



ANNEX G

Interconnection Operations and Maintenance Manual



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1. Introduction

1.1. Background

The purpose of this Manual is to define the joint operational & maintenance procedures relating to the network of Interconnection Links between GO and Operator. This Manual supports the Interconnection Agreement and describes the mutually agreed processes, which will be used to manage the ongoing operational activity associated with the Interconnection between the two Networks.

It is based on the premise that the efficient management of the physical Interconnection is to the mutual benefit of both Parties.

The processes described are in general reciprocal between GO and Operator. They address GO's regulatory obligations towards Operator. It should be noted that whilst the text refers to GO and Operator, that due to the reciprocity principle, these roles are interchangeable unless explicitly stated otherwise.

Where the Interconnection Agreement specifies issues relating to operation and maintenance, such issues shall be dealt with in accordance with the provisions of this Manual.

In the event that there is any conflict with the provisions of this Manual and the Main Body of the Interconnection Agreement, then the said Main Body shall have precedence.

1.2. The Status of this Manual

This is a working document and as such both Parties recognise that it shall have free circulation to all relevant staff in both organisations.

1.3. Definitions

For the purposes of this Manual, a reference to a Clause or Appendix unless stated otherwise is to a Clause or Appendix of this Manual. Words and expressions have the meaning given in Annex A of the Interconnection Agreement.



2. Scope

This Manual deals with the normal operations and maintenance activities, which arise from the operation of an Interconnection as agreed and defined in the Interconnection Agreement.

The activities, which are covered by this Manual, are divided into the following categories:

1) Forecasting Process

This process describes the mechanism for producing and reviewing the Forecasts.

2) Pre-Provisioning Processes

These processes relate to the format and process for the placement of orders for Interconnection elements and Interconnection Services as defined in the Interconnection Agreement.

3) Provisioning Processes

These processes relate to the mechanism for the implementation of the various Interconnection elements and Interconnection Services ordered using the processes described in the Pre-Provisioning section.

4) Post Provisioning Processes

The Post Provisioning Processes describe the mechanisms for dealing with the operational issues relating to the in-service Interconnection. These items include fault reporting & resolution, performance monitoring, planned outages etc.

5) Billing Processes

The Billing Processes describe the mechanisms and procedures for the Interconnection payment system.

6) Miscellaneous Processes

This section deals with various miscellaneous processes that do not fall within the above categories.

3. Forecasting Process

3.1. General

In the period leading up to commencement of service, Operator must provide GO with a Forecast of capacity requirements. This Forecast of capacity requirements will be in terms of the “In Service Capacity” at the end of any particular Forecast period. Following commencement of service and for the duration of the Interconnection Agreement, Operator shall submit Forecasts to GO at four monthly intervals. A four-month binding forecast shall be submitted four months prior to the commencement of the designation forecast. In this respect, the Operator is obliged to convert the binding forecast into an order within 20 calendar days from the submission of the binding forecast.

The binding forecast will be used by both Parties to:

- *plan* resources in advance
- *provide* the core Network facilities necessary to support future Interconnection Services; and
- *activate* the required core Network capacity in the correct time frame to meet the *demand* in the Forecast.

3.2. Forecasting Process

In order to compile a Forecast, Operator calculates the quantity of Interconnection paths expected to be required in the future. More specifically, a Forecast shall include the cumulative quantity of Interconnection paths expected to be required within a four month period for the period commencing at least four months from the commencement of the binding period.

For example, forecast for the period commencing 1 May till end-August, the binding forecast shall be submitted by 1st January. In addition, the Operator is also obliged to convert this binding forecast into a formal order by not later than 20th January.

A **penalty charge** will arise in the event there emerge differences between the binding forecast as provided by the operator and the actual order quantities. This penalty charge will be calculated as follows:

A positive variance will occur when, during any particular forecasting period, the Operator places an order for a number of interconnection paths that exceeds the number projected in the binding forecast.

A negative variance would occur when, during any particular forecast period, the operator total number of interconnection paths ordered falls below the number projected in the binding forecast.



In the event that more than two negative variances occur during any 12-month period, the Operator would become liable to a penalty charge. This penalty would be equivalent to 80% of the rental charge of the cumulative positive and negative variances calculated at twelve-month intervals.



4. Pre-Provisioning Processes

The Pre-Provisioning Processes describe the mechanisms for the ordering of Interconnection Services or for the modification or augmentation of the in-service Interconnection.

These processes shall be that laid down by the Service Level Agreement, in Annex D of the Interconnection Agreement.

Moreover, the following shall also apply:

4.1. Order Format

All orders for new or additional Interconnection Services shall be placed using the Order form for Interconnection Services as per Appendix 2.

4.2. Order Process

Operator will complete and send the Order Form to GO. If the order form is incomplete, it will be returned to Operator with the reason for incompleteness stated. Operator may revise or amend the order and re-submit it. If this does not occur within a further 5 working days, the order will be deemed to have been cancelled.



