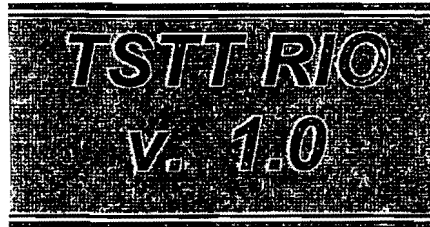


## Reference Interconnection Offer

### Legal Framework



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*RG*

**THIS AGREEMENT** is made this            day of            , 2012, between,

**COLUMBUS COMMUNICATIONS TRINIDAD LIMITED DBA "FLOW"**, a limited liability company duly incorporated and existing under the laws of Trinidad and Tobago, having its principle place of business at 29 Victoria Square, Port of Spain, Trinidad, West Indies ("CCTL" or the "Company"); and

**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").

#### **RECITALS**

- A. Pursuant to Concessions issued by the Minister, CCTL is entitled to operate a domestic Public Telecommunications Network and to provide domestic and international Public Telecommunications Services in Trinidad and Tobago.
- B. Pursuant to its Concessions, TSTT is entitled to operate its Public domestic fixed, domestic mobile and International Telecommunications Networks and to provide domestic fixed, domestic mobile and international public telecommunications services in Trinidad and Tobago.
- C. TSTT and CCTL first entered into an Interconnect Agreement on June 20, 2007 and the term of the original agreement having expired, the Parties are desirous of entering into a new Interconnect Agreement so as to continue to provide interconnection, on the terms and conditions hereinafter set forth.

#### **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;
  - 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.

- 2.1 This Agreement takes effect on the date it is approved and has been executed and continues in full force and effect until 31<sup>st</sup> March, 2017 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 22, or replaced with a new Agreement. At any time within the year prior to the expiration of the five-year term referenced above, either Party may request that the Parties commence negotiations for an agreement to replace this Agreement.
- 2.2 The Parties agree that in the event that the period set out in Clause 2.1 expires and the Parties have not concluded an agreement replacing this Agreement, the terms and

conditions of this Agreement shall continue in full force and effect until such time as a replacement agreement is negotiated, provided however, that neither Party shall be obliged to continue to provide service if no agreement is reached and approved within an initial period of nine (9) months of the conclusion of the term referenced in Clause 2.1.

### **3. Interconnection**

- 3.1 Subject to the provisions of this Agreement, TSTT shall connect and keep connected the TSTT System to the CCTL System and CCTL shall connect and keep connected the CCTL System to the TSTT System in the manner described in this Agreement in order to convey data, 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 CCTL 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 as described therein unless otherwise agreed to by the Parties.
- 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 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, in advance in writing on a timely basis, the other Party of developments within its System that may 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).
- 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 so notify the other Party as soon as practicable and in any event at least six (6) months in advance in writing, so that the other Party has a reasonable opportunity to attempt to meet such standards or adjust its System accordingly. 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).

- 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 mutually agreed to by the 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, data, Messages or Calls of any category, unless the Parties have agreed to convey data, Messages or Calls of that category pursuant to a Service Description. In the event that data, Messages or Calls not expressly provided for are handed over and accepted for conveyance, the following supplementary charges will be applied: (i) where the data, 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 data, 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 and with agreement between the Parties.
- 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.

- 9.3 Payments shall be made in an agreed and reasonable 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 Repo Rate of the Central Bank of Trinidad and Tobago Limited from time to time in force, 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 deduct the amount it is owed from any amount it owes the other Party.
- 9.5 The Parties may agree in advance in writing to make payments on a "net" basis whereby if one Party is owed an amount by the other Party, the first Party may deduct the 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 9.7. Nothing in this Clause shall be taken as permitting a Party to withhold payment of an amount that is not in dispute.
- 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

Either Party may from time to time notify in advance in writing, the other of new Charges or changes to specific Charges,

- i) where the Authority has approved new Charges or changes to specific Charges; or

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- 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 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, if applicable, shall be carried out in accordance with the relevant Service Description and all reasonable endeavours shall be used to ensure that all information necessary to produce a complete invoice for such Services is obtained in a timely manner.
- 11.5 Any failure to deliver invoices in accordance with Clause 11.2, 11.3 or 11.4 shall not be deemed to be a waiver 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.
- 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 prohibiting a Party to share Telecommunications Facilities or to provide co-location.
- 12.2 Associated co-location or other agreed sharing of a Party's Telecommunications Facilities may be provided under a separate agreement between the Parties and scheduled hereto.

## 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 prompt and 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 National 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, shall use consistent and uniform dialling patterns and shall not impose anti-competitive non-uniform dialling patterns on calls between the subscribers on the Parties' networks.

**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.
- 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 reasonable safety and protection requirements contained in this Agreement (including, without limitation, the Joint Working Manual);
  - b) do not intentionally endanger the safety or health of the officers, employees, contractors, representatives, agents, invitees or subscribers of the other Party;
  - c) do not intentionally interfere with or cause any impairment to or deterioration in the operation of the other Party's System;
  - d) do not intentionally 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 in advance in writing 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 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 data, Calls or Messages (i), where the volume of such data, Calls or Messages materially exceeds that which could reasonably be expected and such traffic materially and adversely impedes the transmission of other data, Calls or Messages, or (ii) such data, Calls or Messages are otherwise significantly 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 data, Calls or Messages, in the event of (i) payment not being received from a Third Party in respect of data, Calls or Messages, or (ii) fraud being carried out against the Party, provided that the same action is taken in respect of all affected data, 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 immediately inform the other of such circumstances by phone and written notice.
- 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, and shall require that such persons be bound in writing with obligations equivalent to the terms contained in this Clause 18.
- 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 to provide commercial advantage to its

Customer Facing Divisions or for any other reason than the stated purpose for which it was disclosed.

- 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.
- 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) business days of receipt of such request.

## 19. Third Party Equipment

- 19.1 Use by a Party 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 Party 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 Party of equipment owned by or shared with a third party shall be the sole responsibility of the Party, and the Party 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. Subject to a prior mutual agreement in writing between the Parties on developed IPR, each Party grants to the other a non-exclusive,

royalty free licence to use other 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.
- 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 in writing 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 shall 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 to 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 contemporaneous 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 limitation, licence changes, Authority determinations, and court decisions that necessitate the amendment of this Agreement);
- b) a requirement arises that is not technically or financially feasible;
- c) a requirement arises for space that is not available; or
- d) 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 processes outlined in Clause 33 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 reasonable advance 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 as specified.
- a) Either Party may suspend where suspension is necessary to deal with a material degradation of either Party's telecommunications network or services with advance written notice, where possible, but in any event with immediate oral notice stating reasons before such suspension occurs.
  - b) Either Party may suspend where the other Party fails to pay any undisputed invoice or payable undisputed portion of an invoice within thirty (30) days of deemed 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 (24) twenty-four hours notice where it reasonably believes that the other Party is engaged in acts or omissions which impair the integrity or security of the Party's network or services, and may suspend on (5) five days advance written 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 thirty (30) days, and the suspended Party fails to remedy the acts or omissions giving rise to the suspension during that thirty (30) day period subsequent to the advance written 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 the other Party knowingly engages in conduct which is materially 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 2 (two) business days of advance written 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 advance written 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 or 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 and is not immediately replaced or re-issued;
- i) Either Party may suspend or terminate within two (2) days advance written notice 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 ninety (90) days advance written notice suspend or terminate a Service if circumstances arise whereby it is no longer technically feasible for that Party to provide that Service, provided however, that in the unlikely event that it is no longer technically feasible to provide any Service the Party shall be entitled to suspend or terminate this Agreement upon thirty (30) days advance written notice; or
- k) Either Party may terminate this Agreement 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, it shall promptly be restored 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. Except in the case of Force Majeure, 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 terminate this Agreement during a dispute in respect of any Service unless authorised to do so by the Authority, a dispute resolution settlement or a court of law.

#### 24. Effects of Termination

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 or expiry and such termination or expiry 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 best 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 within 24 hours 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 immediately notify the other of such cessation.
- 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 25.5, 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 [REDACTED] Dollars ([REDACTED]) for any one incident or series of events arising from a single incident and to [REDACTED] Dollars [REDACTED] 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.
- 26.6 Subject to the express terms of this Agreement and 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 provide sufficient funds to satisfy or pay the claim; or
    - ii) give notice to the Indemnified Party directing it to take such action (including legal proceedings) in respect of the claim as notified at the Indemnifying Party's expense; and
  - c) the Indemnifying Party must cause the Indemnified Party to provide and maintain, in sufficient advanced funds in sufficient time to pay all reasonable costs and expenses of any action or settlement directed by the Indemnifying Party under Clauses 26.8(b) and 26.8(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, provided indemnifying Party has advanced sufficient funds to sustain the action or defense or deposited same in escrow for this purpose and
    - 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 CCTL and TSTT.
- 27.4 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 to the best of its knowledge 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 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;
- a) 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
  - b) is duly qualified to act as a Public Telecommunications Network and Services 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**

- 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 Party at any 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.

**31. Entire Agreement**

- 31.1 This Agreement and to the extent applicable governmental regulations, applicable mandated tariffs or other applicable government mandated 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.

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### 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 this Clause 32 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 by electronic mail scanned in PDF file, 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.
- 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, facsimile transmission, or sent in scanned PDF file via electronic mail. 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.

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33.3 All notices under this Agreement shall be sent:

To TSIT -

Telecommunications Services of Trinidad and Tobago Limited

1 Edward Street, Port of Spain, Trinidad

Attention: CEO

With scanned PDF file copy sent via electronic mail to:

Executive Vice-President, Fixed Line, Legal, Regulatory & Carrier Services

To CCTL dba Flow

29 Victoria Square,

Port of Spain, Trinidad, W.I.

ATTN: The Managing Director

With scanned PDF file copy sent via electronic mail to:

Regulatory Manager

#### **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, subject to the provisions of the Act, subsidiary legislation and the Parties' respective Concessions, to use the following procedures to resolve the Dispute prior to referring it to the Authority under the Interconnection Regulations:

34.1.1 A Party that wishes to invoke this internal dispute resolution procedure 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.
- 34.1.3 In the event that the dispute is not resolved within fifteen (15) calendar days of receipt of the notice under Clause 34.1.1, the Parties shall agree to refer the dispute to the Authority for resolution.
- 34.1.4 Nothing herein shall prevent a Party from using other internal dispute resolution procedures to settle the matter agreed to by the Parties in writing up to and until the resolution of the dispute by the Authority.
- 34.1.5 Providing there is no fundamental error at law or no fundamental or manifest error of fact, the final Authority determination award shall be final and binding on the Parties.
- 34.2 Nothing herein shall prevent a Party from:
- 34.2.1 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 this Clause; and
- 34.2.2 Seeking recourse from the High Court of the Republic of Trinidad and Tobago subject to the conclusion of either 34.1.3 or 34.1.4 above..
- 34.3 For greater certainty, this process shall not apply to the resolution of faults pursuant to Paragraph 3.5.4 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 press, 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 upon receipt of the written request notice.

**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) [REDACTED] in respect of any one incident and [REDACTED] in the aggregate for public liability; and

b) [REDACTED] in respect of any one incident and [REDACTED] in the aggregate for product liability,

in respect of any twelve month period.

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 may 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, including but not limited to, in the joint names of CCTL 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 the Republic of Trinidad and Tobago.

37.2 The Parties agree that any legal action, suit, or proceeding brought by it in any way arising out of the Agreement must be brought in the jurisdiction of the courts of the Republic 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.

(Signature page follows)

RG



Signed as an Agreement on the 13<sup>th</sup> day of JULY, 2012

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

By: Lisa Spaid

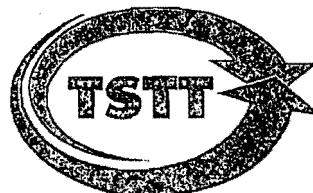
Witness: Michelle Spaid

Signed for and on behalf of COLUMBUS COMMUNICATIONS  
TRINIDAD LIMITED DBA FLOW

By: [Signature]

Witness: Dawson

[Handwritten mark]



## Reference Interconnection Offer

### Definitions



PS

## Definitions

Acceptance Testing	The process described in Paragraph 3.4 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 Call	The System established and operated by TSTT under its Concession. 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 2.6.5.1 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 SONET based transmission facility operating at a minimum of OC3 (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 3.5.1.2 of the Joint Working Manual.
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.
Circuit Termination	A technical unit at which the Optical In-Span Joining Service is terminated and

Unit or CTU	which has the technical specifications set out in the Joint Working Manual.
Claim	Has the meaning given to in Clause 26.8
CLI (Calling Line Identification)	The SS7 out of band signalling parameter which automatically transmits the directory number associated with the Subscriber Connection from which a Call is generated, to the called customer.
Concession	Has the meaning ascribed to it in the Act
Concessionaire	The holder of a Concession
Confidential Information	<p>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:</p> <ul style="list-style-type: none"><li>(a) Which is or becomes part of the public domain (other than through any breach of this Agreement or any obligation of confidence); or</li><li>(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</li><li>(c) Which has been independently developed by another Party; or</li><li>(d) Which is in the possession of or is known by the Receiving Party prior to its receipt from the Disclosing Party;</li><li>(e) Which is disclosed to satisfy a legal demand by a court of competent jurisdiction or by a government agency, provided<ul style="list-style-type: none"><li>• the Disclosing Party requests to the court or the government agency that it keep such information confidential; and</li><li>• 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</li></ul></li><li>(f) which is authorised to be disclosed by the Disclosing Party in writing to the Receiving Party to the extent of that authority; or</li><li>(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</li></ul>
Critical Link Failure	Has the meaning given to it in Paragraph 3.5.1.5 of the Joint Working Manual.
Critical Route Failure	Has the meaning given to it in Paragraph 3.5.1.5 of the Joint Working Manual.
CTU Patch Panel Frame	The interface between the CTU multiplexing equipment and the respective Service Supplier/Service Taker switch.
Customer Facing Division	A division which deals directly with Subscribers and includes those responsible for sales and marketing of TSTT services, including TSTT mobile services.
Dial Set-up Delay	Has the meaning given to it in Paragraph 2.6.6 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 set out in the Tariff Schedule and chargeable pursuant to Paragraph 3.3.2.6 of the Joint Working Manual
Electromagnetic Compatibility (EMC)	A set of requirements more particularly described in Paragraph 2.3.5 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 2.4.1.3 of the Joint Working Manual.
Fatal Fault	Has the meaning given to it in Paragraph 5.8.1.2 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 3.5.2.1 of the Joint Working Manual.
Fault Control Manager	A person with the responsibilities outlined in Paragraph 3.2.1.1 (V). of the Joint Working Manual.
Fault Log Number	A log number given to a Fault in accordance with Paragraph 3.5.2.2 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 5 of the Joint Working Manual.
First Live Traffic	The third phase of interconnect testing as more particularly described in Chapter 5 of the Joint Working Manual.
Fixed to Mobile Call	A Call from the PSTN to a PLMN in the Republic of 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, extreme 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.
Forecasting Meetings	The meetings more particularly described in Paragraphs 3.3.1.3 and 3.3.1.6 of the Joint Working Manual.

