	8003288	183	8004349	233	8004848	283	8006644	333	8007868			
34	8000661	84	8002327	134	8003325	184	8004357	234	8004863	284	8006673	334	8007873			
35	8000662	85	8002355	135	8003333	185	8004362	235	8004867	285	8006686	335	8007874			
36	8000663	86	8002375	136	8003336	186	8004365	236	8004868	286	8006725	336	8007973			
37	8000664	87	8002386	137	8003339	187		237	8004869	287	8006742	337	8007977			
38		88		138		) i		238			8006762	338	8008000			
39	8000670	1 1	8002407	139		2 1	8004377	239		1 ;	8006822	339	8008080			
40		1 1 1		i		1 - 1	8004382	1 11			8006823	340	8008288			
41			8002437	141				241	8004933		8006876	341	8008294		İ	ĺ
42		1	8002444	1 1	8003377	1.1.1.1			8004968	1 1	8006878	342	8008299			
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1 1	8000679	2 1	8002588				8004444		8005375	i	8007243					ĺ
1 1	8000685	: 1	8002623	1	8003533			1 1			8007250		8008468			
50	8000687	100	8002626	150	8003663	200	8004455	250	8005395	300	8007253	350	8008477			

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# 5. International Freephone Number Ranges

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1	1-800-203-1294	31	1-800-344-8211	61	1-800-571-4164	91	1-800-361-7373
2	1-800-203-1411	32	1-800-442-0497	62	1-800-571-3725	92	1-800-401-7201
3	1-800-203-1412	33	1-800-201-8978	63	1-800-468-3656	93	1-800-448-8537
4	1-800-203-1291	34	1-888-863-5564	64	1-800-327-6700	94	1-800-448-8538
5	1-800-203-1410	35	1-888-201-2216	65	1-800-200-8393	95	1-800-448-8539
6	1-800-203-9945	36	1-800-880-8745	66	1-800-477-2170	96	1-800-479-1544
7	1-800-203-9946	37	1-888-748-5481	67	1-800-456-0186	97	1-888-689-2247
8	1-888-495-7298	38	1-800-201-4336	68	1-800-516-0297	98	1-800-689-8080
9	1-800-203-1237	39	1-800-815-2959	69	1-888-452-8105	99	1-800-717-7992
10	1-800-203-1290	40	1-800-815-2979	70	1-888-651-1928	100	1-800-717-7984
11	1-800-203-1299	41	1-888-321-3795	71	1-800-911-9409	101	1-888-805-8482
12	1-800-203-1289	42	1-888-855-3742	72	1-800-837-5387	102	1-800-958-2612
13	1-800-203-1300	43	1-866-805-7643	73	1-800-204-7837	103	1-800-691-7099
14	1-888-389-7202	44	1-888-255-1979	74	1-800-204-7841	104	1-800-365-8722
15	1-800-744-2020	45	1-888-255-1978	75	1-800-803-5934	105	1-800-344-8344
16	1-800-744-4662	46	1-800-580-2949	76	1-800-238-6239	106	1-800-766-7686
17	1-800-744-0021	47	1-800-580-2999	77	1-800-203-7678	107	1-888-235-1111
18	1-800-203-2032	48	1-800-203-6069	78	1-800-200-0577	108	1-888-235-3333
19	1-800-203-0154	49	1-800-200-3949	79	1-800-200-0579	109	1-888-236-3333
20	1-888-773-2141	50	1-800-365-2774	80	1-800-633-5890	110	1-888-252-2258
21	1-800-562-0519	51	1-888-275-7833	81	1-888-264-4557	111	1-888-259-6255
22	1-800-201-4060	52	1-800-214-5369	82	1-888-586-4251	112	1-888-279-5555
23	1-800-223-2234	53	1-800-215-9370	83	1-888-349-0380	113	1-888-279-6666
24	1-800-926-5846	54	1-800-215-9372	84	1-888-349-0381	114	1-888-279-7777
25	1-800-960-9940	55	1-800-480-8637	85	1-800-222-3564	115	1-888-508-5620
26	1-800-876-7143	56	1-800-595-8303	86	1-800-243-4636	116	1-888-570-9555
27	1-800-523-0452	57	1-800-548-5274	87	1-888-247-2262	117	1-888-599-9946
28	1-800-323-5566	58	1-800-215-9374	88	1-800-279-5959	118	1-888-599-9947
29	1-800-010-0683	59	1-800-246-4610	89	1-888-300-0004	119	1-888-776-3030
30	1-800-231-0587	60	1-800-317-3589	90	1-800-361-5373	120	1-800-401-7015
121	1-800-401-7713	151	1-800-267-9028	181	1-800-237-3204	211	1-800-925-2738
122	1-800-401-7565	152	1-800-204-0116	182	1-800-722-7372	212	1-800-338-1604
123	1-800-606-7196	153	1-800-203-8959	183	1-800-338-5504	213	1-800-228-1082
124	1-888-632-3375	154	1-800-444-2584	184	1-800-482-3145	214	
125	1-800-972-4967	155	1-800-962-7171	185	1-800-543-4080	215	1-800-762-0521
126	1-800-442-4455	156	1-800-201-5069	186	1-800-858-1561	216	1-800-443-7672
127	1-800-825-5883	157	1-888-252-6765	187	1-800-966-9978	217	1-800-528-5200
128	1-800-744-1116	158	1-800-766-8262	188	1-800-365-3066	218	1-800-447-7677
129	1-800-395-2471	159	1-800-331-9728	189	1-800-753-0687	219	
130	1-800-859-2506	160	1-800-365-2883	190	1-800-430-0300	220	and a construction of the
131	1-800-479-1716	161	1-800-217-5832	191	1-800-297-2639	221	1-888-541-6690
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#### Service Schedule - Schedule 3

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132	1-800-829-0911	162	1-800-688-6102	192	1-888-373-6898	222	1-800-327-2557
133	1-800-488-1054	163	1-800-374-2725	193	1-888-252-4887	223	1-800-324-9052
134	1-800-226-7028	164	1-800-374-2724	194	1-888-252-4414	224	1-888-402-1205
135	1-800-283-0575	165	1-800-554-3373	195	1-888-654-0104	225	1-888-402-1207
136	1-800-568-9651	166	1-800-205-3769	196	1-800-801-6564	226	1-888-402-1208
137	1-800-732-3232	167	1-877-251-3836	197	1-800-455-8643	227	1-888-402-1209
138	1-800-327-9633	168	1-800-321-4910	198	1-800-238-8684	228	1-888-499-5678
139	1-800-533-4084	169	1-800-205-3770	199	1-888-473-3864	229	1-800-203-0548
140	1-800-553-2577	170	1-800-331-2690	200	1-888-558-6656	230	1-800-873-6961
141	1-800-205-4536	171	1-800-727-1275	201	1-888-537-6645	231	1-800-967-5289
142	1-800-203-0160	172	1-800-648-9070	202	1-800-274-3553	232	1-800-288-2877
143	1-800-205-7811	173	1-800-433-7300	203	1-800-889-5976	233	1-888-871-7474
144	1-800-205-4925	174	1-800-422-5905	204	1-888-800-6728	234	1-800-867-5184
145	1-800-800-1125	175	1-800-338-5503	205	1-800-528-6038	235	1-800-205-1624
146	1-800-229-5037	176	1-800-889-7890	206	1-800-874-0421	236	1-800-205-1625
147	1-800-878-7463	177	1-800-221-3768	207	1-800-221-7282	237	1-800-205-2048
148	1-800-231-7652	178	1-800-433-2601	208	1-800-228-1096	238	1-800-205-2053
149	1-800-582-8513	179	1-800-433-7510	209	1-800-358-1994	239	1-800-205-2068
150	1-800-845-8324	180	1-800-331-7260	210	1-800-327-1267	240	1-800-205-5955
241	1-800-205-5965	271	1-800-463-3818	301	1-800-556-2972	331	1-888-830-6246
242	1-800-205-5966	272	1-800-463-3827	302	1-800-859-6377	332	1-800-221-7680
243	1-800-205-5971	273	1-800-463-3840	303	1-800-545-1125	333	1-800-452-5252
244	1-800-205-5972	274	1-800-463-3867	304	1-800-247-0285	334	1-866-657-9737
245	1-800-206-8812	275	1-800-463-3887	305	1-800-524-0135	335	1-866-297-2016
246	1-800-206-8813	276	1-800-463-3891	306	1-800-797-8946	336	1-866-285-7784
247	1-800-203-5850	<b>27</b> 7	1-800-776-2572	307	1-800-744-3926	337	1-888-783-6419
248	1-800-203-5860	278	1-800-776-2578	308	1-800-205-8564	338	1-800-992-2809
249	1-800-203-0153	279	1-800-776-2590	309	1-800-205-8565	339	1-800-583-4002
250	1-800-205-6755	280	1-800-776-2941	310	1-800-205-8566	340	1-800-710-2709
251	1-800-205-1059	281	1-800-776-5827	311	1-800-979-0931	341	1-800-876-1812
252	1-800-205-1006	282	1-800-776-5829	312	1-800-526-2385	342	1-800-201-1029
253	1-800-205-1058	283	1-800-776-6408	313	1-800-696-2910	343	1-800-201-1496
254	1-800-206-6969	284	1-800-776-6927	314	1-800-727-5829	344	1-800-201-1497
255	1-800-201-1719	285	1-800-776-7036	315	1-800-318-5783	345	1-800-201-1503
256	1-800-201-1741	286	1-800-776-7063	316	1-800-458-9146	346	1-800-201-1504
257	1-800-201-1742	287	1-800-453-9672	317	1-800-203-7772	347	1-800-201-1508
258	1-800-201-1743	288	1-800-453-9671	318	1-800-876-1920	348	1-800-201-1509
259	1-800-201-1744	<b>28</b> 9	1-800-377-7729	319	1-800-695-3784	349	1-800-201-1510
<b>26</b> 0	1-800-201-1745	290	1-888-789-1111	320	1-800-477-2222	350	1-800-201-1512
261	1-800-201-1746	291	1-800-253-6500	321	1-800-477-0907	351	1-800-201-1513
262	1-800-201-1830	292	1-800-253-5377	322	1-800-477-0187	352	1-800-201-2142
263	1-800-201-1831	293	1-800-543-4300	323	1-800-925-2678		1-888-801-2601
264	1-800-201-1832	294	1-800-744-2230	324			1-888-801-2609
265	1-800-201-1833	295	1-800-965-8463	325	1-888-846-5680	355	1-888-801-2598

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266	1-800-328-6119	296	1-800-201-4970	326	1-800-477-2783	356	1-888-897-9412
267	1-800-828-0366	297	1-800-933-8284	327	1-888-233-2811	357	1-800-996-1824
268	1-800-297-2976	298	1-800-994-2788	328	1-800-444-7925	358	1-800-651-1051
269	1-800-453-9688	299	1-800-286-6072	329	1-800-205-4706	359	1-888-757-5581
270	1-800-457-0641	300	1-800-477-9845	330	1-800-744-3500	360	1-800-992-5402
361	1-800-876-8427	421	1-800-209-8163	481	1-800-883-5910	541	1-888-388-1596
362	1-800-627-0018	422	1-888-792-5757	482	1-800-678-8380	542	1-888-496-1132
363	1-800-871-6497	423	1-800-280-0201	483	1-800-846-3276	543	1-888-311-4403
364	1-800-803-3680	424	1-800-280-0288	484	1-800-688-0721	544	1-800-290-1624
365	1-800-685-3827	425	1-800-280-0351	485	1-800-257-7341	545	1-888-846-5842
366	1-800-725-8964	426	1-800-203-5938	486	1-800-631-3161	546	1-888-213-1560
367	1-800-311-8207	427	1-800-203-9676	487	1-800-458-3707	547	1-888-213-1562
36 <b>8</b>	1-800-311-8208	428	1-800-204-3216	488	1-800-873-2150	548	1-888-213-1564
369	1-800-818-5764	429	1-800-202-5963	489	1-800-873-3397	549	1-800-648-4985
370	1-800-285-8610	430	1-800-955-4086	490	1-800-825-6476	550	1-800-649-4715
371	1-800-451-5421	431	1-888-530-9782	491	1-800-357-7555	551	1-800-539-6263
372	1-800-551-1490	432	1-800-731-1821	492	1-800-201-8701	552	1-888-622-1701
373	1-800-201-5928	433	1-800-201-0532	493	1-800-202-0933	553	1-800-350-3089
374	1-800-201-5921	434	1-800-204-0385	494	1-800-202-0934	554	1-800-573-3032
375	1-800-201-5922	435	1-800-204-5627	495	1-800-202-0935	555	1-800-292-1183
376	1-800-201-5923	436	1-800-235-5768	496	1-800-202-0936	556	1-800-925-4450
377	1-800-201-5924	437	1-888-413-6054	497	1-800-202-0937	557	1-800-744-4724
378	1-800-201-5925	438	1-800-506-2448	498	1-800-202-0938	558	1-888-847-5802
379	1-800-201-5926	439	1-888-546-6965	499	1-800-202-0939	559	1-800-291-7626
380	1-800-201-5927	440	1-888-826-9630	500	1-800-202-0940	560	1-800-744-4637
381	1-800-201-5929	441	1-888-411-5604	501	1-800-202-0941	561	1-800-744-4000
382	1-800-201-5930	442	1-888-231-6571	502	1-800-202-0942	562	1-800-479-6425
383	1-800-201-5946	443	1-888-534-8728	503	1-800-744-2151	563	1-800-635-9296
384	1-800-201-6261	444	1-888-726-3382	504	1-800-201-8319	564	1-800-636-4334
385	1-888-429-3538	445	1-800-528-1234	505	1-800-817-5220	565	
386	1-888-203-1314	446	1-800-744-4357	506	1-800-866-8906		1-800-666-8353
387	1-800-204-2397	447	1-800-724-2785	507	1-800-853-2256	567	
388	1-800-228-0668	448	1-800-724-2793	508	1-800-839-2588	568	1-800-925-7844
389	1-888-413-4232	449	1-800-724-4851	509	1-800-937-2628	569	i
390	1-888-413-4080	450	1-877-332-7531	510	1-800-777-8743	570	1-888-230-0911
391	1-888-413-4153	451	1-877-494-7782	511	1-800-958-5364	571	1-800-202-9487
392	1-888-413-4178	452	1-866-461-1826	512	1-800-488-1664	572	1-800-202-3362
393	1-800-744-4636	453	1-866-235-4779	513	1-800-488-1666	573	
394	1-800-821-5602	454	1-877-832-8710	514	1-888-642-0110	574	1-800-202-5916
395	1-800-922-2477	455	1-800-202-2988	515		575	1
396	1-800-846-7778	456	1-800-201-2550	516	1-800-201-9021	576	
397	1-800-295-5726	457	1-800-397-8036	517	AT 2 B 1 M AND	577	
398	1-800-463-3987	458	1-800-201-4650	518			1-800-804-2994
399	1-800-463-3998	459	1-800-201-6129	519	1-800-744-2997	579	1-800-744-6222

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## Service Schedule - Schedule 3

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400	1-800-477-3157	460	1-800-201-7264	520	1-800-435-0098		1-800-744-3778
401	1-800-735-1502	461	1-800-201-9407	521	1-800-782-3387	581	1-800-744-9022
402	1-800-488-3024	462	1-800-202-2797	522	1-800-437-9202	582	1-800-955-0090
403	1-888-802-8926	463	1-800-202-3148	523	1-800-828-8144	583	1-800-558-3030
404	1-800-848-6090	464	1-800-202-3285	524	1-800-403-0882	584	1-800-825-6773
405	1-800-925-6060	465	1-888-781-8961	525	1-877-428-2228	585	1-800-285-3109
406	1-888-284-3741	466	1-888-317-3544	526	1-800-247-9297	586	1-800-739-0546
407	1-800-204-0313	467	1-888-803-8750	527	1-800-452-1201	587	1-800-225-5872
408	1-800-744-1120	468	1-888-402-4220	528	1-800-243-6822	588	1-800-333-6559
409	1-800-202-3846	469	1-888-540-9783	529	1-800-741-4951	589	1-800-201-1990
410	1-800-744-6244	470	1-888-803-9181	530	1-800-654-3246	590	1-800-456-1808
411	1-800-744-5272	471	1-800-698-1070	531	1-800-201-8259	591	1-800-274-2538
412	1-800-744-0013	472	1-877-359-7310	532	1-800-766-6275	592	1-800-744-2422
413	1-800-744-0014	473	1-800-380-8994	533	1-800-274-4951	593	1-800-540-0265
414	1-800-744-0020	474	1-800-461-2744	534	1-800-568-4112	594	1-800-204-0421
415	1-800-677-0063	475	1-800-304-0143	535	1-800-352-3878	595	1-800-204-5571
416	1-800-368-0809	476	1-800-218-1382	536	1-888-769-5090	596	1-800-590-1659
417	1-800-862-8020	477	1-800-956-5620	537	1-888-456-1407	597	1-800-562-2002
418	1-800-937-4824	478	1-800-896-3432	538	1-877-387-8564	5 <b>98</b>	1-888-266-3860
419	1-800-460-9986	479	1-888-388-1595	539	1-888-499-0449	599	1-888-382-6723
420	1-800-759-5613	480	1-888-217-6330	540	1-877-860-9642	600	1-800-940-8266
601	1-800-669-2524	721	1-800-688-3740	841	1-866-936-0584	961	1-888-874-9793
602	1-888-660-2074	722	1-800-207-5994	842	1-800-203-8293	962	1-888-511-7754
603	1-800-310-6970	723	1-800-992-2484	843	1-800-770-3899	963	1-888-511-7761
604	1-800-280-1158	724	1-800-833-8670	844	1-800-805-2771	964	1-888-241-0097
605	1-800-490-3866	725	1-800-228-0400	845	1-800-315-1400	965	1-888-511-7703
606	1-800-740-6976	726	1-800-695-5150	846	1-800-766-5450	966	1-888-279-8566
607	1-800-485-0150	727	1-800-688-6582	847	1-800-846-6309	967	1-888-279-8704
608	1-800-734-0937	728	1-800-688-5222	848	1-800-200-0907	968	1-800-805-3405
609	1-800-735-9405	729	1-800-344-0223	849	1-800-253-6189	969	1-888-847-1631
610	1-800-337-7301	730	1-800-799-3477	850	1-888-844-3629	970	1-800-766-8667
611	1-800-205-6282	731	1-800-796-9602	851	1-800-241-6443	971	1-800-753-0743
612	1-800-964-2751	732	1-800-836-7333	852	1-800-223-1784	972	1-800-374-4599
613	1-800-744-2527	733	1-800-201-1720	853	1-800-241-2411	973	
614	1-800-243-8788	734	1-800-945-0160		1-800-565-1398		1-800-221-6112
615	1-800-684-6378	735	1-800-204-0096		1-888-927-2337	975	1-800-395-5841
616	1-800-987-6507	736	1-888-465-1381		1-888-482-2963	976	1-800-204-2804
617	1-800-987-6508	737	1-888-810-1371	857	1-800-577-6138	977	1-800-202-1619
618	1-800-987-6509	738	1-800-688-8155	858	1-888-564-1294	978	1-800-201-0891
619	1-800-987-6514	739	1-800-873-4536	859	1-800-872-6482	979	1-800-202-2692
620	1-800-736-2321	740	1-800-203-8605	860	1-877-873-0956	980	1-800-934-4395
621	1-888-459-1809	741	1-800-201-8358	861	1-877-722-2402	981	1-800-331-6594
622	1-800-205-0163	742	1-800-201-8359	862	1-800-293-1605	982	1-800-291-6110
	1-800-685-1632		1-800-201-8360		1-800-811-0738		1-800-499-2498
525 (	1 000 000 1002	7 ° 13	1.000-201-0000	505		202	1 000 700-2400

