

## SERVICE DESCRIPTION 1-2: CUSTOMER SITED INTERCONNECTION SERVICE

### 1 THE SERVICE

The **Customer Sited Interconnect (CSI) Link Service** is provided by Batelco, at the Licensed Operator's Seeker's request, to establish the facility for delivery of traffic between the parties' Networks. The CSI Link Service is an alternative to use of the In-Span Interconnect Link Service to establish interconnection between a Batelco Switch Connection and a Licensed Operator Switch Connection.

### 2 DEFINITIONS

Capitalised terms not defined in this Service Description are defined in Dictionary. Terms defined in this Service Schedule are specific to it.

**2Mbit/s Path** means the transmission layer (comprising the multiplexers, line terminating equipment and transmission medium) between the 2048 Mbit/s interfaces of the multiplexer located at the Licensed Operator's premises housing the Point of Interconnection and a multiplexer located at the building containing Batelco Switch Connection.

**Base Circuit** means a nominated CSI Link between the Batelco and the Licensed Operator Switch Connections in respect of which Separated Circuits may be ordered by the Access Seeker and provided by Batelco.

**Busy Hour** means in a communications system, the sliding 60-minute period during which occurs the maximum total traffic load in a given 24-hour period determined by fitting a horizontal line segment equivalent to one hour under the traffic load curve about the peak load point, provided that:

- (a) if the service time interval used by an Operator's traffic load curve is less than 60 minutes, the busy hour is the 60-minute interval that contains the service timer interval; and
- (b) cases where more than one busy hour occurs in a 24-hour period, i.e., when saturation occurs, the hour or hours most applicable to the particular situation are used

**CSI Link** has the meaning in paragraph 3.1 of this Service Description.

**Delivery Lead Time** means the delivery lead times described in paragraph 4.3.

**End to End Bit Error Rate Test** means bit error rate tests specified as part of the End to End Multiplexing Tests.

**End to End Multiplexing Tests** means the standards, testing criteria, testing procedures and acceptance procedures specified in the Joint Working Manual in accordance with which the parties will configure, line up, test and accept In-Span tributaries referred to in the relevant Tributary Assignment Form.

**Full Separation** means the provision of Site Entry Separation plus separate physical paths for CSI Links to the relevant Batelco building containing the Batelco Switch Connection.

**Grade of Service** means the number of unsuccessful call attempts as a proportion of the total call attempts over the CSI Link calculated during the Busy Hour, expressed on a percentage basis.

**Intrabuilding Link** means a connection between a Batelco Switch Connection or an Access Seeker Switch Connection and the interface on the multiplexer forming part of the CSI Link.

**Link Availability Rebate Cap** means 20% of the monthly rental Charges for a single Interconnect Link.

**Local End Separation** means the provision of Site Entry Separation with each duct having separate physical paths for CSI Links to the Batelco building containing the relevant local serving exchange.

**Mean Response Time** means the average of a Batelco's Response Times in respect of each of Critical Link Failures, Major Link Failures, Critical Route Failures and Major Route Failures only, measured over a quarter (being three (3) consecutive months).

**Mean Restoration Time** means the average of Batelco's Restoration Times in respect of each of Critical Link Failures, Major Link Failures, Critical Route Failures or Major Route Failures only, measured over a quarter (being three (3) consecutive months).

**Performance Tests** means the performance tests specified as part of the End to End Multiplexing Tests.

**Separated Circuit** means a CSI Link that has Separation in respect of a Base Circuit.

**Separation** means one of Site Entry Separation, Local End Separation or Full Separation applicable to CSI Links.

**Service Credit** means, in relation to a single Service Credit, that amount represented by 1% of the monthly rental Charges for a single Interconnect Link .

**Site Entry Separation** means the provision of two separate ducts having different entry points to the Licensed Operator premises.

**Target Availability** means that amount of time over a quarter, being three (3) consecutive months, during which CSI Link does not suffer a certain type of link failure or route failure, expressed on a percentage basis.