5. Provisioning Processes

5.1. Introduction

These processes relate to the mechanism for the implementation of the various Interconnection services ordered using the processes described in the Pre-Provisioning section.

These processes shall be those laid down by the Service Level Agreement, in Annex D of the Interconnection Agreement.

Moreover, the following shall also apply:

5.2. Provision of Interconnection Services

GO will specify which of the tests detailed in the Technical Manual, will be used for the testing of the Interconnection Services. Testing shall be done on a mutually agreed date. When testing is completed to the satisfaction of GO, GO shall notify Operator that the testing of the Interconnection Services has been successfully completed. At this point the Interconnection Services shall be deemed to be ready for service and the commissioning form included under Appendix 2 shall be signed by both Parties. Full billing of the new provisioned service shall start on the date when both Parties sign the commissioning form included under Appendix 2. If Operator fails to sign, then charging shall start anyway from a date that is 10 days after GO notifies Operator that tests have been successfully completed.

If the results of the testing are not acceptable to GO, there shall then follow a mutually agreed time period where both Parties shall attempt to repair faults and re-test the unacceptable aspects of the service. If a mutually agreeable solution is not found, then the case shall be considered as a Dispute and Clause 17 of the Main Body of the Interconnection Agreement shall apply.



6. Post-Provisioning Processes

6.1. Introduction

The post provisioning processes describe the mechanisms for dealing with the operational issues relating to the in-service Interconnection. These items include fault reporting and resolution, performance monitoring, and Network Alterations including planned maintenance.

These processes shall be those laid down by the Service Level Agreement, in Annex D of the Interconnection Agreement.

Moreover, the following shall also apply:

6.2. Alarm Thresholds

The GO Interconnection Nodes will generate an A1 alarm if the Bit Error Rate (BER) on the 2Mb/s Interconnection paths exceeds 10^{-3} and an A2 alarm will be generated if the BER exceeds 10^{-6} . An A1 alarm shall be considered as a fault that adversely affects end users. On the other hand, an A2 alarm shall be considered as not affecting end users. Both alarm types shall be dealt with according to the timescales set in Annex D of the Interconnection Agreement.

6.3. Fault Reporting Procedures

In the event that a fault is discovered by either Party, a trouble ticket in the form specified in Appendix 3 shall be compiled and sent to the other Party. The fault shall be considered rectified when the Party reporting the fault confirms in writing to the other Party that the case may be considered closed subject that the confirmation or otherwise is forthcoming within four (4) hours of receipt. The Party receiving the trouble ticket shall provide a written acknowledgement to the ticket with a corresponding ticket reference.

6.4. Planned Maintenance Procedures

If either Party intends to carry out any planned work which may affect the Interconnection, then the originating Party must notify the other Party of the planned work as specified in Appendix 11, using the “Notification of Planned Maintenance” form in Appendix 4.

6.5. Implementation of Network Alterations

Both Parties will have to mutually agree on the required timescales to complete the implementation of a Network Alteration. If the results of the testing following the agreed Network Alterations are not acceptable, there shall then follow a mutually agreed time period where both Parties shall attempt to repair faults and re-test the unacceptable aspects of the service. If a mutually agreeable solution is not found, then the case shall be considered as a Dispute



and Clause 17 of the Main Body of the Interconnection Agreement shall apply.

6.6. Update of the International access code list accessible via the GO gateways

- a. GO will from time to time add new overseas number ranges that can be reached from the GO Network.
- b. Provided that Operator is entitled to do so by virtue of the Service Schedules listed in Annex C GO's Carrier Services Section will inform Operator that the new numbers are accessible within one week from the date when the necessary testing is completed from GO's side. The technical departments of GO and Operator will then co-ordinate the implementation on the respective switches so that Operator's customers may also have access to the new number ranges.

6.7. Network Management

6.7.1. General Network traffic management

- a. Network traffic management is the function of supervising the Network and taking action when necessary to control the flow of traffic. The objective of Network management shall be to enable as many Calls as possible to be successfully completed through the application of the general principles laid down in Clause 6.2.1.b below. Network management assumes that the Network is adequately engineered to meet the normal levels of traffic.
- b. The general principles to be adopted by both Parties are:
 - 1 To make use of available circuits during periods of outage, such that after negotiation, some or all of the affected traffic may be re-routed, where capacity permits, to alternate routes for completion.
 - 2 To identify and reduce, as close to their source as possible, Call attempts which are likely to be ineffective because of a situation in the Network, such as a failure, to allow trunk capacity to be available for Call attempts which have a higher probability of being effective.
 - 3 To inhibit switching congestion and prevent its spread such that if a large increase in Call attempts results in switching congestion, controls shall be applied to inhibit the congestion by removing those Call attempts, which have a low chance of resulting in a successful Call (from the congested switch).

