



Partial Private Circuits (PPC)

Inter-operator Operations & Maintenance Manual



Version Control

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For information:

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- Publish means the action of uploading a document to the website regardless of status or location.
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Table of Contents

1. FORECASTING PROCESS.....	5
1.1 INTRODUCTION	5
1.2 FORECASTING PRINCIPLES.....	5
1.3 FORECAST FORMAT	5
- <i>Transport Links</i>	5
- <i>End User Links (data) and Subsidiary Links</i>	5
1.4 FORECASTING PROCESS – STM-X TRANSPORT LINKS.....	5
1.5 PROCESS TIMELINES.....	6
2. ORDERING PROCESS.....	6
2.1 INTRODUCTION	6
2.2 ORDER TYPES.....	6
2.3 ORDER FORMAT.....	7
- <i>Orders for EULs at 2048kb and above</i>	7
- <i>Orders for <2048kb EULs</i>	8
- <i>Orders for 2mb subsidiary links</i>	8
2.4 PROVIDE ORDER PROCESS	8
- <i>Orders for 2mb CSH Transport Links, 2mb Subsidiary Links and EULs</i>	98
- <i>Orders for STM-x Transport Links</i>	9
2.5 ORDER REJECTION PROCESS.....	9
2.6 CANCELLATION PROCESS	109
- <i>2mb CSH Transport Links, 2mb Subsidiary Links & EULs</i>	10
- <i>STM-x Transport Links</i>	10
- <i>STM-x Transport Link Protection</i>	10
2.7 STEADY STATE MIGRATION	10
2.8 CHANGE OF SERVICE: (RE-ARRANGEMENT) ORDERS.....	10
- <i>2mb CSH Transport Link, 2mb Subsidiary Link and EULs</i>	10
- <i>STM-x Transport Links</i>	10
2.9 CHANGE OF SERVICE: UPGRADE / DOWNGRADE ORDERS	10
- <i>2mb CSH Transport Link</i>	1140
- <i>EUL</i>	11
- <i>EUL Upgrade or Downgrade</i>	11
- <i>STM-x Transport Links</i>	11
2.10 CESSATION PROCESS	11
- <i>2mb CSH Transport Link</i>	1244
- <i>EUL</i>	12
- <i>STM-x Transport Links</i>	12
- <i>STM-x Transport Link Protection</i>	12
2.11 PROCESS TIMELINES.....	12
3. PROVISIONING PROCESS	13
3.1 INTRODUCTION	13
3.2 PROVISIONING PROCESS.....	13
- <i>Provide Orders for STM-x Transport Links and Provide Orders for STM-X Transport Link Protection</i>	13
- <i>Provide Orders for 2mb CSH Transport Links, and EULs</i>	13
- <i>Provide Orders for 2mb Subsidiary Links</i>	13
- <i>Provision testing for 2mb Subsidiary Links and 2048kb EULs</i>	13
3.3 CHANGE OF SERVICE	13
3.4 CHANGE OF SERVICE : UPGRADE / DOWNGRADE	14
3.5 CEASE	14
3.6 PROCESS TIMELINES.....	14
4. FAULT MANAGEMENT PROCESS.....	14