Free-phone Access Service	The service of that name as more particularly described in the Service Description Schedule
Free-phone number	A special type of PSTN number whereby domestic PSTN subscribers will not be charged for calls to that number
Imperfections	Faults identified in testing which are more particularly described in Paragraph 5.8.1.6 of the Joint Working Manual.
Inadmissible Fault	A fault identified in testing which is more particularly described in Paragraph 5.8.1.3 of the Joint Working Manual.
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 5 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 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 PSTN network numbering prefixes specified in the Service Schedule which are supported by the TSTT Interconnect Switch Location, the CCTL Interconnect Point of Presence and designated other switches.
Interconnect Point of Presence (IPOP)	A location which is part of the CCTL System and which is specified in the Service Schedule as a location at which CCTL 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 3.2.5 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 CCTL System
Internally Detected Faults	Faults that a Party detects within its own network
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.
IP Indemnified Party	Has the meaning given to it in Clause 20.2
IP Indemnifying Party	Has the meaning given to it in Clause 20.2
IP Owner	Has the meaning given to it in Clause 20.3
Joining Service	Optical In-Span Joining Service as defined in the Joint Working Manual
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 3.2.1.1 of the Joint Working Manual.
Maintenance Party	Has the meaning given to it in Paragraph 3.6.1.2 of the Joint Working Manual.
Major Link Failure	Has the meaning given to it in Paragraph 3.5.1.5 of the Joint Working Manual.
Major Route Failure	Has the meaning given to it in Paragraph 3.5.1.5 of the Joint Working Manual.
Messages	3.1KHz speech and the associated CCSS7 protocol used to convey the call setup, clear down 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 3.5.1.5 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
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 3.5.1.2 of the Joint Working Manual.
Network Integration Tests	The second phase of interconnect testing described in Chapter 5 of the Joint Working Manual
Network Link	Uni-directional T1 transmission facilities initially within a SONET OC3 Carrier System.
Network Link Availability	Has the meaning given to it in Paragraph 2.4.1.2 of the Joint Working Manual
Non –Service Affecting	The Faults more particularly described in Paragraph 3.5.1.4 (ii) of the Joint

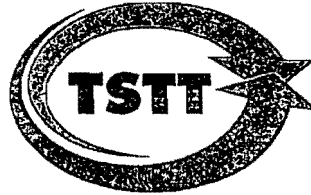
or NSA	Working Manual.
NPA	A geographic division within which no two (2) telephones will have the same seven (7) digit number
NXX	The current general configuration for exchange codes within each NPA
One-off Charges	Charges that are generally non-recurring and specified in the Tariff Schedule
Operational Field Trial	The third phase of interconnect testing as described in Chapter 5 of the Joint Working Manual
Operational Meetings	The meetings more particularly described in Paragraph 3.2.2.8 of the Joint Working Manual
Operations Manager	The representative with the responsibilities referred to in Paragraph 3.2.1.1 (II) 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 3.2.2.4 of the Joint Working Manual
Other Affected Party	Has the meaning given to it in Paragraph 3.5.2.5 of the Joint Working Manual
Overall Test Manager	The representative with the responsibilities outlined in Paragraph 5.9.1.3 of the Joint Working Manual
Parameter Schedule	The name given to the document in Schedule 4 of this Agreement
Party	Either CCTL or TSTT in this Agreement, according to context
Penalty Charger	Has the meaning given to it in Paragraph 3.3.7.1 of the Joint Working Manual
Penalty Payer	Has the meaning given to it in Paragraph 3.3.7.1 of the Joint Working Manual
Performance Reports	The reports submitted on a monthly basis more particularly described in section (3.2.4) of the Joint Working Manual .
Planned Maintenance	Maintenance falling within the description in Paragraph 3.6.1.1 of the Joint Working Manual
Planning Manager	A representative with the responsibilities outlined in Paragraph (3.2.1.1(IV) of the Joint Working Manual
PLMN	Public Land Mobile Network
PLMN Terminating Access Service	The Service of that name as more particularly described in the Service Descriptions
PLMN to PLMN Terminating Access Service	The Service of that name as more particularly described in the Service Descriptions
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 3.2.1.1(III) of the Joint Working Manual
Propagation Delay	Has the meaning given to it in Paragraph 2.6.7.1 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 Free-phone customer	A PSTN customer that has subscribed for a free-phone number
PSTN free-phone subscriber connection	The point connected to the PSTN where a telecommunications service is made available to a subscriber and that subscriber can be contacted by its free-phone number
PSTN Subscriber Connection	The point connected to the PSTN where a telecommunications service is made available to a Subscriber
PSTN Terminating Access Service	The service of that name as more particularly described in the Service Descriptions
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 3.5.3.4 of the Joint Working Manual
Restoration Times	The times for restoration of a Fault detailed on a service by service basis in the Joint Working Manual and Parameter Schedule.
Service	One of the services more particularly described in the Service Descriptions under the category of “Joining Services”, “Termination Services”, “Special Access Services”, “PSTN Transit Services”.
Service Affecting or SA	The Faults more particularly described in Paragraph 3.5.1.4 of the Joint Working Manual.
Service Descriptions	The name given to the document in Schedule 2
Service Implementation Meetings	The meetings more particularly described in Paragraph 3.2.2.2 of the Joint Working Manual
Service Quality Manager	A representative with the responsibilities outlined in Paragraph 3.2.1.1(VI) 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 2.4.1.4 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
SONET (Synchronous Optical Network)	The ANSI standard for synchronous data transmission on optical media.
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
Tariff Schedule	The name given to the document in Schedule 6 of this Agreement
CCTL System	The telecommunications System established and operated by CCTL pursuant to its Concessions.
Telecommunications	Any facility, apparatus or other thing that is used or capable of being used for

Apparatus	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 Guidelines	Has the meaning given to in Chapter 5 of the Joint Working Manual.
Test Report	Has the meaning given to in Chapter 5 of the Joint Working Manual.
Test Sheet	Has the meaning given to in Chapter 5 of the Joint Working Manual.
Test Specification	Has the meaning given to in Chapter 5 of the Joint Working Manual.
Test Suite	Has the meaning given to in Chapter 5 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, including TSTT in its capacity as Service Supplier
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 Paragraphs 2.6.2 and 2.6.2.4 of the Joint Working Manual. All trunk groups will be comprised of 64 Kbps channels capable of supporting voice and data calls.
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 3.5.3.7 of the Joint Working Manual



## **Offer of Terms and Conditions**

### **For Interconnection**

### **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 initially will comprise a single Optical Fibre cable run from a CCTL IPOP to the TSTT ISL within the same Interconnect Access Area. A second Optical Fibre cable run from a CCTL IPOP to the TSTT ISL may be implemented if diverse fibre routes are desired.
- 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 CCTL. 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.

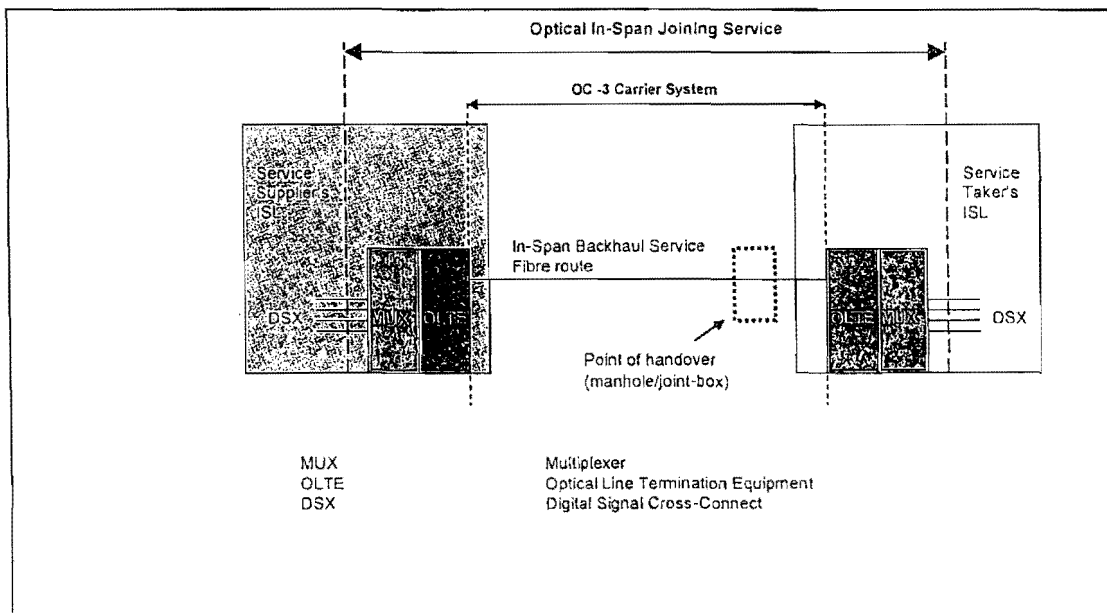


Figure 1 – The Carrier System

*BL*

## Service Descriptions – Schedule 2

### 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 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. 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 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 Working Manual.

## Service Descriptions – Schedule 2

### 1.4 Configuration

- 1.4.1 The Optical In-Span Joining Service will be available at the TSTT ISL and CCTL IPOP(s) specified in the Service Schedule.
- 1.4.2 The Optical In-Span Joining Service comprises:
- 1.4.2.1 One Service Supplier CTU;
  - 1.4.2.2 One Optical Fibre cable in ducts;
  - 1.4.2.3 One Service Taker CTU; and
  - 1.4.2.4 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 [REDACTED] 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. Any one-off charges shall be specifically described and shall be agreed upon in advance in writing by CCTL.
- 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. For the avoidance of doubt, this does not include Roaming Messages and SMS messages.

### 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 CCTL for the Charges specified in the Tariff Schedule for the Optical In-Span Joining Service. TSTT shall be entitled to invoice CCTL for monthly recurring charges following the expiration of each Billing Period.

– End of Service Description –



## 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. *Calls shall be presented by the Service Taker to the Point of Connection as conventional circuit switched traffic with a bearer capability of speech or 3.1 KHz only. Calls either originating outside Trinidad and Tobago or ultimately terminating outside of Trinidad and Tobago are not conveyed pursuant to this Service Description, that is, the PSTN Subscriber Connections shall both be within Trinidad and Tobago.*
- 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.

## Service Descriptions – Schedule 2

- 1.1.6 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.

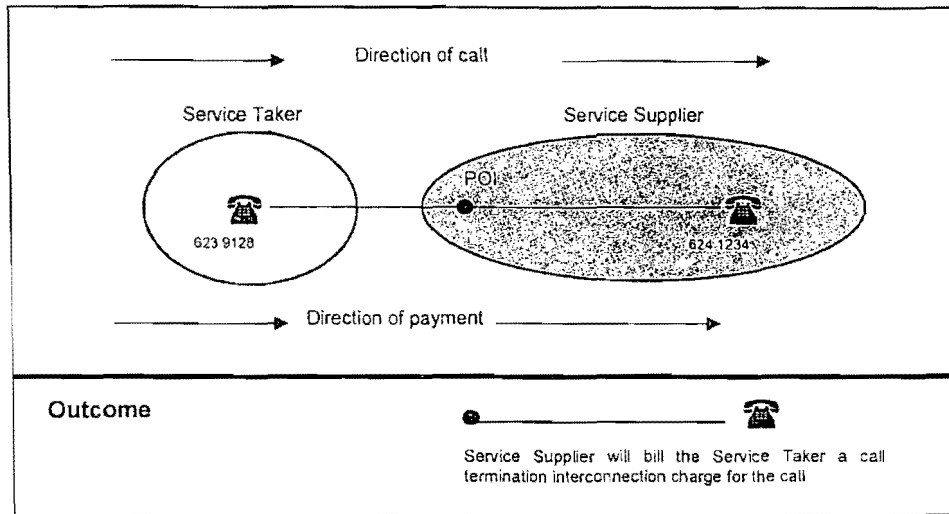


Figure 2 - Call originating in Service Taker's Network and terminating in Service Supplier's PSTN

### 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 Descriptions – Schedule 2

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 CCTL IPOPs 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 pursuant to Clause 8.2.

- 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.

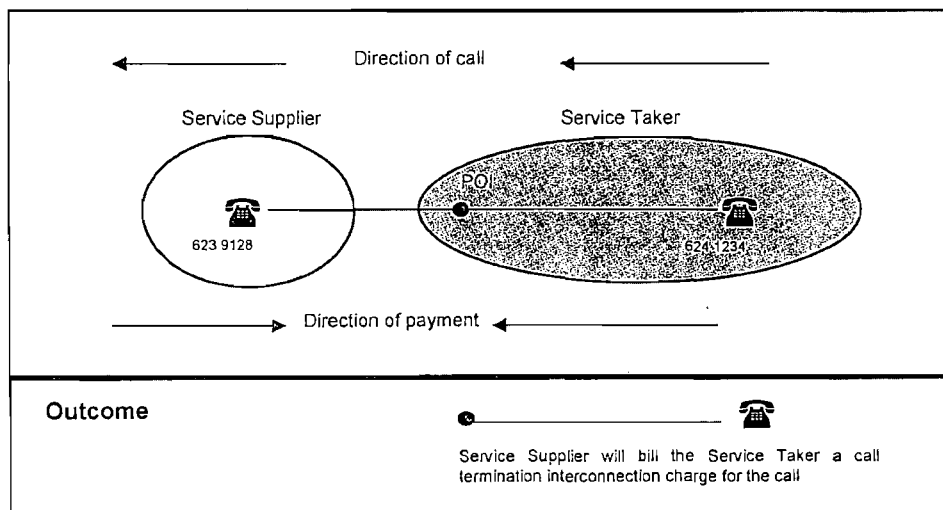


Figure 3 - Call originating in Service Taker's Network and terminating in Service Supplier's PLMN

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## Service Descriptions – Schedule 2

### 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

## Service Descriptions – Schedule 2

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. For the avoidance of doubt, this does not include Roaming Messages and SMS messages.