6.7.2. Network management actions

- a. The application or removal of Network management controls shall be based on reported faults and planned outages. This may also include Mass Calling Events as described hereunder. Performance data shall also be used to measure the effect of any Network management control taken, and to indicate when a Network management control shall be modified or removed. Network management actions are divided into two categories:
 - 1. "Expansive" actions, intended to make available lightly loaded parts of the Network to traffic experiencing congestion;
 - 2. "Protective" actions, intended to remove traffic with a low probability of resulting in successful Calls from the Network during congestion.
- b. The first choice response to a Network problem shall be an expansive action. Protective actions shall be applied if expansive actions are not available or not effective.

6.7.3. Expansive actions

- a. Expansive actions involve the re-routing of traffic from trunk groups experiencing congestion to other parts of the Network which are lightly loaded with traffic by performing one of the following actions:
 - 1. Establishing temporary alternative routing arrangements in addition to those normally available;
 - 2. Where there is more than one access point switch, temporarily reorganising the distribution of the affected traffic or services.

6.7.4. Protective actions

- a. Protective actions involve removing traffic from the Network during congestion which has a low probability of resulting in successful Calls. Such traffic shall be removed as close as possible to its origin, thus making more of the Network available to traffic, which has a higher probability of success.
- b. Protective actions that may be taken include:
 - 1. *Temporary removal of trunk circuits from service (circuit busying)* – This action may be taken when a distant part of the Network is experiencing serious congestion.
 - 2. *Special instructions to other Parties* – For example, such instructions may require that only a limited number of attempts (or none at all) be made to set up a Call via a congested trunk group or switch, or to a particular destination experiencing congestion.



3. *Inhibiting direct traffic* – This action reduces the traffic accessing a trunk group in order to reduce the loading on the distant Network.
4. *Inhibiting traffic to a particular destination (code blocking or Call gapping)* – This action may be taken when it is known that a distant part of the Network is experiencing congestion.

6.7.5. Actions during disasters

In the event of disasters, whether man-made or natural, that result in damage to the Network, a single point of contact for Network-related information shall be established to prevent confusion, duplication of effort, and to ensure an orderly process of returning communications to normal. The single point of contact shall be the official responsible for service restoration within the Party or Parties affected by the disaster.

6.7.6. Process for Notification or Request for Network Management action

- a. When either Party wishes to initiate Network management action or request the other Party to apply an action on its behalf, it shall complete a notification/request form as shown in Appendix 6 and described by the following process.
- b. The Party requiring controls to be applied originates the form and is denoted as the originating Party. The Party to whom the notification/report is initially sent is denoted as the receiving Party.
- c. The originating Party may apply controls in which case it is a notification, or it may wish the Receiving Party to apply controls in its Network in which case the form is a request.
- d. If the Party originating the request is applying the controls it shall, after verbally informing the Receiving Party, complete section A of the form as a notification and send to the Receiving Party. If Network management action is required as a result of a fault that has been reported via the fault management process the fault reference number shall be entered in section A.
- e. The Receiving Party shall then complete section B of the form indicating that the requested Network management action is acknowledged. On receipt of the form with completed section B, the originating Party shall then apply controls in the manner described on the form.



- f.** The originating Party shall monitor the Network to determine the appropriate time for controls to be removed. At this time it shall complete section C of the form and send it to the Receiving Party to notify them that controls have been removed. The Receiving Party will then complete section D of the form and return it to the originating Party to indicate that the removal of the controls has been noted.
- g.** During the period when the controls are active, the Receiving Party shall monitor the Network and if during this time it wishes for the controls to be removed it shall complete section C of the form and send it to the originating Party. The originating Party will review the status of the Network and the reasons given by the Receiving Party for the removal of the controls.
- h.** If the originating Party agrees to remove the controls it shall remove the controls and complete section D of the form and send it to the Receiving Party indicating that the controls have been removed.
- i.** If the originating Party does not wish to remove the controls it shall continue to monitor the Network until such a time as it feels the controls may be removed. If the Receiving Party still requires that the controls are removed, it shall escalate the situation using the Dispute resolution procedure laid down by Clause 17 of the Main Body of the Interconnection Agreement.
- j.** If the Party originating the request wishes the Receiving Party to apply controls on its behalf, it shall, after verbally informing the Receiving Party's Network management Interconnection centre point (MICP), of the request, fill out section A of the form as a request and send it to the Receiving Party. If Network management action is required as a result of a fault that has been reported via the fault management process, the fault reference number shall be entered in section A.
- k.** If the Receiving Party agrees with the request it shall apply the controls indicated on the form, complete section B of the form and return it to the originating Party indicating that the controls have been applied.
- l.** If the Receiving Party does not agree to the request it shall complete section B of the form and return it to the originating Party indicating the reasons why. The originating Party shall review and/or revise its request before resubmitting it to the Receiving Party. If agreement is not reached the originating Party may then escalate using the Dispute resolution procedure



laid down by Clause 17 of the Main Body of the Interconnection Agreement.