4.1	INTRODUCTION	14
4.2	FAULT MANAGEMENT PROCESS: STM-X TRANSPORT LINKS AND STM-X TRANSPORT LINK PROTECTION	14
-	<i>Fault Management</i>	14
-	<i>Quality of Service and Traffic Performance</i>	18
-	<i>Operational Performance</i>	18
4.3	FAULT MANAGEMENT PROCESS: 2MB TRANSPORT LINKS, AND EULS.....	18
-	<i>Introduction</i>	18
-	<i>Fault Management</i>	19
-	<i>Maintenance Management</i>	24
5.	DATA CIRCUIT ORDER INFORMATION	26
	APPENDIX 1: PPC TRANSPORT LINK FORECAST	28
	APPENDIX 2: OPEN EIR WHOLESALE PPC ORDER REQUEST	29
	APPENDIX 3: STM-X TRANSPORT LINK ORDER FORM	32
	APPENDIX 4: 2MB VOICE INTERCONNECT ORDER FORM	36
	APPENDIX 5: INTERCONNECT TROUBLE TICKET USAGE GUIDE	38
	APPENDIX 6: NOTIFICATION OF PLANNED MAINTENANCE USAGE GUIDE	40
	APPENDIX 7: FAULT RESPONSE AND ESCALATION TIMESCALES	42
	APPENDIX 8: QUALITY OF SERVICE AND TRAFFIC PERFORMANCE PARAMETERS	43
	APPENDIX 9: TYPICAL QUALITY OF SERVICE AND TRAFFIC PERFORMANCE REPORT - USAGE GUIDE	45
	APPENDIX 10: TYPICAL OPERATIONAL PERFORMANCE REPORT -USAGE GUIDE	46
	APPENDIX 11: DIRECTORY OF CONTACT POINTS	49
	APPENDIX 12: FAULT TYPES AND THEIR LOCATION	57
	APPENDIX 13: ESCALATION POINTS	59
	APPENDIX 14: CLEAR CODES EXCLUDED	60
	APPENDIX 15: NOTIFICATION OF PLANNED MAINTENANCE	61
	APPENDIX 16 - DATA CIRCUIT ORDER INFORMATION	63
	VERSION CONTROL HISTORY	67



1. Forecasting Process

1.1 Introduction

This section outlines the industry processes to support the forecasting for Partial Private Circuits (PPCs).

It is designed to suggest the optimal process for forecasting, using existing processes where possible. The process will in turn impact on the ordering, provisioning and post provisioning processes. Thus it **will not exist as a “stand alone” section, and may be amended where subsequent agreement on related processes requires.**

1.2 Forecasting Principles

Operators currently forecast their voice interconnect circuit requirements, but do not forecast their leased line requirements.

It is proposed that Operators will therefore forecast:

- ✔ All STM-x Transport Links
- ✔ All voice interconnect circuits to be provided off Transport Links

1.3 Forecast Format

- Transport Links

Forecasts for Transport Links are submitted on the form proposed in Appendix 1, through a bi-lateral process agreed between open eir and the Operator and will identify the Operator's requirements for ~~six~~ seven types of Transport Links: CSH at STM-1, STM-4 and STM-16, and ISH at STM-1, STM-4 and STM-16 ~~and IBH at STM-1/4/16.~~ IBH.

- End User Links (data) and Subsidiary Links

It is recommended that forecasts for End User Links (EULs) and subsidiary links will be submitted through a bi-lateral process agreed between open eir and the Operator Voice interconnect circuits

Forecasts for voice interconnect circuits will follow the forecast process detailed in the Interconnect Operations and Maintenance (O&M) Manual.

1.4 Forecasting Process – STM-x Transport Links

Forecasts will be submitted through bi-lateral process agreed between open eir and the Operator.

The forecasting process is for Capital Forecasting only and is disassociated from the Provisioning process.



1.5 Process Timelines

Timelines quoted in the PPC Service Level Agreement (to be agreed) will reflect this agreed forecasting process.

2. Ordering Process

2.1 Introduction

This section outlines the industry processes to support the ordering of new PPCs.

It is designed to suggest the optimal process for ordering PPCs, using existing processes where possible.

The process assumes an agreed forecasting process, and will in turn impact on the provisioning and post provisioning processes. Thus it will **not exist as a “stand alone” section, and may be amended** where subsequent agreement on related processes requires it.

2.2 Order Types

Only one PPC component can be ordered per form but multiple forms can be issued at the same time.

The order types are:

- ✔ CSH Transport Link at 2mb
- ✔ CSH Transport Link at STM-1
- ✔ CSH Transport Link at STM-4
- ✔ CSH Transport Link at STM-16
- ✔ ISH Transport Link at STM-1
- ✔ ISH Transport Link at STM-4
- ✔ ISH Transport Link at STM-16
- ✔ [IBH Transport Link at STM-1/4/16](#)
- ✔ PPC Protection Desktop Survey
- ✔ PPC Protection Site Survey
- ✔ PPC CSH -x Transport Link Protection
- ✔ PPC ISH -x Transport Link Protection



- ✔ EUL at n x 64kb
- ✔ EUL at 1984kb
- ✔ EUL at 2048kb
- ✔ 2mb Subsidiary Link
- ✔ EUL at 45mb
- ✔ EUL at 34mb
- ✔ EUL at STM-1

2.3 Order Format

All orders for new or additional PPC components will be placed via an order form.