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624	1-800-744-3333		1-800-203-3935	865	1-800-411-7864	985	1-800-436-7174
625	1-800-744-3334	745	1-800-826-3698		1-800-984-8523	986	1-800-523-9482
626	1-800-744-4545	746	1-800-203-9841	866		987	1-800-843-9842
627	1-800-744-1111	747	1-800-203-4037	867	1-888-531-7752	988	1-800-366-4968
628	1-800-744-2228	748	1-800-753-6085	868	1-800-898-4985		and provide a subscription that are required in party and reaching and an and all the other states of the sub-
629	1-800-744-3665	749	1-800-200-5584	869	1-800-224-8368	989	1-800-204-5701
630	1-800-878-4656	750	1-800-981-8547	870	1-800-212-2867	990	1-800-937-4501
631	1-800-744-9335	751	1-800-955-9027	871	1-800-744-7283	991	1-800-821-8000
632	1-800-293-8496	752	1-800-955-9026	872	1-800-203-0922	992	1-800-945-1424
633	1-800-420-1461	753	1-800-955-9028	873	1-800-203-1746	993	1-800-202-0489
634	1-800-444-9674	754	1-800-772-1929	874	1-800-206-8875	994	1-800-202-1487
635	1-800-744-2222	755	1-800-766-2273	875	1-800-205-4707	995	1-800-202-1488
636	1-800-744-2244	756	1-800-436-5764	876	1-800-744-7245	996	1-800-202-1489
637	1-800-744-9753	757	1-800-444-8414	877	1-888-849-1919	997	1-800-202-1490
638	1-800-351-5553	758	1-888-834-6003	878	1-800-954-3674	998	1-800-354-2323
639	1-800-765-8806	759	1-800-200-6611	879	1-800-430-1003	999	1-800-641-2079
640	1-800-744-8000	760	1-800-579-3958	880	1-800-487-4833	1000	1-800-463-3339
641	1-800-744-7827	761	1-800-805-1786	881	1-800-366-0931	1001	1-800-955-2882
642	1-800-293-6287	762	1-888-500-1245	882	1-888-309-6359	1002	1-800-858-8920
643	1-800-468-4560	763	1-888-500-1248	883	1-888-867-5880	1003	1-800-772-8687
644	1-800-203-4491	764	1-888-402-4710	884	1-800-774-8427	1004	1-888-510-2992
645	1-800-744-5030	765	1-888-266-5227	885	1-800-203-9191	1005	1-800-884-1234
646	1-888-242-3725	766	1-800-271-2672	886	1-800-201-0871	1006	1-800-798-1528
647	1-800-200-4488	767	1-800-275-0877	887	1-800-201-2537	1007	1-800-884-1111
648	1-800-204-5573	768	1-800-588-9504	888	1-800-950-3663	1008	1-800-201-2564
649	1-888-338-6329	769	1-800-200-1039	889	1-888-877-9760	1009	1-800-911-9980
650	1-800-343-7823	770	1-800-436-8971	890	1-800-932-4537	1010	1-888-780-4368
651	1-800-414-6944	771	1-800-275-3627	891	1-800-666-0411	1011	1-800-842-5226
652	1-800-203-0787	772	1-800-203-4518	892	1-800-928-0411	1012	1-800-634-7490
1	1-888-684-3987	773	1-800-506-9379	893	1-800-677-0411	1013	1-800-766-9144
654	1-888-832-9339	774		894	1-800-474-1363	1014	1-888-294-3911
655	1-800-431-4487	775	1-800-744-3684	895	1-800-203-7388	1015	1-800-727-3547
656	1-800-203-9326	776	1-800-744-1010	896	1-800-203-7389	1016	1-800-201-0882
657	1-800-203-9625	777	1-800-203-8157	897	1-800-234-3355	1017	1-800-221-0828
658	1-888-661-4251	778	1-800-231-0626	898	1-800-205-0346	1018	1-800-362-8702
659	1-888-235-3909	779	1-888-625-7423	899	1-800-205-4775	1019	1-800-685-8797
ł	1-888-400-0464	780	1-800-445-1253	900	1-800-205-4522	1020	1-800-685-9940
660		781	1-800-873-0171	901	1-800-202-5026	1021	1-800-863-6287
661	1-800-446-6234	782	1-888-402-4219	902	1-800-205-0324	1022	1-800-944-2490
662	1-800-744-1246	783	1-800-204-3134	903	1-800-205-0325	1023	
663	1-800-419-6232		1-888-668-3264	904	1-800-205-0326	1024	1-877-366-4357
664	1-800-986-3437		1-888-808-0923	905	1-800-203-3101	1025	
665	1-800-825-3541	785		906		1026	
666	1-800-362-1774	786 787		{	1-800-433-0587		1-800-201-4732
667	1-800-221-6125	181	1-800-744-8683	507	1-000-900-0007	,	7