- m.** The originating Party shall then monitor the Network and review the status in order to determine the effect of the controls and identify when they can be removed. If within an initial 30 day period the originating Party wishes for the controls to be removed it shall complete section C of the form and send it to the Receiving Party requesting that the controls are removed. The Receiving Party shall then remove the controls and complete section D of the form, returning it to the originating Party indicating that the controls have been removed.
- n.** If the controls have been in place for more than 30 days and the originating Party wishes that the controls remain in place it shall make a request to the Receiving Party for the controls to be continued. It shall do this using section A of the original form and indicating that this is a request for continuation.
- o.** If such a request for continuation is not made the Receiving Party may, after the initial 30-day period, remove the controls. It shall complete section C of the form indicating that the controls shall be removed and giving the reason for their removal. It shall then proceed to remove the controls.
- p.** If the originating Party receives a form with section C completed by the Receiving Party it shall complete section D indicating that the removal of controls has been noted.

6.7.7. Mass Calling Events

- a.** Mass Calling Events can have catastrophic effects on both the Interconnection and one or both Parties' Networks. As such both Parties will endeavour as far as possible to ensure that end users generating Mass Calling Events provide adequate notice of such events and to disseminate this information as outlined below.
- b.** Where an event terminating on one Network which has not been notified causes quality degradations in the other Network, both Parties reserve the right to block future access to the terminating number(s) in question.
- c.** For events which cannot be accurately forecast (competitions etc.) then the terminating number ranges assigned to the end users will be from a range designated for "bursty" traffic and for which generic Call management procedures may be put in place e.g. Call gapping.



6.7.8. Mass Calling Event Procedures

Advance notice of Mass Calling Events will be given using the form in Appendix 7. At least 10 Working Days notice is required.

6.8. Quality of Service and Traffic Performance

6.8.1. Quality of Service and Traffic Performance Reporting

- a. Quality of service statistics and traffic performance measurements shall be exchanged between both Parties for all in-service Interconnection paths. The measurements shall be exchanged on a monthly or quarterly basis unless agreed otherwise between both Parties.
- b. The quality of service report will be produced by each Party for use in the Operations and Maintenance Forum, as described hereunder.
- c. The quality of service and traffic performance parameters to be reported are defined in Appendix 8 and typical examples can be seen in Appendix 9. Additional reports and parameters may be available, at additional cost, subject to agreement between both Parties and subject to the development and implementation of the necessary systems and procedures to gather and process the required data.

6.8.2. Quality of Service and Traffic Performance Reviews

- a. Reviews of the quality of service and traffic performance shall take place as part of the activities of the Operations and Maintenance Forum, as described hereunder.
- b. Where the busy hour traffic on any Interconnection route exceeds 70% fill, this shall prompt a joint review by the Operations and Maintenance Forum of the capacity on the route in question.

6.9. Operational Performance

The mechanism for reporting operational performance statistics shall be the Operations and Maintenance Forum and is described in Appendix 10.



7. Billing Process

7.1. Introduction

These processes relate to the production of Interconnection bills and to the testing, for billing purposes of an Interconnection path.

7.2. Production of Interconnection Bills

The Billing Process shall be that laid down in Annex B of the Interconnection Agreement.

7.3. Billing Test Process

- a.** GO and Operator shall agree on a set of test procedures aimed to validate the call handling and billing information that will be generated by both sides for the purpose of interconnect billing.
- b.** The test procedures to use shall be in line with the billing test procedures defined under section 9.1.2 of Annex H of this Interconnection Agreement.
- c.** Once both Parties reach agreement on the reconciliation process, the billing tests will be signed off and the route opened for traffic.
- d.** All aspects of the Billing tests will be co-ordinated by the respective Interconnection Commercial and Technical contact points listed under Appendix 11.



8. Miscellaneous Processes

8.1. Opening or Modification of Number Ranges

8.1.1. General

This Clause details the process for the opening of access to new number ranges within the GO Network.

8.1.2. Number Ranges Accessible via the Operator Network

- a. Operator shall submit a request utilising the form attached at Appendix 12 for the opening of a new number range, which they have obtained from the MCA, within the GO Network via the contact point specified in Appendix 11.
- b. The request shall detail the number range, the Operator switch it is mapped to and the date that it will be active on the Operator Network. Each requested number range shall contain at least **one test number** to allow verification of the number range implementation. This test number must be specified at the time of the request to open the range.
- c. GO shall acknowledge the receipt of the request in writing and shall implement the opening of the requested range within the time frames set up in Annex D of this agreement.
- d. Upon implementation of the range GO will notify Operator via the contact point.

8.1.3. Number Ranges Accessible via the GO Network

- a. GO shall issue an update detailing new GO number ranges accessible via its Network together with activation dates and mapping to Interconnection Nodes.
- b. Within 10 working days after the publication of the GO number ranges, Operator shall take the necessary action to allow its end users to access the new GO number ranges, provided that Operator is entitled to do so by virtue of the Service Schedules listed in Annex C of the Interconnection Agreement.



