

**OPERATION AND MAINTENANCE MANUAL FOR THE  
LOCAL LOOP UNBUNDLING SERVICE**

**27 April 2017**

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This Operations and Maintenance Manual sets out the processes and principles by which JT and the Alternative Operator shall maintain and operate the Network elements that makes up the LLU Services.

## **1 General**

- 1.1 A JT contact number is available on a 24-hour basis to receive Network queries from the Alternative Operator (Contact Points shall be listed in the Network Plan).
- 1.2 The Alternative Operator shall use its best endeavour to protect the integrity and performance of JT Network.

## **2 Quality of Service Measures**

### **2.1 GENERAL STATEMENT**

JT shall provide LLU Services to the Alternative Operators equal to the same level of quality as provided in the Service Level Offer.

## **3 Fault Management**

### **3.1 PRINCIPLES**

- 3.1.1 JT and the Alternative Operator shall maintain its own fault reporting centre which shall be responsible for handling the faults between Networks, coordinating fault clearance (including escalations) within its own Network and subsequently reporting the clearance of the fault to the other Licensee.
- 3.1.2 JT and the Alternative Operator shall provide twenty-four (24) hour designated point of contact for fault reporting.
- 3.1.3 The details of designated Points of Contact for JT and Alternative Operator shall be included in the Network Plan.
- 3.1.4 JT or Alternative Operator detecting a fault which may affect LLU Services shall endeavour to inform the other Party immediately and within one (1) hour, regardless of the nature and ownership of the fault, as defined in the fault reporting procedure outlined below.

### **3.2 FAULT REPORT PROCEDURE**

- 3.2.1 Prior to submitting a Fault Report, the Alternative Operator shall have to ensure that a genuine fault exists and that every effort has been made in advance to check that the fault resides within JT's area of responsibility.
- 3.2.2 All faults shall be reported by Alternative Operator using the Fault Report form provided in Appendix 2 of this Operation and Maintenance Manual and transmitted to JT to the Point of Contact designated in the Network Plan.
- 3.2.3 The Alternative Operator shall provide sufficient information to allow the diagnosis of the reported fault and to enable the progression of the fault until resolution. Therefore, all Fault Reports shall contain at least the following data:
- JT's reference number of the disturbed LLU Services and type of affected LLU Services.
  - Contact point and phone number of the End User.
  - Full address of the concerned End User.
  - Alternative Operator's contact point (including phone and fax numbers as well as e-mail address) for the given Fault Report and related fault clearance.
  - Precise description of the reported fault and all relevant technical details.
  - Date and description of the Alternative Operator's technician intervention.
- 3.2.4 Upon receipt of a valid Fault Report compliant to the minimum terms set above in 3.2.3, JT shall fill in the Fault Response section in the Fault Report form and send it back to the Alternative Operator, to do so, the Alternative Operator shall provide JT with an e-mail address for the exchange of such notification messages.
- 3.2.5 Both Licensees shall nevertheless co-operate in any investigation and follow up actions and keep each other informed on the status of the progress of the fault clearance in a timely manner.
- 3.2.6 The Alternative Operator shall accept if necessary to disconnect its services upon JT's request to enable appropriate measurements of the line.
- 3.2.7 If the repair activity shows that the Alternative Operator connects equipment that is not compliant with the requirements set out in the IMP- Technical specifications, or equipment that causes disturbances for JT and/or for other End Users in the cables, JT is entitled to disconnect the LLU Service.