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000         1000         240         1000         1800         818         1800         686         7852         1031         1800         480         666           671         1800         248         2865         911         1800         586         7855         1031         1800         744         6660           673         1800         2236         793         1800         723         1800         7574         1033         1800         744         6660           73         1800         22374         133         1800         7574         1033         1800         744         6660           74         1800         26474         787         1800         75         1800         75         1800         742         1803         1800         210         1400         1800	668	1-800-832-6296	788	1-800-201-3739	908	1-800-586-7583	1028	1-800-203-3237
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0.00         0.00 <th0.00< th="">         0.00         0.00         <th0< td=""><td>671</td><td>1-800-945-8859</td><td>791</td><td>1-800-203-9342</td><td>911</td><td>1-800-586-7855</td><td>1031</td><td>1-800-201-4505</td></th0<></th0.00<>	671	1-800-945-8859	791	1-800-203-9342	911	1-800-586-7855	1031	1-800-201-4505
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6.00         6.00         708         1-800-235-0696         918         1-800-866-0414         1038         1-888-219-6230           679         1-800-201-3268         800         1-800-267-7346         919         1-800-200-2986         1039         1-888-219-6230           680         1-800-201-3268         800         1-800-895-2886         920         1-888-999-4248         1040         1-800-201-0089           681         1-800-876-8778         801         1-800-895-2886         920         1-800-675-1189         1041         1-800-201-8008           682         1-800-487-8820         802         1-800-487-1189         1044         1-800-201-8008           683         1-888-63-7835         803         1-800-626-1155         921         1-888-717-4512         1044         1-800-201-8008           684         1-800-488-1670         804         1-800-628-3194         925         1-888-717-4512         1044         1-800-388-9811           685         1-800-754-6122         806         1-800-825-8378         928         1-888-717-4512         1044         1-800-861-5682           688         1-800-861-5383         1         1-888-251-8642         927         1-888-649-0604         1048         1-800-861-5686	676	1-800-241-7468	796	1-800-101-3493	916	1-800-742-2922	1036	1-800-201-4441
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661         1-600-876-8778         801         1-600-934-7340         921         1-800-575-1189         1041         1-800-201-0089           662         1-800-476-8820         802         1-800-477-1080         923         1-800-201-2450         1043         1-800-201-8708           683         1-888-953-7835         803         1-800-826-1155         924         1-888-717-4384         1044         1-800-801-6069           684         1-800-488-1670         804         1-800-826-1155         924         1-888-717-4384         1044         1-800-881-6016           685         1-800-754-6122         806         1-800-826-3194         925         1-888-717-4512         1045         1-800-383-1125           686         1-800-754-6122         806         1-800-861-5085         926         1-800-744-3445         1044         1-800-385-6882           688         1-800-269-9729         807         1-888-255-3878         928         1-888-549-0604         1048         1-800-861-5288           688         1-800-6566         809         1-888-639-6910         929         1-800-560-5882         1049         1-800-861-6288           691         1-800-851-8313         811         1-888-799-5908         931         1-800-203-9950         1052	679	1-800-491-5135	799	1-800-926-7346	919	1-800-200-2986	1039	1-888-219-6230
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1         1	683	1-888-953-7835	803	1-800-477-1080	923	1-800-201-2450	1043	1-800-801-6069
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6871-800-269-97298071-888-251-96429271-888-521-178710471-800-365-68826881-800-791-66548081-888-639-69109291-800-560-588210491-800-861-52886891-800-851-59328101-888-225-38799301-800-488-346510501-800-861-46516911-800-850-83138111-888-799-59089311-800-209-140910511-888-808-32146921-800-485-81258121-888-893-06939321-800-203-995010521-877-203-01416931-800-418-15738131-800-331-39069331-800-203-995110531-800-203-01516941-800-335-93578141-888-383-74049341-800-300-254910541-800-205-36676951-800-265-60908151-800-318-11649351-888-985-880110551-800-205-36706961-800-206-28618171-800-895-25479371-800-762-630010571-800-205-94836971-800-609-56358201-800-201-76029401-888-367-666510601-800-205-79876991-800-609-56358201-800-221-76029401-888-367-666510601-800-205-97577021-808-35-65718231-800-221-76029411-800-979-128710611-800-205-92217041-888-887-59138241-800-226-5779421-800-290-572210621-800-205-92217041-888-887-59138241-800-202-5579947	685	1-800-895-1915	805	1-800-628-3194	925	1-888-717-4512	1045	1-800-881-6016
66811 <t< td=""><td>686</td><td>1-800-754-6122</td><td>806</td><td>1-800-805-8035</td><td>926</td><td>1-800-744-3445</td><td>1046</td><td>1-800-388-9811</td></t<>	686	1-800-754-6122	806	1-800-805-8035	926	1-800-744-3445	1046	1-800-388-9811
6891-800-650-95668091-888-639-69109291-800-560-598210491-800-861-46516901-800-881-59328101-888-225-38799301-800-488-346510501-800-861-49056911-800-850-83138111-888-799-59089311-800-209-140910511-888-806-32146921-800-855-81258121-888-893-06939321-800-203-995010521-877-203-01416931-800-418-15738131-800-31-39069331-800-203-995110531-800-203-01516941-800-335-93578141-888-383-74049341-800-300-254910541-800-203-01516941-800-349-59688161-800-364-16649351-888-985-860110551-800-205-36706951-800-349-59688161-800-318-11649361-800-200-950010561-800-205-94836971-800-262-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-201-94218181-800-211-76029401-888-367-666510601-800-205-20427001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-92777021-800-478-4278221-800-221-76069411-800-99-524510641-800-205-92217031-800-483-56718231-800-221-76029431-800-234-832910631-800-205-92217041-888-887-59138241-800-225-5779441-	687	1-800-269-9729	807	1-888-251-9642	927	1-888-521-1787	1047	1-800-365-6882
6901-800-881-59328101-888-225-38799301-800-488-346510501-800-861-49056911-800-850-83138111-888-799-59089311-800-209-140910511-888-808-32146921-800-895-81258121-888-893-06939321-800-203-995010521-877-203-01416931-800-418-15738131-800-331-39069331-800-203-995110531-800-203-01516941-800-365-60908151-800-364-16649351-888-885-880110551-800-205-36676951-800-206-865-60908151-800-318-11649361-800-200-950010561-800-205-36706961-800-206-28618171-800-895-25479371-800-206-90010561-800-205-94836971-800-206-28618171-800-691-55089381-800-202-120010581-800-205-79876991-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-92217021-800-947-84278221-800-572-46279421-800-234-832910631-800-205-92217031-888-247-03808251-888-660-02479451-800-205-752210661-800-205-92217041-888-247-03808251-888-660-02479451-800-205-752210661-800-209-91207051-888-247-03808251-888-660-0247945 <td>688</td> <td>1-800-791-6654</td> <td>808</td> <td>1-888-225-3878</td> <td>928</td> <td>1-888-649-0604</td> <td>1048</td> <td>1-800-861-5288</td>	688	1-800-791-6654	808	1-888-225-3878	928	1-888-649-0604	1048	1-800-861-5288
6911-800-850-83138111-888-799-59089311-800-209-140910511-888-808-32146921-800-895-81258121-888-893-06939321-800-203-995010521-877-203-01416931-800-418-15738131-800-331-39069331-800-203-995110531-800-203-01516941-800-335-93578141-888-383-74049341-800-300-254910541-800-205-36676951-800-865-60908151-800-364-16649351-888-985-880110551-800-205-36706961-800-206-28618171-800-895-25479371-800-762-630010571-800-205-24836971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-79876991-800-609-56358201-800-691-55089391-800-622-623210591-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-521-76269431-800-204-832910631-800-205-92217041-888-87-59138241-800-224-06269431-800-204-832910631-800-705-278427051-888-247-03808251-880-660-2479451-800-205-752210661-800-209-91207041-888-8759138241-800-202-55779461	689	1-800-650-9566	809	1-888-639-6910	929	1-800-560-5982	1049	1-800-861-4651
6921-800-895-81258121-888-893-06939321-800-203-995010521-877-203-01416931-800-418-15738131-800-331-39069331-800-203-995110531-800-203-01516941-800-335-93578141-888-383-74049341-800-300-254910541-800-205-36676951-800-865-60908151-800-364-16649351-888-985-860110551-800-205-36706961-800-349-59688161-800-318-11649361-800-200-950010561-800-205-94836971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-501-94218181-800-691-55089391-800-622-623210591-800-205-79876991-800-6956358201-800-201-76029401-888-367-666510601-800-205-20427001-800-969-56358201-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-224-6279421-800-930-278210621-800-205-92217041-888-887-59138241-800-224-799431-800-205-752210641-800-752-78427051-888-247-03808251-888-666-02479451-800-205-752210661-800-205-9877041-888-887-59138241-800-202-55779461-800-205-752210661-800-209-91207071-800-772-43918271-800-202-55779461-80	690	1-800-881-5932	810	1-888-225-3879	930	1-800-488-3465	1050	1-800-861-4905
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6941-800-335-93578141-888-383-74049341-800-300-254910541-800-205-36676951-800-865-60908151-800-364-16649351-888-985-880110551-800-205-36706961-800-349-59688161-800-318-11649361-800-200-950010561-800-205-94836971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-84996991-800-69748191-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-201-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-221-2219441-800-950-278210621-800-205-92217041-888-887-59138241-800-221-12129441-800-293-8431-800-205-78427051-888-247-03808251-886-660-02479451-800-205-752210641-800-762-78427051-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-7164 <td>692</td> <td>1-800-895-8125</td> <td>812</td> <td>1-888-893-0693</td> <td>932</td> <td>1-800-203-9950</td> <td>1052</td> <td>1-877-203-0141</td>	692	1-800-895-8125	812	1-888-893-0693	932	1-800-203-9950	1052	1-877-203-0141
6951-800-865-60908151-800-364-16649351-888-985-860110551-800-205-36706961-800-349-59688161-800-318-11649361-800-200-950010561-800-205-94836971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-94836981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-79876991-800-69748191-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-85097021-800-947-84278221-800-246-06269431-800-234-832910631-800-205-85097031-800-835-65718231-800-221-12129441-800-999-524510641-800-752-78427041-888-887-59138241-800-22-55779451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-8	693	1-800-418-1573	813	1-800-331-3906	933	1-800-203-9951	1053	1-800-203-0151
6961-800-349-59688161-800-318-11649361-800-200-950010561-800-205-94836971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-79876991-800-609-56358201-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-221-12129441-800-999-524510641-800-752-78427041-888-887-59138241-600-221-12129441-800-205-752210641-800-290-91207041-888-247-03808251-888-666-02479451-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-668-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-65658301-888-828-3626950 <t< td=""><td>694</td><td>1-800-335-9357</td><td>814</td><td>1-888-383-7404</td><td>934</td><td>1-800-300-2549</td><td>1054</td><td>1-800-205-3667</td></t<>	694	1-800-335-9357	814	1-888-383-7404	934	1-800-300-2549	1054	1-800-205-3667
6971-800-206-28618171-800-895-25479371-800-762-630010571-800-205-21906981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-79876991-800-480-69748191-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-201-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-886-66-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-3626950 <td< td=""><td>695</td><td>1-800-865-6090</td><td>815</td><td>1-800-364-1664</td><td>935</td><td>1-888-985-8801</td><td>1055</td><td>1-800-205-3670</td></td<>	695	1-800-865-6090	815	1-800-364-1664	935	1-888-985-8801	1055	1-800-205-3670
6981-800-501-94218181-800-576-96959381-800-202-120010581-800-205-79876991-800-480-69748191-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55789481-800-205-716410681-800-704-53877081-800-204-00018291-800-202-55789491-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	696	1-800-349-5968	816	1-800-318-1164	936	1-800-200-9500	1056	1-800-205-9483
6991-800-480-69748191-800-691-55089391-800-622-623210591-800-205-84997001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55789471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	697	1-800-206-2861	817	1-800-895-2547	937	1-800-762-6300	1057	1-800-205-2190
7001-800-609-56358201-800-211-76029401-888-367-666510601-800-205-20427011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	698	1-800-501-9421	818	1-800-576-9695	938	1-800-202-1200	1058	1-800-205-7987
7011-888-729-89018211-800-201-76069411-800-979-128710611-800-205-97577021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	699	1-800-480-6974	819	1-800-691-5508	939	1-800-622-6232	1059	1-800-205-8499
7021-800-947-84278221-800-572-46279421-800-950-278210621-800-205-85097031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-204-00018291-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	700	1-800-609-5635	820	1-800-211-7602	940	1-888-367-6665	1060	1-800-205-2042
7031-800-835-65718231-800-246-06269431-800-234-832910631-800-205-92217041-888-887-59138241-800-221-12129441-800-999-524510641-800-752-78427051-888-247-03808251-888-666-02479451-800-201-103210651-800-843-36667061-800-293-80438261-800-202-55779461-800-205-752210661-800-290-91207071-800-772-43918271-800-202-55799471-888-661-748210671-800-704-53877081-800-444-01238281-800-202-55789481-800-205-716410681-800-868-94297091-800-204-00018291-800-202-55809491-800-205-846110691-877-681-43437101-800-204-55658301-888-828-36269501-800-203-581910701-888-279-7590	701	1-888-729-8901	821	1-800-201-7606	941	1-800-979-1287	1061	1-800-205-9757
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	709	1-800-204-0001	829	1-800-202-5580	949	1-800-205-8461	1069	1-877-681-4343
711 1-800-999-2622 831 1-800-387-3124 951 1-888-499-4340 1071 1-800-202-8708	710	1-800-204-5565	830	1-888-828-3626	950	1-800-203-5819	1070	1-888-279-7590
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714	1-888-367-9072	834	1-800-239-3641	954	1-800-355-3629	1074	1-800-202-9763
715	1-800-966-4210	835	1-888-251-5168	955	1-888-534-6287	1075	1-800-203-4416
716	1-800-735-0147	836	1-800-220-0183	956	1-888-571-8959	1076	1-800-203-4481
717	1-800-744-3784	837	1-800-285-9893	957	1-888-571-8957	1077	1-800-203-4579
718	1-800-539-2190	838	1-800-201-6299	958	1-888-571-8980	1078	1-800-202-8709
719	1-888-305-0494	839	1-800-201-6834	959	1-888-749-9794	1079	1-800-202-5293
720	1-888-802-0455	840	1-800-201-3166	960	1-888-870-7470	1080	1-800-205-3853
1081	1-800-205-3854	1471	1-800-543-1037	1861	1-800-926-9483	2251	1-888-898-1150
1082	1-800-201-7910	1472	1-800-200-8700	1862	1-800-952-3465	2252	1-800-228-6966
1083	1-800-201-1974	1473	1-800-203-1008	1863	1-800-964-8218	2253	1-888-414-3954
1084	1-888-400-2511	1474	1-800-203-1009	1864	1-800-510-7518	2254	1-800-203-4865
1085	1-800-519-3657	1475	1-800-202-1624	1865	1-800-926-2808	2255	1-800-448-0479
1086	1-888-787-0007	1476	1-800-285-5903	1866	1-800-925-9286	2256	1-800-203-0681
1087	1-800-744-0009	1477	1-888-842-1423	1867	1-800-543-6862	2257	1-800-505-0182
1088	1-800-278-7235	1478	1-888-842-2091	1868	1-800-543-9470	2258	1-800-203-0680
1089	1-888-637-9298	1479	1-800-205-8439	1869	1-800-643-9023	2259	1-800-888-7528
1090	1-800-941-6882	1480	1-800-205-8440	1870	1-800-202-5834	2260	1-888-453-4561
1091	1-800-670-3505	1481	1-800-205-8441	1871	1-800-346-6823	2261	1-800-897-0165
1092	1-800-921-8403	1482	1-800-205-8442	1872	1-888-896-7212	2262	1-800-234-3655
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1094	1-800-204-5656	1484	1-800-206-0658	1874	1-800-203-0400	2264	1-800-892-1977
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1098	1-800-203-8738	1488	1-888-495-7316	1878	1-800-205-6863	2268	1-800-258-8258
1099	1-800-203-9080	1489	1-888-495-7302	1879	1-888-224-3628	2269	1-888-402-5977
1100	1-800-203-9273	1490	1-888-495-7308	1880	1-800-846-4472	2270	1-800-723-0658
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1102	1-800-205-6238	1492	1-888-495-7314	1882	1-800-203-7006	2272	1-800-888-3151
	1-800-205-6285		1-888-603-0311	1883	1-800-203-7007	2273	1-800-666-8092
	1-800-205-6311		1-888-721-4152	1884	1-800-203-7008	2274	1-800-205-9814
1104	1-800-205-6314		1-800-202-1605	1885	1-800-203-7009	2275	1-800-205-0011
1105	1-800-205-6344		1-800-202-1606	1	1-800-217-2417	2276	1-800-205-9173
1100	1-800-205-6437	1	1-800-202-1607	1887	1-800-883-3699	2277	1-800-205-9700
	1-800-205-6438			1888	1-800-926-4986	2278	1-800-205-9805
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1119	1-800-205-7769	1509	1-800-477-5254	1899	1-800-937-9230	2289	1-800-327-5876
1120	1-800-205-7775	1510	1-800-327-0200	1900	1-888-472-0494	2290	1-800-328-6250
1121	1-800-205-8002	1511	1-800-395-0361	1901	1-800-577-7910	2291	1-800-205-6295
1122	1-800-205-8490	1512	1-800-201-8868	1902	1-800-851-3031	2292	1-800-205-9815
1123	1-800-205-8497	1513	1-800-201-7952	1903	1-888-373-0189	2293	1-800-203-8350
1124	1-800-205-8518	1514	1-800-201-3974	1904	1-877-452-6781	2294	1-800-203-8243
1125	1-800-205-8623	1515	1-800-201-3975	1905	1-800-720-8099	2295	1-800-203-8246
1126	1-800-205-8639	1516	1-800-550-9576	1906	1-888-298-9554	2296	1-800-205-6440
1127	1-800-205-9166	1517	1-888-458-0466	1907	1-866-994-9312	2297	1-800-205-7175
1128	1-800-206-6623	1518	1-800-201-0791	1908	1-800-318-9218	2298	1-800-205-5956
1129	1-800-206-7884	1519	1-800-224-3527	1909	1-800-203-9132	2299	1-800-668-7904
1130	1-800-205-7073	1520	1-800-367-0160	1910	1-800-220-4693	2300	1-800-668-7861
1131	1-800-223-7770	1521	1-800-756-3833	1911	1-800-924-8675	2301	1-800-668-7620
1132	1-800-203-9812	1522	1-800-231-2319	1912	1-800-924-9760	2302	1-800-205-5967
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1134	1-800-203-9563	1524	1-800-937-2660	1914	1-800-453-2909	2304	1-800-205-5977
1135	1-800-205-9968	1525	1-800-202-5062	1915	1-800-203-1096	2305	1-800-205-6112
1136	1-800-203-5870	1526	1-800-202-5063	1916	1-800-244-6146	2306	1-800-205-9029
1137	1-800-203-8197	1527	1-888-442-8784	1917	1-800-201-0492	2307	1-800-203-7129
1138	1-800-203-8961	1528	1-800-677-4118	1918	1-800-934-9349	2308	1-800-205-0998
1139	1-800-205-5988	1529	1-800-937-3567	1919	1-800-688-1872	2309	1-800-205-6293
1140	1-800-205-6686	1530	1-800-336-8263	1920	1-800-648-7383	2310	1-800-205-6294
1141	1-800-744-1127	1531	1-800-200-0100	1921	1-800-772-9302	2311	1-800-205-6808
1142	1-800-203-3035	1532	1-888-481-0359	1922	1-800-772-9320	2312	1-800-205-6814
1143	1-800-488-1496	1533	1-888-624-0282	1923	1-888-205-5975	2313	1-800-205-7120
1144	1-800-488-1679	1534	1-800-846-1550	1924	1-888-205-5978	2314	1-800-205-7129
1145	1-800-201-6775	1535	1-800-283-0050	1925	1-888-648-7383	2315	1-800-205-7179
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1153	1-800-444-1333		1-888-761-5131	1933	1-888-772-0642	2323	1-800-205-8609
1154	1-800-936-2501	1544	1-800-788-4695	1934		2324	1-800-205-8624
1155		1545	1-888-882-3494	1935		2325	1-800-206-1024
	1-800-408-4905	1546	1-888-882-3562	1936		2326	1-800-206-6838
1157	1-800-408-4942	1547	1-888-882-3563	1937		2327	1-800-206-7055
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1161	1-800-937-5061	1551	1-888-882-3859	1941	1-888-214-7933	2331	1-800-356-1852
1162	1-800-937-2862	1552	1-888-882-3860	1942	1-888-456-3447	2332	1-800-390-7027
1163	1-888-414-7223	1553	1-888-882-3870	1943	1-888-456-3448	2333	1-800-879-7371
1164	1-800-744-2663	1554	1-888-882-3873	1944	1-800-201-9139	2334	1-800-200-7513
1165	1-800-934-4769	1555	1-888-495-8833	1945	1-800-201-9203	2335	1-800-863-3921
1166	1-800-284-7697	1556	1-888-495-8838	1946	1-800-348-8800	2336	1-800-935-1865
1167	1-800-744-7223	1557	1-800-613-0283	1947	1-800-201-1651	2337	1-800-936-3663
1168	1-800-526-6566	1558	1-800-628-4910	1948	1-800-700-6126	2338	1-800-936-4059
1169	1-800-223-0888	1559	1-800-744-8337	1949	1-800-333-4411	2339	1-800-201-2396
1170	1-800-235-6397	1560	1-800-925-7915	1950	1-800-753-6602	2340	1-800-406-1424
1171	1-800-323-7500	1561	1-800-766-9869	1951	1-800-678-5525	2341	1-800-406-1345
1172	1-800-327-8585	1562	1-800-206-6102	1952	1-800-720-7748	2342	1-800-406-1377
1173	1-800-562-3764	1563	1-800-792-3542	1953	1-866-375-1601	2343	1-800-406-1420
1174	1-800-942-5050	1564	1-800-945-6239	1954	1-800-283-2791	2344	1-800-406-1421
1175	1-800-942-6226	1565	1-888-766-8664	1955	1-888-622-3477	2345	1-800-333-1213
1176	1-800-541-3579	1566	1-800-305-0208	1956	1-800-744-1533	2346	1-800-744-1536
<sup>'</sup> 1177	1-800-945-2454	1567	1-800-744-4445	1957	1-888-434-3197	2347	1-800-283-1044
1178	1-800-744-4729	1568	1-888-744-5256	1958	1-877-763-9439	2348	1-800-876-4150
1179	1-800-205-8919	1569	1-800-744-1132	1959	1-800-876-8372	2349	1-800-456-4150
1180	1-800-753-8448	1570	1-800-744-0015	1960	1-800-200-3109	2350	1-800-999-4599
1181	1-888-808-3193	1571	1-800-744-5887	1961	1-800-200-1344	2351	1-800-236-6433
1182	1-888-808-3213	1572	1-800-248-6822	1962	1-800-200-1345	2352	1-800-237-2012
1183	1-888-442-5789	1573	1-888-696-8261	1963	1-888-327-7475	2353	1-800-237-6064
1184	1-800-282-5325	1574	1-800-200-0686	1964	1-888-634-2922	2354	1-800-239-7017
1185	1-800-944-8236	1575	1-800-744-2273	1965	1-888-827-6950	2355	1-800-239-7670
1186	1-800-937-1085	1576	1-800-964-6802	1966	1-800-840-3149	2356	1-800-477-9701
1187	1-800-744-1234	1577	1-800-766-1577	1967	1-800-201-2312	2357	1-888-707-5883
1188	1-800-427-8935	1578	1-800-080-3604	1968	1-800-201-2539	2358	1-800-759-6567
1189	1-800-676-3772	1579	1-800-446-5284	1969	1-800-203-6491	2359	1-800-327-5051
1190	1-800-662-7530		1-888-876-8662	1970	1-800-429-8488	2360	1-800-992-6662
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1192	1-800-662-0685	1582	1-800-737-0684	1972	1-800-203-7789	2362	1-800-934-8577
1193	1-800-202-7699	1583	1-800-942-7982	1973	1-800-203-7790	2363	1-800-326-6189
1194	1-888-337-3777	1584	1-800-388-0873	1974	1-800-203-7791	2364	1-800-201-1549
1195	1-800-744-4353	1585	1-877-643-9281	1975	1-800-203-7792	2365	1-888-732-6021
1196	1-800-729-2300	1586	1-800-889-4919	1976	1-800-203-7793	2366	1-800-204-0204
1197		f	1-800-200-8371	1977	1-800-925-7464		1-800-944-2656
1198	1-888-993-9995		1-800-579-8324	1978	1-800-203-8412		1-800-944-2666
1199	1-800-735-2323	1589	1-800-744-5575	1979	1-800-950-7336		1-800-288-1204
1200	1-800-546-8554	1590	1-900-582-4533	1980	1-800-361-5918	2370	1-800-288-4624
1201	1-800-546-6385	1591	1-800-524-8348	1981	1-800-262-1590		1
1202	1-800-735-5778	1592	1-800-204-3424	1982	1-800-283-5262	2372	
1203	1-800-933-8110	1593	1-800-365-0645	1983	1-800-727-7846	2373	1-800-365-6066
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1204	1-800-201-6645	1594	1-800-762-5809	1984		2374	1-888-453-4000
1205	1-800-756-0142	1595	1-800-572-8557	1985	1-800-201-5206	2375	1-800-750-7102
1206	1-800-417-3698	1596		1986	1-800-201-6593	2376	1-800-752-5376
1207	1-800-654-3131	1597	1-888-777-6998	1987	1-800-756-3244	2377	1-800-852-5479
1208	1-888-226-2209	1598	1-800-643-5549	1988	1-800-864-8161	2378	1-800-859-9782
1209	1-800-654-3001	1599		1989	1-800-848-6398	2379	1-800-874-2317
1210	1-800-654-3011	1600	1-888-543-9683	1990	1-800-345-5588	2380	1-888-210-8732
1211	1-800-227-4053	1601	1-800-744-8687	1991	1-800-201-6168	2381	1-888-210-8801
1212	1-800-227-4653	1602	1-800-416-7491	1992	1-888-231-2334	2382	1-888-210-8803
1213	1-800-270-6035	1603	1-800-759-4792	1993	1-888-525-3607	2383	1-800-840-3602
1214	1-800-224-1186	1604	1-800-744-3924	1994	1-888-525-3613	2384	1-800-773-0156
1215	1-800-735-2118	1605	1-800-766-1608	1995	1-888-205-0396	2385	1-888-825-2838
1216	1-888-532-0926	1606	1-800-944-5317	1996	1-800-864-7675	2386	1-800-201-4726
1217	1-800-786-1470	1607	1-800-272-0057	1997	1-800-864-7705	2387	1-800-201-4727
1218	1-800-825-4374	1608	1-800-466-0675	1998	1-800-203-0993	2388	1-800-201-4728
1219	1-800-525-4327	1609	1-866-279-3711	1999	1-800-291-9928	2389	1-800-200-2978
1220	1-800-442-6613	1610	1-800-927-3557	2000	1-888-876-6734	2390	1-800-744-1121
1221	1-800-204-0085	1611	1-800-201-2527	2001	1-800-374-4328	2391	1-800-201-2056
1222	1-800-477-9877	1612	1-800-873-5277	2002	1-800-950-1543	2392	1-800-633-7400
1223	1-800-995-2154	1613	1-800-332-6492	2003	1-800-955-1543	2393	1-800-203-4508
1224	1-800-973-2035	1614	1-800-437-4317	2004	1-800-866-4873	2394	1-800-378-4369
1225	1-800-873-8534	1615	1-800-739-0042	2005	1-800-684-2273	2395	1-888-825-8339
1226	1-888-438-1296	1616	1-800-601-9689	2006	1-800-220-0257	2396	1-800-932-9784
1227	1-800-215-6897	1617	1-800-835-3101	2007	1-800-724-2201	2397	1-800-877-6950
1228	1-800-257-6555	1618	1-888-483-8041	2008	1-800-527-0797	2398	1-800-848-1151
1229	1-800-325-9276	1619	1-888-483-8056	2009	1-800-234-3472	2399	1-800-204-0010
1230	1-800-436-7586	1620	1-888-483-8065	2010	1-800-745-0289	2400	1-800-827-5122
1231	1-800-465-9583	1621	1-800-221-6471	2011	1-888-207-2507	2401	1-800-792-6246
1232	1-888-362-4402	1622	1-800-666-3772	2012	1-800-526-3784	2402	1-800-944-6289
1233	1-800-858-0094	1623	1-800-203-0609	2013	1-800-824-8001	2403	1-800-933-1716
1234	1-800-383-4631	1624	1-800-203-0610	2014	1-800-701-0540	2404	1-888-496-6173
1235	1-800-273-4495	1625	1-800-203-0765	2015	1-800-701-9032	2405	1-800-253-8259
1236	1-800-273-7098	1626	1-800-201-5448	2016	1-800-246-6997	2406	1-800-364-0028
1237	1-800-273-7187	1627	1-800-201-5508	2017	1-800-432-4451	2407	1-800-390-2244
1238	1-800-279-1877	1628	1-800-201-5521	2018	1-800-201-5981	2408	1-800-373-3527
1239	1-800-279-1894	1629	1-800-201-5532	2019	1-800-881-1862	2409	1-800-766-0889
1240	1-800-279-3681	1630	1-800-201-5543	2020	1-800-566-2203	2410	1-800-203-6538
1241	1-800-279-4121	1631	1-800-202-1589	2021	1-800-566-2160	2411	1-800-628-6668
1242	1-800-286-0114	1632	1-800-846-5323	2022	1-800-566-2089	2412	1-800-200-8755
1243	1-800-295-5505	1633	1-888-234-8633	2023	1-800-289-8360	2413	1-800-458-2200
1244	1-800-298-7199	1634	1-800-216-6220	2024	1-800-200-1501	2414	1-800-724-0011
1245	1-800-671-9948	1635	1-800-203-6651	2025	1-800-205-3096	2415	1-800-537-6497
1246	1-800-204-2829	1636	1-800-227-9597	2026	1-800-436-8196	2416	1-800-678-6852
1247	1-800-735-2776	1637	1-800-279-3198	2027		2417	1-800-724-9955
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1248	1-800-947-1000	1638	1-800-421-9670	2028	1-800-873-4327	2418	1-800-397-8235
1249	1-800-456-3507	1639	1-800-436-9786	2029	1-800-873-1837	2419	1-800-207-7037
1250	1-800-711-2884	1640	1-888-844-5428	2030	1-800-379-9722	2420	1-800-454-0899
1251	1-800-546-4142	1641	1-800-744-5222	2031	1-800-477-3762	2421	1-800-724-8877
1252	1-800-764-1494	1642	1-800-381-7226	2032	1-800-203-3861	2422	1-800-724-9988
1253	1-800-764-6704	1643	1-888-248-4683	2033	1-800-203-0601	2423	1-800-724-4477
1254	1-800-784-6994	1644	1-800-203-2652	2034	1-800-456-1201	2424	1-800-724-7744
1255	1-800-794-1353	1645	1-800-203-2653	2035	0-000-900-4886	2425	1-800-331-4654
1256	1-800-830-8099	1646	1-800-201-2978	2036	0-000-900-8332	2426	1-800-548-2300
1257	1-800-388-0438	1647	1-800-201-2980	2037	1-800-805-8517	2427	1-800-451-0044
1258	1-800-515-5828	1648	1-800-201-2979	2038	1-800-201-1883	2428	1-800-818-8992
1259	1-800-516-1336	1649	1-800-926-8471	2039	1-888-900-6500	2429	1-800-338-7777
1260	1-800-527-5257	1650	1-800-947-4685	2040	1-888-677-2002	2430	1-800-864-5398
1261	1-800-572-5072	1651	1-800-786-0293	2041	1-888-546-3288	2431	1-888-899-9412
1262	1-800-615-5453	1652	1-800-333-2468	2042	1-800-744-6726	2432	1-800-203-1676
1263	1-800-615-6045	1653	1-800-876-1958	2043	1-800-203-5676	2433	1-800-435-0101
1264	1-800-616-8737	1654	1-800-234-5117	2044	1-800-203-8346	2434	1-800-744-5000
1265	1-800-616-8898	1655	1-800-545-7986	2045	1-800-973-4671	2435	1-800-403-7206
1266	1-800-631-0224	1656	1-800-856-9437	2046	1-800-200-2823	2436	1-800-846-7871
1267	1-800-727-5405	1657	1-888-749-8777	2047	1-800-200-2825	2437	1-800-348-5580
1268	1-800-227-5551	1658	1-888-749-8544	2048	1-800-200-2826	2438	1-888-506-0160
1269	1-800-432-6992	1659	1-800-400-4736	2049	1-800-562-1922	2439	1-888-506-0159
1270	1-800-944-9376	1660	1-800-790-2632	2050	1-800-562-1921	2440	1-800-200-2863
1271	1-800-937-2008	1661	1-800-200-3765	2051	1-800-677-1430	2441	1-800-288-4050
1272	1-800-938-6348	1662	1-800-998-1909	2052	1-800-842-3403	2442	1-888-801-0013
1273	1-800-685-0529	1663	1-800-660-8583	2053	1-800-926-1062	2443	1-800-204-0354
1274	1-800-426-9990	1664	1-800-879-8553	2054	1-800-967-5231	2444	1-800-204-0342
1275	1-800-744-1114	1665	1-800-688-9003	2055	1-800-622-3601	2445	1-800-204-0343
1276	1-800-203-0475	1666	1-800-846-9003	2056	1-888-639-7257	2446	1-800-204-0345
1277	1-800-313-5558	1667	1-800-568-2632	2057	1-800-568-7651	2447	1-800-268-7693
1278	1-800-473-1844	1668	1-800-752-8275	2058	1-800-236-7709	2448	1-800-201-8029
1279	1-866-910-2256	1669	1-800-846-2257	2059	1-800-269-0483	2449	1-800-456-7836
1280	1-800-205-7779	1670	1-800-964-6225	2060	1-800-352-9392	2450	1-877-388-1216
1281	1-800-458-0497	1671	1-800-202-3862	2061	1-800-353-9392	2451	1-800-080-9012
1282	1-800-458-9137	1672	1-800-947-4827	2062	1-800-689-9543	2452	1-800-744-7483
1283	1-800-560-0516	1673	1-800-824-0232	2063	1-800-933-9067	2453	1-888-400-9043
1284	1-800-204-0033	1674	1-800-866-6424	2064	1-800-925-4016	2454	1-877-607-4364
1285	1-800-407-1260	1675	1-800-225-5622	2065	1-800-206-6840	2455	1-888-870-9002
1286	1-800-645-3330	1676	1-888-576-9465	2066	1-800-206-6841	2456	1
1287	1-800-838-4777	1677	1-800-685-9112	2067	1-800-206-6842	2457	1-888-343-4674
1288	1-800-436-9989	1678	1-888-558-9160	2068	1-800-206-6843	2458	1-888-287-0526
1289	1-800-203-0855	1679	1-800-294-3734	2069	1-800-206-6844	2459	Contraction and real second seco
1290	1-800-327-0949	1680	1-800-305-5357	2070	1-800-206-6845	2460	1-800-744-7707
1291	NAME A DESCRIPTION OF A	1681	1-800-764-5678	2071	1-800-206-6846	2461	1-800-964-9012
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1292	1-800-477-2614	1682	1-800-929-8523	2072	1-800-206-6847	2462	1-800-436-3727
1293	1-800-500-0583	1683	1-800-269-7440	2073	1-800-206-6849	2463	1-800-879-7541
1294	1-800-288-3795	1684	1-800-771-7179	2074	1-800-626-6551	2464	1-888-702-0763
1295	1-800-283-7396	1685	1-800-203-1027	2075	1-800-280-0174	2465	1-800-438-9491
1296	1-866-216-2106	1686	1-800-744-2688	2076	1-800-488-9660	2466	1-800-472-4346
1297	1-888-831-7408	1687	1-800-638-3117	2077	1-800-727-2787	2467	1-800-732-7023
1298	1-800-204-0002	1688	1-800-340-2710	2078	1-800-936-2210	2468	1-800-326-0174
1299	1-800-204-0003	1689	1-877-435-2252	2079	1-800-554-8900	2469	1-877-833-6693
1300	1-800-570-2814	1690	1-800-228-9290	2080	1-800-344-5520	2470	1-800-837-6602
1301	1-888-242-3375	1691	1-800-366-6824	2081	1-866-579-9690	2471	1-800-857-2232
1302	1-800-701-5036	1692	1-800-201-9625	2082	1-800-201-3586	2472	1-800-477-4716
1303	1-800-752-8588	1693	1-800-270-2079	2083	1-800-201-8179	2473	1-800-759-1734
1304	1-800-255-2172	1694	1-888-770-3665	2084	1-800-201-9870	2474	1-800-753-0681
1305	1-800-686-2693	1695	1-800-307-7309	2085	1-888-799-0983	2475	1-800-440-0094
1306	1-800-730-4442	1696	1-800-274-3325	2086	1-888-242-2701	2476	1-800-440-0585
1307	1-800-422-4443	1697	1-800-274-5936	2087	1-800-678-2973	2477	1-800-440-0587
1308	1-800-430-8043	1698	1-800-283-4245	2088	1-877-422-8760	2478	1-800-440-0589
1309	1-800-203-0128	1699	1-800-289-7854	2089	1-800-288-4903	2479	1-800-440-0588
1310	1-800-798-3367	1700	1-800-533-9314	2090	1-888-783-3067	2480	1-800-440-0590
1311	1-800-305-8478	1701	1-800-663-1864	2091	1-800-965-3067	2481	1-800-811-2748
1312	1-888-387-4734	1702	1-800-766-2546	2092	1-800-744-1537	2482	1-888-765-5678
1313	1-800-289-1199	1703	1-800-257-3007	2093	1-800-744-0060	2483	1-800-744-7233
1314	1-800-477-4882	1704	1-888-889-6983	2094	1-800-203-4937	2484	1-800-661-7906
1315	1-800-944-9145	1705	1-888-813-2163	2095	1-800-356-7315	2485	1-800-200-7646
1316	1-888-372-5587	1706	1-800-203-6555	2096	1-800-432-4838	2486	1-800-203-7932
1317	1-800-475-3965	1707	1-800-234-1152	2097	1-800-695-9963	2487	1-800-203-7928
1318	1-800-201-3669	1708	1-800-793-3581	2098	1-800-325-8518	2488	1-800-203-7929
1319	1-800-201-3670	1709	1-800-283-9977	2099	1-888-746-3554	2489	1-800-203-7930
1320	1-800-530-4885	1710	1-888-374-2802	2100	1-888-751-4142	2490	1-800-203-7931
1321	1-888-788-2742	1711	1-800-205-7410	2101	1-800-283-9328	2491	1-800-532-8356
1322	1-866-384-3582	1		2102	1-888-616-1660	2492	1-800-227-8521
1323	1-800-999-6678	1713	1-800-201-8048	2103	1-800-638-3225	2493	1-800-202-7734
1324	1-800-333-6678	1714	1-800-201-8185	2104	1-800-753-4844	2494	1-800-509-6320
1325	1-800-753-6509	1715	1-800-374-3533	2105	1-888-771-1776	2495	1-800-570-0620
1326	1-800-405-2259	1	1-888-256-0160	2106	1-800-744-5433	2496	1-800-998-7616
1327	1-800-744-1124	1717	1-800-622-5780	2107	1-800-284-4586	2497	1-800-998-7617
1328	1-800-906-4610	1718	1-800-424-6253	2108	1-800-744-2262	2498	1-800-203-0194
1329	1-800-906-3354	1719	1-800-388-7863	2109	1-877-258-3633	2499	1-800-935-6634
1330	1-800-722-9793	1720	1-800-951-7847	2110	1-800-205-2851	2500	1-800-677-1739
1331	1-800-200-8336	1721	1-800-568-8568	2111	1-800-205-8906	2501	1-800-436-6155
1332	1-800-847-6255	1	1-800-284-5382	2112	1-800-981-2722	2502	1-800-744-8682
1333	1-800-777-2788	1	1-800-289-4900	2113		2503	Carolin in Print II. Caroline and a standard and a second
1334	1-800-316-5484	1	1-800-338-9062	2114	······································	2504	• *• * • • • • • • • • • • • • • • • •
	1-800-582-5533	i i	1-888-356-9991		1-800-201-2648	2505	
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1336	1-800-843-5161	1726	1-800-752-0620	2116	1-800-203-0425	2506	1-800-276-9539
1337	1-800-744-7886	1727	1-800-475-8516	2117	1-800-765-2652	2507	1-800-331-6307
1338	1-800-622-7747	1728	1-800-445-7767	2118	1-800-778-8906	2508	1-888-237-7924
1339	1-800-498-6280	1729	1-800-727-4474	2119	1-800-945-3258	2509	1-800-873-3413
1340	1-800-202-0192	1730	1-800-289-7820	2120	1-800-945-2188	2510	1-800-587-3936
1341	1-800-201-4399	1731	1-800-201-4299	2121	1-800-202-5381	2511	1-800-873-3356
1342	1-800-201-8289	1732	1-800-888-0596	2122	1-800-202-5380	2512	1-800-929-2891
1343	1-800-201-9591	1733	1-888-537-2486	2123	1-800-472-9162	2513	1-800-809-1340
1344	1-800-685-0771	1734	1-800-283-0475	2124	1-800-482-6020	2514	1-800-685-2529
1345	1-800-203-9266	1735	1-800-203-8147	2125	1-866-203-4957	2515	1-800-825-5763
1346	1-800-566-1885	1736	1-800-936-7519	2126	1-877-935-5746	2516	1-800-270-0187
1347	1-800-234-5551	1737	1-800-831-1004	2127	1-800-620-7413	2517	1-800-988-7511
1348	1-800-568-7808	1738	1-800-542-4934	2128	1-888-441-5782	2518	1-800-528-2121
1349	1-800-205-1233	1739	1-888-707-3005	2129	1-888-847-5803	2519	1-800-510-0451
1350	1-800-451-3062	1740	1-888-707-3004	2130	1-888-621-6622	2520	1-800-510-0452
1351	1-800-475-9633	1741	1-800-203-0169	2131	1-800-523-9299	2521	1-800-510-0453
1352	1-800-288-4359	1742	1-800-205-1113	2132	1-800-642-8468	2522	1-800-510-0454
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13991-800-933-388817891-800-570-202121791-800-201-055825691-800-202-607014001-800-272-459717901-800-681-595521801-800-203-071925701-800-976-377814011-800-808-413217911-800-788-486421811-800-594-922325711-800-610-185514021-802-282-156817921-800-835-793221821-800-203-088425721-800-249-829514031-888-566-192117931-800-204-555721841-800-285-321825741-800-356-881214041-888-566-157017941-800-204-555721841-800-744-947425751-800-202-629714051-800-744-683517951-800-502-121221851-800-750-187025761-800-358-220114071-800-677-578717971-800-444-887121871-886-715-756825771-800-447-455214081-800-205-407017991-888-303-704421881-886-715-766625791-800-628-601114101-800-203-141318001-800-201-852121911-877-273-452025811-800-201-626114111-800-201-350718021-800-201-865221911-800-202-461125821-800-201-776714131-800-201-356718031-800-201-885321911-800-202-461225851-800-203-220614141-800-201-356718031-800-201-885521941-800-202-461225851-800-203-220614141-800-201-35671803<	1397	1-800-311-4085	1787	1-800-558-0005	2177	1-800-769-8665	2567	1-800-910-2781
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14011-800-808-413217911-800-788-486421811-800-594-922325711-800-610-185514021-800-282-156817921-800-835-793221821-800-203-088425721-800-249-829514031-888-566-192117931-800-874-269421831-800-750-259625731-800-336-681214041-888-566-157017941-800-204-555721841-800-285-321825741-800-333-510214051-800-874-237817951-800-520-121221851-800-744-687425751-800-26252714061-800-744-683517961-800-77-887121861-800-750-187025761-800-358-220114071-800-677-578717971-800-444-887121871-868-715-765825771-800-947-455214081-800-250-407017991-888-303-704421881-888-715-766625781-800-627-538414091-800-205-407017991-888-303-704521891-888-715-756525791-800-200-062114111-800-203-141318001-800-201-852121911-877-273-452025811-800-201-666314121-800-201-350718021-800-201-862121911-807-202-461125821-800-201-776714131-800-201-350718031-800-201-865721951-800-202-461225851-800-203-220614141-800-201-350718031-800-201-865721951-800-202-461225851-800-203-220614141-800-201-35071803 <td>1399</td> <td>1-800-933-3888</td> <td>1789</td> <td>1-800-570-2021</td> <td>2179</td> <td>1-800-201-0858</td> <td>2569</td> <td>1-800-202-5070</td>	1399	1-800-933-3888	1789	1-800-570-2021	2179	1-800-201-0858	2569	1-800-202-5070
14021-800-282-156817921-800-835-793221821-800-203-088425721-800-249-829514031-888-566-192117931-800-874-269421831-800-750-259625731-800-335-681214041-888-566-157017941-800-204-555721841-800-285-321825741-800-333-510214051-800-874-237817951-800-520-121221851-800-744-947425751-800-202-529714061-800-774-683517961-800-777-887121861-800-750-187025761-800-358-220114071-800-677-578717971-800-444-887121871-888-715-755825771-800-947-455214081-800-205-407017991-888-303-704421881-888-715-756625791-800-627-538414091-800-205-407017991-888-303-704521891-888-715-756625791-800-628-601114101-800-203-141318001-800-201-852121911-877-273-452025811-800-201-66314111-800-201-350718021-800-201-883221921-800-202-461125821-800-201-776714131-800-201-356718031-800-201-883221931-800-202-461225851-800-201-776714131-800-201-707118041-800-201-885521941-800-202-461325861-800-203-220614141-800-263-698518051-800-201-420721961-800-202-461325861-800-203-220714181-800-963-26291806 </td <td>1400</td> <td>1-800-272-4597</td> <td>1790</td> <td>1-800-681-5955</td> <td>2180</td> <td>1-800-203-0719</td> <td>2570</td> <td>1-800-976-3778</td>	1400	1-800-272-4597	1790	1-800-681-5955	2180	1-800-203-0719	2570	1-800-976-3778
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14071-800-677-578717971-800-444-887121871-888-715-755825771-800-947-455214081-800-825-578717981-888-303-704421881-888-715-740625781-800-627-538414091-800-205-407017991-888-303-704521891-888-715-756625791-800-628-601114101-800-203-141318001-800-553-472721901-800-685-819025801-800-200-062114111-800-201-350718021-800-201-852121911-877-273-452025811-800-201-866314121-800-201-350718021-800-201-882121921-800-202-461125821-800-201-776714131-800-201-356718031-800-201-883321931-800-202-243725831-800-201-776714131-800-201-707118041-800-201-885721941-800-202-243825841-800-201-685514141-800-201-707118041-800-201-420721961-800-202-461225851-800-203-220614141-800-532-895118061-800-201-420721961-800-202-461325861-800-203-220614171-800-532-895118071-800-201-420821971-800-202-461325881-800-203-220614171-800-263-62918081-800-201-420821971-800-202-461625881-800-203-220714181-800-263-61918081-800-203-032021991-800-202-461625891-800-203-220614191-800-283-01011809 <td>1405</td> <td>1-800-874-2378</td> <td>1795</td> <td>1-800-520-1212</td> <td>2185</td> <td>1-800-744-9474</td> <td>2575</td> <td>1-800-202-5297</td>	1405	1-800-874-2378	1795	1-800-520-1212	2185	1-800-744-9474	2575	1-800-202-5297
14081-800-825-578717981-888-303-704421881-888-715-740625781-800-627-538414091-800-205-407017991-888-303-704521891-888-715-755625791-800-628-601114101-800-203-141318001-800-553-472721901-800-685-819025801-800-200-062114111-800-531-811118011-800-201-852121911-877-273-452025811-800-208-666314121-800-201-350718021-800-201-882121921-800-202-461125821-800-201-776714131-800-201-356718031-800-201-883321931-800-202-243725831-800-909-228614141-800-201-707118041-800-201-884521941-800-202-243825841-800-544-457514151-800-457-259818051-800-201-420721961-800-202-461225851-800-201-685514161-800-532-895118061-800-201-420721961-800-202-461325861-800-203-220614171-800-598-739518071-800-201-420821971-800-202-461425871-800-203-220714181-800-963-262918081-800-203-032021991-800-202-461525881-800-203-920714181-800-283-010118091-800-203-032021991-800-202-461625891-800-279-944314201-800-283-010118091-800-203-032021991-800-202-461825901-800-201-865914211-800-531-87221811<	1406	1-800-744-6835	1796	1-800-777-8871	2186	1-800-750-1870	2576	1-800-358-2201
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14131-800-201-356718031-800-201-883321931-800-202-243725831-800-909-228614141-800-201-707118041-800-201-884521941-800-202-243825841-800-544-457514151-800-457-259818051-800-201-885721951-800-202-461225851-800-201-685514161-800-532-895118061-800-201-420721961-800-202-461325861-800-203-220614171-800-598-739518071-800-201-420821971-800-202-461425871-800-203-220714181-800-963-262918081-800-201-420921981-800-202-461525881-800-201-959314191-800-283-010118091-800-203-032021991-800-202-461625891-800-279-944314201-800-285-872218101-800-201-235522011-800-202-461825901-800-201-865914211-800-531-872218111-800-201-235522011-800-202-461925911-800-201-865914221-888-825-253618121-800-744-747722021-800-202-462025921-800-863-4140	1411	1-800-531-8111	1801	1-800-201-8521	2191	1-877-273-4520	2581	1-800-208-6663
14141-800-201-707118041-800-201-884521941-800-202-243825841-800-544-457514151-800-457-259818051-800-201-885721951-800-202-461225851-800-201-685514161-800-532-895118061-800-201-420721961-800-202-461325861-800-203-220614171-800-598-739518071-800-201-420821971-800-202-461425871-800-203-220714181-800-963-262918081-800-201-420921981-800-202-461525881-800-201-959314191-800-283-010118091-800-203-032021991-800-202-461625891-800-279-944314201-800-285-872218101-800-833-196022001-800-202-461825901-800-967-534614211-800-531-872218111-800-201-235522011-800-202-461925911-800-201-865914221-888-825-253618121-800-744-747722021-800-202-462025921-800-863-4140	1412	1-800-201-3507	1802	1-800-201-8821	2192	1-800-202-4611	2582	1-800-201-7767
14151-800-457-259818051-800-201-885721951-800-202-461225851-800-201-685514161-800-532-895118061-800-201-420721961-800-202-461325861-800-203-220614171-800-598-739518071-800-201-420821971-800-202-461425871-800-203-220714181-800-963-262918081-800-201-420921981-800-202-461525881-800-201-959314191-800-283-010118091-800-203-032021991-800-202-461625891-800-279-944314201-800-285-872218101-800-833-196022001-800-202-461825901-800-967-534614211-800-531-872218111-800-201-235522011-800-202-461925911-800-201-865914221-888-825-253618121-800-744-747722021-800-202-462025921-800-863-4140	1413	1-800-201-3567	1803	1-800-201-8833	2193	1-800-202-2437	2583	1-800-909-2286
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1422 1-888-825-2536 1812 1-800-744-7477 2202 1-800-202-4620 2592 1-800-863-4140	1420	1-800-285-8722	1810	1-800-833-1960	2200	1-800-202-4618	2590	1-800-967-5346
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1423 1-800-531-8080 1813 1-800-744-7447 2203 1-800-202-4621 2593 1-800-350-2590	1422	1-888-825-2536	1812	1-800-744-7477	2202	1-800-202-4620	2592	1-800-863-4140
	1423	1-800-531-8080	1813	1-800-744-7447	2203	1-800-202-4621	2593	1-800-350-2590