- 2.5.6 For the avoidance of doubt, the Tariffs Schedule does not include any sums that may be 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 -

**PART 3. SPECIAL ACCESS SERVICES**

**1 Emergency Services Access Service**

**1.1 Service Description**

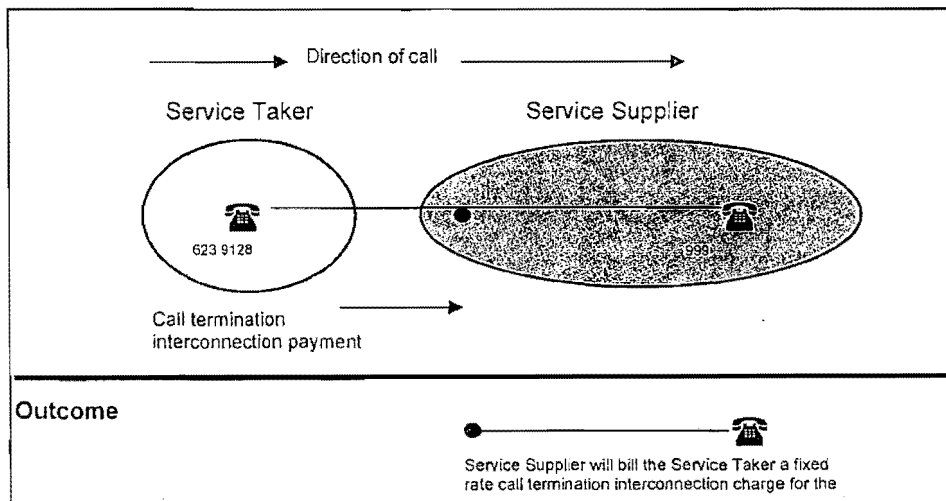
1.1.1 The Emergency Services Access Service will be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement.

1.1.2 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.

1.1.3 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.

1.1.4 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.

1.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.



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

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## Service Descriptions – Schedule 2

### 1.2 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, 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.
- 1.2.3 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.
- 1.2.4 Service Taker will be responsible for forecasting usage of the Emergency Services Access Service in accordance with the Joint Working Manual.
- 1.2.5 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.
- 1.2.6 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.
- 1.2.7 Service Taker will be responsible for handling all enquiries and complaints from an Emergency Centre about Calls conveyed via the Emergency Services Access Service.
- 1.2.8 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.



## Service Descriptions – Schedule 2

- 1.2.9 The Parties will co-operate to comply with any directions from appropriate Ministerial departments that may affect this service.

### 1.3 Quality of service

- 1.3.1 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.
- 1.3.2 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.

### 1.4 Configuration

- 1.4.1 The Emergency Services Access Service will be available at the TSTT ISL and CCTL 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 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.
- 1.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

### 1.5 Charges

- 1.5.1 The tariffs for Charges for the Emergency Services Access Service are specified in the Tariff Schedule.
- 1.5.2 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.
- 1.5.3 Usage charges include:
- Call Duration Charges depending on duration.
- 1.5.4 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.

**Service Descriptions – Schedule 2**

- 1.5.5 For each Answered Call, the Call Charge will be applicable when Call Start occurs.
- 1.5.6 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.
- 1.5.7 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.
- 1.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

**- End of Service Description -**

## Service Descriptions – Schedule 2

### 2 National DQ Service

#### 2.2 Service Description

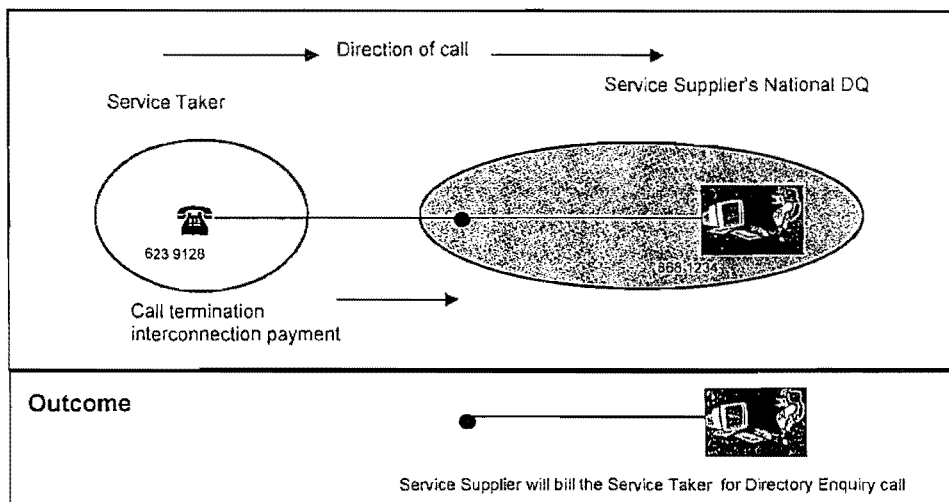
- 2.2.1 The National DQ Service will be provided by Service Supplier to Service Taker, in accordance with the terms and conditions of this Agreement.
- 2.2.2 The National DQ Service will provide conveyance of Calls originating from Service Taker Subscriber Connections addressed to the valid national 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.
- 2.2.3 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.
- 2.2.4 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.
- 2.2.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual
- 2.2.6 The call greeting will be specified in the Parameter Schedule.
- 2.2.7 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.
- 2.2.8 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.
- 2.2.9 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

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## Service Descriptions – Schedule 2

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.

- 2.2.10 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**

### 2.3 Specific Responsibilities

- 2.3.1 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.
- 2.3.2 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.
- 2.3.3 Service Supplier will be responsible for managing, operating and maintaining the Service Supplier Standard National Directory Database and associated computer systems and

## Service Descriptions – Schedule 2

providing training for the DQ Operators and the necessary working environment.

- 2.3.4 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.
- 2.3.5 Service Taker will be responsible for forecasting usage of the National DQ Service in accordance with the Joint Working Manual
- 2.3.6 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.
- 2.3.7 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.

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### 2.4 Quality of service

- 2.4.1 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.
- 2.4.2 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.

### 2.5 Configuration

- 2.5.1 The National DQ Service will be available at the Service Supplier ISL / IPOP(s) specified in the Service Schedule.
- 2.5.2 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.
- 2.5.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

### 2.6 Charges

- 2.6.1 The tariffs for Charges for the National DQ Service are specified in the Tariff Schedule.
- 2.6.2 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.
- 2.6.3 Usage Charges will include
  - Call Setup Charges.
- 2.6.4 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.
- 2.6.5 For each Answered Call, the Call Setup Charges will be applicable when Call Start occurs.
- 2.6.6 The duration of an Answered Call will be measured from Call Start to Call End. The duration of an Answered Call

**Service Descriptions – Schedule 2**

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.

- 2.6.7 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.
- 2.6.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

- **End of Service Description** -

## Service Descriptions – Schedule 2

### 3 International DQ Service

#### 3.2 Service Description

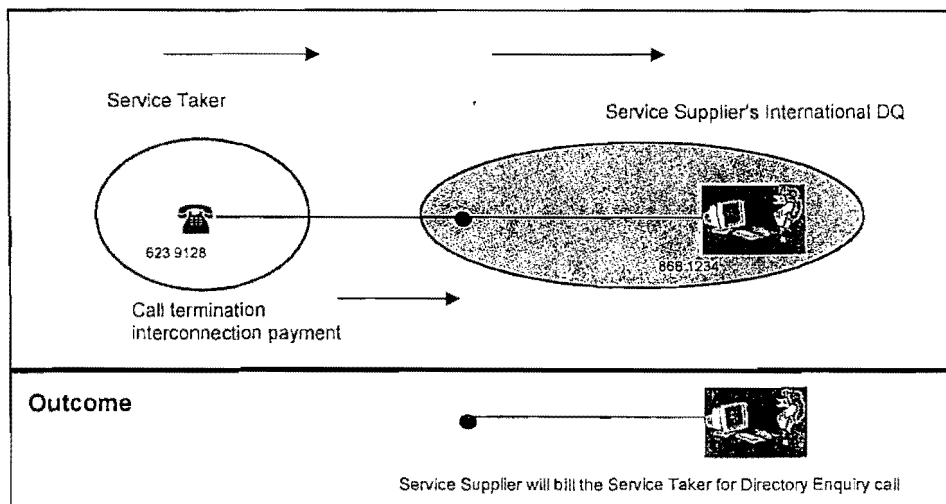
- 3.2.1 The International DQ Service will be provided by Service Supplier to Service Taker, in accordance with the terms and conditions of this Agreement.
- 3.2.2 The International DQ Service will provide conveyance of Calls originating on Service Taker Subscriber Connections from the Point of Connection 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.
- 3.2.3 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.
- 3.2.4 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.
- 3.2.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.
- 3.2.6 The call greeting will be specified in the Parameter Schedule.
- 3.2.7 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.
- 3.2.8 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.
- 3.2.9 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



## Service Descriptions – Schedule 2

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.

- 3.2.10 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.



**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**

### 3.3 Specific Responsibilities

- 3.3.1 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.
- 3.3.2 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.
- 3.3.3 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.

## Service Descriptions -- Schedule 2

- 3.3.4 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.
- 3.3.5 Service Taker will be responsible for forecasting usage of the International DQ Service in accordance with the Joint Working Manual.
- 3.3.6 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.
- 3.3.7 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.

### 3.4 Quality of service

- 3.4.1 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.
- 3.4.2 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.

### 3.5 Configuration

- 3.5.1 The International DQ Service will be available at Service Supplier ISL / IPOP(s) specified in the Service Schedule.
- 3.5.2 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.
- 3.5.3 Service Supplier will undertake the necessary routing and

## Service Descriptions – Schedule 2

translation for all codes that require routing or translation across its System.

### 3.6 Charges

- 3.6.1 The tariffs for Charges for the International DQ Service are specified in the Tariff Schedule.
- 3.6.2 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.
- 3.6.3 Usage Charges will include:
- Call Setup Charges.
- 3.6.4 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.
- 3.6.5 For each Answered Call, the Call Setup Charge will be applicable when Call Start occurs.
- 3.6.6 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.
- 3.6.7 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.
- 3.6.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

- End of Service Description -

## PART 4. PSTN TRANSIT SERVICES

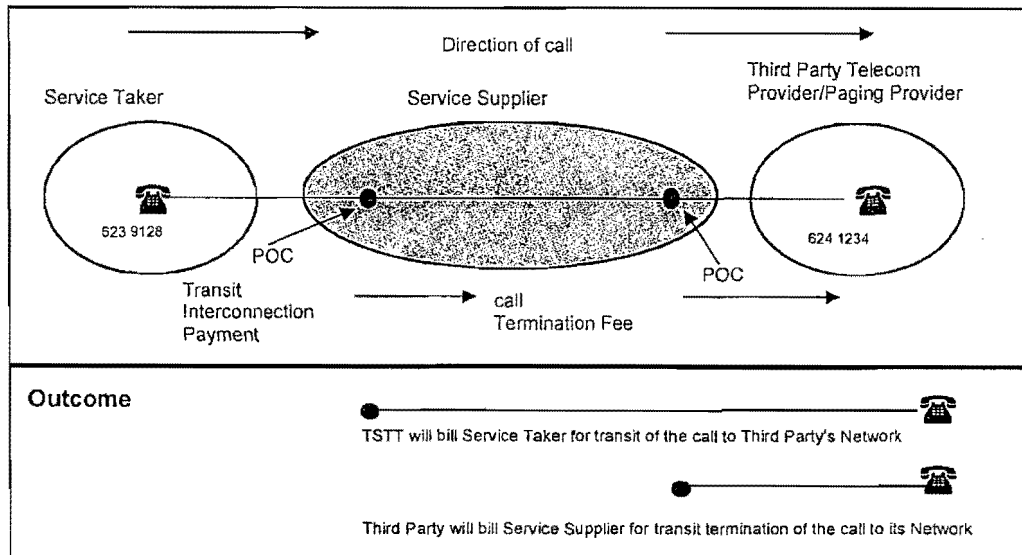
### 1 PSTN Transit Service

#### 1.1 Description

- 1.1.1 The PSTN Transit Service will, upon request by the Service Taker, be provided by the Service Supplier to the Service Taker, in accordance with the terms and conditions of this Agreement and as more particularly set down in the Service Schedule.
- 1.1.2 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 or (b) a Paging Provider Subscriber Connection in Trinidad and Tobago 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 (a) the Third Party National Telecom Provider or (b) the Paging Provider. Calls originating or ultimately terminating outside of Trinidad and Tobago are not conveyed pursuant to this Service Description.
- 1.1.3 Valid number ranges for the Third Party National Telecom Provider Subscriber Connections and Paging 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.
- 1.1.4 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.

## Service Descriptions – Schedule 2

- 1.1.5 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual.



**Figure 8: Service Supplier Transits call between Service Taker and Third Party Telecom Provider or Paging Provider**

### 1.2 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 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
- 1.2.3 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.
- 1.2.4 Service Taker will be responsible for forecasting usage of the PSTN Transit Service in accordance with the Joint Working Manual.
- 1.2.5 The 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, the Service Supplier will be under no obligation

## Service Descriptions – Schedule 2

to convey calls pursuant to this Service Description that are not listed in the Service Schedule as valid numbers for the PSTN Transit Service.

- 1.2.6 Service Taker will be responsible for the end-to-end management of Calls made from Service Taker Subscriber Connections using the PSTN Transit Service

### 1.3 Quality of service

- 1.3.1 In accordance with Clause 15 of the Legal Framework, the Service Supplier will provide the PSTN Transit 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 Transit 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.