- 3.2.8 If the Alternative Operator requests the repair and JT concludes that Alternative Operator's equipment caused the fault, the Alternative Operator will be billed for the work done by JT.
- 3.2.9 When JT believes that a fault has been cleared, they shall advise the Alternative Operator and fill in the Fault Closure section on the relevant Fault Report Form and return it back to the Alternative Operator.
- 3.2.10 The Fault will be closed automatically by JT if the Alternative Operator doesn't reject the Closing notification within one (1) hour after sending it by JT.
- 3.2.11 If the Alternative Operator rejects the Closing Notification within one (1) hour, the Alternative Operator shall specifically provide the following information:
- The reason why the Alternative Operator reasonably believes that the metallic wire is unsuitable for LLU Service.
  - Whether or not the Alternative Operator believes that the LLU Service is within the agreed specifications.
  - All additional information that the Alternative Operator considers as suitable to assist in understanding and diagnosing any underlying fault in the LLU Service.
- 3.2.12 The Alternative Operator shall co-operate with JT to carry out further tests, even on Alternative Operator's equipment when reasonably requested to do so.
- 3.2.13 At its sole discretion, JT may carry out additional work at the Alternative Operator's request while the costs thereof shall be invoiced to the Alternative Operators as long as the fault is caused by the Alternative Operator.
- 3.2.14 Both Parties recognize and acknowledge that the fault repair time will commence when the fault is reported by the Alternative Operator to JT and end when JT issue the Fault Closing Notification, for the avoidance of doubt where clearance is accepted or not rejected within one hour by the Alternative Operator the clearance time shall be the time JT reported the clearance.
- 3.2.15 The target Response and Repair time for fault is detailed in the Service Level Offer.
- 3.2.16 If a fault is submitted to JT, that is proved to be isolated to JT's Network and the affected Alternative Operator Site visit is required to resolve this fault, JT will arrange for repair appointment with the Alternative Operator. If the fault resolution lead-time is delayed or affected due to JT experiencing difficulty in

contacting the Alternative Operator or accessing its Site, or its Site is not equipped with necessary power outlets required for the test equipment ...etc. The fact that there has been a delay of the fault lead time as a consequence it will be flagged against the Alternative Operator. The reason for delay in the fault resolution will then be clearly visible to the Alternative Operator. And the fault will be considered as End User Problem. Thus, the Alternative Operator needs to open new ticket and comply with JT fault handling procedures.

3.2.17 If a wrongful Fault Report occurs, or when the reported fault does not lie within the scope of JT's responsibility for the concerned part(s) of the LLU Services under this Reference Offer, all the costs related to works and travelling already performed by JT in relation to such Fault Report will be charged to the Alternative Operator.

### 3.3 FAULT ESCALATION

3.3.1 Where a fault persists and progress of the remedy is not satisfactory, the fault may be escalated according to the fault escalation timescales and the escalation reporting levels shown in clause ~~3.3.33.3.3~~ below. If the escalation time has expired but both Licensees are satisfied with the progress of the fault restoration, no immediate escalation is necessary.

3.3.2 Alternative Operator shall immediately inform the first level of escalation within JT organization at the same time that the Alternative Operator who detected the fault notifies the fault reporting point of JT that the fault is being escalated in accordance with this clause ~~3.33.3~~.

3.3.3 All requests for escalation shall be notified through JT 's fault reporting point, as detailed in the Network Plan, and according to the following indicative timescale:

<b>Minimum Time before Escalation (Commencing after the Response Time)</b>		
First Level	Second Level	Third Level
Immediate	(72) hours	5 working Days

3.3.4 Persistent faults or issues which cannot be resolved satisfactorily through the normal channels shall be escalated to a higher level to expedite the fault clearance process.

3.3.5 The Licensees shall notify their respective and appropriate officers for problems encountered in the implementation or execution of the fault escalation procedures.

### 3.4 PLANNED ENGINEERING WORK

3.4.1 Planned work is known and planned beforehand and can put the local loop out of order, or influence temporarily the quality of service offered by the

Alternative Operator to the End User, or cause temporary interruptions to its provision.