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1424	1-800-626-0922	1814	1-866-894-4929	2204		2594	1-800-835-6185
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1461	1-800-876-6142	1851			1-800-753-6708	1	1-800-950-1561
1462	1-800-428-0541	1853		2243	1-800-499-4941		1-800-950-1561
ŕ	1-800-428-0542	1854		2244			<u></u>
1464	1-800-428-0539			2245			
1465	1-800-428-0543	1855	1-800-205-8645	í	1-800-201-0786		
t	1-800-456-5234			<b>{</b>	1-800-201-0787	1	
1467 [	1-800-203-7613	102/	1-800-203-7616	12241	1-000-201-0707	) , , , , , , , , , , , , , , , , , , ,	

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1468	1-888-389-1850	1858	1-800-203-9153	2248	1-800-201-0788
1469	1-888-389-7201	1859	1-800-203-0939	2249	1-800-555-2291
1470	1-888-390-0228	1860	1-800-744-4263	2250	1-800-213-7175

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# **Parameter Schedule**

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#### Annual Performance Review and Measurements

TSTT shall conduct an annual review commencing at the first anniversary of the execution of this Agreement with the intention of reducing timeframes of the below expressed fault times through amendment to this Agreement Schedule. Lisa Communications shall have the right to review TSTT performance in this regard on a bi-annual basis. Such bi-annual review shall be coordinated with TSTT and shall be used accordingly with the intention of annually amending TSTT's fault resolution time lower herein in all categories to more closely align its performance standards under this Agreement to reflect agreed upon international performance standards.

Parameters of review shall be based on the average fault restoration timeframe reviewing practical actual performance between Lisa Communications and TSTT from the former year, and other TSTT customer performance experience for the prior year as well as agreed upon international performance standards.

To the extent of any inconsistency between this Schedule and Schedule F of each Party's Concession then the terms of each Party's Concession shall prevail.

#### 1. Joining Services (Service Definitions Part I) Optical In-Span Joining Service

Fault Restoration Times	Max time in which faults are repaired following notification through the Fault Control Centre (hours)
Faults concerning the Joining Service (excluding fibre faults)	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement.
Fibre Faults	To be resolved by agreement

#### 2. Termination Services (Service Definitions Part II) PSTN Terminating Access Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours)
Faults concerning the PSTN Terminating Access Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement

#### PLMN Terminating Access Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours)
Faults concerning the PLMN Terminating Access Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement

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#### Incoming International Call Termination to PLMN Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours)	
Faults concerning the Incoming International Call Termination to PLMN Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement	

#### Incoming International Call Termination to PSTN Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours)
Faults concerning the Incoming International Call Termination to PSTN Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement

## 3. Special Access Services (Service Definitions Part III) Emergency Services Access Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the Emergency Services Access Service	85% of Faults to be resolved in 4 hours 95% of Faults to be resolved in 24 hours Remaining faults to be resolved by agreement

#### National DQ Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the National DQ Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be by agreement

# Call Greeting "Directory Assistance"

#### International DQ Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the International DQ Services	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement

Call Greeting	"Directory Assistance"

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#### National Freephone Access Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the National Freephone Services	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33hours Remaining faults to be resolved by agreement

#### International Freephone Access Service

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the International Freephone Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33hours Remaining faults to be resolved by agreement

#### 4. PSTN Transit Services (Service Definitions Part IV) **PSTN Transit Service**

Fault Restoration Times	Time in which faults are repaired following notification through the Fault Control Centre (hours).
Faults concerning the PSTN Transit Service	80% of Faults to be resolved in 8 hours 95% of Faults to be resolved in 33 hours Remaining faults to be resolved by agreement

# **5. Trunk Groups and routing principles** Services are designated to the following trunk groups.

Classification	Outgoing/Incoming	Group	
Domestic	Outgoing	A	
Domestic	Incoming	B	
International	Outgoing	C	
International	Incoming	<b>D</b>	
Transit	Outgoing	B	
Transit	Incoming	R	
Emergency	Incoming	G	
National DQ	Incoming	H	
International DQ	Incoming	1	
National Freephone	Incoming		
International Freephone	Incoming	K	
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Service	Trunk Designation/routing
PSTN Terminating Access Service	A, B
PLMN Terminating Access Service	BjE
Incoming International Call Termination to PLMN Service	D.
Incoming International Call Termination to PSTN Service	<b>C</b> D
Emergency Service Access Services	<b>C</b>
National DQ Service	
International DQ Service	li se
PSTN Transit Service (outgoing)	<b>B</b>
PSTN Transit Service (incoming)	P
National Freephone Access	I A STATISTICS AND A STATISTICS
International Freephone Access	K

Note that there will be one set of trunk groups per Telco. Note above chart is from perspective of TSTT Switch.

# 6. Signalling

Called party number format	7.Digit - 868.NXX XXXX
Calling party number format	7Digit-868 NXX XXXX
Number length (range)	3-7.Digits

# 7. Billing Addresses

TSTT	Lisa Communications
	Accountant,
Telecommunications Services of Trinidad and Tobago Limited (TSTT)	Lisa Communications Limited-
61 - 67 Henry Street	#50.Gordon Street,
Port of Spain	Port of Spain

# 8. Contact Details

Company	Role	Contact Details
TSTT	Liaison Manager	of Spain,

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#### Joint Working Manual - Schedule 5

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CHAPTER 1: TECHNICAL SPECIFICATION

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#### 1 Chapter 1 – Technical Specification

#### 1.1 Introduction

1.1.1.1 This chapter describes the technical specifications applicable to the Services as described in the Service Descriptions. The specifications in this chapter are applicable to both Parties.

#### 1.2 Technical characteristics for the Optical In-Span Joining Service

- 1.2.1 Principles
- 1.2.1.1 The Optical In-Span Joining Service is based upon the principle of one Telco ISL to one TSTT ISL.
- 1.2.1.2 As described in the Optical In-Span Joining Service Service Description, the service will comprise:
  - One Optical Fibre cable run (which may consist of two or more Optical Fibre strands) from the Telco ISL to the TSTT ISL (referred to as the route).
- 1.2.1.3 As described in the Optical In-Span Joining Service Service Description, a Carrier System comprises a Service Taker CTU, the matching Service Supplier CTU for the route, and the point to point Optical Fibre cable.
- 1.2.1.4 Carrier Systems based on Synchronous Optical Network (SONET) 155.52 Mbit/s (OC-3) will be used. All SONET systems should conform to SONET Transport Systems standards: Bellcore GR-253 section 3.1. The basic sub-rate of all the systems is 1.544 Mbit/s.
- 1.2.1.5 The 155.52 Mbit/s Carrier Systems specified are capable of supporting up to 1.544Mbit/s Network Links. Figure 1 represents a functional overview of the service.

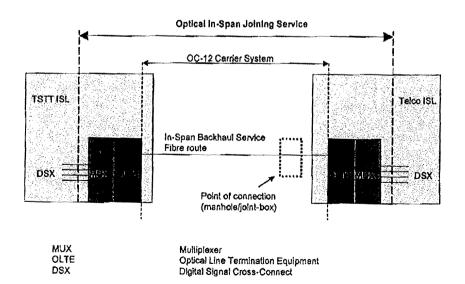


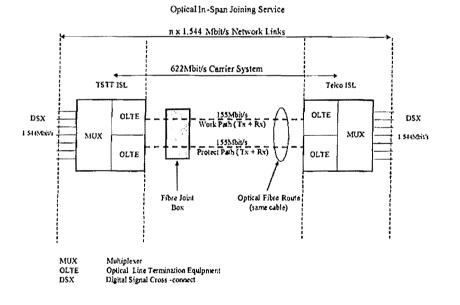
Figure 1 – The Carrier System

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1.2.1.6 Single mode optical fibre cable is specified utilising 1330nm short haul interface conforming to G.957.