At the product launch stage, orders for a 2mb CSH Transport Link will be placed using the Wholesale Order Request form shown in Appendix 2. ~~It is anticipated that from April 2003, orders may be submitted via open eir's Extranet facility. PPCs can be ordered via the Unified Gateway (UG) using the PDC order type. IBH Handover PPC cannot be ordered via UG, however any IBH request will be processed via the operator's account manager.~~ The form will be updated to include this ordering option.

Comment [DS1]: How is IBH ordered so?

Orders for ~~STM-x CSH/IBH~~ and ISH Transport Links will be placed using the order form shown in Appendix 3. It is proposed that Appendix 3 will be appended to the Order Forms shown in Appendix 2 to service schedule 100 of the Reference Interconnect Offer (RIO).

Comment [DS2]: Include IBH here as it seems to be on the order form in Appendix 3

Orders for Protection on STM-x CSH and ISH Transport Links will be placed using the order form shown in Appendix 3. Orders for voice interconnect paths will be placed using the order form shown in Appendix 4. It is proposed that Appendix 4 will replace section 1 of the Order Form shown in Appendix 2 to service schedule 101 of the RIO.

The processes for ordering STM-x CSH/IBH, STM-x ISH and voice interconnect paths is described in the ~~Interconnect O&M Manual~~ applicable to products contained in ~~service schedule 100 and 101 of the RIO. Interconnect O&M manual refers to traditional Interconnect paths. Annex C RIO refers to ISL. Transport links which are covered in the LLRO.~~

Comment [DS3]: What document is this?

Comment [DS4]: Annex C of the RIO should be updated with IBH so, unless this should be LLRO?

Orders for EULs will be placed using the Wholesale Order Request form shown in Appendix 2. Orders may also be submitted through open eir's Unified Gateway.

All relevant sections of the forms must be completed by the Operator.

- Orders for EULs at 2048kb and above

The a-end of an EUL will be an Operator nominated transport link. The Operator will define the payload on the transport link at which the EUL is to be provided.



The b-end will be an End User Premises, which may be an end user's **premises or the premises** of the Operator in whose name the EUL is ordered.

EULs at 2048kb and above must be ordered to a nominated transport link. If it is a new transport link then once it has been allocated a circuit reference, at the acknowledgement stage, then the EUL can be ordered quoting the appropriate transport link circuit reference.

Where the a-end of the EUL does not have a valid and complete circuit reference the order will be rejected.

- Orders for <2048kb EULs

The a-end of an EUL will be an Operator nominated 2mb subsidiary link or 2mb transport link. The Operator will nominate the timeslot on the 2mb subsidiary link or 2mb transport link at which the EUL is to be provided.

The b-end will be an End User Premises, which may be an end user's **premises or the premises** of the Operator in whose name the EUL is ordered.

<2048kb EULs must be ordered to a nominated 2mb subsidiary link or 2mb transport link. If it is a new bearer then once it has been allocated a circuit reference, at the acknowledgement stage, then the EUL can be ordered quoting the appropriate transport link circuit reference or subsidiary link timeslot.

Where the a-end of the EUL does not have a valid and complete circuit reference the order will be rejected.

- Orders for 2mb subsidiary links

The a-end of a 2mb subsidiary link will be an Operator nominated STM-x transport link. The Operator will define the payload on the transport link at which the bearer is to be provided.

The b-end will be the relevant equipment at the *open eir* exchange.

<2048kb EULs must be ordered to a nominated 2mb subsidiary link or 2mb transport link. If it is a new bearer then once it has been allocated a circuit reference, at the acknowledgement stage, then the EUL can be ordered quoting the appropriate transport link circuit reference or subsidiary link timeslot.

Where the a-end of the EUL does not have a valid and complete circuit reference the order will be rejected.