- 3.4.2 JT reserves the right for interventions and formation of the condition of the loops in order to upgrade the capabilities of the access Network, and support of new or existing services.
- 3.4.3 JT reserves the right to conduct measurements and tests, which could cause disturbance to LLU Services offered to the Alternative Operator.
- 3.4.4 JT and the Alternative Operator shall notify each other in writing and within a reasonable period of time for all the planned works which may interfere with the quality of the unbundled services provided, stating the exact date and time, as well as the estimated duration of the works, the twisted pairs that will be affected by the work interruption.
- 3.4.5 The details of the works to be carried out shall be recorded and communicated on the "Advice of Planned Engineering Work" form in Appendix 3 of this Operation and Maintenance Manual. This form shall state the date, time and duration of such works, the impact on LLU Service, any management procedures required, and any contingency measures to be taken by either or both Licensees.
- 3.4.6 The planned works are performed on a specific Day and time, after informing the other Party, the requesting Licensee, prior to planned engineering works, shall give advance notice of at least five (5) working Days' notice to the other Licensee.
- 3.4.7 In any case, both Parties will make the best possible effort to minimize the interruptions on the Local Loop.
- 3.4.8 The requesting Licensee shall notify the other Licensee when the work is completed by filling the relevant section of the "Advice of Planned Engineering Work" form, which should be transmitted to the other Licensee without unnecessary delay.

### **3.5 SYSTEM PROTECTION AND SAFETY**

- 3.5.1 Both Licensees shall agree to take adequate measures to maintain the integrity of their Networks and to ensure the protection and safety of persons and equipments at all times.
- 3.5.2 Integrity of the Network refers to the ability of its systems to preserve and retain their original operational status and remain unaffected by connection with other Networks.

3.5.3 Both Licensees shall ensure that:

1. adequate measures are taken to prevent the transmission of any signalling message across to the other Licensee Network which does not comply with industry standards; and
2. efficient arrangement for screening functions and rejection of non-compliant messages are established to detect signals which do not comply with industry standards.

3.5.4 Each Licensee is responsible for the safe operation of its Network and shall, so far as is reasonably possible, take all necessary steps to ensure that its side of the Network and its Network operations:

1. Do not endanger the safety or health of any person, including employees and contractors of the other Licensee; and
2. Do not cause physical or technical harm to the other Licensee's Network, including but not limited to causing damage, interfering with or cause deterioration in the operations of the other's Licensee Network.

## **4 Site Access Procedure (COLLOCATION Sites only)**

- 4.1 Collocation Sites for LLU Service will be defined and monitored by JT staff, they can be accessed twenty four (24) hours a Day, seven (7) Days a week.
- 4.2 Access will only be granted to the room where the Alternative Operator hires collocation space(s), escorted by JT staff where necessary.
- 4.3 Only those individuals whose names the Alternative Operator has notified to JT will be allowed to access a Site. To that effect, the Alternative Operator shall issue a list stating the full name and national identity number of each authorized person on the form provided in Appendix 5 of this Operation and Maintenance Manual. The form should be sent to the JT NMC and the JT Commercial Account Manager, and may be amended from time to time by the Alternative Operator.



- 4.4 The Alternative Operator shall inform JT of any change to the list of authorized persons. The Alternative Operator shall remain responsible for the action of any individual entering the Site until notification is received and the name of the individual is removed from the list of authorized persons.
- 4.5 Any individual requiring access shall present an identity card at the entrance of the Site. Access to the Site will be granted upon verification that the name of the individual is recorded on the list of authorized persons and signature of the logbook which should state the arrival time, departure time and purpose of the visit.
- 4.6 Any individuals accompanying an authorized person should also sign the logbook. The authorized employee shall be held fully accountable for any actions of the individuals accompanying him on the visit.
- 4.7 It is the responsibility of each individual entering Collocation facilities to ensure that they work in a safe environment. The Alternative Operator shall ensure that all persons entering the JT collocation facilities on its behalf have adequate training for working on equipment collocated at JT premises, and that these persons comply with all safety and security requirements applicable on JT premises.
- 4.8 All questions and comments regarding safety and security in collocation Sites shall be addressed in writing to the JT Technical Account Manager.
- 4.9 All persons entering collocation Sites on behalf of the Alternative Operator shall be allowed to make reasonable use of essential facilities, such as power, lighting, water and toilets.
- 4.10 Information on JT access Network is considered as business secrets. The publishing or providing of this information to third party is strictly forbidden.