#### 1.2.2 Cable Routing & Resiliency

- 1.2.2.1 No physical route diversity is provided as Part of the Optical In-span Joining Service. However, an additional route can be provided if technical issues or traffic volumes warrant or shall be provided if requested by the Service Taker.
- 1.2.2.2 Carrier System equipment resiliency may be provided upon request whereby a working fibre pair and a protecting fibre pair are provided on the same fibre route. Protection switching is facilitated by the CTU of each party in accordance with Uni-directional Path Switched Ring (UPSR) protection standards specified in T1.105.01.
- 1.2.2.3 Cables that enter and traverse cable vaults will be protected by concrete (outside building) and mechanical armour (within building).
- 1.2.2.4 The physical interface between the Telco System and the TSTT System will be the OC-3 optical fibre interface. For the avoidance of doubt, the physical interface is not the same as the Point of Connection.



a) Figure 2: Carrier System resiliency

#### 1.2.3 Circuit Termination Unit Specification

1.2.3.1 TSTT approved suppliers, following testing:

Manufacturer	Product
Nortel Networks Corporation	Optera Metro 3400

Note: Optera Metro 3400 equipment is capable of supporting 84xT1 in protected mode.

#### 1.2.4 Process for Accreditation of Alternative CTU

- 1.2.4.1 All CTU equipment must conform to SONET standards and any additional standards specified in this technical chapter.
- 1.2.4.2 In advance of ordering, the alternative CTU manufacturer equipment specification shall be sent to the TSTT Liaison Manager for technical evaluation. Further to this evaluation, some specific inter-operability testing may need to be planned and conducted. For the avoidance of doubt, interoperability testing will not be required where alternative CTU equipment is designed with identical interface specifications as equipment defined in Paragraph 1.2.3.1.

#### 1.2.5 Joint Box engineering drawing

1.2.5.1 The specification of the Joint Box will be provided in the form of an engineering drawing blue print.

#### 1.3 1.544Mbit/s Network Link Characteristics

#### **1.3.1** Electrical characteristics

- 1.3.1.1 The output jitter shall not exceed 5 UI under worst case operating conditions when measured in the frequency range 10 Hz to 40 kHz, as defined in ANSI T1.102 (Table 9).
- 1.3.1.2 The tolerance of both the TSTT and the Telco input ports to jitter should be as defined in ITU-T Recommendation G.823.
- 1.3.1.3 A jitter measuring set conforming to the requirements of ITU-T Recommendation O.171 (Timing Jitter Measuring Equipment for Digital Systems) shall be used to measure jitter. TSTT and the Telco shall co-operate in the application of testing methods as described in ITU-T Recommendation G.823.
- 1.3.1.4 The wander specification is set out in ITU-T recommendation G.823. The maximum values of wander at input ports must conform to section 3.1.1 of ITU-T Recommendation G.823.

#### **1.3.2** Functional characteristics

- 1.3.2.1 Each 1.544Mbit/s Network Link shall be transparent and independent of any traffic stream passed across it.
- 1.3.2.2 For the D-type channel bank application, eight bits are available for payload in 5/6 of the DS1 frames. In every sixth frame, bit position eight (# 8) is a payload overhead channel, used for signalling. In the super frame format, two distinct channels are available; A and B as presented in ANSI T1.107 figure 7, while four distinct channels, A, B, C, and D are available in the extended superframe format as presented in figure 10 of ANSI T1.107.
- 1.3.2.3 1.544Mbit/s interfaces shall conform to ANSI T1.107 for generation of Alarm Identification Signal (AIS) and RAI alarms and with G.824 for slipping conditions. RAI timing requirements shall comply with ANSI T1.231.
- 1.3.2.4 At the digital interface the analogue information shall be encoded using the 8bit,  $\mu$ -law characteristic in accordance with ITU-T Recommendation G.711 such that a 64kbit/s time slot at the switch connection can be decoded using an 8-bit,  $\mu$ -law decoder. The bit pattern of a free channel shall be in conformity with ITU-T recommendation Q.522, Section 2.1.2.

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#### 1.3.3 Synchronisation

- 1.3.3.1 The Telco shall synchronise on the TSTT System.
- 1.3.3.2 The Telco shall synchronise on the TSTT System via nominated Network Links using an OC-3 Carrier System.
- 1.3.3.3 TSTT will provide the 1.544Mbit/s interface for synchronisation for the Telco Switch. Inputs will have a minimum accuracy of Stratum 2 (Accuracy of 1.6x10-8 and stability of 1x10-10/day).
- 1.3.3.4 The nominated synchronisation channels will be agreed as part of the order process.
- 1.3.3.5 The maximum wander shall conform to ITU-T G.811 and G.812. The synchronisation provided by TSTT meets the requirements of ITU-T G.703 and is traceable to Stratum 1 source (minimum accuracy of  $\pm 1 \times 10^{-11}$ ).

#### 1.3.4 Safety and Protection

- 1.3.4.1 All equipment will comply with UL 1950 and/or national safety standards whichever is the most stringent.
- 1.3.4.2 For high voltages, equipment will comply with ITU-T K.11.
- 1.3.4.3 If radio equipment is used, it will comply with the International standard ITU-T K.37 to protect employees from electromagnetic radiation with a power in excess of 1 milliwatt per centimetre.
- 1.3.4.4 The screen of the cable at an output port must be connected to the metal cabinet, which holds the equipment. The screen of the cable at an input port must be earthed.

#### 1.3.5 Electromagnetic Compatibility

- 1.3.5.1 All link equipment must comply with ITU-T K.43 for network equipment Electromagnetic Compatibility (EMC) requirements and must comply with any national regulations relating to electromagnetic and electrostatic compatibility.
- 1.3.5.2 All link equipment must comply with ITU-T K.42 for immunity to radiated electromagnetic energy.
- 1.3.5.3 All link equipment must comply with ANSI T1.308 and/or ITU-T K.32 for electrostatic discharge.
- 1.3.5.4 All link equipment must comply with EN 55022 class B or FCC Part 15 for radiated and conducted emissions.
- 1.3.5.5 All link equipment must comply with any national regulations relating to electromagnetic and electrostatic compatibility.
- 1.3.5.6 The link equipment must be immune to radiated electromagnetic field of up to 3V/m.

#### 1.4 Network Link Quality of Service

#### 1.4.1 Definitions

1.4.1.1 Network Link Availability, Errored Seconds and Severely Errored Seconds are the parameters used to measure the service quality of the Network Link. These quality of service parameters are applicable to all Network Links that are delivered by TSTT as

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well as to all Network Links that are delivered by the Telco. Measurements of these service quality parameters will be specified in units relating to calendar months.

1.4.1.2 The definition of Network Link Availability (%) for a Party is

100 \* (total time - time allocated to Planned Maintenance - time the link is not available for traffic due to faults) (total time - time allocated for Planned Maintenance)

during the specified calendar month.

- 1.4.1.3 The definition of Errored Second is a one second interval with one or more bit errors.
- 1.4.1.4 The definition of Severely Errored Second is a one-second period, which has a bit error ratio greater than or equal to 10<sup>-3</sup>.

#### 1.4.2 Quality of Service Levels

1.4.2.1 The following Quality of Service level is applicable to the Network Links.

1.	Network Link Availability	> 99.5%
2.	Percentage of Severely Errored Seconds	≤ 0.055%
3.	Error Free Seconds	> 99.0%

#### 1.5 Signalling

#### 1.5.1 Signalling Principles

- 1.5.1.1 Signalling applied shall be Signalling System No. 7 which conforms to ANSI T1.110 standards. Operator dependent implementations of the signalling protocol at the network interconnection interface will not be supported.
- 1.5.1.2 In principle TSTT will transfer signalling messages transparently through its network. However, TSTT cannot guarantee proper end-to-end inter-working of services originating or terminating outside the TSTT network.

#### 1.5.2 Circuit Related Signalling

1.5.2.1 3.1Khz audio and speech bearer services are supported.

#### 1.5.3 Protocols

- 1.5.3.1 The MTP (ANSI T1.111) and ISUP V2 (ANSI T1.113) protocols are supported.
- 1.5.3.2 The signalling mode is quasi-associated.

#### 1.5.4 Parameter Fields

1.5.4.1 Network indicator 11 (binary notation) and National Transit Domain point-codes shall be used. The CLI represents the national significant number or international number depending on the source of the call. The nature of address indicator shall be set accordingly. The address presentation restriction indicator shall not contain the values "spare" or "address not available".

#### 1.5.5 Signalling procedure

1.5.5.1 All calls to national significant numbers shall use en-bloc-signalling mode of operation.

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- 1.5.5.2 In case of overlap signalling mode of operation the Address Complete Message shall be sent as soon as all digits necessary to complete the call are received.
- 1.5.5.3 Stop digits for indicating that the full number is transmitted shall be used where necessary.
- 1.5.5.4 The required called party number format, nature of address, number length (range) and signalling mode of operation as passed between the networks is specified in the Parameter Schedule.

#### **1.6** Traffic Handling of Services

#### 1.6.1 Routing

- 1.6.1.1 The location of the ISL at which Services are provided pursuant to this Agreement are specified in the Service Schedule.
- 1.6.1.2 Each party will undertake the routing/translation for all codes that require re-routing/retranslation across its network.

#### 1.6.2 Trunk Groups

- 1.6.2.1 Separate Trunk Groups per Service or for a group of services will be agreed.
- 1.6.2.2 All trunk groups will be uni-directional.
- 1.6.2.3 The separate Trunk Groups between the Telco ISL and the corresponding TSTT ISL are specified in the Parameter Schedule.

#### 1.6.3 Signalling Links

- 1.6.3.1 A minimum of two Signalling Links will be provided between the TSTT System and the Telco System.
- 1.6.3.2 TSTT and the Telco will maintain equal loading of the Signalling Links.
- 1.6.3.3 The Signalling Links will be designed for a normal load of 0.2E and a maximum load of 0.4E following the guidelines of ETS 300 008.
- 1.6.3.4 The dimensioning of Signalling Links will be determined by the number of Call attempts using Erlangs formula.
- 1.6.3.5 This formula is applicable when Signalling Links are used for circuit related signalling and the number of links will be subsequently monitored, and adjusted, should this be necessary, according to specific traffic type.
- 1.6.3.6 The Signalling Links shall be used exclusively for the exchange of signalling messages.

#### 1.6.4 Quality of Service for Termination Services, Special Access Services, Transit Services and Other Services

- 1.6.4.1 The Quality of Call related Termination Services, Special Access Services, Transit Services and Other Services are represented by the parameters Call Availability, Dial Set-up Delay and Propagation Delay.
- 1.6.4.2 Depending on the Service offered the Service Supplier has a role as:

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- originating party. In this role the Service Supplier handles calls from the Subscriber Connection of the calling party in the originating network to the Point of Connection.
- transit party. In this role the Service Supplier handles calls from the Point of Connection or Point of Handover as the case may be via the national transit network to the Point of Handover or Point of Connection as the case may be.
- terminating party. In this role the Service Supplier handles calls from the Point of Connection to the called Subscriber Connection of the called party in the terminating network.
- 1.6.4.3 For each Quality of Service parameter a value is defined.

#### 1.6.5 Call Availability

1.6.5.1 The definition of Call Availability (%) is

#### 100 \* (total call attempts - total call releases with causes marked as network fault) (total call attempts)

during a specified calendar month.

Release causes marked as network faults are the following causes specified in ITU-T rec. Q.850:

- \* no circuit/channel available
- \* network out of order
- \* temporary failure
- \* switching equipment congestion
- \* access information discarded
- \* requested circuit/channel not available
- \* resource unavailable, unspecified
- \* bearer capability not presently available
- \* protocol error, unspecified
- \* interworking, unspecified.
- 1.6.5.2 The Call Availability is > 99.6%. The apportionment for the Call Availability budget for Service Supplier and Service Taker is as follows:

Originating party	Transit party	Terminating party
≥99.6 %	<u>≥99.8 %</u>	≥99.6 %

#### 1.6.6 Dial Setup Delay

- 1.6.6.1 Dial Setup Delay is defined as the interval from the moment that the last digit of the called party number is keyed by the calling party to the time a relevant tone (ring tone/busy/information tone/message) is received by the calling party.
- 1.6.6.2 Dial Setup Delay Quality of Service parameter shall be no more than 2350 ms for a national Call.
- 1.6.6.3 The apportionment for the Dial Setup Delay value for Service Supplier and Service Taker is as follows:

Originating	Transit	Terminating	database access
party party		party	if applicable
575 ms	700 ms	575 ms	500 ms

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#### 1.6.7 **Propagation Delay**

- 1.6.7.1 Propagation Delay is defined as the round trip delay between the received signal and the transmitted signal.
- 1.6.7.2 The Propagation Delay Quality of Service parameter shall be no more than 22ms. Both Parties will take appropriate actions (e.g. echo cancellation) if this Propagation Delay is exceeded.
- 1.6.7.3 The apportionment for the Propagation Delay budget for Service Supplier and Service Taker is as follows:

Originating PBX network if applicable	Originating party	Transit party	Terminating party	Terminating PBX network
<u>5 ms</u>	4.5 ms	3 ms	4.5 ms	<u>5 ms</u>

#### 1.6.8 Calling Line Identity

- 1.6.8.1 All interconnect trunks will utilise Q.731 signalling through which CLI will be passed transparently.
- 1.6.8.2 All numbers with CLI are transparent between networks. Calling Number Delivery Blocking (CNDB) shall be applied to all private numbers within the TSTT System and the Telco System. TSTT and the Telco should ensure that CLI associated with numbers with the CNDB feature is blocked from Subscriber Connections.

#### 1.7 References

ITU-T

#### Recommendation

G.703	"Physical/electrical characteristics of hierarchical digital interfaces"
G. <b>7</b> 11	"Pulse code modulation (PCM) of voice frequencies"
G. <b>82</b> 6	"Error performance of an international digital connection forming part of an integrated services digital network"
G.824	"The control of Jitter and wander within digital networks which are based on the 1.544 Mbit/s hierarchy".
O.171	"Timing Jitter measuring equipment for digital systems"
K.11	"Principles of protection against over voltage and over current"
K.42	"Preparation of emission and immunity requirements for telecommunications equipment"
K.43	"Immunity requirements for telecommunications equipment"
K.37	"Public Telecommunications network equipment EMC requirements Part I: Product family overview, compliance criteria and test levels"
UL 1950	"Standard for Safety for Information Technology Equipment, 3rd Edition"
ANSI	
T1.102-1993 T1.105-1995	Digital Hierarchy – Electrical Interfaces Synchronous Optical Network (SONET) - Basic Description including
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	Multiplex Structure, Rates and Formats
T1.105.01-1998	Synchronous Optical Network (SONET) - Automatic Protection
T1.105.02-1995	Synchronous Optical Network (SONET) - Payload Mappings
T1.105.03-1994	Synchronous Optical Network (SONET) - Jitter at Network Interfaces
T1.105.04-1995	Synchronous Optical Network (SONET) - Data Communication Channel
	Protocol and Architectures
T1.105.05-1994	Synchronous Optical Network (SONET) - Tandem Connection Maintenance
T1.105.06-1996	Synchronous Optical Network (SONET) - Physical Layer Specifications
T1.105.07-1996	Synchronous Optical Network (SONET) - Sub-STS-1 Interface Rates and
	Formats Specification
T1.105.09-1996	Synchronous Optical Network (SONET) - Network Element Timing and
	Synchronization
T1.105.06-1996	Synchronous Optical Network (SONET) - Digital Hierarchy Optical Interface
	Specification: Single-Mode
T1.107-1995	Digital Hierarchy – Formats Specifications
T1.110-1992	Signalling System No. 7, General Information
T1.111-1996	Signalling System No. 7, Message Transfer Part
T1.112-1996	Signalling System No. 7, Signalling Connection Control Part Functional
	Description
T1.231-	Digital hierarchy-Layer 1 in-Service Digital Transmission Performance
	Monitoring
T1.304-1997	Ambient Temperature and Humidity Requirements for Network Equipment in
	Controlled Environments

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CHAPTER 1: TECHNICAL SPECIFICATION

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## 2 Chapter 2 - Operations and Maintenance

#### 2.1 Operations and Maintenance: Introduction

2.1.1.1 This chapter specifies the operations and maintenance principles that TSTT and the Telco will be required to conform to following signing of the Agreement. It describes the processes for Services provided by each Party and the exchange of information between Parties.

#### 2.1.1.2 The following processes are covered in this chapter.

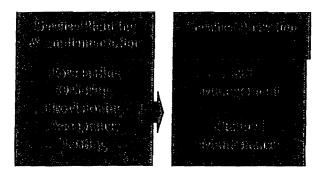


Figure 1 Operational Processes

#### 2.2 Roles and Responsibilities

#### 2.2.1 Introduction

2.2.1.1 This section describes the functions from each Party's organisation that are required to assure the effective management and execution of processes. The roles, which may be combined, are:

#### I. Liaison Manager

The Liaison Manager has overall responsibility for preliminary discussions regarding service planning, implementation and operational processes. Information should be exchanged between Liaison Managers, unless stated otherwise in this manual.

#### III. Project Manager

The Project Manager has responsibility for the service planning, commissioning, testing and implementation for new and additional Services. The Project Manager will track the activities relating to forecasting, ordering, provisioning and testing and will keep the Liaison Manager abreast

CHAPTER 2: OPERATIONS AND MAINTENANCE II. Operations Manager The Operations Manager has responsibility for managing the day to day Quality of Service including operational processes.

IV. Planning Manager The Planning Manager has responsibility for forecasting and planning services and dimensioning of facilities for new and additional Services. Communications will generally be through the Project Manager to allow project co-ordination and monitoring.



of related issues.

V. Fault Control Manager The Fault Control Manager has responsibility for managing a 24 hour, all days a year Fault Control Centre (FCC) for its respective network. The Fault Control Centre will own, identify and resolve relevant faults. VI. Service Quality Manager The Service Quality Manager has responsibility for monitoring service performance.

2.2.1.2 The relationship between the roles is illustrated in Figure 2 below:

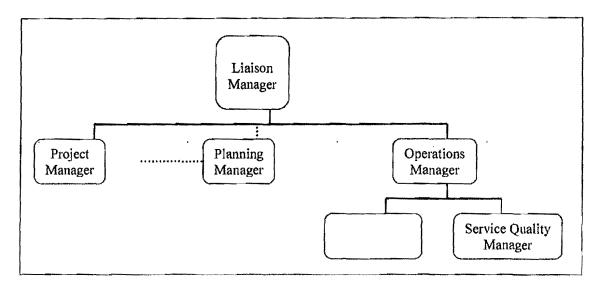


Figure 2 Relationships between roles

#### 2.2.2 Meetings

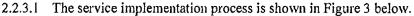
- 2.2.2.1 Periodic meetings involving representatives from both Parties will be held, at least quarterly, and may be held face to face or by teleconference. Meetings will consider issues relating to implementation and operation of Services provided pursuant to this Agreement.
- 2.2.2.2 Service Implementation Meetings will include Forecasting Meetings, Order Planning Meetings, Provisioning Meetings and Testing Meetings.
- 2.2.2.3 Forecasting Meetings will consider, inter alia, the service forecasts of both Parties and will seek to validate any assumptions used in making the forecasts.
- 2.2.2.4 Order Planning Meetings will consider, inter alia, the final forecast and will lead to the production of an Order Plan.
- 2.2.2.5 Provisioning Meetings will, inter alia, review progress against plans and lead to agreement on any changes required.
- 2.2.2.6 Testing Meetings will, inter alia, review the process, the test stages, the test suites, the test plan and service acceptance. Any additional inter-operability testing that is

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required as a result of differences in standards or the introduction of new technology will also be included.

- 2.2.2.7 Additional technical meetings may be held prior to the provisioning phase for the early exchange of information regarding technical standards, the numbering scheme of each network, switch identification, routing etc.
- 2.2.2.8 Operational Meetings will inter alia
  - review process performance by comparing actual and agreed quality of service levels
  - review operational problems that affect the quality of service levels
  - review of Interconnect Resolution Log
  - agree on quality initiatives
  - discuss Performance Reports

#### 2.2.3 Service Implementation



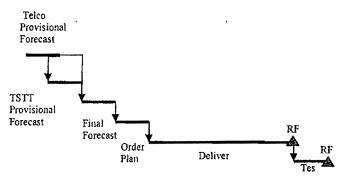


Figure 3. Service Planning

#### 2.2.4 Performance Reports

2.2.4.1 Written Performance Reports will be exchanged monthly and will include:

- Services that have been forecasted and ordered, in the role of Service Taker, and services that have been delivered in the role of Service Supplier; and
- Service performance data.
- 2.2.4.2 The minimum set of items to be included in the Performance Report is listed in Appendix I.