8.2. Technology Changes Which Affect the Interconnection

- a.** Whenever a Party is aware that there are planned changes/upgrading of its Network that affect the technical parameters of the Interconnection then the other Party must be informed at the earliest practical date.
- b.** The timescales and process for the implementation of such changes must be requested via the contact points listed in Appendix 11. The request will be acknowledged within two weeks. Examples of these changes are:
 - i.** Upgrades to software in network element such as switch, transmission or signalling systems.
 - ii.** Upgrades to software in Network monitoring or management systems.
 - iii.** Upgrades to operational support systems such as provisioning or Billing Systems.

8.3. Health and Safety

- a.** Both Parties shall comply with any statutory national safety regulations that are applicable from time to time.
- b.** Both Parties shall also comply with any specific GO or Operator health and safety practices that may be applicable, including any site-specific requirements.
- c.** All GO internal health and safety guidelines shall be complied with at all times by both Parties.



Appendices



Appendix 1: FORECAST Forms for each Interconnection Node and each Point of Interconnection

Appendix 1 usage guide

These forms are to be used to generate the Forecasts for switching and transmission requirements for Interconnection.



TRAFFIC/TRANSMISSION FORECAST

Interconnection Paths required to carry the traffic between the GO Network and the Operator Network.				
Operator				
Date when this Forecast was compiled: XXXXX				
Four Month Period	Designated Date	Details of Interconnection Paths		
		Cumulative Quantity of Interconnection Paths	Address at GO	Address at Operator
1				
2				
3				

Note:

- Each forecast period shall cover a four-month time frame.
- Forecast for the first 4-month period is binding and shall be submitted at least four months in advance.
- Operator shall give details as to the basis for the calculations that led to the projected required paths. As stated in Annex H Section 8 of GO RIO Technical Manual, the requirement is that interconnection paths between GO and Operator be dimensioned on the expected both way busy-hour offered traffic and a grade of service of 0.002 or better. More details can be found under the said section of GO Technical Manual.



Appendix 2: Order/Commissioning Forms for Interconnection Services

Appendix 2 Usage Guide

These forms are to be used for the ordering/commissioning of new Interconnection Services and the rearrangement or termination of existing Interconnection services.

The following shall apply:

1) General

1.1) Technical Requirements:

A high level description of the GO network is given in the Technical Manual (Annex H) of this RIO

Operator shall also note that all technical requirements related to the provisioning of interconnect services – including the supported network functionality, interface standards, equipment installation work practices, signal quality, traffic performance, and test requirements for the commissioning of these services, are all detailed in said GO Annex H - Technical Manual.

The more important sections of the Technical Manual in regards to interconnection services are:

Section 6: Signalling Network Details

Section 7: Supported Bearer and Supplementary services

Section 8: Service Quality Issues

Section 9 and relevant Appendices: Test Requirements for the commissioning of the requested services

1.2) Operations & Maintenance Procedures:

All technical operations and maintenance activities that may be required to be implemented by GO and the Operator as a result of the requested interconnect services are set up in the Interconnect Operations and Maintenance Manual - Annex G of the GO RIO.



Special attention shall be given to the following sections of the O. & M Manual:

- Section 3: Forecast Process
- Section 4: Pre-Provisioning Process
- Section 5: Provisioning Process
- Section 6: Post provision Process
- Section 7: Billing Process – including the required billing tests

2) Services Required

2.1) General:

Operator shall mark the exact services required by ticking the respective boxes under section 1 of the Order Form.

Detailed description of these interconnection services as well as the terms and conditions related to these services can be found in Annex C1 of the GO RIO.

Minimum leads times for provisioning/testing are as detailed in Annex D – GO RIO Service Level Agreement. In this respect, the target timeframes specified by the Operator under Section 1 of the order form shall be within the lead times specified in Annex D.

2.2) New Operator Sited Interconnection Link

The Operator shall submit a high level network diagram with the relevant description, including main sites proposed for the interconnection.

Furthermore, the transmission information portion of the form shall contain the preferred GO Interconnection Node. The latter can be anyone or both of the Maltacom Interconnection nodes as further detailed under Annex E of the GO RIO.

Operator shall also give the relevant details, including the site address of its proposed Point of Interconnection.

For new Points of Interconnection, the date at which site access will be available to GO shall be stated.

For Points of Interconnection served by protected links, the routing of the Interconnection link shall be specified in the comments field. Any special arrangements for site access shall also be included in this field.

The switching information portion of the form shall contain the Operator Interconnection Node and the GO Interconnection Node.

Section 2 of the form shall be duly filled as applicable.