**Threshold Response Time** means, in relation to Critical Link Failures, Major Link Failures, Critical Route Failures and Major Route Failures only, the threshold response times set out in paragraph 4.6(b).

**Threshold Restoration Time** means, in relation to Critical Link Failures, Major Link Failures, Critical Route Failures and Major Route Failures only, the threshold restoration times set out in paragraph 4.6(b).

**Total Service Credit Cap** means 40% of the monthly rental Charges for a single Interconnect Link.

### **3 TERMS**

#### **3.1 Architecture**

- (a) The CSI Link Service comprises:
  - (i) the Intra-building Link within the Batelco building in which the Batelco Switch Connection is located;
  - (ii) one or more 2Mbit/s Paths; and
  - (iii) as appropriate, a signalling link,provisioned and operated by Batelco. The Point of Interconnection is the 2Mbit/s interface on the Licensed Operator's side of the relevant Batelco line terminating equipment located within the Licensed Operator's premises.
- (b) Each CSI Link is a 2Mbit/s capacity service and contains not more than 30 traffic circuits and may, if required, contain a signalling link.
- (c) Unless otherwise agreed, a CSI Link may convey agreed traffic types of both Parties.
- (d) Subject to Batelco obtaining all necessary consents, which it must use its reasonable endeavours to obtain, Batelco shall provide 2Mbit/s Paths by optical fibre. If Batelco is unable to obtain such consents, Batelco, after notifying the Licensed Operator in writing, may:
  - (i) suspend its obligations under the relevant order until such time as the necessary consents are obtained; and/or

- (ii) notify the Licensed Operator that, subject to the payment of the relevant charges (if any), Batelco shall, if agreed by the Licensed Operator, provide (as a temporary or permanent measure) that 2Mbit/s Path by radio or coaxial if agreed by the Access Seeker Licensed Operator.
- (e) If, pursuant to sub-paragraph (d), the Licensed Operator notifies Batelco that the Licensed Operator does not accept provision by the use of radio, Batelco's obligation to provide that CSI Link shall be suspended until such time as the necessary consents are obtained.
- (f) If Batelco notifies the Licensed Operator of its intention to suspend its obligation to provide a CSI Link in accordance with sub-paragraph (e), the Licensed Operator may notify Batelco in writing of the cancellation of the order for that CSI Link without any penalty:
- (g) If pursuant to sub-paragraph (d), the Licensed Operator notifies Batelco that the Licensed Operator accepts provision by the use of radio, Batelco shall so provide the 2Mbit/s Path, provided that all necessary consents are obtained.
- (h) If a 2Mbit/s Path has been provided by radio, Batelco at its cost, may, at its discretion, provide in substitution a 2Mbit/s Path by optical fibre cable. Any additional charges for radio link will cease at the time that the relevant charges for fibre commence.

### **3.2 Licensed Operator Obligations**

- (a) The Licensed Operator shall provide Batelco with suitable space for, and access at reasonable times to, the Batelco equipment required to be located in the building in which the Licensed Operator's Connection is located. If consent is required from a third party, the Licensed Operator shall procure such consent. Batelco is not required to pay the Licensed Operator for the preparation or use of, or access to, space provided pursuant to this sub-paragraph.
- (b) Batelco undertakes not to damage or destroy equipment forming part of the Licensed Operator property whilst providing or maintaining CSI Links. If such damage or destruction does occur, then subject to the provisions of the Supply Terms, Batelco shall pay the reasonable cost of repair or replacement of such equipment, fair wear and tear excepted.
- (c) If the Batelco equipment at the Point of Interconnection requires a continuous mains electricity supply and electricity connection points, they shall be supplied, where specified by Batelco, by the Licensed Operator at its expense. Such

electricity shall be available at the same level of supply, protection and continuity as that available to the Licensed Operator's own equipment.

- (d) The Licensed Operator shall be solely responsible for any loss, theft or destruction of, or damage (reasonable wear and tear excepted) to Batelco equipment in the accommodation housing the agreed Point of Interconnection, howsoever caused (unless caused by Batelco or its agents), occurring at any time while such Batelco equipment is so located.