- 1.3.3 For the avoidance of doubt, Service Supplier is not responsible for the service quality of Call completion beyond the Point of Handover.

### 1.4 Configuration

- 1.4.1 The PSTN Transit Service will be available at TSTT ISL and CCTL 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 Transit 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 Transit Service are specified in the Tariff Schedule.

- 1.5.2 The Charges for the PSTN Transit 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 and include all payments to Third Party National Telecom Providers and Paging Providers for each Answered Call.

- 1.5.3 Usage Charges include:

- Call Duration Charges depending on duration.
- Payments to the Third Party National Telecom Providers for completion of the Call.

**Service Descriptions – Schedule 2**

- 1.5.4 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.
- 1.5.5 For each Answered Call, the Call Setup Charge will be applicable when Call Start occurs.
- 1.5.6 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.
- 1.5.7 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.
- 1.5.8 For the avoidance of doubt, the Tariff Schedule does not include any sums that may be payable pursuant to Clause 8.2 of the Legal Framework.

**- End of Service Description -**

**PART 5. NATIONAL AND INTERNATIONAL FREEPHONE ACCESS SERVICE.**

**1. National Freephone Access Service**

**1.1 Description**

- 1.1.1 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.
- 1.1.2 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.
- 1.1.3 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.
- 1.1.4 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 reach National Freephone Numbers on the National Freephone Service Provider platform, via the Service Taker PSTN.
- 1.1.5 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.
- 1.1.6 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.
- 1.1.7 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.
- 1.1.8 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual

**1.2 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 5.2 of this Service Description.
- 1.2.2 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



## Service Descriptions – Schedule 2

Freephone Access Service in accordance with the Joint Working Manual

- 1.2.3 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.
- 1.2.4 The Service Taker will be responsible for forecasting usage of the National Freephone Access Service in accordance with the Joint Working Manual.
- 1.2.5 The Service Taker will be responsible for validating the called number against the valid national freephone numbers. In accordance with Clause 8.2, 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.
- 1.2.6 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.
- 1.2.7 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.
- 1.2.8 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.

### 1.3 Quality of service

- 1.3.1 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.
- 1.3.2 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.

### 1.4 Configuration

- 1.4.1 The National Freephone Service Access Service will be available at Service Supplier ISLs specified in the Service Schedule.
- 1.4.2 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
- 1.4.3 The Service Supplier will undertake the necessary routing and translation for all

## Service Descriptions – Schedule 2

codes that require routing or translation across its System.

### 1.5 Charges

- 1.5.1 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.
- 1.5.2 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.
- 1.5.3 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.

**- End of Service Description -**

## Service Descriptions – Schedule 2

### 2 International Freephone Access Service

#### 2.1 Description

- 2.1.1 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.
- 2.1.2 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.
- 2.1.3 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.
- 2.1.4 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.
- 2.1.5 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.
- 2.1.6 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.
- 2.1.7 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.
- 2.1.8 The technical standards for voice telephony, operational processes and billing processes are described in the Joint Working Manual

#### 2.2 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 necessary to monitor all Calls

## Service Descriptions – Schedule 2

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

- 2.2.3 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 Manual. For the avoidance of doubt, access to the Service Supplier's or Service Taker's management information systems will not be provided.
- 2.2.4 Service Taker will be responsible for forecasting usage the International Freephone Service Access Service in accordance with the Joint Working Manual.
- 2.2.5 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 pursuant 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.
- 2.2.6 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.
- 2.2.7 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 management.

### 2.3 Quality of service

- 2.3.1 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.
- 2.3.2 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.
- 2.3.3 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.

### 2.4 Configuration

- 2.4.1 The International Freephone Service Access Service will be available at the Service

**Service Descriptions – Schedule 2**

Supplier ISLs specified in the Service Schedule.

- 2.4.2 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.
- 2.4.3 Service Supplier will undertake the necessary routing and translation for all codes that require routing or translation across its System.

**2.5 Charges**

- 2.5.1 The tariffs for Charges for the International Freephone Service Terminating Access Service are listed in the Tariff Schedule.
- 2.5.2 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.
- 2.5.3 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.

**- End of Service Description -**



## **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
A	TSTT	CCTL
B	CCTL	TSTT

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

#	Interconnect Access Area	TSTT ISL	IPOP(s)	Minimum # Network Links for Year 1
1	Trinidad and Tobago	[REDACTED]	CCTL IPOP	T1s

CCTL'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	CCTL IPOP	[REDACTED]	T1s

**PART 2. TERMINATION SERVICES**

**1.2 PSTN Terminating Access Service**

Option	Service Supplier	Service Taker
A	TSTT	CCTL
B	CCTL	TSTT

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

#	TSTT ISL	CCTL IPOP
1	[REDACTED]	CCTL POS POP Site

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

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

#	Telco IPOP	TSTT ISL
1	CCTL IPOP	[REDACTED]

List of Service Supplier Codes: 221 – 224

25

**1.3 PLMN Terminating Access Service**

Option	Service Supplier	Service Taker
A	TSTT	CCTL

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

#	TSTT ISL	Telco IPOP
1	[REDACTED]	CCTL IPOP

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



### PART 3. SPECIAL ACCESS SERVICES

#### 1.4 Emergency Services

Police 999  
 Fire & Ambulance 990  
 Coast Guard 634-4440

Option	Service Supplier	Service Taker
A	TSTT	CCTL

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location
1	[REDACTED]

Service taken at the following CCTL IPOP(s):

#	IPOP
1	CCTL IPOP

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

#### 1.5 National DQ Service

Option	Service Supplier	Service Taker
A	TSTT	CCTL

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location
1	[REDACTED]

Service taken at the following CCTL IPOP(s):

#	IPOP
1	CCTL IPOP

Valid National DQ Service number: 6411

#### 1.6 International DQ Service

Option	Service Supplier	Service Taker
A	TSTT	CCTL

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location
1	[REDACTED]

Service taken at the following CCTL IPOP(s):

#	IPOP
1	CCTL IPOP

Valid International DQ Service number: 0

**1.7 National Freephone Access**

Option	Service Supplier	Service Taker
A	TSTT	CCTL
B	CCTL	TSTT

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

#	TSTT ISL	CCTL IPOP
1	[REDACTED]	[REDACTED]

CCTL service supplied at the following CCTL IPOP. Service taken at the following TSTT ISL

#	CCTL IPOP	TSTT ISL
1	[REDACTED]	[REDACTED]

**1.8 International Freephone Access**

Option	Service Supplier	Service Taker
A	TSTT	CCTL

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

#	TSTT ISL	CCTL IPOP
1	[REDACTED]	[REDACTED]

*bc*

## PART 4. PSTN TRANSIT SERVICES

### 1.9 PSTN Transit Service \*

Option	Service Supplier	Service Taker	3 <sup>rd</sup> Party National Telecom Provider including TSTT Mobile
A	TSTT	CCTL	Mobile Telecom Provider
B	TSIT	CCTL	Fixed Telecom Provider
C	CCTL	TSTT	Fixed Telecom Provider
D	CCTL	TSTT	Mobile Telecom Provider

Service supplied at the following TSTT ISL:

#	TSTT Interconnect Switch Location
1	[REDACTED]

Service taken at the following CCTL IPOP(s):

#	IPOP
1	CCTL IPOP

## 2. Points of Connection

TSTT Interconnect Switch Location	
Interconnect Access Area	ISL
Trinidad and Tobago	[REDACTED]

Interconnect Point of Presence	
Interconnect Access Area	IPOP
Trinidad and Tobago	CCTL 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.

### 3. Interconnect Access Areas

**Trinidad and Tobago IAA: Number Range**

1	610	31	643	61	675
2	612	32	644	62	676
3	613	33	645	63	677
4	614	34	646	64	679
5	615	35	647	65	690
6	616	36	648	66	691
7	617	37	649	67	692
8	618	38	650	68	693
9	619	39	651	69	694
10	621	40	652	70	695
11	622	41	653	71	696
12	623	42	654	72	697
13	624	43	655	73	698
14	625	44	656	74	821
15	626	45	657	75	822
16	627	46	658		
17	628	47	659		
18	629	48	660		
19	630	49	662		
20	631	50	663		
21	632	51	664		
22	633	52	665		
23	634	53	667		
24	635	54	668		
25	636	55	669		
26	637	56	670		
27	638	57	671		
28	639	58	672		
29	640	59	673		
30	642	60	674		

**CCTL Trinidad and Tobago IAA: Number Range**

1	221				
2	222				
3	223				
4	224				
5	225				

- End of Schedule

**4. National  
Freephone Number  
Ranges**

1	8000002
2	8000090
3	8000111
4	8000598
5	8000599
6	8000600
7	8000604
8	8000608
9	8000610
10	8000619
11	8000620
12	8000624
13	8000625
14	8000627
15	8000628
16	8000629
17	8000630
18	8000631
19	8000632
20	8000633
21	8000635
22	8000636
23	8000637
24	8000638
25	8000639
26	8000640
27	8000641
28	8000642
29	8000643
30	8000644
31	8000645
32	8000646
33	8000647
34	8000661
35	8000662
36	8000663
37	8000664
38	8000669
39	8000670
40	8000671
41	8000672
42	8000673
43	8000674
44	8000675
45	8000676
46	8000677
47	8000678
48	8000679

49	8000685
50	8000686
51	8000687
52	8000688
53	8000689
54	8000690
55	8000691
56	8000692
57	8000694
58	8000696
59	8000698
60	8000699
61	8000700
62	8000703
63	8000704
64	8000705
65	8000709
66	8001000
67	8001034
68	8001035
69	8001120
70	8001121
71	8001122
72	8001190
73	8001232
74	8001234
75	8001622
76	8001675
77	8001887
78	8002000
79	8002020
80	8002121
81	8002222
82	8002235
83	8002255
84	8002267
85	8002273
86	8002277
87	8002278
88	8002284
89	8002288
90	8002289
91	8002327
92	8002355
93	8002375
94	8002386
95	8002388
96	8002407
97	8002427
98	8002437
99	8002444
100	8002455

101	8002467
102	8002472
103	8002484
104	8002525
105	8002582
106	8002583
107	8002588
108	8002623
109	8002626
110	8002636
111	8002637
112	8002653
113	8002655
114	8002662
115	8002663
116	8002664
117	8002666
118	8002667
119	8002672
120	8002676
121	8002678
122	8002679
123	8002722
124	8002739
125	8002742
126	8002772
127	8002777
128	8002788
129	8002793
130	8002810
131	8002847
132	8002852
133	8002862
134	8002886
135	8002946
136	8003000
137	8003131
138	8003222
139	8003223
140	8003247
141	8003273
142	8003278
143	8003279
144	8003282
145	8003288
146	8003325
147	8003333
148	8003336
149	8003339
150	8003347
151	8003355
152	8003368

nr

153	8003375
154	8003377
155	8003456
156	8003463
157	8003473
158	8003474
159	8003499
160	8003524
161	8003533
162	8003663
163	8003666
164	8003683
165	8003728
166	8003733
167	8003742
168	8003745
169	8003778
190	8004000
191	8004011
192	8004123
193	8004222
194	8004225
195	8004227
196	8004229
197	8004232
198	8004236
199	8004238
200	8004240
201	8004242
202	8004267
203	8004277
204	8004278
205	8004282
206	8004283
207	8004289
208	8004321
209	8004327
210	8004328
211	8004333
212	8004342
213	8004467
214	8004476
215	8004477
216	8004488
217	8004532
218	8004534
219	8004567
220	8004622
221	8004632
222	8004633
223	8004638
224	8004658

225	8004662
226	8004663
227	8004664
228	8004667
229	8004673
230	8004675
231	8004676
232	8004685
233	8004687
234	8004722
235	8004739
236	8004742
237	8004743
238	8004744
239	8004763
240	8004772
241	8004773
242	8004774
243	8004775
244	8004777
245	8004782
246	8004786
247	8004825
248	8004826
249	8004829
250	8004832
251	8004842
252	8004848
253	8004863
254	8004867
255	8004868
256	8004869
257	8004877
258	8004882
259	8004888
260	8004922
261	8004925
262	8004933
263	8004968
264	8004969
265	8005000
266	8005267
267	8005274
268	8005325
269	8005375
270	8005395
271	8005433
272	8005438
273	8005459
274	8005463
275	8005464
276	8005481

277	8005483
278	8005500
279	8005555
280	8005559
281	8005566
282	8005626
283	8005627
284	8005678
285	8005683
286	8005750
287	8005865
288	8006111
289	8006245
290	8006294
291	8006328
292	8006337
293	8006342
294	8006376
295	8006378
296	8006388
297	8006397
298	8006427
299	8006428
300	8006455
301	8006600
302	8006644
303	8006673
304	8006686
305	8006725
306	8006742
307	8006762
308	8006822
309	8006823
310	8006876
311	8006878
312	8006947
313	8006972
314	8007000
315	8007225
316	8007233
317	8007243
318	8007250
319	8007253
320	8007266
321	8007274
322	8007283
323	8007290
324	8007291
325	8007297
326	8007323
327	8007335
328	8007363

329	8007368
330	8007378
331	8007447
332	8007467
333	8007469
334	8007473
335	8007526
336	8007626
337	8007629
338	8007665
339	8007672
340	8007673
341	8007678
342	8007684
343	8007700
344	8007723
345	8007727
346	8007762
347	8007777
348	8007827
349	8007829
350	8007837
351	8007845
352	8007867
353	8007868
354	8007873
355	8007874
356	8007973
357	8008000
358	8008080
359	8008236
360	8008288
361	8008294
362	8008299
363	8008300
364	8008324
365	8008362
366	8008368
367	8008439
368	8008443
369	8008468
370	8008477
371	8008627
372	8008683
373	8008687
374	8008722
375	8008725
376	8008746
377	8008748
378	8008785
379	8008824

380	8008827
381	8008832
382	8008833
383	8008842
384	8008888
385	8008898
386	8008973
387	8009000
388	8009255
389	8009283
390	8009287
391	8009355
392	8009366
393	8009367
394	8009377
395	8009622
396	8009675
397	8009746