2.3) Re-arrangement of an existing Interconnection Link

Three possibilities exist:

(i) Switching change with no transmission change (point code change): In this case, the transmission portion of the form is not required to be completed. It shall be noted that the “rearrangement” of part of a route onto a new Interconnection Link requires the addition of new signalling links – this therefore is not a re-arrangement but a new provision and shall be effected by ceasing the existing Interconnection paths and providing new Interconnection paths. These orders shall be submitted as matched pairs cross-referenced in the comments field.

(ii) Transmission change with no switching change: In this case, the switching portion of the form is not required to be completed.

(iii) Transmission and switching change: In this case, both transmission and switching portions of the form shall be completed. The circuit references (CCt. nos.) shall be stated for the circuits affected.

Section 2 of the form shall be completed for each scenario.

3.3) Termination of existing Interconnection Path

Only Section 1 of the form shall be completed quoting the circuit references.



ORDER FORM FOR INTERCONNECTION SERVICES

Section 1

Order Details - sent by Operator to GO.jan48j

To: <i>[GO Order contact point]</i>	From: <i>[Operator Order contact point]</i>
Date:	Operator Reference No.:
Order Type:	
<p>New Service <input type="checkbox"/> Re-arrangement <input type="checkbox"/> Termination <input type="checkbox"/></p>	
Services Required: <i>[Please mark where appropriate]</i>	Target Timeframes for Deployment and Testing:
<ul style="list-style-type: none"> • E1 Interconnect Paths..... <input type="checkbox"/> • National Termination..... <input type="checkbox"/> • Access to Emergency Service..... <input type="checkbox"/> • International Access..... <input type="checkbox"/> • Call Origination..... <input type="checkbox"/>

Transmission Information

Operator Point of Interconnection	
Date when the site will be accessible to <i>GO</i>	
New Operator End (In case of Rearrangement):	
Circuit ID (In case of Rearrangement):	
Number of Interconnection Paths:	
Comments:	



Switching Information

Operator Interconnection Node (Give address details)	
Operator's new Interconnection Node (In case of Rearrangement):	
Circuit ID (In case of Rearrangement):	
Number of Interconnection Paths:	
Comments:	

Order details (to be completed by GO)

Account Number:	Equipment Code:
Service Order Number:	Circuit No.s:
Signed on behalf of GO:	Date:

Section 2

Operator Interconnection Node Name		
Operator Interconnection Node Point Code		
GO Interconnection Node Name		
GO Interconnection Node Point Code		
Traffic direction (With respect to GO)		
Traffic Overflow: Choices for Originating Geographic Number Ranges	First Choice	
	Second Choice	
	Final Choice	

(To be completed by GO)

GO Interconnection Link Designations		
GO Route Name		
GO Interconnection Path Designations	GO Circuit Designations	Circuit Identification Code (CIC) numbers



SIGNALLING ALLOCATIONS		
GO Interconnection Link Designations	GO Circuit (E1) Designations	CIC numbers



Proposed Commissioning Form for Interconnection Services

[This form is to be filled in immediately on the completion of the agreed technical tests by the respective technical Parties, and shall mark the start of the Billing Process by GO for the Interconnection Service concerned]

Completion of Works form with respect to Operator _____	Operator ref.	Order Order Dated:
Date of Completion:		
Work Type: New Service Re-arrangement <div style="display: flex; justify-content: space-around; width: 100%;"> <input style="width: 40px; height: 20px;" type="checkbox"/> <input style="width: 40px; height: 20px;" type="checkbox"/> </div> <p><i>This is to certify that all works related to this order have now been completed to the satisfaction of Operator in accordance with all established conditions and technical requirements. The date of signature of this commissioning form is the date on which the Billing Process begins.</i></p>		
Signed on behalf of Operator		
Signed on behalf of GO		
Date of signing of Commissioning form		



Appendix 3: Interconnection Trouble Ticket

Appendix 3 Usage Guide

The form in this section shall be used for the reporting of faults/failures relating to the Interconnection.

Faults may be advised by phone in parallel to faxing/e-mail the form however the faxed/e-mail form will be the official trouble reporting mechanism.



INTERCONNECTION TROUBLE TICKET

Trouble Ticket Opening Information

Ticket Opened by (name):			
Ticket Opened on (date):		Ticket Priority:	
Ticket Opened at (time):		Ticket Status:	
Acknowledgement Time:			
Operator Ticket Reference:		GO Ticket Reference:	

Designation Information

Time of Fault Start:	
Description of Fault:	
Interconnection Link(s) Affected:	
No. of Circuits Affected:	
Interconnection Path(s) Affected:	
Services Affected:	
Proportion of Calls Affected:	
Initial Response:	
Time of Identification of Fault:	
Update Number []	(An entry shall be made for each update)
Time when the Fault ends:	Answer Code:
Ticket Answered by:	Ticket Accepted by:
Ticket Answered on:	Ticket Accepted on:
Ticket Answered at:	Ticket Accepted at:
Nature of Fault Clearing:	

Trouble Ticket Closing Information

Ticket Closed by (name):	
Ticket Closed on (date):	
Ticket Closed at (time):	



Appendix 4: Notification of Planned Maintenance

Appendix 4 Usage Guide

The form in this section shall be used for the notification of planned maintenance activities relating to the Interconnection.