#### 2.2.5 Interconnect Resolution Log

- 2.2.5.1 The resolution process is a mechanism for recording, tracking and ultimately resolving interconnect issues that have not been resolved within established time periods and through normal processes.
- 2.2.5.2 An Interconnect Resolution Log will be maintained to keep track of interconnect issues and their status. This log (which will include the items set out in Appendix 1) will be maintained by the Parties and shall be reviewed at the Operational Meetings.

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#### 2.2.6 Technical Disputes

2.2.6.1 In the event of any dispute arising in respect of any technical matter in connection with this Agreement (other than technical matters in relation to fault resolution prior to the exhaustion of the fault escalation procedure), such dispute shall in the first instance be referred to the Parties' respective Liaison Managers for resolution. In the event that the Liaison Managers shall fail to resolve such dispute within thirty (30) days of the matter being referred to them, either Party may refer the dispute in the absence of such agreement a person appointed by the Telecommunications Authority of Trinidad and Tobago and whose decision shall be final and binding. The Parties shall co-operate in such determination and will make all relevant information and technical data available to the expert.

#### 2.3 FORECASTING, ORDERING AND PROVISIONING

#### 2.3.1 Forecasting

- 2.3.1.1 The forecasting process requires both Parties to plan and exchange Forecasts for each applicable Service provided pursuant to this Agreement, and to ensure that changes to the Forecasts are communicated in a timely fashion.
- 2.3.1.2 The exchange of Forecast information is required to enable each Party to plan and manage its System and human resources. The process is ongoing over a rolling 24-month period with quarterly updates.
- 2.3.1.3 Each Party has the opportunity to comment on the validity of provisional Forecast information in the forecasting meetings, and to review any assumptions used. Each Party is encouraged to provide appropriate supplementary information to aid the development of Forecasts.
- 2.3.1.4 All information exchanged will be treated as confidential, and will not be used for any purpose other than as set out in this Joint Working Manual.
- 2.3.1.5 Each Party shall provide a provisional Forecast for all Services that they require (in the role of Service Taker) from the other Party (in the role of Service Supplier) for the ensuing two year period. This provisional Forecast will consist of the locations and number of Network Links within each Joining Service, together with traffic forecasts for all other Services provided pursuant to this Agreement. Traffic forecasts will include the locations of the applicable Point of Connection and the location of the associated Point of Handover. In addition, forecasts for Special Access Services will include an estimated number of Calls. The Parties will exchange forecasts on agreed dates each quarter, using the forms in Appendix II.
- 2.3.1.6 The two Parties will meet shortly thereafter to agree on the Forecast data in relation to the following Quarter; such agreed Forecast data will be called the "Final Forecast" and will include the combined provisional forecasts of both parties (with any agreed amendments).

#### 2.3.2 Ordering

2.3.2.1 The Parties will agree on an initial Order Plan upon execution of an Interconnection Agreement between the parties. Thereafter, the Parties will agree on an Order Plan for each Quarter at the preceding quarterly ordering meeting and following sign-off by both Parties the Order Plan shall be treated as submitted and shall constitute a binding Order from each Party for capacity. The relevant Final Forecast will be an integral component of the Order. The format of the Order Plan is given at Appendix III.

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#### Joint Working Manual - Schedule 5

- 2.3.2.2 The Order Plan will include a Ready for Test Date and Ready for Service Date for the capacity. These dates will depend on whether additional Network Links are required, whether an additional Carrier System is required or whether a new Joining Service is required and on the location of the applicable Telco ISL and associated TSTT ISL and will be agreed between the Parties on a case by case basis.
- 2.3.2.3 The decision as to whether a new Joining Service or additional Carrier System is required will be based on the Final Forecast and, if necessary, appropriate variations made to the Service Schedule and other relevant parts of this Agreement. For the avoidance of doubt, since the Order Plan will be based on the Final Forecast, it will represent an order for capacity in both directions.
- 2.3.2.4 For the avoidance of doubt, the Order Plan will not include a specific use requirement for any Termination Service or Transit Service but the Parties recognise that the Final Forecast for those Services will be used to agree an Order Plan for capacity and will be used by the Service Supplier to anticipate likely demand for those Services.
- 2.3.2.5 The Ready for Test Date and Ready for Service Date may be subject to Force Majeure circumstances, including delays caused by third parties, events beyond the Service Supplier's control and delays caused by the Service Taker not complying with its obligations, providing insufficient or inaccurate information or not co-operating with the Service Supplier. In the event of any delay attributable to such Force Majeure circumstances, events and delays caused by the Service Taker, the Ready for Test Date and/or Ready for Service Date shall be deemed extended by the number of days of delay and the Service Supplier shall not be liable therefor. References to the Service Supplier and Service Taker are to the Service Supplier and Service Taker of the relevant Joining Service.
- 2.3.2.6 In the event that a Service Taker shall notify the Service Supplier that it wishes to cancel any capacity specified in an Order Plan (whether prior to or following provisioning), the Service Supplier shall be entitled to invoice the Service Taker for the Early Termination Charge, determined by the fully documented costs, in respect of such capacity and the Service Taker shall make payment of such amount within thirty (30) days of the date of such invoice. In the event that a Service Taker shall notify the Service Supplier that it wishes to cancel any incremental capacity specified in an Order Plan (following initiation of provisioning), the Service Supplier shall be entitled to invoice the Service Taker for the Service Supplier's fully documented costs in respect of such capacity and the Service Taker shall make payment of such amount within thirty (30) days of the date of such invoice. For the avoidance of doubt, termination of this Agreement under any of Clauses 12.3, 23.1(c) to (i), and 25.5 shall be deemed to effect a cancellation of the capacity specified in all Order Plans then being provided. For the purposes of this paragraph, a Service Supplier shall be the Service Supplier of Joining Services, and the terms Service Supplier and Service Taker shall be construed accordingly. Not necessarily the case that service supplier supplies the joining services.
- 2.3.2.7 The Parties agree that the Early Termination Charges or fully documented costs represent a reasonable pre-estimate of a Service Supplier's loss on any actual or deemed cancellation of an Order in the circumstances specified in Paragraph 2.3.2.6 and that such amounts shall not be regarded as or deemed to be onerous or a penalty.

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#### 2.3.3 Provisioning

- 2.3.3.1 After the submission of the Order Plan, both Parties shall carry out the necessary preparations required for installation of the Services. Such preparations shall include ordering of all required equipment from third parties within seven (7) days of agreement on the relevant Order Plan and payment of all necessary charges.
- 2.3.3.2 The Service Supplier and the Service Taker will use their best endeavours to perform all activities to ensure that the Carrier Systems and T1 Network Links are in place to meet the agreed Ready for Test Date and Ready for Service Date.
- 2.3.3.3 If a Party envisages a delay to the Ready for Test Date or Ready for Service Date, it will inform the other Party in writing within 24 hours clearly indicating the reasons for the delay and any proposed revised Ready for Test Date or Ready for Service Date and the Parties shall seek to agree on a revised date.
- 2.3.3.4 Both Parties shall seek to minimise delay and the effects of delay.

#### 2.3.4 Compensation for inaccurate forecasts

- 2.3.4.1 Compensation shall be payable by the Service Taker to the Service Supplier in the following cases:
  - (a) where in relation to any Quarter, the Relevant Forecast exceeds the Relevant Traffic by at least the Forecast Threshold; and/or
- 2.3.4.2 For these purposes:
  - (a) the Relevant Forecast for any Quarter shall be the aggregate Final Forecast of the Service Taker's aggregate traffic utilising any of the Services during such Quarter between each Telco ISL and the corresponding TSTT ISL;
  - (b) the Relevant Traffic for any Quarter shall be the Service Taker's aggregate traffic utilising any of the Services during that Quarter between each Telco ISL and the corresponding TSTT ISL;
  - (c) the Forecast Threshold shall be 35% of the Relevant Forecast or such other percentage as may be agreed between the parties.
- 2.3.4.3 Subject to Paragraph 2.3.4.5, in the event that the Relevant Forecast for any Quarter shall exceed the Relevant Traffic by at least the Forecast Threshold and/or the Operator Services Forecast for any Quarter shall exceed the Operator Services Traffic by at least the Forecast Threshold the Service Supplier shall be entitled to receive payment from the Service Taker, by way of compensation, of the Service Supplier's non-recoverable costs flowing from such inaccurate forecast or inaccurate forecasts, including but not limited to, one-off operating costs and carrying charges, capital charges and depreciation for the period until the relevant equipment would generally be reused. Such non-recoverable costs shall be exclusive of any payments made or performance bonds offered by the Service Taker to the Service Supplier for the ordering and provisioning of the Carrier System.
- 2.3.4.4 In the event that the Relevant Traffic for any Quarter shall exceed the Relevant Forecast, the Service Supplier shall use its reasonable endeavours to provide the

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Services in respect of traffic exceeding such Relevant Forecast, but shall have no liability for any failure to do so or for any reduced Quality of Service.

- 2.3.4.5 Neither Party shall be liable to make payment of compensation:
  - (a) in respect of a Relevant Forecast relating to any Quarter which occurs within the first twelve months following signature of an Agreement; and
  - (b) to the extent that the difference between the Relevant Forecast and Relevant Traffic, or between the Operator Services Forecast and Operator Services Traffic, as appropriate, in respect of any Quarter is directly attributable to any failure by the other Party, (in the event that such Party is Service Supplier of a Joining Service to be delivered during the Quarter in question) to deliver such Joining Service in accordance with Paragraph 2.3.5.1. or
  - (c) to the extent that the difference between the Relevant Forecast and the Relevant Traffic is due to a Force Majeure circumstance.
- 2.3.4.6 For the purposes of Paragraphs 2.3.4.1 2.3.4.5, the Service Supplier, in each case, shall be responsible for the measurement of the Relevant Traffic for each Quarter.
- 2.3.4.7 For the avoidance of doubt, the obligation to compensate set out in paragraphs 2.3.4.1 2.3.4.5 is designed to recover costs flowing from inaccurate ordering of capacity. Liability for compensation is assessed by reference to the forecasts for services carried over such capacity since that is the basis upon which the Order Plan for the capacity will be prepared.

#### 2.3.5 Compensation for Delay in Installation or Acceptance Testing

- 2.3.5.1 Subject to Paragraph 2.3.2.5, in the event that, in relation to any capacity, the Ready for Test Date or Ready for Service Date is not met through the act or omission (including negligence) of the Service Supplier, the Service Taker shall be entitled to claim compensation for any of its fully-documented costs, including but not limited to, one-off operating costs and carrying charges, capital charges and depreciation, arising out of or in connection with such delay for which the Service Supplier would be liable under this Agreement.
- 2.3.5.2 Any dispute as to an amount payable under Paragraphs 2.3.4.3 and 2.3.5.1 of this Joint Working Manual shall be submitted to an expert for determination under Paragraph 2.3.7.

#### 2.3.6 Invoicing and Payment

2.3.6.1 In the event that either Party shall be entitled to receive payment under Paragraphs 2.3.4 or 2.3.5 it shall be entitled to invoice the other Party for the relevant amount immediately upon such entitlement arising. Any invoice shall include a breakdown of the cost elements included in the relevant amount. Any such invoice shall be payable within thirty (30) days of the date of deemed delivery.

#### 2.3.7 Dispute Resolution

2.3.7.1 If either Party liable to pay compensation ("the Penalty Payer") disagrees with the estimate of loss, the Penalty Payer may require the other party ("the Penalty Charger") to justify the amount to an independent expert agreed between the Parties, or in the absence of such agreement to be appointed by the Telecommunication Authority of Trinidad and Tobago (TATT). In providing such justification, all cost information will,

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be kept confidential and not revealed to the Penalty Payer. The independent expert will assess the loss and either confirm the Penalty Charger's penalty or substitute a replacement amount. The expert's decision will be final and binding. The costs of the expert shall be met by the Penalty Payer if the Penalty Charger's estimate is upheld (or the amount substituted is higher than the original estimate or not less than 5 % lower than the original estimate). Otherwise the Penalty Charger will pay for the costs of the expert.

#### 2.4 ACCEPTANCE TESTING

1

- 2.4.1.1 The acceptance testing process requires both Parties to ensure that all required T1 Network Links within the Carrier System(s) in the relevant Joining Service and any applicable Services are operational by the agreed Ready for Service Date (or other agreed date) to the agreed operational specifications and at the lowest practicable cost.
- 2.4.1.2 Plans for acceptance testing will be included in the Order Plan and shall consist of the standard suite of tests in accordance with Chapter 4 of the Joint Working Manual.
- 2.4.1.3 Any subset of the standard suite of tests to be used will be agreed by both Parties on a case-by-case basis. The Service Supplier of the relevant Joining Service will supply the other Party with all relevant test documentation. The Service Taker shall liaise with and provide full co-operation to the Service Supplier in the performance of such acceptance tests.
- 2.4.1.4 The two Parties shall jointly develop a test plan in accordance with Chapter 4 of the Joint Working Manual. The test plan shall include all required tests to be performed at specified intervals throughout the implementation of the Order Plan and the contact names and telephone numbers of representatives of both Parties.
- 2.4.1.5 Both Parties shall sign the test plan at least one month before the expected start of acceptance testing. Any delay in signing the test plan may result in a consequential delay of all previously scheduled implementation dates.
- 2.4.1.6 Prior to the scheduled Ready for Test Date (or other agreed date), all Carrier Systems, T1 Network Links and signalling links to be used during acceptance testing must be in place and Individual Location Tests must have been successfully completed.
- 2.4.1.7 At least five (5) Business Days before the scheduled Ready for Test Date (or other agreed date), the Service Supplier of the relevant Joining Service shall advise the Service Taker whether the provisioning has been completed and acceptance testing can commence.
- 2.4.1.8 All acceptance test results will be recorded in a test report in accordance with Chapter 4 of the Joint Working Manual and both Parties will retain copies for future reference.
- 2.4.1.9 If the acceptance testing is successful, each Party will sign the acceptance test reports within five (5) Business Days of completion.
- 2.4.1.10 If acceptance testing is unsuccessful within the initially agreed time frame, the Parties may agree on a partial acceptance testing, with the understanding that full compliance will be met by an agreed date.
- 2.4.1.11 If either Party cannot accept the Carrier System and/or Network Links and/or Service with partially successful acceptance testing, then the reasons for non-acceptance should be documented and the report signed indicating non-acceptance. The Parties will agree. CHAPTER 2: OPERATIONS AND MAINTENANCE Page 20 of 51

what action should be taken, including any timeframe for remedial work and re-testing. Any disputes will be resolved in accordance with Clause 34.

#### 2.5 FAULT MANAGEMENT

2.5.1.1 The fault management process adopted by both Parties shall ensure the prompt restoration of agreed quality of service. The level of detail for reporting faults will be agreed in advance of service activation by the two parties and will be reciprocal.

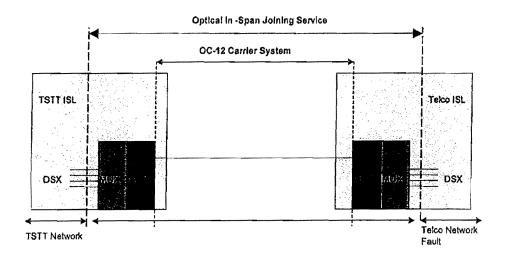
#### 2.5.2 Fault Classification

- 2.5.2.1 Faults arising in segments of the network illustrated in figure 4 will be classified as follows:
  - i. Carrier System Fault

A Fault resulting in the total loss of ability by either Party to transmit Calls between the two Systems due to transmission faults on the T1 Network Link or an entire Carrier System.

ii. Network Fault

A Fault located within the TSTT System (TSTT Network Fault) or within the Telco System (Telco Network Fault). Network Faults include faults within the signalling networks.



2.5.2.2 Figure 4. Fault Classification in Network Segments

- 2.5.2.3 Faults will be addressed depending on individual circumstances, with Service Affecting faults having the higher priority:
  - i Service Affecting (SA)

Faults that result in a noticeable deterioration in the Quality of Service:

- a Carrier System Faults for which the Fault Reporting Party can demonstrate a total loss of ability by either Party to transmit calls between Systems due to transmission faults within the Carrier System (Critical Link Failure);
- b Network Faults for which there is a Critical Link Failure or Major Link Failure or Route Failure and for which the Fault Reporting Party can demonstrate:

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- severely restricted ability by either Party to convey Calls between the two Systems ; or
- Total loss of, or severely restricted access to one or more of the Numbering Ranges which reside on either Party's System; or
- Total loss of, or severely restricted access to one or more of the number ranges which reside on a Third Party Telecom Provider's System, where the Calls are transited via either Party's System; or
- a loss of Service deemed as 'business critical' by either Party
- ii Non Service Affecting (NSA)

A Fault which is not Service Affecting

2.5.2.4 Critical Link Failure, Major Link Failure, and Critical Route Failure, Major Route Failure and Minor Route Failure are defined as follows:

Fault type	Classification
Critical Link Failure	100% of total signalling capacity is unavailable
Major Link Failure	50% of total signalling capacity is unavailable
Critical Route Failure	50% or more of total capacity of the route is unavailable to carry traffic.
Major Route Failure	25% to < 50% of total capacity of the route is unavailable to carry traffic
Minor Route Failure	1% to < 25% of total capacity of the route is unavailable to carry traffic

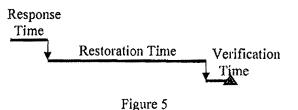
#### 2.5.3 Fault Control Centres and Fault Assignment

- 2.5.3.1 Each Party is required to provide a Fault Control Centre (FCC) for Fault reporting and Fault management. Each FCC should operate twenty-four (24) hours per day, seven (7) days per week and all days per year. FCCs for each Party should have specified contact numbers.
- 2.5.3.2 Either Party can report a Fault. Each FCC will maintain a unique set of FCC Log Numbers. When one Party's FCC reports a Fault to the other, the FCCs will exchange FCC Log Numbers.
- 2.5.3.3 Both Parties' FCCs will exchange sufficient information to allow for efficient Fault resolution of all affected Services. A standard Fault Management Form will be used by both FCCs to report and receive faults. (Appendix IV)
- 2.5.3.4 Each reported Fault will be investigated by the reporting Party to ensure that the Fault exists and to attempt to establish the location of the Fault.
- 2.5.3.5 Once the Fault is reported, the Parties will decide who will take responsibility for the Fault. The Party who takes responsibility for the Fault shall be called the Fault Owner and the other Party shall be called the Other Affected Party. Where no agreement over ownership can be reached, the Fault Owner will be the Party who was informed of the Fault.
- 2.5.3.6 Internally Detected Faults are Faults that a Party believes to exist within its own network. Once detected, the Party will inform the other Party about any Service Affecting Faults. This also applies to known Service Affecting Faults in a connected Third Party Telecom Provider's network.

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#### 2.5.4 **Fault Restoration**

2.5.4.1 The stages associated with Fault restoration are presented in Figure 5.



- 2.5.4.2 If, during Fault restoration, it is established that the ownership of the Fault is in the System of the Other Affected Party, then the roles will be reversed, i.e. the Fault Owner will become the Other Affected Party and vice versa.
- 2.5.4.3 A Fault is classified as cleared when the Fault Owner informs the Other Affected Party that the Fault has been rectified and the Other Affected Party has verified this.
- 2.5.4.4 The Response Time (maximum thirty (30) minutes) is the period in which:
  - . The Parties agree ownership of the Fault i.e. the Fault Owner and Other Affected Party are determined.
  - The Fault priority is determined; whether fault is Service Affecting or Non Service Affecting. If there is no agreement, then by default the Fault is classified as Service Affecting.
  - The Fault Owner specifies expected Restoration Time. •
- 2.5.4.5 The Restoration Time is the period in which:
  - Fault Owner clears the Fault .
  - Fault Owner informs the Other Affected Party of progress and when the Fault is cleared.
- 2.5.4.6 Fault Restoration Times are specified in the Parameter Schedule.
- 2.5.4.7 The Verification Time (maximum fifteen (15) minutes) is the period in which the Other Affected Party reports its acceptance or rejection of the Fault clearance to the Fault Owner.
- 2.5.4.8 Disrupted services may be restored promptly on a temporary basis, to be followed by permanent fault resolution at a later date. This form of restoration shall only be used when the temporary restoration costs are considered by the Fault Owner to be reasonable.
- The FCCs will manage information relating to all outstanding faults, including status 2.5.4.9 data. This information will be made available to either Party at agreed intervals or as required.
- 2.5.4.10 Both Parties' field staff may liaise directly to resolve a current fault as deemed necessary. However, all information must be communicated to the respective FCCs to ensure the maintenance of Fault records and the taking of appropriate action.

#### Re-classifications, suspensions and escalation 2.5.5

2.5.5.1 At any time during the resolution of a Fault, the Other Affected Party may, with sufficient documented justification, request the change in status of the Fault from NSA to SA at which point the Restoration Time will need to be reviewed. Similarly, the CHAPTER 2: OPERATIONS Page 23 of 51 AND MAINTENANCE

Fault Owner may also request a change in status of a fault from SA to NSA with the required documented justification.