2.4 Provide Order Process

For the purpose of supporting the PPC product, the following processes are proposed.



- **Orders for 2mb CSH Transport Links, 2mb Subsidiary Links and EULs**

The Provide Order Process used is that contained within the Wholesale O&M Manual.

- **Orders for STM-x Transport Links**

The Provide Order Process used will be that contained within the Interconnect O&M Manual.

Orders for Protection on STM-x Transport Links

This process is a three step consecutive process outlined as follows;

Desktop Survey

The Operator will nominate existing transport link to be protected. Open eir will conduct a desktop survey to determine feasibility of providing protection on that transport link.

This order should be placed using the Transport Link Protection Order Form in Appendix 3.

Site Survey

Once the desktop survey has been completed the Operator may submit a subsequent Site Survey request referencing the order number for the Desktop Survey. The site survey will be carried out to confirm requirements to deliver protection on the nominated transport link.

This order should be placed using the Transport Link Protection Order Form in Appendix 3.

CSH-x/IBH-x/ISH-x Protection Order

[Protection for IBH has not been developed????](#)

Once the site survey has been completed the Operator may submit a subsequent Protection Order referencing the order number for the associated Site Survey.

This order should be placed using the Transport Link Protection Order Form in Appendix 3.

Comment [DS5]: Is there an option for protection on IBH? If so, IBH needs to be included here.

2.5 Order Rejection Process

The Rejection Order Process used for 2mb Transport Link and EUL orders is that contained within the Wholesale O&M Manual

The Rejection Order Process used for STM-x Transport Links will be that contained within the Interconnect O&M Manual.

The Rejection Order Process used for Protection on STM-x Transport Links will be that contained within the Interconnect O&M Manual.



2.6 Cancellation Process

Should an Operator wish to cancel a PPC order prior to it being provided, the following processes should be followed.

- 2mb CSH Transport Links, 2mb Subsidiary Links & EULs

The Cancellation Order Process used is that contained within the Wholesale O&M Manual.

- STM-x Transport Links

The Cancellation Order Process used will be that contained within the Interconnect O&M Manual.

- STM-x Transport Link Protection

The Cancellation Order Process used will be that contained within the Interconnect O&M Manual.

2.7 Steady State Migration

The detail of migration ordering is contained within the Migration Process document.

2.8 Change of Service: (Re-arrangement) Orders

This describes a situation where an Operator wishes to change the physical location of one termination point of a Transport Link or an End User Link either within a specific site or from one specific site to another. For the purpose of supporting the PPC product, the following processes are proposed. The order form in Appendix 2, provides options for EUL change of address and EUL or subsidiary link re-arrangement onto another Transport Link or Subsidiary Link that is in service.

- 2mb CSH Transport Link, 2mb Subsidiary Link and EULs

The Order Process used is that contained within the Wholesale O&M Manual. Major re-arrangements of EULs or Subsidiary Links onto a new Transport Link or Subsidiary Link, will be managed as an agreed project between open eir and the Operator. The project will be subject to non-standard mutually agreed lead-times.

- STM-x Transport Links

The Order Process used is that contained within the Interconnect O&M Manual.

2.9 Change of Service: Upgrade / Downgrade Orders

This describes a process for upgrading or downgrading the bandwidth of an installed circuit. For the purpose of supporting the PPC product, the following processes are proposed.



- 2mb CSH Transport Link

The options available are:

- ✔ 2mb CSH to STM-1 or STM-4 CSH or STM-16 CSH

The process will involve ceasing the existing Transport Link as per the process described in the Wholesale O&M, and providing the new Transport Link as per the process described in the Interconnect O&M Manual applicable to products contained in service schedule 101 of the RIO. Major network re-arrangements may be subject to non-standard mutually agreed lead-times and shall be implemented on a project basis.

Save where the order is submitted as part of an agreed project between *open eir* and the Operator, a re-arrangement order will proceed independently. The management of any EULs and/or voice interconnect paths served by that Link, is the responsibility of the Operator.