#### **APPENDIX 1 – NETWORK PLAN**

The Network Plan shall be in accordance with clause 1.3 of the Reference Offer and reviewed in accordance with clause 8 of the same document.

The Network Plan shall contain those elements of necessary specific information required to achieve delivering the LLU Service to the Alternative Operator. Such information shall include but not limited to.

1. JT Sites that the Service will be delivered from.
2. The forecast for the Alternative Operator.
3. Alternative Operator orders
4. Contact points for both JT and the Alternative Operator
5. Notification and information relating to planned Network upgrades
6. Date of next review

**APPENDIX 2 – FAULT REPORT FORM**

<b>FAULT REPORT FORM</b>	
<b>Time of Report:</b> hh-mm	<b>Date:</b> dd/mm/yyyy
<b>Licensee Details:</b>	
<b>Alternative Operator Name:</b>	<b>Address:</b>
<b>Report Contact Name:</b>	<b>E-mail Address:</b>
<b>Phone Number:</b>	<b>Fax Number:</b>
<b>Fault Details</b>	
<b>Service Reference:</b>	<b>Fault Reference:</b>
<b>Fault Description/Symptoms:</b>	

<b>Fault Response</b>	
<b>Time of Response:</b> hh-mm	<b>Date:</b> dd/mm/yyyy
<b>Response Contact Name:</b>	<b>E-mail Address:</b>
<b>Phone Number:</b>	<b>Fax Number:</b>
<b>Fault Identified:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Ownership Accepted:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>Diagnostic:</b>	
<b>Fault Reference:</b>	<b>Target Repair Time:</b> hh-mm on dd/mm/yyyy
<b>Taken Action:</b>	

<b>FAULT CLOSURE</b>	
<b>Fault Reference:</b>	<b>Contact Name:</b>
<b>Time of Closure:</b> hh-mm	<b>Date:</b> dd/mm/yyyy
This is to confirm that the Fault has been repaired/cleared and hereby close the instance	
<b>Comments:</b>	

**APPENDIX 3 – ADVICE OF PLANNED ENGINEERING WORK FORM**

<b>Licensee Name:</b>		<b>Date:</b> dd / mm / yyyy	<b>Reference No.:</b>
<b>Contact Details:</b>		<i>(At least 5 Days before start date)</i>	
<b>Name :</b>			
<b>Phone No.:</b>			
<b>Mobile No.:</b>			
<b>Fax No.:</b>			
<b>Email address:</b>			
<b>Planned Work Details</b>			
<b>Subject:</b>	<b>Location:</b>	<b>Type of planned works:</b>	
<i>(Title of the planned works)</i>	<i>(location of the planned work)</i>		
<b>Reason of planned work</b>			
<i>(Describe the reason for the planned work i.e. due to routine/urgent maintenance or software upgrade etc.)</i>			
<b>Planned Work Duration:</b>			
<b>Start Date:</b>	<b>Start Time:</b>	<b>Service Interruption Duration:</b>	
<i>(Indicate the date of planned work)</i>	<i>(Indicate the start time of planned work)</i>	<i>(Provide an estimated duration of service interruption)</i>	
<b>Impact of Planned Work on Services</b>			
:			
<b>Remarks</b>			
<b>Issuing Officer:</b>		<i>(Indicate the name and designation of the officer issuing the advice of planned work)</i>	



**APPENDIX 5 – LIST OF AUTHORISED PERSONS TO ACCESS COLLOCATION FACILITIES**

The following persons are authorised to access the collocations facilities on behalf of the Alternative Operator:

<b>Name</b>	<b>Identity No.</b>

The following persons are no longer authorised to access the Collocation facilities on behalf of the Alternative Operator.

<b>Name</b>	<b>Identity No.</b>

Signed on behalf of the Alternative Operator

Date.....

Name.....

Position:.....

Signature:.....