1-800-744-0020
1-800-744-0013
1-800-744-4357
1-800-744-2997
1-800-744-4724
1-888-847-5802
1-800-744-4637
1-800-744-4000
1-800-274-2538
1-800-744-2422
1-800-744-3333
1-800-744-3334
1-800-744-4545
1-800-744-2228
1-800-744-1111
1-800-744-9335
1-800-351-5553
1-800-744-7827
1-800-744-1246
1-800-248-8045
1-800-249-8046
1-800-744-3276
1-800-744-3784
1-800-588-9504
1-800-744-3445
1-888-499-4340
1-800-450-6461
1-800-744-0560
1-800-868-9429
1-800-744-4729
1-800-744-2273
1-900-582-4533
1-800-744-3924
1-800-744-2688
1-800-744-6726
1-800-744-1537
1-800-744-0060
1-800-744-7483
1-800-744-7233
1-800-744-2262
1-888-847-5803
1-800-248-8974
1-800-744-9474
1-800-744-8682
1-800-744-7447

Digicel Free-phone Code --  
866

CCTL Free-phone Code --  
877

Tobago House of Assembly  
Free-phone Code - 211

### 5. International Freephone Number Ranges

1-800-744-6200
1-800-648-4985
1-800-744-2527
1-800-468-4560
1-800-414-6944
1-800-275-0877
1-800-744-1234
1-800-744-8337
1-800-744-8687
1-888-844-5428
1-800-744-5222
1-888-744-8155
1-800-744-4263
1-800-744-2020
1-800-744-4662
1-800-744-4636
1-888-284-3741
1-800-744-6244
1-800-744-5272
1-800-744-0014

1-800-744-7477	1-800-291-7626	1-800-717-7984
1-800-744-8474	1-800-744-4353	1-888-235-3333
1-800-744-6222	1-888-744-5256	1-888-599-9947
1-800-744-8683	1-800-744-8000	1-800-958-2612
1-800-744-0021	1-800-287-2835	1-800-501-7905
1-800-744-7283	1-800-744-8255	1-888-570-9555
1-800-744-5433	1-800-744-6031	1-888-508-5620
1-888-605-7324	1-800-744-5030	1-800-958-2584
1-800-744-1010	1-800-235-0696	1-800-958-2610
1-800-744-5000	1-800-344-0525	1-800-448-8539
1-800-825-5883	1-800-744-3500	1-888-252-2258
1-800-744-1116	1-800-279-3198	1-800-448-8538
1-800-744-2230	1-800-531-8111	1-800-365-8722
1-800-744-1120	1-800-203-1300	1-888-599-9946
1-800-744-2151	1-888-495-7298	1-800-448-8537
1-800-744-4444	1-800-203-0154	1-800-401-7713
1-800-804-2994	1-800-201-8978	1-800-401-7565
1-800-744-9022	1-888-201-2216	1-800-401-7015
1-800-744-3665	1-800-201-4336	1-800-606-7196
1-888-266-5227	1-800-815-2979	1-800-205-4536
1-800-744-3684	1-800-815-2959	1-800-205-7811
1-800-744-7245	1-800-580-2949	1-800-203-0160
1-800-744-0009	1-800-580-2999	1-800-205-4925
1-888-414-7223	1-888-279-5555	1-800-800-1125
1-800-744-2663	1-888-236-3333	1-800-204-0116
1-800-744-7223	1-888-279-7777	1-888-666-5754
1-800-744-1114	1-800-243-4636	1-800-205-3769
1-800-744-4445	1-800-270-4504	1-800-205-3770
1-800-744-0015	1-888-279-6666	1-800-203-0548
1-800-744-5887	1-888-247-2262	1-800-205-5971
1-888-876-8662	1-888-689-2247	1-800-205-5966
1-888-622-3477	1-888-300-0004	1-800-205-2068
1-800-744-1533	1-800-344-8344	1-800-205-5955
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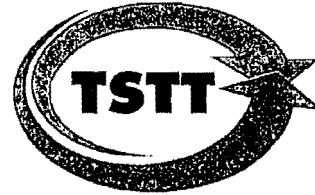
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July 10, 2012

Parameter Schedule – Schedule 4



**Parameter Schedule**

**Offer of Terms and Conditions**

**For Interconnection**

**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. CCTL shall have the right to review TSTT performance in this regard on a bi-annual basis. Such CCTL 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 CCTL and TSTT from the former year, and other TSTT customer performance experience for the prior year as well as agreed upon international performance standards.

**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

**3. Special Access Services (Service definitions Part III)**

**Emergency Services Access Service**

<b>Fault Restoration Times</b>	<b>Time in which faults are repaired following notification through the Fault Control Centre (hours).</b>
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**

<b>Fault Restoration Times</b>	<b>Time in which faults are repaired following notification through the Fault Control Centre (hours).</b>
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 resolved by agreement

<b>Call Greeting</b>	<b>“Directory Assistance”</b>
----------------------	-------------------------------

**International DQ Service**

<b>Fault Restoration Times</b>	<b>Time in which faults are repaired following notification through the Fault Control Centre (hours).</b>
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

<b>Call Greeting</b>	<b>“Directory Assistance”</b>
----------------------	-------------------------------

**4. PSTN Transit Services (Service definitions Part IV)**

**PSTN Transit Service**

<b>Fault Restoration Times</b>	<b>Time in which faults are repaired following notification through the Fault Control Centre (hours).</b>
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.

#### Trunk Groups

Classification	Outgoing/Incoming	Group
Domestic	Outgoing	A
Domestic	Incoming	B
International	Outgoing	C
International	Incoming	D
Transit	Outgoing	E
Transit	Incoming	F
Emergency	Incoming	G
National DQ	Incoming	H
International DQ	Incoming	I

Service	Trunk Designation/routing
PSTN Terminating Access Service	A, B
PLMN Terminating Access Service	F
Incoming International Call Termination to PLMN Service	D
Incoming International Call Termination to PSTN Service	C, D
Emergency Service Access Services	G
National DQ Service	H
International DQ Service	I
PSTN Transit Service (outgoing)	E
PSTN Transit Service (incoming)	F

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	10 Digits: 868; NXXXXXX
Calling party number format	10 Digits: 868; NXXXXXX
Number length (range)	3-18 Digits

### 7. Billing Addresses

TSTT	CCTL
[Redacted]	Financial Controller
Head – Carrier Services (Ag)	29 Victoria Square
TSTT, 1 Edward Street	Port of Spain
Port of Spain	Republic of Trinidad and Tobago

*Handwritten initials*

**8. Contact Details**

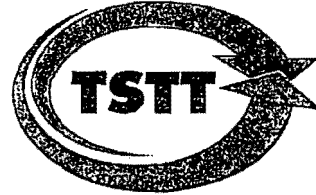
Company	Role	Contact Details
TSTT	Liaison Manager	[REDACTED]
TSTT	Operations Manager	[REDACTED]
TSTT	Project Manager	[REDACTED]
TSTT	Planning Manager	[REDACTED]
TSTT	Fault Control Manager	[REDACTED]
TSTT	Service Quality Manager	[REDACTED]

Company	Role	Contact Details
CCTL	Liaison Manager	[REDACTED]
CCTL	Operations Manager	[REDACTED]
CCTL	Project Manager	[REDACTED]
CCTL	Planning Manager	[REDACTED]
CCTL	Fault Control Manager	[REDACTED]
CCTL	Service Quality Manager	[REDACTED]

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.

16 July 2012

Joint Working Manual - Schedule 5



**Joint Working Manual**

**Offer of Terms and Conditions**

**For Interconnection**

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## 1 Chapter 1 – Overview CCTL and TSTT Network Interconnection

### 1.1 Introduction

1.1.1 This chapter describes the relationship between CCTL and TSTT and the responsibilities of each Party in regards to equipment provisioning.

### 1.2 Parallel Networks

1.2.1 CCTL and TSTT are local telephone service providers operating in the same geographic area. As such, both networks must be interconnected together to permit the end customers of each company to communicate with the end customers of the other company.

1.2.2 Although TSTT is currently considered the Incumbent telephone service provider, CCTL operates a parallel network in the same geographic area and will be treated as an equal during both negotiations and network operation.

### 1.3 Network Interconnection

1.3.1 CCTL and TSTT will negotiate and implement in good faith interconnection of their networks together in a reliable, cost effective and timely manner.

1.3.2 Network interconnection will be technology and vendor independent as long as the interconnecting switch, SONET nodes, and other equipment meet the standards outlined in this document and pass agreed upon interoperability testing.

1.3.3. Each Party will be responsible for providing and provisioning its own interconnecting switch and SONET node as well as any other required network equipment. Subject to the provisions set forth in the Tariff Schedule CCTL shall be responsible for the payment of its own interconnect specific equipment.

1.3.4 Neither Party will be required to compensate the other Party for any one-offs unless the specific one-offs and rates are agreed upon in writing beforehand.

## 2 Chapter 2 – Technical Specification

### 2.1 Introduction

2.1.1.1 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.

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

#### 2.2.1 Principles

2.2.1.1 The Optical In-Span Joining Service is based upon the principle of one CCTL IPOP to one TSTT ISL.

2.2.1.2 As described in the Optical In-Span Joining Service Service Description, the service will comprise:

One Optical Fibre cable run (which will consist of two Optical Fibre strands) from the CCTL IPOP to the TSTT ISL (referred to as the route).

A Diverse Optical Fibre cable run (which will consist of two Optical Fibre strands) from CCTL IPOP to TSTT ISL shall also be provided, as per CCTL's request.

Note: specifically, as part of this service, TSTT will be responsible for providing and maintaining the Optical Fibre cable runs from its ISL to CCTL's Joint Box (which will be placed at a location to be agreed between the Parties during the final route design process). CCTL will be responsible for providing and maintaining the Optical Fibre cable runs from their Joint Box into its premise at its IPOP

2.2.1.3 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.

2.2.1.4 Initially, Carrier Systems based on Synchronous Optical Network (SONET) 155 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. The OC-3 will be upgraded as appropriate.

2.2.1.5 The 155 Mbit/s Carrier Systems specified are capable of supporting up to [REDACTED] 1.544Mbit/s Network Links. Figure 1 represents a functional overview of the service.

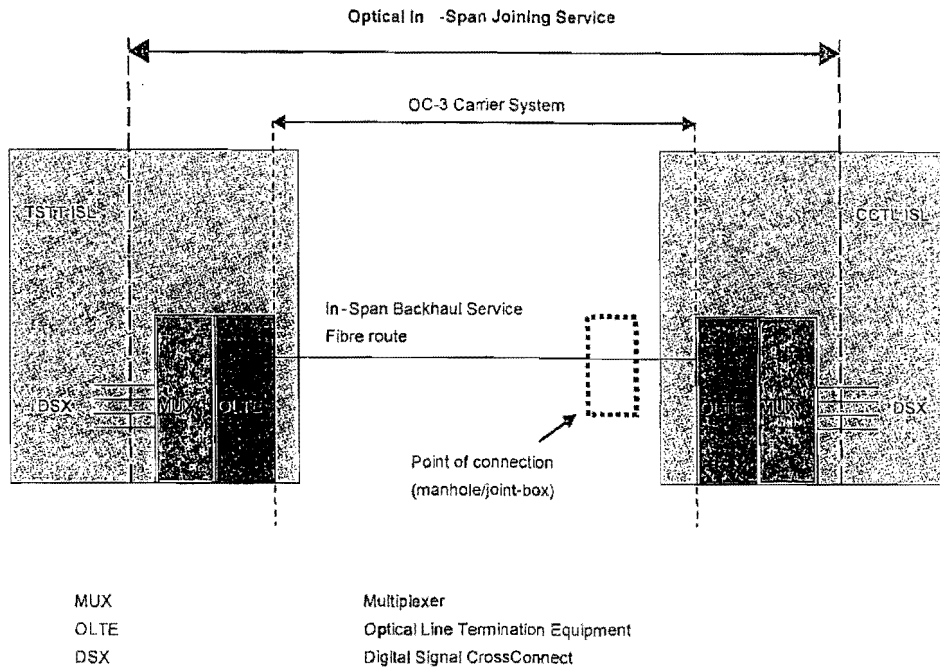


Figure 1 – The Carrier System

2.2.1.6 Single mode optical fibre cable is specified utilising 1310 intermediate range interface conforming to G.957.

**2.2.2 Cable Routing & Resiliency**

2.2.2.1 Physical route diversity is not provided by default as Part of the Optical In-span Joining Service. However, an additional route shall be provided if requested by the Service Taker, and can be provided if technical issues or traffic volumes warrant.

2.2.2.2 Carrier System equipment resiliency may be provided upon request whereby a working fibre pair and a protecting fibre pair are provided on diverse optical fiber cables. Protection switching is facilitated by the CTU of each Party in accordance with Unidirectional Path Switched Ring (UPSR) protection standards specified in T1.105.04.

2.2.2.3 Cables that enter and traverse cable vaults will be protected by concrete (outside building) and mechanical armour or plastic conduit (within building).

2.2.2.4 The physical interface between the CCTL System and the TSTT System initially 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.

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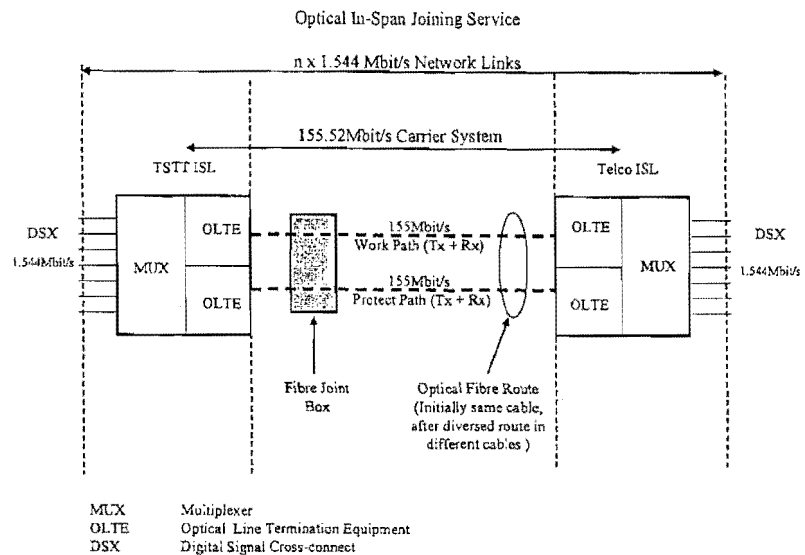


Figure 2: Carrier System resiliency

**2.2.3 Circuit Termination Unit Specification**

2.2.3.1 TSTT approved suppliers, following testing:

Manufacturer	Product
Nortel Networks Corporation	Optera Metro 3300, 3400 or 3500

Note: Optera Metro 3300, 3400 or 3500 equipment is capable of supporting 84xT1 in protected mode or multiples of this.