### **3.3 Separation**

- (a) When making a Service Request for or rearrangement of a CSI Link, the Licensed Operator may request Separation. The Licensed Operator shall specify the type of Separation required and Batelco shall, subject to its reasonable ability to do so, use its reasonable endeavours to supply the relevant Separation in accordance with the reasonable timescales notified by Batelco when accepting the request for Separation.
- (b) If a CSI Link fails, restoration or repair of the Service may result in Separation being suspended for CSI Links. Batelco shall reinstate the Separation as soon as reasonably practical and if the period of the suspension exceeds 24 hours, no additional payments for Separation shall be payable until Separation is restored.
- (c) If the Separation is found to have diminished, because of changes to the Batelco network or otherwise, the parties shall consult with a view to reinstating the Separation. If Batelco is unable to reinstate the Separation, the Licensed Operator may terminate the relevant capacity on the CSI Link or, continue to use the capacity without Separation, and no additional payments for Separation shall be payable for this Capacity.

### **3.4 Signalling**

- (a) When ordering the first CSI Links between a specific Batelco Switch Connection and a specific Licensed Operator Switch Connection, the Licensed Operator shall order a signalling link set and specify the route type(s).
- (b) The Licensed Operator shall order an additional signalling link set if the total number of 2Mbit/s Interconnect Links between a Batelco Switch Connection and a Licensed Operator Switch Connection exceed 64 times 2Mbit/s or as otherwise agreed by the parties in accordance with the Joint Working Manual.
- (c) An order for a signalling link shall include an order for an Intra-building Link.

### **3.5 Route Types**

Each traffic route is provided with a route type. Where a Party orders an additional route type, in accordance with the Joint Working Manual, it shall specify the required traffic types from the list previously agreed between the parties.

### **3.6 Rearrangements**

- (a) The Licensed Operator may request, in accordance with the Joint Working Manual, the rearrangement of Intrabuilding Links on the Licensed Operator's side of the Point of Interconnection, or, in the building housing the Batelco Switch Connection. A change necessitating a 2Mbit/s Path being moved from one building to another building shall be termination of an existing 2Mbit/s CSI Link and the provision of a new 2Mbit/s CSI Link.
- (b) If the Licensed Operator requests Separation of an existing CSI Link such request shall be an order for a new CSI Link for the capacity on the Separated Circuit and a termination of the relevant capacity on the Base Circuit.

### **3.7 Charges**

The Licensed Operator shall pay Batelco the relevant Charges for CSI Interconnect in accordance with Schedule 3.

## **4 SERVICE LEVELS**

### **4.1 Application of Service Levels**

Batelco will use its reasonable endeavours to meet the Service Levels applicable to the Customer Sited Interconnect (CSI) Link Service as set out in this paragraph 4. However those Service Levels will not apply:

- (a) where the Service has not been properly ordered and provisioned by the Licensed Operator in accordance with the procedures set out in Schedule 5 (Ordering and Provisioning);
- (b) where the Licensed Operator has engaged in unreasonable delay in relation to, or breached any of, its obligations as set out in this Service Description;
- (c) where the Licensed Operator does not co-operate with Batelco as reasonably requested by Batelco in relation to factors affecting quality of Service over the CSI Link; or
- (d) where the Supply Terms provide that they do not.

## 4.2 Reporting

In addition to its obligations under paragraph 3 of Schedule 4, Batelco shall provide reports upon request from the Licensed Operator in relation to the traffic and quality of Service over the CSI Link containing at least information detailing the conduct and results of the following tests defined in the Joint Working Manual:

- (a) End-to-End Bit Error Rate Test (BERT); and
- (b) Performance Test.