The type of actions which require to be notified are activities directly affecting the Interconnection together with activities in one Party's Network at switch level which will impact on the ability of users directly connected to that Network to access Interconnection Services on another interconnected Network.



NOTIFICATION OF PLANNED MAINTENANCE

To:		Reference Number:
From:		Date:
Address:		
Address:		
Telephone No:	Fax No:	

Engineering work is due to be carried out on the following Interconnection Link/Node and will necessitate the following break in service: -

Interconnection Link(s) Affected: _____

Interconnection Path(s) Affected: _____

Interconnection Node(s) Affected: _____

Break Description: _____

Start Date & Time of Break: _____/_____/_____
 Finish Date & Time of Break: _____/_____/_____

Duration of Break: _____ hours

Comments: _____

Originator's Initial: _____ Issue: _____
 Received by: _____ Date: ____/____/_____
 Amendment Agreed by: _____ Date: ____/____/_____

Engineering work completed as planned:

Signed: _____ Date: ____/____/_____



Appendix 5: Fault Resolution and Escalation Timescales

The procedure and commitments related to fault rectification are set out in Annex D of the Interconnection Agreement and are summarised below for ease of reference.

Fault type	Initial Response	Status Updates			
Critical Faults	60 Minutes from when the fault is reported in accordance with Annex D of the Interconnection Agreement	every 60 minutes			
Non-Critical Faults	1 Working Day from when the fault is reported in accordance with Annex D of the Interconnection Agreement	every Working Day			



Appendix 6: Notification/Request for Network Management Action

Appendix 6 Usage Guide

The form in this section shall be used to request/notify Network management actions as detailed in the body of this Manual.



**NOTIFICATION/REQUEST FOR NETWORK
MANAGEMENT ACTION**

Section A

To: (Receiving Party)

This notification/request* is to confirm the verbal notification/request* made between Originating Party contact _____ and Receiving Party contact _____ that Network management action shall be applied / for Network management to be applied*

Originating Party's Reference: Receiving Party's Reference:
Fault Reference Number:

Reason:

Trunk Routes/Codes Affected:

Description of Network management action:

Please note/apply/continue* the above Network management action as of:

Date: Time: Duration:

Name: Signature: Date:

Section B

To: (Originating Party)

The requested Network management action:

has been applied*
has not been applied* Reason:
is acknowledged*

Name: Signature: Date:

Section C

To: (Receiving Party)

Please remove/note removal* of the above requested Network management action

Name: Signature: Date:

* Delete as appropriate



Section D

To: (Originating Party)

The removal of the above requested Network management action has been noted/completed*

Name: Signature: Date:



Appendix 7: Notification of Mass Calling Event

Appendix 7 Usage Guide

The form in this section shall be used for notification of Mass Calling Events as detailed in the body of this Manual.

Details

From: [<i>GO/Operator</i> *]		To: [<i>Operator/GO</i> *]	
Date:		Reference No.:	
Details of Event:			
Start Date			
Start Time:			
End Date:			
End Time:			
Calling Area/Point of Interconnection affected			
Destination Number (s)			
Expected Volume			
Notes:			
Signed on behalf of <i>GO/Operator</i> *			



Appendix 8: Quality of Service and Traffic Performance Parameters

QUALITY OF SERVICE PARAMETERS

General Quality of Service Parameters

The following general service quality parameters are applicable to both GO and Operator Networks. The parameters represent a minimum set to be measured and recorded by both Parties in accordance with the process set out in this Manual.

The current state of implementation of systems to measure and report on these parameters shall be confirmed between GO and Operator. Both Parties shall agree on the timetable for the introduction of the measurement of these parameters.

TRAFFIC PERFORMANCE PARAMETERS

Traffic Performance Parameters

Source Switch:	The identity of the Party's switch at the traffic source.
Trk Grp Id:	The id number of the trunk group.
Circuits available:	The total number of circuits available on the trunk group.
Actual Circuits:	The actual number of circuits in service at the time of measurement.
Time:	The time of day at which the busy hour commences, where the busy hour is determined by measurement of the average daily peak quarterly defined hour (ADPQH), per ITU-T E.500.
Busy Hour Traffic:	The total traffic intensity carried by the trunk group, measured in Erlangs during the busy hour using the ADPQH method. For daily reports this is the actual daily busy hour; for weekly reports this is the busiest hour of the week i.e. the busy hour for the busiest day.
% Traffic Lost:	The traffic lost, expressed as a percentage of the total traffic offered to the trunk group.