**2.2.4 Process for accreditation of alternative CTU**

2.2.4.1 All CTU equipment must conform to SONET standards and any additional standards specified in this technical chapter.

2.2.4.2 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.

**2.2.5 Joint Box engineering drawing**

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

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## 2.3 1.544Mbit/s Network Link Characteristics

### 2.3.1 Electrical characteristics

- 2.3.1.1 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).
- 2.3.1.2 The tolerance of both the TSTT and the CCTL input ports to jitter should be as defined in ITU-T Recommendation G.823.
- 2.3.1.3 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 CCTL shall co-operate in the application of testing methods as described in ITU-T Recommendation G.823.
- 2.3.1.4 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.

### 2.3.2 Functional characteristics

- 2.3.2.1 Each 1.544Mbit/s Network Link shall be transparent and independent of any traffic stream passed across it.
- 2.3.2.2 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.
- 2.3.2.3 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.
- 2.3.2.4 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 2.7.

### 2.3.3 Synchronisation

- 2.3.3.1 CCTL shall synchronise on the TSTT System.
- 2.3.3.2 CCTL shall synchronise on the TSTT System via nominated Network Links using an initial OC-3 Carrier System .
- 2.3.3.3 TSTT will provide the 1.544Mbit/s interface for synchronisation for the CCTL Switch. Inputs will have a minimum accuracy of Stratum 2 (Accuracy of  $1.6 \times 10^{-8}$  and stability of  $1 \times 10^{-10}$ /day).
- 2.3.3.4 The nominated synchronisation channels will be agreed as part of the order process.
- 2.3.3.5 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  $\pm 1 \times 10^{-11}$ ).

**2.3.4 Safety and protection**

- 2.3.4.1 All equipment will comply with UL 1950 and/or national safety standards whichever is the most stringent.
- 2.3.4.2 For high voltages, equipment will comply with ITU-T K.11.
- 2.3.4.3 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.
- 2.3.4.4 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.

**2.3.5 Electromagnetic Compatibility**

- 2.3.5.1 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.
- 2.3.5.2 All link equipment must comply with ITU-T K.42 for immunity to radiated electromagnetic energy.
- 2.3.5.3 All link equipment must comply with ANSI T1.308 and/or ITU-T K.32 for electrostatic discharge
- 2.3.5.4 All link equipment must comply with EN 55022 class B or FCC Part 15 for radiated and conducted emissions.
- 2.3.5.5 All link equipment must comply with any national regulations relating to electromagnetic and electrostatic compatibility.
- 2.3.5.6 The link equipment must be immune to radiated electromagnetic field of up to 3V/m.

**2.4 Network Link Quality of Service****2.4.1 Definitions**

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

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

$$100 * \frac{\text{total time} - \text{time allocated to Planned Maintenance} - \text{time the link is not available for traffic due to faults}}{\text{total time} - \text{time allocated for Planned Maintenance}}$$

during the specified calendar month.

- 2.4.1.3 The definition of Errored Second is a one second interval with one or more bit errors.
- 2.4.1.4 The definition of Severely Errored Second is a one-second period, which has a bit error ratio greater than or equal to  $10^{-3}$ .

## 2.4.2 Quality of Service levels

2.4.2.1 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%

## 2.5 Signalling

### 2.5.1 Signalling Principles

2.5.1.1 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. If different versions of ANSI T1.110 (e.g ANSI T1.110-1999) are being used on the CCTL and TSTT networks, both Parties will work together to resolve or work around any interoperability testing issues. Neither Party will be forced to conform to the version of ANSI T1.110 that the other Party is using.

2.5.1.2 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.

### 2.5.2 Circuit related signalling

2.5.2.1 3.1Khz audio and speech bearer services are supported.

### 2.5.3 Protocols

2.5.3.1 The MTP (ANSI T1.111) and ISUP V2 (ANSI T1.113) protocols are supported. If different versions of ANSI T1.111 or ANSI T1.113 (e.g ANSI T1.111-1996) are being used on the CCTL and TSTT networks, both Parties will work together to resolve or work around any interoperability testing issues. Neither Party will be forced to conform to the version of ANSI T1.111 or ANSI T1.113 that the other Party is using.

2.5.3.2 The signalling mode is quasi-associated.

### 2.5.4 Parameter fields

2.5.4.1 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".

### 2.5.5 Signalling procedure

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

2.5.5.2 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.

2.5.5.3 Stop digits for indicating that the full number is transmitted shall be used where necessary.

- 2.6.4.2 Each Service Taker shall ensure that enough trunking capacity is provisioned on all trunk groups. No carrier shall intentionally under provision trunk capacity in an attempt to block calls into or out of it's network for any reason including to undermine the credibility of the other carrier.
- 2.6.4.3 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.
- 2.6.4.4 Depending on the Service offered the Service Supplier has a role as:
- **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.
- 2.6.4.5 For each Quality of Service parameter a value is defined.

## 2.6.5 Call Availability

- 2.6.5.1 The definition of Call Availability (%) is

$$100 * \frac{\text{total call attempts} - \text{total call releases with causes marked as network fault}}{\text{total call attempts}}$$

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.

- 2.6.5.2 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 %	>99.8 %	>99.6 %
---------	---------	---------

### 2.6.6 Dial Setup Delay

2.6.6.1 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.

2.6.6.2 Dial Setup Delay Quality of Service parameter shall be no more than 2350 ms for a national Call.

2.6.6.3 The apportionment for the Dial Setup Delay value for Service Supplier and Service Taker is as follows:

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

### 2.6.7 Propagation Delay

2.6.7.1 Propagation Delay is defined as the round trip delay between the received signal and the transmitted signal.

2.6.7.2 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.

2.6.7.3 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
5 ms	4.5 ms	3 ms	4.5 ms	5 ms

### 2.6.8 Calling Line Identity

2.6.8.1 All interconnect trunks will utilise Q.731 signalling through which CLI will be passed transparently.

2.6.8.2 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 CCTL System. TSTT and CCTL should ensure that CLI associated with numbers with the CNDB feature is blocked from Subscriber Connections.

## 2.7 References

### ITU-T Recommendation

G.703 "Physical/electrical characteristics of hierarchical digital interfaces"

G.711	“Pulse code modulation (PCM) of voice frequencies”
G.821	“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”
<b>ANSI</b>	
T1.102-1993	Digital Hierarchy – Electrical Interfaces
T1.105-1995	Synchronous Optical Network (SONET) - Basic Description including 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-ST5-1 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

### 3 Chapter 3 - Operations and Maintenance

#### 3.1 Operations and Maintenance: Introduction

3.1.1.1 This chapter specifies the operations and maintenance principles that TSTT and CCTL 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.

3.1.1.2 The following processes are covered in this chapter.

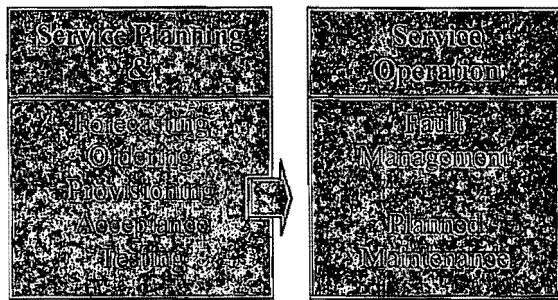


Figure 1 Operational

#### 3.2 Roles and Responsibilities

##### 3.2.1 Introduction

3.2.1.1 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.

II. Operations Manager  
The Operations Manager has responsibility for managing the day to day Quality of Service including operational processes.

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

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

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relating to forecasting, ordering, provisioning and testing and will keep the Liaison Manager abreast of related issues.

Manager to allow project co-ordination and monitoring.

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.

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

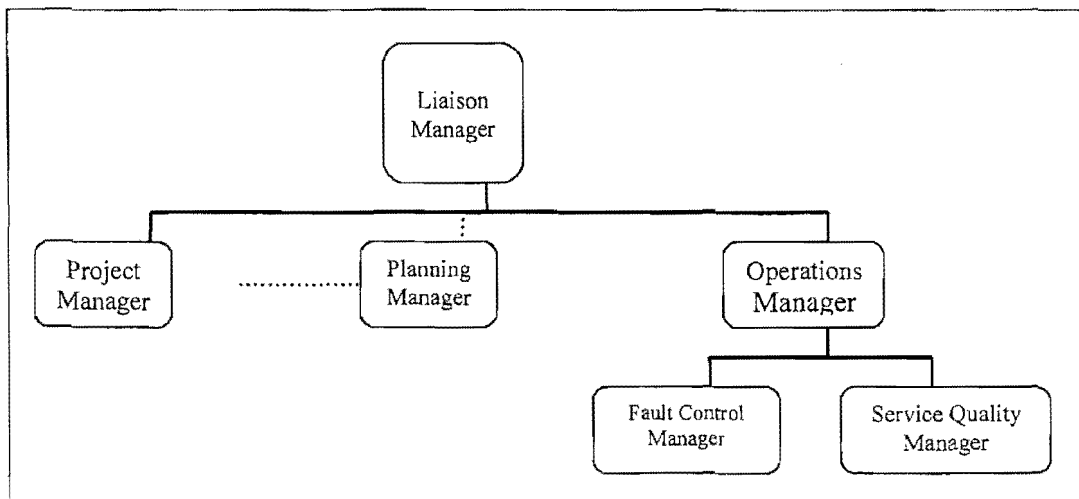


Figure 2 Relationships between roles

### 3.2.2 Meetings

- 3.2.2.1 Subject to clause 3.3.4 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.
- 3.2.2.2 Service Implementation Meetings will include Forecasting Meetings, Order Planning Meetings, Provisioning Meetings and Testing Meetings.
- 3.2.2.3 Forecasting Meetings will consider, inter alia, the service forecasts of both Parties and will seek to validate any assumptions used in making the forecasts.
- 3.2.2.4 Order Planning Meetings will consider, inter alia, the final forecast and will lead to the production of an Order Plan.
- 3.2.2.5 Provisioning Meetings will, inter alia, review progress against plans and lead to agreement on any changes required.

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

3.2.2.7 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.

3.2.2.8 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

### 3.2.3 Service Implementation

3.2.3.1 The service implementation process is shown in Figure 3 below.

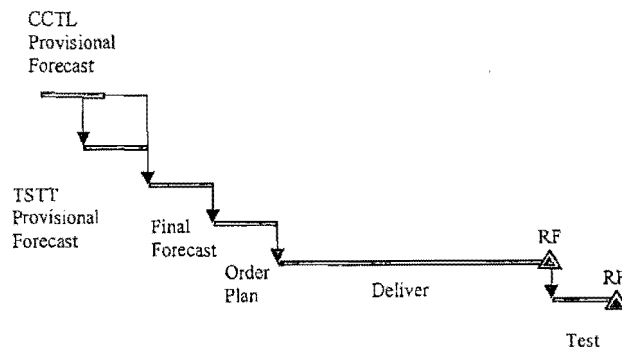


Figure 3. Service planning

### 3.2.4 Performance Reports

3.2.4.1 Written Performance Reports will be exchanged quarterly 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.

3.2.4.2 The minimum set of items to be included in the Performance Report is listed in Appendix I.

### 3.2.5 Interconnect Resolution Log

3.2.5.1 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.

- 3.2.5.2 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.

### **3.2.6 Technical disputes**

- 3.2.6.1 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 to 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.

## **3.3 FORECASTING, ORDERING AND PROVISIONING**

### **3.3.1 Forecasting**

- 3.3.1.1 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.
- 3.3.1.2 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.
- 3.3.1.3 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.
- 3.3.1.4 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.
- 3.3.1.5 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.
- 3.3.1.6 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).

### **3.3.2 Ordering**

- 3.3.2.1 The Parties will agree 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.

- 3.3.2.2 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 CCTL ISL and associated TSTT ISL and will be agreed between the Parties on a case by case basis.
- 3.3.2.3 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.
- 3.3.2.4 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.
- 3.3.2.5 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 therefore. References to the Service Supplier and Service Taker are to the Service Supplier and Service Taker of the relevant Joining Service.
- 3.3.2.6 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 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 reasonable 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 23.1(c) to (i), and 25.5 of the Legal Framework 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.
- 3.3.2.7 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 3.3.2.6 and that such amounts shall not be regarded as or deemed to be onerous or a penalty.

### 3.3.3 Provisioning

- 3.3.3.1 After the submission of the Order Plan, both Parties shall carry out the necessary preparations required for installation of the Services.
- 3.3.3.2 The Service Supplier and the Service Taker will use their reasonable endeavours to perform all activities to ensure that the Carrier Systems and TI Network Links are in place to meet the agreed Ready for Test Date and Ready for Service Date.
- 3.3.3.3 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 a revised date.
- 3.3.3.4 Both Parties shall seek to minimise delay and the effects of delay.

#### 3.3.4 "Annual Forecast Review and Measurements

TSTT and CCTL shall conduct an annual review commencing at the first anniversary of the execution of this Agreement with the intention of reviewing forecasting figures to reflect as closely as possible evolving market demand for identified services. TSTT shall have the right to review CCTL traffic forecasting performance in this regard on a bi-annual basis. Such TSTT bi-annual review shall be coordinated with CCTL and shall be used accordingly with the intention of annually amending CCTL traffic forecasts in all categories to more closely align its projections under this Agreement to reflect actual and evolving anticipated traffic market growth.

Parameters of review shall be based on an average practical actual performance and realistic projected growth from the former year, other TSTT customer forecasted projections experience for the prior year, as well as documentation of evolving market indicators.