- 2.5.5.2 If for any reason the resolution of a Fault is impeded, due to the Other Affected Party, the Fault Owner may, with proper documented justification, suspend the measurement of the Fault Restoration Time.
- 2.5.5.3 Fault Escalation can be instigated when:
  - a) the Other Affected Party raises concerns about the speed of restoration; or
  - b) when the Fault Owner requires greater co-operation from the Other Affected Party; or
  - c) when the target Restoration Time for a Fault, as stated in the Parameter Schedule has elapsed without restoration.
- 2.5.5.4 Initiation of the escalation process shall be done through the Parties' FCCs. The FCCs will be responsible for co-ordinating the entire escalation process and maintaining the escalation records.
- 2.5.5.5 Initiation of the escalation process is done by phone, fax or other agreed media. Documented records must be kept of the entire process.
- 2.5.5.6 Every effort shall be made by both Parties to reach agreement at each escalation level before proceeding to the next level.
- 2.5.5.7 The Parties can agree on set escalation deadlines for specific circumstances.

#### 2.6 PLANNED AND EMERGENCY MAINTENANCE

- 2.6.1.1 Planned maintenance encompasses:
  - work that affects, or has the potential to affect the Carrier System or its underlying T1 Network Links or their Quality of Service; or
  - work that affects, or has the potential to affect the Quality of Service provided to Subscriber Connections; or
  - work that affects, or has the potential to affect the Quality of Service provided by the other Party's System.
    - a)
- 2.6.1.2 The Party planning to carry out planned maintenance activity (the Maintenance Party) should provide at least five (5) Business Days notice to the other Party.
- 2.6.1.3 If the other Party determines that the planned maintenance has the potential to adversely effect its Services, then it should contact the Maintenance Party within three (3) Business Days of the first notice, with a view to negotiating a mutually agreed date for planned maintenance activity.
- 2.6.1.4 Both Parties must be in possession of the final schedule at least two (2) Business Days before the commencement of planned maintenance. If an agreement cannot be reached within this time frame, then the escalation procedure as described in Paragraph 2.5.4 should be applied, with any necessary modifications.

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2.6.1.5 Emergency maintenance is a type of maintenance work that needs to be carried out immediately due to the impact or potential impact to services. If this work affects, or has the potential to affect the other Party's Services, then, as much advance notice will be given as the situation permits.

#### 2.7 MISCELLANEOUS O&M PROVISIONS

#### 2.7.1 Procedure for Alteration of Nnumbers

- 2.7.1.1 Each Party will notify the other in writing of any alterations to the number ranges (or numbers) to which Calls are to be conveyed pursuant to the Service Descriptions. Notwithstanding Clause 33 the date on which such notification is deemed to be received will be the date of receipt.
- 2.7.1.2 Within three (3) Business Days of date of receipt, each Party will notify all interconnected operators of the alterations to such number ranges.
- 2.7.1.3 Each Party will perform the necessary alterations to its respective Systems to facilitate the alteration to the number ranges within five (5) Business Days of date of receipt and will inform the other Party of completion of the necessary alterations within one (1) Business Day of completing the necessary alterations.
- 2.7.1.4 The Parties will co-operate in order to conduct any necessary joint testing, where applicable, and will use all reasonable endeavours to complete such testing within five (5) Business Days of alteration.

#### 2.8 APPENDICES

APPENDIX I	Monthly Performance and issue resolution
APPENDIX II	Forecast
APPENDIX III	Order Plan
APPENDIX IV	Fault Management

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# 2.8.1 Appendix I. Monthly Performance and Issue Resolution

#### INSTRUCTIONS:

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The Service Taker will indicate in Section I, all existing and ordered services. In each month following the report period, both Parties will exchange the information in Sections II and III for each service.

#### SECTION I – EXISTING & ORDERED SERVICES

Service Taker	
Report date	

Existing network links

				<b>Trunk Rout</b>	e		
Service no.	Origin	Destination	No. Links	Name	Type IC/OG	No.	

Ordered	services	

Service no.				<b>Trunk Rout</b>		
	Origin	Destination	No. Links	Name	Type IC/OG	No.

#### SECTION II - MONTHLY REPORT

Service being reported			and a second			5 È.	- 						
Report period													
	Report	Prev	lous	2 mor	nths								
Report Items	Month	1	2	3	4	5	6	7	8	9	10	11	12
1. Traffic Volumes													
No. of minutes/service													
(source: switch operational													
measurements)		1873.A	14 (1 - 14) 					5. N.					
No. of calls/service					23		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	440					
(source: switch operational		Contraction Contraction											
measurements)					i i i	2 - A - A - A - A - A - A - A - A - A - A							
Busy hour (time)								134. A 4 191. a 4					
No. of calls in busy hour			NA S	1.000									
2. Performance Measures		110000											
Link Availability	Carl A						Sec. 1			2.5			
Call Completion Rate													
Total No of Faults													
No. of network faults													
Total network restoration time													
No. of link faults										1.000			
Total link restoration time								24525					
		1000	2.3										
	and and			184 Sant 1	222								

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#### SECTION III – DETAILED FAULT INFORMATION

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Service Taker									
Service being reported Report period									
Fault Details			<u></u>			- A second second second			
Fault log #	Fault reported	Fault class	Other affected party	Cause of fault	Target restoration time	Actual restoration time			
an a									

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2.8.2 Appendix II. Forecast Service Taker to complete all shaded areas

## SECTION I - CONTACT DETAILS

Service Taker								
	Name	Address	Telephone #	Fax #				
Liaison Manager								
Plauning Mauager								
<b>Operations Manager</b>								
Fault Control Manager								
Service Quality Manager								
Project Manager								
This forecast has been su understanding of the traj								
Signature		Signature						
Name		Name						
Position		Position						
Date		Date						

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#### Joint Working Manual - Schedule 5

## SECTION II – NETWORK LINKS FORECAST

Service Taker											
Existing point o	f Intercor	nection									
Service Taker IS	L	a an		2. S	Service	Suppl	ier ISI	. []			li de la composition Anterna composition
	Service	Carrier	T1 links forecast								
Service	ref.	System	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	TOTAL
										1 X 22	
					a la constante de la constante						
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		<u></u>	1 . Jane						
							1				
TOTAL						8. 4 sejul					
New point of Int	erconnect	ion									
Service Taker ISL						Supplie	r ISL			: 	
	Service	Carrier		ks fore					, 		
Service	ref.	System	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	TOTAL
			<u>ta ta t</u>				<u> 13 14 1</u>		- <u> </u>		
								<u> </u>		19 - 19 - 19 19 - 19	
			<u> </u>					· · · · · · · · · · · · · · · · · · ·			
						4					
			<u>}</u>			ang an ag	<u>No 5 1</u> 1310 - 11				
TOTAI		<u>*************</u>		s (* 1						- <u>A</u> + + 4 	
TOTAL			1. 15 1. 1	112 12		C., , ,	1. 1. 1. 1		55 S. C.		

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Forecast Start Date		1999 / 24 2017 - 1999 - 1999	E	End Date					
			SERVICE TRAFFIC FORECAST						
Service ref.	Origin	Destination	Total traffic (Erlangs)	Busy Hour period	Busy Hour traffic (Erlangs)	No. T1 Links			
						学校 化学			
						1993 - S.			
						a an			

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#### SECTION III – QUARTERLY TRAFFIC FORECASTS

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Service Taker				
	Name	Address	Telephone #	Fax #
Liaison Manager				
Planning Manager				
Operations Manager				
Fault Control Manager			and the second	
Service Quality Manager				
Project Manager				
Signature		Signature		
Name		Name		
Position		Position		
Date		Date		

# 2.8.3 Appendix III. Order Plan SECTION I – CONTACT DETAILS

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# SECTION II - EXISTING SERVICES

Service Tak	er 👘		Date			
Existing Net		<u>O lui</u>	NT F	Tuml		
Service ref	Origin/ Destination	Carrier type	No of Links	Trunk Route name	I/C or O/G	No.

# SECTION III - NEW REQUIREMENTS

New requ	uirements								
Intercon	nect Switches				Carri	er sy	stem		
Service Taker	Point code	Service Supplier	Poin code		Carrie Type	er	No. Links	Link Usage	Order type new/ change
			学派						
A DOWNERS OF THE OWNERS OF T	uirements	115	1	. 1.	No of		Line cod	Dend	Deaderfort
Origin	Destination	Trunk route name	True rout J/C e O/G	e type or	trunks		signalling & framing		Ready for service/ termination date
		a in the second s							
<u> </u>									
Change	lataile			di gioxente L		2094 - Y		sta <u>se statu</u> t	
Change of Service	Change Increase Decrease Relocate Reconfigu POC New POC	ĺ	ame	Trunk type L O/G	c route /C or	Tin info	ae slot	CIC assigument	Dialled t digit info
				and a start of					

# SECTION IV – NETWORK OR CIRCUIT DIAGRAM

# 2.8.4 separate attachment

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# Appendix IV. Fault management form

Both Parties shall maintain a log of the information relating to all reported faults. This information shall be made available to either Party at agreed intervals or as required.

# SECTION I - FAULT REPORT

i.

ITEMS	DETAILS
TSTT Fault log no.	
Telco Fault Log #	
Fault report date	
Time detected	
Person detected	
Time Reported	
Person Reporting	
Fault owner	
Other Affected Party	

## SECTION II - FAULT IMPACT

ITEMS	DETAILS
Fault Type	
(Network / Carrier System)	
Fault Status (SA/NSA)	
Critical/Major/Minor Link/Route	
Service Affected	
Supplementary details to aid fault identification	

## SECTION III – FAULT RESTORATION

ITEMS .	DETAILS
Cause of fault	
Clearance date + time	
Person Clearing	
Person receiving clearance	
Confirmation time	
Person requesting confirmation	
Confirmation response time	
Response time	
Restoration time	
Verification time	

# SECTION IV – FAULT RESTORATION ACTIVITIES

DATE	TIME	ACTION TAKEN
Contd V		

Fault type	Classification	
Critical Link Failure	100% of total signalling capacity is unavailable	
Major Link Failure	50% of total signalling capacity is unavailable	
Critical Route Failure	50% or more of total capacity of the route is unavailable to carry traffic.	
Major Route Failure	25% to < 50% of total capacity of the route is unavailable to carry traffic	
Minor Route Failure	1% to < 25% of total capacity of the route is unavailable to carry traffic	

CHAPTER 2: OPERATIONS AND MAINTENANCE

# SECTION V - FAULT ESCALATION (if appropriate)

#### Dispute details

8 9982 8 (I, V, Z, f)1 BR, Gje 2 TSTT escalation list

Date	Name	Position	Response
Telco esca	lation list		
Date	Name	Position	Response

1

1

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CHAPTER 2: OPERATIONS AND MAINTENANCE

# 3 Chapter 3 - Billing

## 3.1 Billing: Introduction

3.1.1.1 This chapter specifies the processes related to billing and accounting applicable to the Services provided between Service Supplier and Service Taker.

# 3.2 Data Collection and Invoice processing

- 3.2.1.1 For usage based services, CDR based billing will be used in electronic or paper format as the Parties may agree.
- 3.2.1.2 Invoices for the Billing Period will detail each service specified in the Service Schedule together with the Billing Period. Where a service is composed of different rating elements the invoice will also detail which rating elements have been applied and the quantities to which each of the rating elements have been applied.

# 3.3 Invoice Disputes

- 3.3.1.1 In the event that the Service Taker disputes the accuracy of an invoice pursuant to Clause 9.5, the Parties will resolve the dispute in accordance with the procedures in Clause 34 and this paragraph 3.3.
- 3.3.1.2 Service Taker will as soon as practicable, but within sixty (60) days of receipt of the invoice, notify the Liaison Manager of the Service Supplier of the dispute including all necessary details. This notification will be in writing by hand delivery, facsimile message or email.
- 3.3.1.3 Where a dispute has arisen, the billing and billed parties will exchange daily summaries for the period under dispute at lowest rating element level to attempt resolution. Failing this, CDRs for the period will be exchanged in the format defined in Paragraph 3.6 of the Joint Working Manual.
- 3.3.1.4 Pursuant to Clause 3.4.1.3, if the dispute is not resolved within thirty (30) days following referral to the relevant Liaison Managers, either Party may refer the dispute for arbitration in accordance with the procedures specified in Clause 34. The Parties shall co-operate in such determination and will make all necessary and relevant billing data available. Any sums found to be due or overpaid in respect of the disputed invoice shall be paid within thirty (30) days from the date of determination together with interest at the Repo Rate of the Central Bank of Trinidad and Tobago from time to time in force plus 2% from and including the day following the due date for payment until the date of payment in full and whether before or after any court judgement or other award.

# 3.4 Undetected Billing Errors

3.4.1.1 In the event that a billing error is discovered that occurred in a previous Billing Period as set out in Clause 11.7(b) or 11.7(c), either party may request a review of the invoice for any of those Billing Periods, provided that the request is made within three (3) months of the date of the start of the current Billing Period. In the event of overpayment, the over-payer shall be entitled to a refund of the overpayment. In the event of underpayment, the under-payer shall be obliged to pay the amount due. Any

**CHAPTER 3: BILLING** 

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sums found to be due or overpaid in respect of the previously undetected billing error shall be paid within thirty (30) days from the date of determination together with interest at the base lending rate of First Caribbean International Bank from time to time in force plus two per centum (2%) from and including the day following the due date for payment until the date of payment in full and whether before or after any court judgement or other award.

3.4.1.2 In the event of billing information being permanently unavailable to either party, the party unable to generate the bill may estimate the amount due based on an estimating method agreed by both parties in advance. The party performing the estimation will supply the detailed data and calculation on which the estimate is based.

## 3.5 Late Usage

3.5.1.1 Where CDRs are only temporarily unavailable, they should be included in the subsequent Billing Period as late usage. This late usage should appear on the invoice separately from usage that occurred during the Billing Period which the invoice covers. At the latest, any late usage should be billed within 3 months of its occurrence.

# 3.6 Validation

3.6.1.1 In cases where dispute resolution requires that CDRs be exchanged, the following format will be used. Alternative formats may be used when agreed by both Parties. A process will be defined by the Parties' Liaison Managers, to identify and act upon relevant discrepancies between Billing Data.

Field	Field Size	Format	Meaning
a-number	28	Alphanumeric	The dialling number
b-number	28	Alphanumeric	The dialled number
Point of Connection	7	Alphanumeric	The TSTT interconnect office
Incoming route	20	Alphanumeric	Populated for Calls sent to TSTT
Outgoing Route	20	Alphanumeric	Populated for Calls sent by TSTT
Start date/time	16	Numeric	Call start time format YYYYMMDDHHMMSShh
Duration	8	Numeric	Call duration format HHMMSShh

# 3.7 Retention of Billing Data

3.7.1.1 Each Party will keep Billing Data in an appropriate form for at least one (1) year.

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**CHAPTER 3: BILLING** 

# 4 Chapter 4 – Testing

# 4.1 Interconnect Testing - Objectives & Scope

# 4.1.1 Objectives

- 4.1.1.1 This chapter details the approach for testing the interconnection between TSTT and the Telco.
- 4.1.1.2 The objectives of the testing are:
  - to maintain the integrity of both networks
  - to meet the contractual specifications
  - to locate and enable resolution of faults with the interconnection
  - to ensure that billing is completed correctly.

# 4.1.2 Scope

4.1.2.1 The chapter describes:

- process to support the testing
- project plan to support the testing
- roles and responsibilities
- phases of testing with entry and exit criteria
- detailed test cases
- results sheets
- how to manage a test failure

# 4.2 Interconnect Testing Framework

4.2.1.1 The following framework is to be used to support interconnect testing.

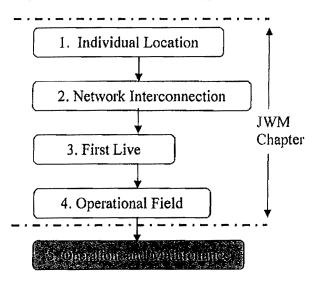


Fig. 1 - Process flow for Interconnect Testing.

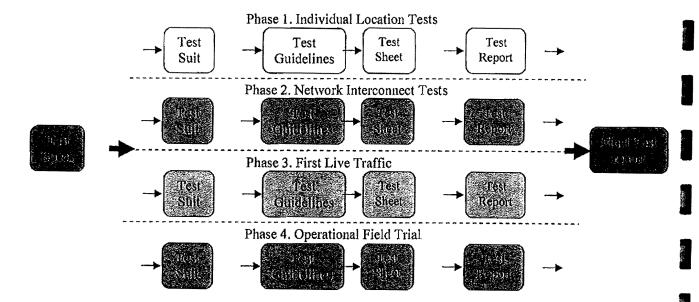
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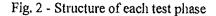
Individual Location Test	This phase of the testing verifies that the network of TSTT and the Telco are suitable for interconnection. Each Party must demonstrate that its interface conforms to the technical chapter (chapter 1) of the Joint Working Manual.
Network Interconnection Test	The Network Interconnection Test ensures the interoperability of the Systems, management of the Network Links, tests whether all types of Calls can be made and includes CCSS7 tests and exchange of CDR records.
First Live Traffic	This is the first trial of the interconnection in a test field environment with limited billable traffic. This phase considers maintenance and fault handling procedures, and verifies that the correct bills are delivered. It also tests that the roles and responsibilities are clear.
Operational Field Trial	This is the phase prior to the general operation of the interconnection. During this phase, fine-tuning of operational procedures takes place. All functions must be verified including start-up/shut-down procedures, disaster recovery, security, and performance under severe load. This phase uses non-billable and billable traffic depending on the test.

Table 1 - overview of proposed interconnect testing

# 4.3 Test Specification Structure

4.3.1.1 Each of the test phases will follow the same structure to derive and document the tests.





## **Test Specification**

4.3.1.2 The Test Specification contains the total set of Test Suites and Test Guidelines agreed between both parties to support the testing.

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## Test Suite

4.3.1.3 The Test Suite is a set of defined Test Guidelines that relate to a particular functionality e.g., billing, inter-operability. A Test Suite can be tested in whole or in part against any of the four test phases.

## **Test Guidelines**

4.3.1.4 The Test Guidelines contain:

- list of all the test cases to be completed
- justification for test cases
- detailed test case procedures
- test case pass/fail criteria
- details of other test data to be recorded
- planning to co-ordinate and track the testing progress.

#### Test Sheet

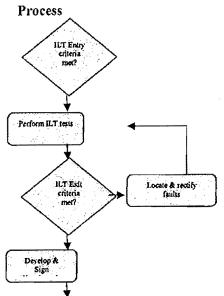
4.3.1.5 The Test Sheet contains an accurate record of the test completed and the outcome of the test.

## Test Report

- 4.3.1.6 The Test Report is a summary of the tests executed. It also provides details on faults, re-tests and exceptions. The Test Report is signed by both parties and is proof that the testing was completed. It is the main input to deciding whether the current phase of work can be exited.
- 4.3.1.7 The Final Test Report is compiled at the end of all the testing and highlights any outstanding faults, issues and concerns. It is the main input into deciding whether the Joining Service is ready to become fully operational.

# 4.4 Test Phases

# 4.4.1 Individual Location Test

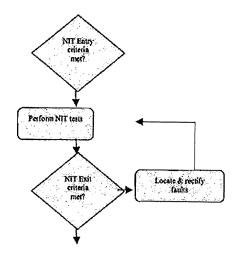




- 4.4.1.1 The goal of the Individual Location Test is to determine whether the infrastructure of each Party exhibits sufficient functionality to interconnect. The tests consider the following areas:
  - Conformance to relevant communication standards and technical specifications as described in the technical chapter
  - Implementation of the charging mechanisms
  - Charging calibration.
- 4.4.1.2 Each Party performs its own Individual Location Test. If either Party fails the testing the interconnection cannot proceed until the fault(s) have been corrected. Each Party is responsible for correcting any faults, and carrying out any modifications or additions to its own interconnect equipment to rectify the situation.

Entry Criteria	Signed Order Plan / agreement on the connection; Test Guidelines completed for this phase; Each Party has sufficient resource available to complete this phase of testing; Provisional project plan drafted.
Exit Criteria	Each Party has completed Individual Location Test and passed all tests; List of known deviations and imperfections available; No known fatal, inadmissible or major faults; Test results made available to each party; Test Report is approved and signed by both parties.

## 4.4.2 Network Interconnection Test Process

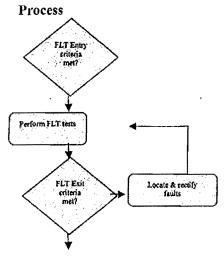


- 4.4.2.1 This phase of testing minimises operational risk for both Parties. The Network Interconnection Test tests consider the following areas:
  - Interoperability of the signalling and billable traffic
  - Checking whether charging mechanisms of both Parties are in line.

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Entry Criteria	Project Plan, documented and signed by both parties; List of known deviations and imperfections available; Test Guidelines have been completed for this phase; Both Parties have sufficient resource available to complete this phase of testing; The interconnection between TSTT's ISL and the Telco ISL is ready for this phase of testing.
Exit Criteria	Successful completion of the Network Interconnection Tests; No known fatal, inadmissible or major faults; Planned solution for all faults has been documented; Test results made available to each party; Test Report is approved and signed by both parties.