## 4.3 Delivery and Installation Lead Times for CSI Links

- (a) The parties agree that the following Delivery Lead Times will apply to the installation of CSI Links for Orders placed by the Licensed Operator and accepted by Batelco:

Order Type	Delivery Lead Time	
	Simple or Intermediate Case	Complex Case
New CSI Link	16 weeks	26 weeks

- (b) The applicable Service Rebates for a failure to meet the Delivery Lead Times set out in the preceding paragraph are as follows:

Actual provisioning time (number of weeks after expiration of the applicable Delivery Lead Time)	Service Rebate for new CSI Link
0-2 weeks	5 Service Credits
2-4 weeks	10 Service Credits
> 4 weeks	15 Service Credits + 15 Service Credits for each further period or part period of 2 weeks delay

#### 4.4 Performance and uptime

Each party will endeavour to meet that Target Availability for the types of failures set out in the table below, and which states the Service Rebate regime that will apply if the relevant Target Availability falls below the stated thresholds:

Calculation	Target Availability	Service Rebate
Target Availability for periods free of Critical Link Failures or Critical Route Failures	99.9%	2 Service Credits per 0.01 % or part thereof below the Target Availability but not exceeding the Link Availability Rebate Cap
Target Availability for periods free of Major Link Failures or Major Route Failures	99.5%	2 Service Credits per 0.01% or part thereof below the Target Availability but not exceeding the Link Availability Rebate Cap

#### 4.5 Grade of Service measurements

Batelco will monitor the Grade of Service over the CSI Link in order to measure and monitor the overall quality of service over it, including at least measurement by the following parameters:

- (a) total number of call attempts;
- (b) total number of successful calls, including total number of answered calls; and
- (c) total number of unsuccessful call attempts.

#### 4.6 Fault response and repair

- (a) Each party will, as soon as practicable after becoming aware of a Fault with the CSI Link, notify the other party of that Fault in accordance with the procedures set out in Schedule 6 (Fault Management) for the reporting of faults, Fault investigation and identification of the Fault Owner and Other Affected Party.
- (b) The parties acknowledge that the applicable Response Times and Restoration Times depend on the nature of the Fault, and that Service Affecting Faults shall be prioritised over Non-Service Affecting Faults. Batelco agrees to observe the following Response Times and Restoration Times with respect to a Fault on the CSI Link:



Fault type (as defined in Schedule 6)	Response Time	Restoration Time	Threshold Response Time	Threshold Restoration Time
	(in hours, as defined in Schedule 6)			
Critical Link Failure	10 minutes	3 hours	15 minutes	5 hours
Major Link Failure	30minutes	5 hours	45 minutes	8 hours
Critical Route Failure	10 minutes	3 hours	15 minutes	5 hours
Major Route Failure	30 minutes	5hours	45 minutes	8 hours

- (c) Where Batelco's Mean Response Time or Mean Restoration Time exceeds the Threshold Response Times or Threshold Restoration Times respectively for:
- (i) Critical Link Failures;
  - (ii) Major Link Failures;
  - (iii) Critical Route Failures; or
  - (iv) Major Route Failures,
- then the following Service Rebates, assessed on a quarterly basis, will apply:

<b>Fault type (as defined in Schedule 6)</b>	<b>Time by which Mean Response Time exceeds Threshold Response Time</b>	<b>Service Rebate</b>	<b>Time by which Mean Restoration Time exceeds Threshold Restoration Time</b>	<b>Service Rebate</b>
Critical Link Failure	15 minutes	4 Service Credits	1 hour	4 Service Credits
	1 hour	5 Service Credits	2hours	5 Service Credits
	> 1 hour	6 Service Credits	> 2hours	6 Service Credits
Major Link Failure	45 minutes	3 Service Credits	2 hours	4 Service Credits
	2 hours	4 Service Credits	3 hours	5 Service Credits
	>2 hours	5 Service Credits	> 3 hours	6 Service Credits
Critical Route Failure	15 minutes	4 Service Credits	1 hour	4 Service Credits
	1 hour	5 Service Credits	2 hours	5 Service Credits
	>1 hour	6 Service Credits	> 2 hours	6 Service Credits
Major Route Failure	45 minutes	3Service Credits	2hours	4 Service Credits
	2 hours	4 Service Credits	3hours	5 Service Credits
	> 2 hours	5 Service Credits	> 3hours	6 Service Credits