### 3.3.5 Compensation for delay in installation or acceptance testing

- 3.3.5.1 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 arising out of or in connection with such delay for which the Service Supplier would be liable under this Agreement.
- 3.3.5.2 Any dispute as to an amount payable under Paragraph 2.3.5.1 of this Joint Working Manual shall be submitted to an expert for determination under Paragraph 2.3.7.

### 3.3.6 Invoicing and Payment

- 3.3.6.1 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.

### 3.3.7 Dispute Resolution

- 3.3.7.1 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 an independent expert to be appointed by the Telecommunications Authority of Trinidad and Tobago. In providing such justification, all cost information will 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.

### 3.4 ACCEPTANCE TESTING

- 3.4.1.1 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.
- 3.4.1.2 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.
- 3.4.1.3 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.
- 3.4.1.4 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.
- 3.4.1.5 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.
- 3.4.1.6 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.
- 3.4.1.7 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.
- 3.4.1.8 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.
- 3.4.1.9 If the acceptance testing is successful, each Party will sign the acceptance test reports within five (5) Business Days of completion.
- 3.4.1.10 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.

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

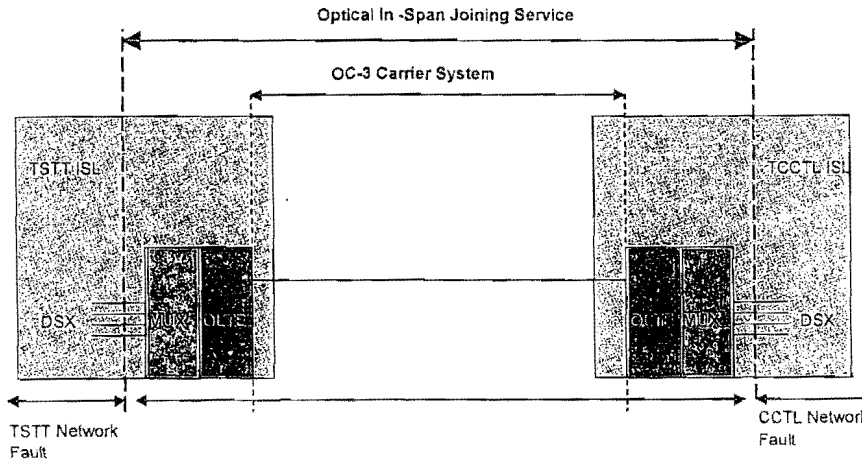
**3.5 FAULT MANAGEMENT**

3.5.1.1 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.

**3.5.1.2 Fault Classification**

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 CCTL System (CCTL Network Fault). Network Faults include faults within the signalling networks.



3.5.1.3 Figure 4. Fault Classification in Network Segments

3.5.1.4 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);

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- 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:
- 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

3.5.1.5 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

### 3.5.2 Fault Control Centres and Fault assignment

- 3.5.2.1 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.
- 3.5.2.2 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.
- 3.5.2.3 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)
- 3.5.2.4 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.
- 3.5.2.5 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.
- 3.5.2.6 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.

### 3.5.3 Fault Restoration

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

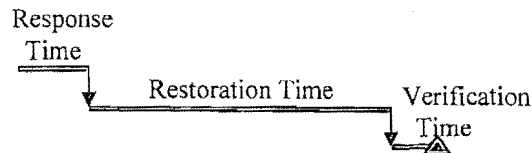


Figure 5

- 3.5.3.2 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.
- 3.5.3.3 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.
- 3.5.3.4 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.
- 3.5.3.5 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.
- 3.5.3.6 Fault Restoration Times are specified in the Parameter Schedule.
- 3.5.3.7 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.
- 3.5.3.8 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.
- 3.5.3.9 The FCCs will manage information relating to all outstanding faults, including status data. This information will be made available to either Party at agreed intervals or as required.
- 3.5.3.10 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.

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### 3.5.4 Re-classifications, suspensions and escalation

- 3.5.4.1 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 Fault Owner may also request a change in status of a fault from SA to NSA with the required documented justification.
- 3.5.4.2 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.
- 3.5.4.3 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.
- 3.5.4.4 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.
- 3.5.4.5 Initiation of the escalation process is done by phone, fax or other agreed media. Documented records must be kept of the entire process.
- 3.5.4.6 Every effort shall be made by both Parties to reach agreement at each escalation level before proceeding to the next level.
- 3.5.4.7 The Parties can agree on set escalation deadlines for specific circumstances.

## 3.6 PLANNED AND EMERGENCY MAINTENANCE

- 3.6.1.1 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.
- 3.6.1.2 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.
- 3.6.1.3 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.

- 3.6.1.4 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.
- 3.6.1.5 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.

### 3.7 MISCELLANEOUS O&M PROVISIONS

#### 3.7.1 Procedure for alteration of numbers

- 3.7.1.1 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 of the Legal Framework the date on which such notification is deemed to be received will be the date of receipt.
- 3.7.1.2 Within three (3) Business Days of date of receipt, each Party will notify all interconnected operators of the alterations to such number ranges.
- 3.7.1.3 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.
- 3.7.1.4 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.

### 3.8 APPENDICES

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

**Appendix I. Monthly performance and issue resolution**

**INSTRUCTIONS:**

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**

<b>Service Taker</b>						
<b>Report date</b>						
<b>Existing network links</b>						
<b>Service no.</b>	<b>Origin</b>	<b>Destination</b>	<b>No. Links</b>	<b>Trunk Route</b>		
				<b>Name</b>	<b>Type IC/OG</b>	<b>No.</b>
<b>Ordered services</b>						
<b>Service no.</b>	<b>Origin</b>	<b>Destination</b>	<b>No. Links</b>	<b>Trunk Route</b>		
				<b>Name</b>	<b>Type IC/OG</b>	<b>No.</b>

**SECTION II – QUARTERLY REPORT**

<b>Service being reported</b>													
<b>Report period</b>													
<b>Report Items</b>	<b>Report Month</b>	<b>Previous 12 months</b>											
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>1. Traffic Volumes</b>													
No. of minutes/service (source: Operational Measurements from Switch)													
No. of calls/service (source: Operational Measurements from Switch)													
Busy hour (time)													
No. of calls in busy hour													
<b>2. Performance Measures</b>													
Link Availability													
Call Completion Rate													
Total No of Faults													
No. of network faults													
Total network restoration time													
No. of link faults													
Total link restoration time													

**SECTION III – DETAILED FAULT INFORMATION**

Service Taker						
Service being reported						
Report period						
Fault Details						
Fault log #	Fault reported	Fault class	Other affected party	Cause of fault	Target restoration time	Actual restoration time



**Appendix II. Forecast**

Service Taker to complete all shaded areas

**SECTION I – CONTACT DETAILS**

<b>Service Taker</b>				
	<b>Name</b>	<b>Address</b>	<b>Telephone #</b>	<b>Fax #</b>
<b>Liaison Manager</b>				
<b>Planning Manager</b>				
<b>Operations Manager</b>				
<b>Fault Control Manager</b>				
<b>Service Quality Manager</b>				
<b>Project Manager</b>				
<i>This forecast has been submitted as part of the interconnect forecasting procedure and represents our current understanding of the traffic (liaison manager and planning manager unless stated otherwise)</i>				
<b>Signature</b>		<b>Signature</b>		
<b>Name</b>		<b>Name</b>		
<b>Position</b>		<b>Position</b>		
<b>Date</b>		<b>Date</b>		

**SECTION II - NETWORK LINKS FORECAST**

<b>Service Taker</b>											
<b>Existing point of Interconnection</b>											
Service Taker ISL			Service Supplier ISL								
Service	Service ref.	Carrier System	T1 links forecast								TOTAL
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
TOTAL											
<b>New point of Interconnection</b>											
Service Taker ISL			Service Supplier ISL								
Service	Service ref.	Carrier System	T1 links forecast								TOTAL
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
TOTAL											

**SECTION III – QUARTERLY TRAFFIC FORECASTS**

<b>Forecast Quarter</b>						
<b>Start Date</b>			<b>End Date</b>			
<b>Service ref.</b>	<b>Origin</b>	<b>Destination</b>	<b>SERVICE TRAFFIC FORECAST</b>			
			<b>Total traffic (Erlangs)</b>	<b>Busy Hour period</b>	<b>Busy Hour traffic (Erlangs)</b>	<b>No. T1 Links</b>

**Appendix III. Order Plan**  
**SECTION I – CONTACT DETAILS**

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

**SECTION II – EXISTING SERVICES**

Service Taker		Date				
<b>Existing Network Links</b>						
Service ref	Origin/ Destination	Carrier type	No of Links	Trunk		
				Route name	I/C or O/G	No.

**SECTION III - NEW REQUIREMENTS**

<b>New requirements</b>							
<b>Interconnect Switches</b>				<b>Carrier system</b>			
Service Taker	Point code	Service Supplier	Point code	Carrier type	No. Links	Link Usage	Order type new/ change
<b>Link requirements</b>							
Origin	Destination	Trunk route name	Trunk route type I/C or O/G	No of trunks	Line code signalling & framing	Ready for test date	Ready for service/ termination date
<b>Change details</b>							
Service	Change Increase Decrease Relocate Reconfigure POC New POC	Trunk route name	Trunk route type I/C or O/G	Time slot info	CIC assignment	Dialled digit info	

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**SECTION IV – NETWORK OR CIRCUIT DIAGRAM**

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**

ITEMS	DETAILS
TSTT Fault log no.	
CCTL 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.		

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



**SECTION V – FAULT ESCALATION (if appropriate)**

Dispute details			
TSTT escalation list			
Date	Name	Position	Response
CCTL escalation list			
Date	Name	Position	Response

BC



## 4 Chapter 4 - Billing

### 4.1 Billing: Introduction

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

### 4.2 Data Collection and Invoice processing

4.2.1.1 For usage based services, CDR based billing will be used in electronic or paper format as the Parties may agree.

4.2.1.2 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.

### 4.3 Invoice disputes

4.3.1.1 In the event that the Service Taker disputes the accuracy of an invoice pursuant to Clause 9.5 of the Legal Framework, the Parties will resolve the dispute in accordance with the procedures in Clause 34 of the Legal Framework and this paragraph 4.3.

4.3.1.2 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.

4.3.1.3 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 4.6 of the Joint Working Manual.

4.3.1.4 Pursuant to Clause 34.1.3 of the Legal Framework, 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 in force 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.

### 4.4 Undetected billing errors

4.4.1.1 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) in the Legal Framework, 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 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 Repo Rate of the Central Bank of Trinidad and Tobago in force 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.

- 4.4.1.2 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.

#### 4.5 Late usage

- 4.5.1.1 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.

#### 4.6 Validation

- 4.6.1.1 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

#### 4.7 Retention of Billing Data

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

## 5 Chapter 5 – Testing

### 5.1 Interconnect Testing - Objectives & Scope

#### 5.1.1 Objectives

5.1.1.1 This chapter details the approach for testing the interconnection between TSTT and CCTL.

5.1.1.2 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.

#### 5.1.2 Scope

5.1.2.1 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

### 5.2 Interconnect Testing Framework

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

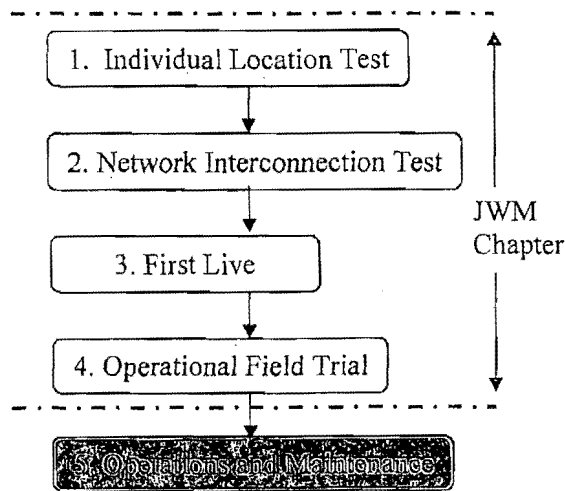


Fig. 1 - Process flow for Interconnect Testing.

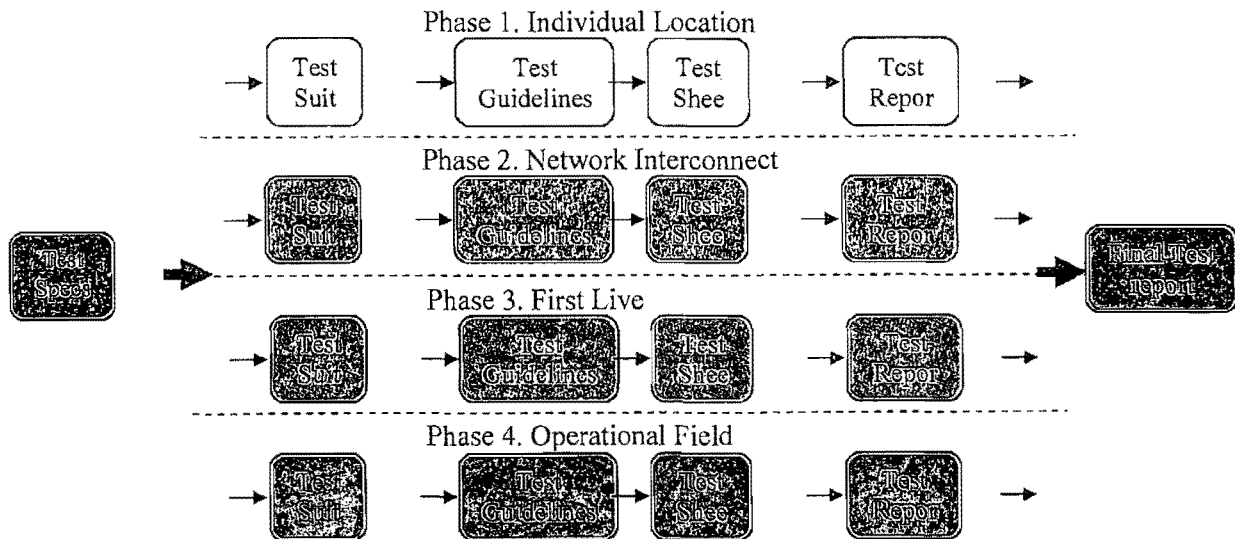
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<b>Individual Location Test</b>	This phase of the testing verifies that the network of TSTT and CCTL are suitable for interconnection. Each Party must demonstrate that its interface conforms to the technical chapter (chapter 1) of the Joint Working Manual.
<b>Network Interconnection Test</b>	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.
<b>First Live Traffic</b>	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.
<b>Operational Field Trial</b>	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

### 5.3 Test Specification Structure

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



*BS*

Fig. 2 - Structure of each test phase

**Test Specification**

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

**Test Suite**

5.3.1.3 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**

5.3.1.4 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**

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

**Test Report**

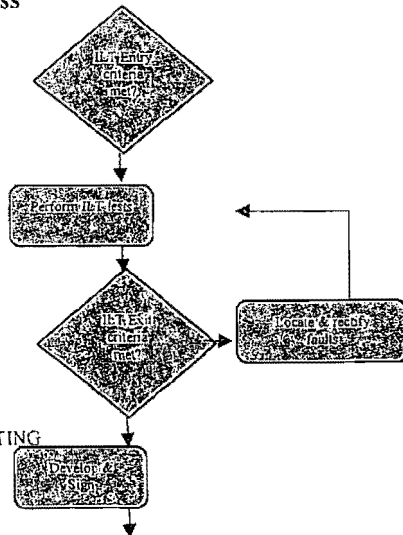
5.3.1.6 The Test Report is a summary of the tests executed. It also provides details on faults, re-tests and exceptions. The Test Report is signed by both Parties and is proof that the testing was completed. It is the main input to deciding whether the current phase of work can be exited.