- EUL

The options available are:

- ✔ $n^1 \times 64\text{kb}$ to $n^2 \times 64\text{kb}$, where $1 \leq n^1, n^2 \leq 31$.
- ✔ 2048kb to 34mb or 45mb or STM-1
- ✔ 34mb or 45mb to 2048kb or STM-1
- ✔ STM-1 to 34mb or 45mb or 2048kb

The Order Process used is that contained within the Wholesale O & M Manual. This will involve a cease and a provide.

- EUL Upgrade or Downgrade

The Order Process used is that contained within the Wholesale Leased Line O & M Manual. This will involve a cross-referenced cease and a provide and is dependent on available capacity.

This process is mutually exclusive to a move process or migration process.

- STM-x Transport Links

The Order Process used will be that contained within the Interconnect O&M Manual.

2.10 Cessation Process

This describes a situation where the Operator wishes to cease a Transport Link or End User Link. For the purpose of supporting the PPC product, the following processes are proposed.



- 2mb CSH Transport Link

Save where the order is submitted as part of an agreed project between *open eir* and the Operator, a cease order for a Transport Link will proceed independently. The management of any EULs and/or voice interconnect paths served by that Link, is the responsibility of the Operator.

The Cease Order Process used is that contained within the Wholesale Leased Line O&M Manual.

- EUL

The Cease Order Process used is that contained within the Wholesale Leased Line O&M Manual

- STM-x Transport Links

The Cease Order Process used is that contained within the Interconnect O&M Manual

- STM-x Transport Link Protection

The Cease Order Process used will be that used for the associated Transport Link.

2.11 Process Timelines

The process timeline will be the stated in the Partial Private Circuit Service Level Agreement



3. Provisioning Process

3.1 Introduction

This section outlines the industry processes to support the provisioning of new PPCs.

It is designed to suggest the optimal process for providing PPCs, using existing processes where possible. The process assumes an agreed forecasting and pre-ordering process, and will in turn **impact on the post provisioning processes. Thus it will not exist as a “stand alone” section, and may be amended where subsequent agreement on related processes require it.**

3.2 Provisioning Process

For the purpose of supporting the PPC product, the following processes are proposed.

- Provide Orders for STM-x Transport Links and Provide Orders for STM-X Transport Link Protection

The processes for providing STM-x CSH, STM-x ISH and voice interconnect circuits are described in the [Interconnect O&M manual](#) applicable to products contained in the service schedule 101 of the RIO. [The Interconnect O&M manual describes the processes for provision of Interconnect paths.](#)

Comment [DS6]: What document is this referring to in relation to voice interconnect or PPC?

- Provide Orders for 2mb CSH Transport Links, and EULs

The Provision process used is that contained within the Wholesale O&M manual.

- Provide Orders for 2mb Subsidiary Links

The Provision process used for 2mb subsidiary links will have the same process points and process transactions between *open eir* and the Operator as exist for Carrier Service products as specified within the Wholesale O&M manual.

- Provision testing for 2mb Subsidiary Links and 2048kb EULs

To enable testing and commissioning of 2mb subsidiary links and 2048kb EULs, the Operator will place a software loop on the relevant payload on the associated Transport Link. The software loop will be visible following order validation.

3.3 Change of Service

Change of Service orders for PPCs are treated as re-arrangements for [STM-x CSH / STM-x CSH](#) and [STM-x ISH](#) as described in the current Reference Interconnect Offer (RIO). [It is not intended to have a re-arrangement for IBH](#)

Comment [DS7]: Add STM-1 IBH. Relevant description should be included in the RIO, unless this should be LLRO?

For 2mb CSH Transport Links and EULs equivalent orders are treated as change orders is described in the Wholesale O&M Manual.



3.4 Change of Service : Upgrade / Downgrade

The process for upgrade/downgrade of STM-x CSH and STM-x ISH is described in the Interconnect O&M Manual. No we do not intend to upgrade or downgrade an IBH

Comment [DS8]: Update to include IBH

The process for upgrade/downgrade of 2mb CSH Transport Links and EULs is described in the Wholesale O&M manual. **Upgrades are treated as ‘changes’.**

3.5 Cease

The Cease process for cease orders of STM-x CSH and STM-x ISH and STM-1 IBH is described in the Interconnect O&M Manual.