- % Loading:** The ratio of total traffic carried on the trunk group to the critical traffic value for the number of circuits for the trunk group, where the critical value is calculated as ***[to be agreed]*** and the % loading is given as % loading = [total traffic/critical traffic value] x 100%.
- Total Calls Lost:** The total number of Calls lost due to congestion on the trunk group.
- ASR %** The answer seize ratio, defined as the number of answered seizures to total seizures i.e.: ASR % = [answered seizures / total seizures] x 100%.



Appendix 9: Typical Quality of Service and Traffic Performance Report

Appendix 9 Usage Guide

The form in this Appendix is a draft template (to be agreed between the two Parties), for the reports to be produced as inputs to the Operations and Maintenance Forum.

Traffic Performance Date: _____ **Measurement Period, Week Ending:** _____

Route Description		Route Capacity		Busy Hour Traffic Measurements				ASR
Source Exch.	Trk Grp Id.	Cts Avail	Actual Cts	Date & Time	Traffic (Erl)	Traffic Lost	% Loading	Busy Hour ASR %



Appendix 10: Typical Operational Performance Report

Appendix 10 Usage guide

The form in this Appendix is a template for the report to be produced as input to the Operations and Maintenance Forum.



TYPICAL OPERATIONAL PERFORMANCE REPORT

Period From: _____ to _____

Part A: Fault Reporting

Reported Faults:

Fault Severity Level	Number of faults reported	Number of faults cleared	Average time to clear	% cleared within 12 hrs	% cleared within 24 hrs	% cleared within 48 hrs
A						
B						

Part B: Planned Maintenance

	GO	Operator
Number of planned maintenance activities notified		
Number of planned maintenance activities started as planned		
Number of planned maintenance activities completed on target		
Number of planned maintenance activities not completed on target		
Number of urgent planned maintenance activities		
Number of unplanned maintenance activities		

Part C: Service Delivery

Service	Target Delivery Time	Quantity due for Delivery during period	Quantity delivered during period	% delivered within target time	% delivered outside target time	Quantity Outstanding outside target time



Appendix 11: Directory of Contact Points

The details contained in this Appendix shall be compiled and agreed between GO and Operator.

The contact points information shall include – for each contact person in the directory:

- Name
- Title
- Mailing Address
- Contact Phone numbers (mobile + fixed line)
- E-mail information.

Contact Pt.	Contact Details	GO plc	Operator
Main Technical Contact: <i>For issues/decision related to:</i> <ul style="list-style-type: none"> • Control/ amendments to Technical Documents • Technology changes, which affect the Interconnection. • Fault Escalation – Managerial Contact (level 2) 	Name		
	Title		
	Mailing Address		
	Phone		
	Mobile		
	E-Mail		
Forecast, Provisioning and Number Changes: <ul style="list-style-type: none"> • Forecast of interconnect traffic • Provisioning of new interconnect paths • Number changes notification affecting interconnection 	Name		
	Title		
	Mailing Address		
	Phone		
	Mobile		
	E-Mail		
Planned Maintenance & Fault handling <ul style="list-style-type: none"> • Single Pt. of Contact (Spoc) for fault handling and trouble reporting 	Name		
	Title		
	Mailing Address		
	Phone		
	Mobile		
	E-Mail		
Fault Escalation <ul style="list-style-type: none"> • Fault Escalation – Technical Contact (level 1) 	Name		
	Title		
	Mailing Address		
	Phone		
	Mobile		
	E-Mail		
Commercial Contact			



Contact Pt.	Contact Details	GO plc	Operator
<i>For issues related to:</i> <ul style="list-style-type: none">• <i>Ordering of interconnect services</i>• <i>Update on international access information</i>• <i>All Billing issues</i>			



Appendix 12: Operator Number Range Activation Request Template

Activation Request Template

OPERATOR Name	<i>Operator Malta Limited</i>	
Contact details of applicant	<i>Numbering Manager</i>	
	<i>Postal Address</i>	
	<i>Phone Number</i>	
	<i>Fax Number</i>	
	<i>e-mail</i>	
Date of request		
Requested completion date		
Activation to cover period		
Terminating Point(s) of Interconnection on the Operator Network		

GO only: -

GO Reference Number	
Request Status	
GO Point of Interconnection/ Routes	
Service Schedule	

Number Range(s) Details

Access Code	Number Range	Service Designation	Number Range Digit Length	Test Number(s) within the range	Quantity of Numbers within the specified range



Appendix 13: New MTP routing Activation Request Template

Activation Request Template

OPERATOR Name	<i>Operator Malta Limited</i>	
Contact details of applicant	<i>Numbering Manager</i>	
	<i>Postal Address</i>	
	<i>Phone Number</i>	
	<i>Fax Number</i>	
	<i>e-mail</i>	
Date of request		
Activation date		
Activation to cover period:		

GO only: -

GO Reference Number	
Request Status	

MTP Routing details

DPC	Country	International Operator/ Company

Note:

1. Requests are to be submitted at least five [5] working days prior to the required activation date.
2. Implementation may take longer in case routing access by the foreign operator is not readily available.