4.4.3 First Live Traffic



4.4.3.1 The First Live Traffic test determines whether the networks of both Parties are correctly interconnected. In addition to testing the basic interconnection, billing and supporting processes are tested during the First Live Traffic tests.

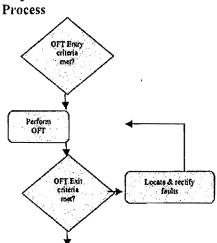
4.4.3.2 Billable traffic should be used during this phase of the testing.

- 4.4.3.3 The First Live Traffic tests consider the following areas:
  - Interoperability of signalling traffic;
  - Service tests (can all types of calls be established);
  - Routing tests (is the Telco reachable from all locations);
  - Whether charging mechanisms of both Parties are in line;
  - Bill test (on basis of CDRs from test traffic);
  - Process test (e.g. maintenance and error procedure).

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Entry Criteria	List of known deviations and imperfections available; Both Parties have sufficient resource available to complete this phase of testing; The interconnection between TSTT's ISL and the Telco ISL is fully installed and operational; List of known deviations and imperfections available; Test Guidelines have been completed for this phase; O&M procedures are available.
Exit Criteria	Successful completion of the First Live Traffic Tests; No fatal, inadmissible or major faults are present; Planned solution for all faults has been documented; Test results made available to each Party; Test Report is approved and signed by both Parties.

# 4.4.4 Operational field trial



4.4.4.1 The Operational Field Trial is the phase prior to general availability of the interconnection. During the Operational Field Trial all outstanding faults from previous test phases have to be resolved. During this phase billable traffic is passed for the first time. The objective of this Trial is to ensure that the operational and maintenance procedures are effective to deal with any issues that will arise.

Entry	No changes in the interconnection since conclusion of the previous phase of
Criteria	testing;
	List of known deviations and imperfections available;
	Test Guidelines completed for this phase;
	Both Parties have sufficient resource available to complete this phase of testing.
Exit Criteria	No faults are present;
	Support for further Field introduction is available;
	Performance and stability statistics are within the limits defined in the contractual agreement;
	Applicable O&M procedures approved;
	Test results made available to each Party;
	Operational Field Trial Test Report is approved and signed by both Parties;
	Final Test Report is approved and signed by both Parties.

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# 4.5 Test Sheets & Report

- 4.5.1.1 The Test Sheets contain the results of executed tests for each test phase. These results can be positive (passed), negative (failed) or impossible to execute (inconclusive); and where applicable additional information may need to be recorded.
- 4.5.1.2 For each phase of testing a test report must be completed. In all cases the Test Report should be completed and signed by both Parties. The Test Report should at a minimum reflect what tests have been performed, whether the result was as expected or if deviations were observed.

# 4.6 Test Suites

4.6.1.1 The interconnect Test Suites required are shown below. Within each suite there are key areas of testing, which are shown below. Agreement to this needs to be confirmed through the Project Plan and then further detailed in the Test Guidelines.

	Test Suites		Tests Phases			
		ILT	NIT	FLT	OP	
1	Conformance tests: 1. Protocol conformance 2. Electrical conformance 3. EMC conformance 4. Local Operation Tests	X X X X X				
2	Interoperability tests: 1. End to end transmission 2. Network Synchronisation 3. SS7 signalling 4. Network routing 5. Network management		X X X X X X	X X X X	x x x x	
3	<ul><li>Stability and Security tests:</li><li>1. Load tests</li><li>2. Stress tests (fault situations)</li><li>3. Fraud</li></ul>	x	X X X	X X		
4	<ol> <li>Service tests:</li> <li>Services from TSTT to Telco</li> <li>Services from Telco to TSTT</li> <li>Changed services</li> <li>New services</li> </ol>			x x x x	x x x x	
5	<ul> <li>Billing:</li> <li>1. Charging calibration</li> <li>2. Charging per service (CDRs)</li> <li>3. Billing aggregates</li> <li>4. Billing service</li> </ul>	x	X X	X X X X	X X X X	
6	Processes: 1. Service & Element			x	x	
	<ul><li>management</li><li>2. Operation processes</li><li>3. Maintenance processes</li><li>4. Customer processes</li></ul>			X X X	X X X	

4.6.1.2 The Test Suites are described in overview below. CHAPTER 4: TESTING

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#### **Conformance Testing**

4.6.1.3 The test suite confirms that the protocol supported meets the technical specification. Conformance testing deals with the behaviour of the protocol, and not with processing capacity under critical load conditions. It may also address invalid behaviour testing.

## Interoperability Testing

4.6.1.4 An Interoperability test involves at least two networks that are interconnected. In these tests it is verified whether elements of a procedure (including parameters) across the common boundary, are in compliance with the specification. The test sequences across the point of observation are not generated or inserted at the point of observation itself, but at interfaces contained within the systems under test.

#### Stability and Security Test

4.6.1.5 Stability tests consist of load and stress tests. Load tests are tests of the interconnection in situations of relatively heavy use. Stress tests are tests in which fault situations are introduced in the interconnection. The point of observation is the common boundary between the interconnected systems. In both tests it should be verified that the interconnection works under extreme circumstances. Network fraud testing is included in this test suite.

#### Service Test

4.6.1.6 These tests ensure the services supplied by either Party will operate in a manner that is compliant with the Service Descriptions and technical characteristics.

#### Billing

4.6.1.7 Billing verifies that the charging mechanism (based on CDR generation) supported by both parties is accurate and meets the agreed specification.

#### Processes

4.6.1.8 Process tests involve the testing of operation, maintenance and customer processes. They also include documentation, training of personnel and support of the interconnection. In some of these areas an actual test case cannot be written to test a process and the relevant people, as part of the exit criteria, will review the process.

## 4.7 Fault Handling Procedure To Be Used in Testing Phases

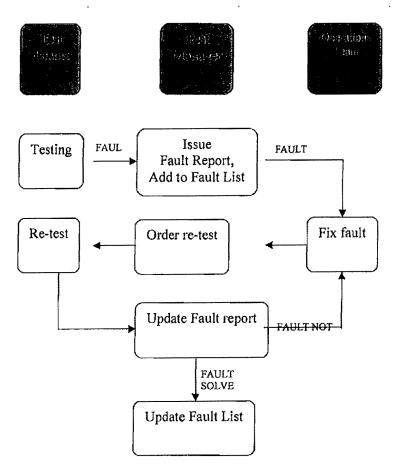
- 4.7.1.1 If a Fault is identified in a testing phase it should be registered and the test manager for the phase informed. The Fault will then be classified, passed on to the installation / development team and resolved. When the Fault is resolved the new implementation may need to be tested again and the result recorded. When the retest is successful, the Fault can be closed on the Fault list that the test manager controls.
- 4.7.1.2 The test teams of either party can detect faults. The test manager for the corresponding test phase will issue a fault report in the format set out in Appendix II and register it on the fault list in the format set out in Appendix III. The fault report shall include fault classification. The classification is defined by mutual agreement between the test managers. If there is a conflict about the classification, the Overall Test Managers will be consulted.
- 4.7.1.3 The fault report and fault list will use the same numbering convention so that a fault number will relate to only one specific fault throughout the end to end fault resolution process. The numbering convention consists of x.y. Where x indicates the phase

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number when the fault was identified, and y is a number allocated to identify the fault, starting at one.

Phase Name	Phase Number (ie x.y)
Individual Location Tests	1.y
Network Interconnection Tests	2.y
First Live Traffic	3.y
Operational field trial	4.y

- 4.7.1.4 The operations and development team is responsible for resolving the fault. Once the fault is resolved the team updates the fault report with details of the solution. If the fault is solved before the end of the related test phase, the test manager organises a retest, otherwise the Overall Test Manager should arrange a retest. When the retest is successful the fault report can be closed. If the retest is not successful, the fault is sent back to the operations and development team. Again re-testing is necessary until the fault is resolved.
- 4.7.1.5 Where faults have created extreme delays due to repeated fault location, resolution and re-testing, the Overall Test Managers will decide whether to progress with the fault resolution. This will avoid a loop in the fault handling procedure.



# 4.8 Fault Classification

4.8.1.1 There are five categories to which a fault can be allocated during testing. A fault must always be allocated to one of these categories and for each fault it should be

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determined which operator will take responsibility for resolving it. Solutions for the faults should be made available within the time agreed for each fault category.

Fault Category	Response Time	
Fatal	Immediately	
Inadmissible	3 days	
Major	4 weeks	
Minor	before Operational Phase	
Imperfections	before general availability	

#### **Fatal Faults**

- 4.8.1.2 A fault is classified 'fatal' if this fault causes a situation in which it is not possible or useful to continue testing. Fatal faults have a significant impact on the test schedule, as all test activities will be stopped until the fault is rectified. Fatal faults therefore need to be attended to immediately.
- 4.8.1.3 Inadmissible faults. Inadmissible faults are faults which are not allowed in the operational phase but can be allowed in a test phase. Although a test phase can be continued if such a fault occurs, the solution for the fault has to be available within 3 days unless otherwise agreed.

#### **Major Faults**

4.8.1.4 Major faults affect the quality of the service in operational status. After a major fault has been detected, the solution for the problem has to be available within four weeks unless otherwise agreed.

#### **Minor Faults**

4.8.1.5 Minor faults also affect the quality of a service in an operational situation. However these faults are not perceived by an end-user and are less urgent to resolve. Both parties need to determine the period of time in which the solution for these faults need to be made available/ deployed and must be completed by at least the start of the operational phase.

#### Imperfections

- 4.8.1.6 Imperfections are all faults that do not affect the Quality of Service. The faults must be solved before general availability. Depending on the possibility, the solution may be covered in future upgrades.
- 4.8.1.7 Where there are issues concerning fault classification and/or the cause of the fault, the Overall Test Managers should be consulted.
- 4.8.1.8 Faults have to be documented in the corresponding test reports and handled as described in the previous section.

# 4.9 Additional Roles and Responsibilities for Testing

4.9.1.1 The acceptance of the interconnection is the responsibility of both parties who must verify the quality of the testing process and the test results. The following sections describe the roles and responsibilities that need to be filled in order to keep the test process clear and manageable. The project plan will contain details of test organisations.

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## Overall Test Manager

1 1

4.9.1.2 At each stage of testing there needs to be regular contact between the operators to track the progress of testing and resolve any issues that could arise. Each operator will appoint a person who is in charge of testing and known as the Overall Test Manager. The Overall Test Managers should overview all test activities, planning and constantly monitor interconnect testing progress.

# 4.9.1.3 The Overall Test manager has the following responsibilities:

- completion of the project plan
- tracks progress of each test phase
- checks entry and exit criteria for each phase
- overall ownership of the Fault List for the operator
- confirms completion of all test phases
- delivery of the final test report
- delivery of interconnection to the O&M phase.

# Test Manager

4.9.1.4 For each phase a test manager will be assigned with the following responsibilities:

- detailed planning of the test phase (documented in the Test Guidelines);
- execution of the tests for the corresponding test phase;
- reporting testing progress to the Overall Test Manager;
- issuing Fault Reports;
- maintaining the Fault Report list (with the Overall Test Manager);
- completing the Test Report.

# 4.10 Interconnect Testing Documentation

## 4.10.1.1 The interconnect testing documentation is as follows

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	Document	Responsible persons
Overall	Project Plan	Overall Test Manager
	Fault List	Overall Test Manager
	Final Test Report	Overall Test Manager
Individual	ILT Test Plan	ILT Test Manager
Location Test		
	ILT Test Guidelines	ILT Test Manager(s)/ ILT Testers
	Fault Reports	ILT Test Manager(s)
	ILT Test Report	ILT Test Manager(s)
Network	NIT Test Plan	NIT Test Manager(s)
Interconnection		
Test		
	NIT Test Guidelines	NIT Test Manager(s)/ NIT Testers
	Fault Reports	NIT Test Manager(s)
	NIT Test Report	NIT Test Manager(s)
First Live Traffic	FLT Test Plan	FLT Test Manager(s)
	FLT Test Guidelines	FLT Test Manager(s)/ FLT Testers
	Fault Reports	FLT Test Manager(s)
	FLT Test Report	FLT Test Manager(s)
Operational	OFT Test Plan	OFT Test Manager(s)
field trial		
	OFT Test Guidelines	OFT Test Manager / OFT Testers
	Fault Reports	OFT Test Manager(s)
	OFT Test Report	OFT Test Manager(s)

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CHAPTER 4: TESTING

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# 4.11 Appendix I. Summary of Interconnect Tests

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SECTION I – PHYSICAL INSPECTION	SECTION IV - TEST CALLS
Ensure joint box termination points meet agreed	Origination
standard.	
Ensure networks of both Parties are prepared to	Routing
agreed standard	
Ensure both Parties have interfaces that conform to	Destination
agreed standards	
Test electrical wiring & grounding	Transmission Quality
	Billing Verification/Validation
	Billing Record Processing
SECTION II – LINK TESTS	SECTION V - SYSTEM FAILURE & ALARM
	TESTS
Link Code Signalling Compatibility	Verify all relevant alarm points are wired.
Framing Compatibility	Generate system alarm and validate expected
	notification.
Bit Error Test (BET): 0 over 24 hrs.	Test system failure and recovery alarms.
Frame Loss: 0 over 24 hrs.	Conduct system back-up & recovery procedures.
DSX-1 Standards Volt Standard	Perform system security tests.
SECTION III – C.7 SIGNALLING TESTS	SECTION VI – OPERATIONAL FIELD
	TRIAL
Link State Control	Operate system for agreed period.
Transmission & Reception Control	Verify system performance under load conditions.
Signalling Link Management	Monitor service quality during high traffic.
Changeover	Modify and re-test as required.
Changeback	
Forced Rerouting	
Controlled Rerouting	
Signalling Route Management	
Circuit Supervision	
Normal Call Set-up Ordinary Calls	

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# 4.12 Appendix II. Fault Report Template for Testing

	pleted by one of the test-teams	<u>)</u>
Test Case Number Description of test		
Description of ites		
Expected result:		
Observed result:		
Comments (conce	rning the configuration, relate	ed problems, consequences, hints)
Name:	Date:	Signature:

# Part II (to be completed by test managers)

Required action(s)		Who	Deadline	Fault classification (Note 1)
Test Manager Telco	Date:		Signature:	<u>I</u>
Test Manager TSTT	Date:		Signature:	

Note 1:-

1 1

\* = imperfection, \*\* = minor, \*\*\* = major, \*\*\*\* = inadmissible, \*\*\*\*\* = fatal

# Part III (to be completed by operations & development team)

Action taken to resolve fault:			
Remaining open issues:		Re-test necessary (Y/N)	
Name:	Date:	Signature:	

# Part IV (to be completed by the test team)

Result of the re-tes	t:	
Comment:		
Name:	Date:	Signature:

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# 4.13 Appendix III. Fault List

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Reference Number	Date Logged	Owner	Priority	Status	Date Expired	Description	Action By
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Problem List between TSTT and Telco

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# **Tariff Schedule**

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All tariffs in this schedule are presented excluding applicable taxes but are subject to those taxes at the prevailing rate.

Call Durations are specified in this document as a charge of TTS per 60s. However, pursuant to the terms of the Service Descriptions, Calls will be measured to an accuracy of 1/10<sup>th</sup> of a second, and the Charges will be the sum of the month's measurements rounded to the nearest minute. Further detail of the billing process and procedures can be found in the Joint Working Manual.

## PART 1. JOINING SERVICES

## **Optical In-span Joining Service**

\* The following table provides unit costs of the elements of the investment undertaken by the Service Provider. No one-off or monthly charges shall be valid unless agreed in advance in writing by Lisa Communications in advance of any work being performed.

# Optical In-span Joining Service

One-off (TT\$)		Monthly recurring	(TT\$)
One-off Joining fee (VAT inclusive)	Note 1	Recurrent Joining fee (VAT inclusive)	N/A
Fiber Provision Charge (VAT inclusive)	Note 1	Ducting (VAT inclusive)	TT <b>\$</b>

100 100-20-

1. One off joining fees may be applicable after the date of execution of this Agreement in the event that Lisa Communications requests additional physical interconnection capacity which requires TSTT to construct additional facilities to satisfy such a request.

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Incoming International Call Termination to PSTN Service

Usage Charges

Payable by Service Taker to Service Supplier

charge	Call duration charge TT\$ per 60 secs Yi 2	charge	charge

# International Carriage Charge

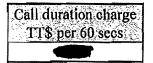
Ca	l durat	ion charge
T	T\$ pei	60 secs
	1	

# Incoming International Call Termination to PLMN Service

# Usage Charges

Payable by Service Taker to Service Supplier. Charges for this service consist of Transit Charges. Transit Charges are applied only when the Service Supplier transits the call over its fixed network for termination on a mobile network.

**Transit** part



# Mobile Termination part

- 14									
	Call duration	Ca	Il duration	Call dur	ation	Call durat	ion	Call duration	
	charge	7	charge	charg		charge	<ul> <li>Interview State</li> </ul>	oharge	
	TT\$ per 60 secs	TT\$	per 60 secs	TT\$ per 6	0 secs	TT\$ per 60	secs	T\$ per 60 secs	
	Yr 1		<u>Yr 2</u>	Yr :	<b>)</b>	Yr 4		Yr 5	
					F I				

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# PART 2. TERMINATION SERVICES

# **PSTN Terminating Access Service**

# **Usage Charges**

Payable by Service Taker to Service Supplier

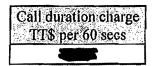
	Call duration charge TT\$ per 60 secs Yr 1,	charge	charge	charge TT\$ per 60 secs Yr4	charge	(Inc.)
Γ						

# **PLMN Terminating Access Service**

# **Usage Charges**

Payable by Service Taker to Service Supplier - Charges for this service consist of Transit Charges. Transit Charges are applied only when the Service Supplier transits the call over its fixed network for termination on a mobile network.

# Transit part



# Mobile Termination part

Call duration	Call duration	Call duration	Call duration	Call duration
charge	charge	charge	charge	charge
TT\$ per 60 secs	TT\$ per 60 secs	TT\$ per 60 secs	TT\$ per 60 secs	TT\$ per 60 secs
Yr 1	Yt 2	Ýr 3	Yr 4	Yr 5

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# International Carriage Charge

Call duration	charge	Call duration	Call duration	Call duration
charge		charge	charge	charge
TT\$ per 60 secs		TT\$ per 60 secs	TT\$ per 60 secs	TT\$ per 60 secs
Yr 1		Yr 3	Yr4	Yr 5

Note: The effective date of the introduction of the tariffs for incoming International Call Termination to PSTN Service and Incoming International Call Termination to PLMN Service shall be the 1st April 2012. In the interim the tariffs from the previous Interconnect Agreement shall apply and the parties shall notify their respective overseas partners of the change in rates as set out in this Tariff Schedule.

The Parties expressly acknowledge that the International Carriage Charge is not an interconnection charge., i.e.

The parties further agree that they will offer to international carriers desirous of terminating international traffic into Trinidad and Tobago the following.

- (i) for calls terminating on a domestic mobile network a rate that shall be no less than USS
- (ii) for calls terminating on a domestic fixed network a rate that shall be no less than USS

# PART 3. SPECIAL ACCESS SERVICES

# **Emergency Services Access Service**

# **Usage Charges**

Payable by Service Taker to Service Supplier

Call duration charge TT\$ per 60 secs Yr 1	charge	internal duration charge TT\$ per 60 secs Yr 3	all/duration charge TT\$ per 60 secs Yr 4	Call duration charge TT\$ per 60 secs Yt 5
	¢			

# **National DQ Services**

**Usage Charges** Payable by Service Taker to Service Supplier

Call Setup charge TT\$ per call 1

# International DQ Service

# **Usage Charges**

Payable by Service Taker to Service Supplier



# National Free-phone Access Service

# **Usage Charges**

. . .

Payable by Service Supplier to Service Taker, where Service Taker is a Domestic **Mobile Operator** 

	<b>#</b> *	۰ ور	ه <sup>مو</sup> تر	
Call duration	Call duration		・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	Call duration
	charge TT\$ per 60 secs	· 2월 - 2월	charge TT\$ per 60 secs Yr 4	charge TI\$ per 60 secs Yr 5
	Yr 2.	Yr3		9
				Page 6 of 7

# Usage Charges Payable by Service Supplier to Service Taker, where Service Taker is a Domestic Fixed Operator

charge	Call duration charge TT\$ per 60 secs Yr 2	charge	charge	charge
		-		

# **International Freephone Access Service**

# Usage Charges

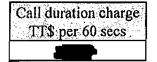
Payable by Service Supplier to Service Taker

-

Call Se	tup Charge
TT\$ p	er 60 secs
No	charge

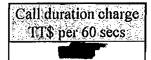
Transit Charges for Mational and International Freephone Access Services

Payable by Service Supplier to the Party providing Transit Service



PART4. PSTN TRANSIT SERVICES PSTN Transit Service

Usage Charges Payable by Service Taker to Service Supplier



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