5.3.1.7 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.

**5.4 Test Phases**

**5.4.1 Individual Location Test**

Process



*AS*

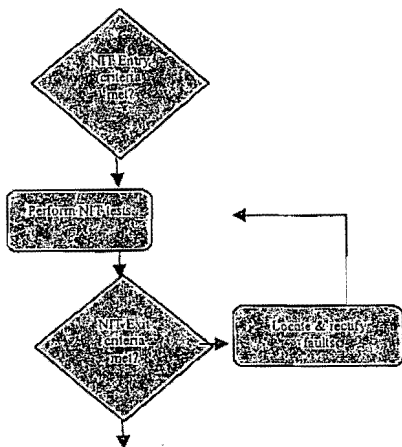
5.4.1.1 The goal of the Individual Location Test is to determine whether the infrastructure of each Party exhibits sufficient functionality to interconnect. The tests consider the following areas:

- Conformance to relevant communication standards and technical specifications as described in the technical chapter
- Implementation of the charging mechanisms
- Charging calibration.

5.4.1.2 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.

**5.4.2 Network Interconnection Test Process**



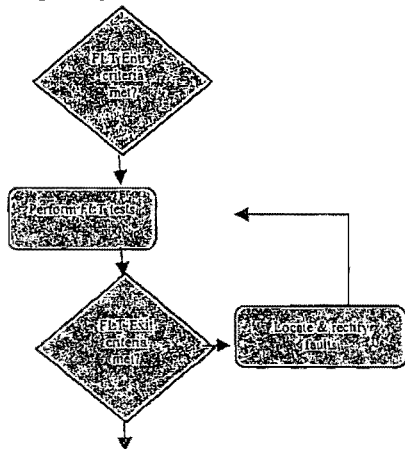
*BB*

5.4.2.1 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.

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 CCTL 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.

**5.4.3 First Live Traffic Process**



5.4.3.1 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.

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

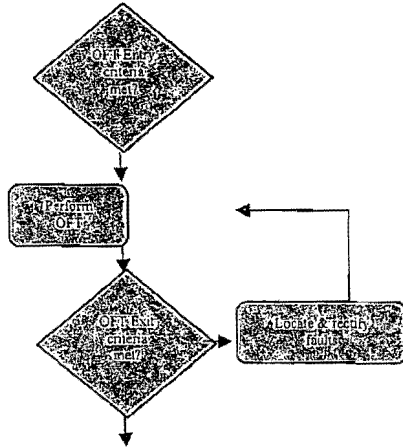
5.4.3.3 The First Live Traffic tests consider the following areas:

- Interoperability of signalling traffic
- Service tests (can all types of calls be established)
- Routing tests (is CCTL 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).

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 CCTL 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.

**5.4.4 Operational field trial**  
Process



5.4.4.1 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 Criteria	No changes in the interconnection since conclusion of the previous phase of 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;

*BB*



	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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## 5.5 Test Sheets & Report

5.5.1.1 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.

5.5.1.2 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.

## 5.6 Test Suites

5.6.1.1 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			
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
3	Stability and Security tests: 1. Load tests 2. Stress tests (fault situations) 3. Fraud	X	X X X	X X	
4	Service tests: 1. Services from TSTT to CCTL 2. Services from CCTL to TSTT 3. Changed services 4. New services			X X X X	X X X X
5	Billing: 1. Charging calibration 2. Charging per service (CDRs) 3. Billing aggregates 4. Billing service	X	X X	X X X	X X X
6	Processes: 1. Service & Element management 2. Operation processes 3. Maintenance processes 4. Customer processes			X X X X	X X X X

5.6.1.2 The Test Suites are described in overview below.

#### Conformance Testing

5.6.1.3 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

5.6.1.4 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

- 5.6.1.5 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

- 5.6.1.6 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

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

### Processes

- 5.6.1.8 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.

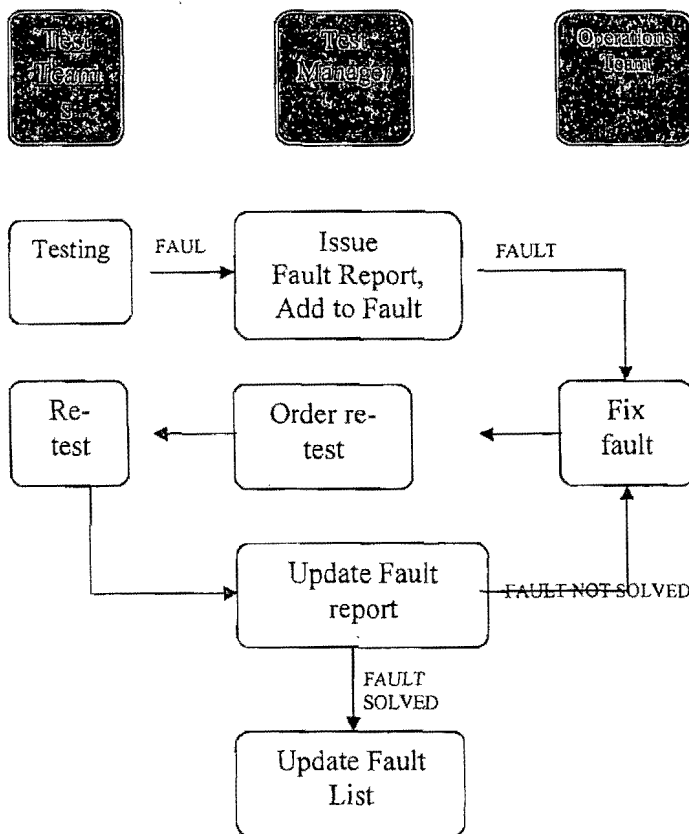
## 5.7 Fault Handling procedure to be used in testing phases

- 5.7.1.1 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.
- 5.7.1.2 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.
- 5.7.1.3 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 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

5.7.1.4 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.

5.7.1.5 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.



**5.8 Fault Classification**

5.8.1.1 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 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.

*RB*

Imperfections	before general availability
---------------	-----------------------------

**Fatal faults**

5.8.1.2 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.

5.8.1.3 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**

5.8.1.4 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**

5.8.1.5 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**

5.8.1.6 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.

5.8.1.7 Where there are issues concerning fault classification and/or the cause of the fault, the Overall Test Managers should be consulted.

5.8.1.8 Faults have to be documented in the corresponding test reports and handled as described in the previous section.

**5.9 Additional roles and responsibilities for testing**

5.9.1.1 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.

**Overall Test Manager**

5.9.1.2 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.

5.9.1.3 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**

5.9.1.4 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.

**5.10 Interconnect Testing Documentation**

5.10.1.1 The interconnect testing documentation is as follows

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

**Appendix I. Summary of Interconnect Tests**

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



**Appendix II. Fault Report Template for testing**

Fault Report between TSTT and CCTL

**Part I (to be completed by one of the test-teams)**

<b>Test Case Number:</b>		
<b>Description of test case:</b>		
<b>Expected result:</b>		
<b>Observed result:</b>		
<b>Comments (concerning the configuration, related problems, consequences, hints)</b>		
<b>Name:</b>	<b>Date:</b>	<b>Signature:</b>

**Part II (to be completed by test managers)**

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

Note 1:-

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

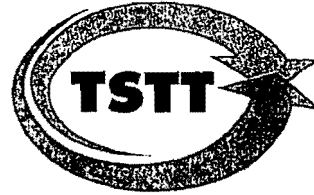
**Part III (to be completed by operations & development team)**

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

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

<b>Result of the re-test:</b>		
<b>Comment:</b>		
<b>Name:</b>	<b>Date:</b>	<b>Signature:</b>





## **Tariff Schedule**

# **Offer of Terms and Conditions For Interconnection**

*DC*

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 TT\$ 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.

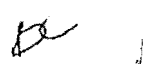
**PART 1. JOINING SERVICES**

**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 CCTL in advance of any work being performed.

Optical In-span Joining Service

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



**PART 2. TERMINATION SERVICES**

**PSTN Terminating Access Service**

**Usage Charges**

Payable by Service Taker to Service Supplier

Call duration charge TTS per 60 secs Yr 1 - April 1, 2012	Call duration charge TTS per 60 secs Yr 2 - April 1, 2013	Call duration charge TTS per 60 secs Yr 3 - April 1, 2014	Call duration charge TTS per 60 secs Yr 4 - April 1, 2015	Call duration charge TTS per 60 secs Yr 5 - April 1, 2016
██████	██████	██████	██████	██████

**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**

Call duration charge TTS per 60 secs Yr 1 - April 1, 2012	Call duration charge TTS per 60 secs Yr 2 - April 1, 2013	Call duration charge TTS per 60 secs Yr 3 - April 1, 2014	Call duration charge TTS per 60 secs Yr 4 - April 1, 2015	Call duration charge TTS per 60 secs Yr 5 - April 1, 2016
██████	██████	██████	██████	██████

**Mobile Termination part**

Call duration charge TTS per 60 secs Yr 1 - April 1, 2012	Call duration charge TTS per 60 secs Yr 2 - April 1, 2013	Call duration charge TTS per 60 secs Yr 3 - April 1, 2014	Call duration charge TTS per 60 secs Yr 4 - April 1, 2015	Call duration charge TTS per 60 secs Yr 5 - April 1, 2016
██████	██████	██████	██████	██████

*bc*

**PART 3. SPECIAL ACCESS SERVICES**  
**Emergency Services Access Service**

**Usage Charges**

Payable by Service Taker to Service Supplier

Call duration charge TTS per 60 secs Yr. 1 April 1, 2012	Call duration charge TTS per 60 secs Yr. 2 April 1, 2013	Call duration charge TTS per 60 secs Yr. 3 April 1, 2014	Call duration charge TTS per 60 secs Yr. 4 April 1, 2015	Call duration charge TTS per 60 secs Yr. 5 April 1, 2016
██████	██████	██████	██████	██████

National DQ Services

**Usage Charges**

Payable by Service Taker to Service Supplier

Call Setup charge TTS per call Yr. 1 April 1, 2012	Call Setup charge TTS per call Yr. 2 April 1, 2013	Call Setup charge TTS per call Yr. 3 April 1, 2014	Call Setup charge TTS per call Yr. 4 April 1, 2015	Call Setup charge TTS per call Yr. 5 April 1, 2016
██████	██████	██████	██████	██████

**International DQ Service**

**Usage Charges**

Payable by Service Taker to Service Supplier

Call Setup charge TTS per call Yr. 1 April 1, 2012	Call Setup charge TTS per call Yr. 2 April 1, 2013	Call Setup charge TTS per call Yr. 3 April 1, 2014	Call Setup charge TTS per call Yr. 4 April 1, 2015	Call Setup charge TTS per call Yr. 5 April 1, 2016
██████	██████	██████	██████	██████

**National Free-phone Access Service**

**Usage Charges**

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

Call duration charge TTS per 60 secs Yr. 1 April 1, 2012	Call duration charge TTS per 60 secs Yr. 2 April 1, 2013	Call duration charge TTS per 60 secs Yr. 3 April 1, 2014	Call duration charge TTS per 60 secs Yr. 4 April 1, 2015	Call duration charge TTS per 60 secs Yr. 5 April 1, 2016
██████	██████	██████	██████	██████

**Usage Charges**

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

Call duration charge TTS per 60 secs Yr. 1 April 1, 2012	Call duration charge TTS per 60 secs Yr. 2 April 1, 2013	Call duration charge TTS per 60 secs Yr. 3 April 1, 2014	Call duration charge TTS per 60 secs Yr. 4 April 1, 2015	Call duration charge TTS per 60 secs Yr. 5 April 1, 2016
██████	██████	██████	██████	██████

*PS*

## International Freephone Access Service

### Usage Charges

Payable by Service Supplier to Service Taker

Call Setup Charge 111\$ per 60 secs
[REDACTED]

## Transit Charges for National and International Freephone Access Services

Payable by Service Supplier to the Party providing Transit Service

Call duration charge 111\$ per 60 secs
[REDACTED]

## PART 4. PSTN TRANSIT SERVICES

### PSTN Transit Service

#### Usage Charges

Payable by Service Taker to Service Supplier

Call duration charge 111\$ per 60 secs
[REDACTED]

Note: Upon execution of this Agreement, where a Third Party National Telecom Provider ("Third Party Provider") which has not previously agreed a termination rate with the Service Supplier subsequently agrees a termination rate with the Service Supplier, the Service Taker shall pay that rate to the Service Supplier which shall then be remitted by the Service Supplier to the Third Party Provider. Where, in respect of that agreed termination rate, it is mandated by any legal or regulatory authority that the termination charge is to be paid retroactively, it is understood that such charge can be incurred for any period mandated by the legal or regulatory authority but no event can it be for any period prior to the commencement of the Operational Field Trial Test, i.e when billing first commenced.

RS