The Cease process used for 2mb CSH Transport Links and for EULs is that contained within the Wholesale O&M Manual.

3.6 Process Timelines

The process timeline will be as stated in the PPC Service Level Agreement (to be agreed).

4. Fault Management Process

4.1 Introduction

This section outlines the industry processes to support the fault management of PPCs.

It is designed to suggest the optimal process for the fault management of PPCs, using existing **processes where possible. The process will not exist as a “stand alone” section, and may be amended** where subsequent agreement on related processes requires.

4.2 Fault Management Process: STM-x Transport Links and STM-x Transport Link Protection

It is proposed that the current process detailed in the Interconnect O&M Manual be used for the fault management of STM-x Transport Links and STM-x Transport Link Protection.

- Fault Management

Alarm Thresholds

STM-x Transport Links will benefit from the alarms set up to monitor bearers at STM-4, STM-16 and STM-~~64~~ level. **These alarms will generate a “major outage” alarm at a BER of 10^{-6} .**

The open eir Interconnect Nodes will generate an A1 alarm if the BER exceeds 10^{-3} and an A2 alarm will be generated if the BER exceeds 10^{-6} . The BER is derived from the Frame Alignment Word on Time Slot 0 of alternating frames of the 2Mb/s Interconnect Path.



An A1 alarm shall result in a Priority A fault.

An A2 alarm will be handled as a Priority A or B fault, depending on whether it is service affecting or non service affecting.

Priority A and Priority B faults shall be handled according to the fault reporting procedures outlined below.

Fault Reporting Procedures

Each Party shall be responsible for correcting faults which occur in its own Network which affect or degrade any of the Services and Facilities of the Interconnect Paths or the performance of the other Parties network.

In the event that a fault is discovered by either Party, and proven out of its own network, a Trouble Ticket shall be raised and submitted to a single technical contact for each Party, the Single Point of Contact, (SPoC). The Trouble Ticket shall be in the form as specified in Appendix 5 or as otherwise agreed.

The Single Point of Contact is specified in Appendix 11. Each SPoC shall be available 24 hours per day and 365 days per year.

The Party receiving the Trouble Ticket shall provide a written acknowledgement to the Ticket with a corresponding Ticket Reference. Depending on the extent of service degradation or the priority of the Trouble Ticket, both Parties shall endeavour to resolve the fault within the time frames specified in Appendix 7.

The priorities shall be defined as the following:

- ✔ Priority A - Customer Service Affecting
- ✔ Priority B - Non Customer Service Affecting

Responses to the ticket shall be made within the time frames specified in Appendix 7, either to notify the other Party of the resolution of the fault or as an update to the progress of fault tracking.

Each Ticket shall only be closed when clearance in writing has been passed to the opening Party and the solution to the fault has been implemented. If the suggested solution is rejected by the Party reporting the fault, within 1 working day, detailed reasons for rejecting the Trouble Ticket Answer should be noted on the Ticket and the Ticket shall remain open.

In the event that a Trouble Ticket has been open with a fault unresolved for longer than [an agreed time period] and no evidence of progress exists to clear the fault, the escalation procedures may be used to resolve the fault.

Fault Reporting Escalation procedures

The escalation of the problem may occur at two levels.



If the target times for response have elapsed and the fault is not cleared, the appropriate Manager/Duty Manager shall be notified and appropriate action shall be taken to resolve the fault.

In the event that the fault is still not cleared, and no evidence of progress exists, the second level of contact, the Management, shall be used to agree appropriate action to clear the fault.

Times given for escalation may depend on priority of the fault.

Planned Maintenance Notification Procedure

Any planned maintenance work which may result in the temporary interruption of any of the Services offered by the Interconnect network or the temporary unavailability of a network element in the Interconnect Network requires written notification prior to the scheduled planned work. It is recognised that planned maintenance work is a regular and normal occurrence, and that this section refers only to planned maintenance work which directly affects Interconnect Services or an outage on an offered Interconnect Node.

The notification shall be made to the SPoC for planned works, by either facsimile or E-mail.

Planned Maintenance Procedures

This section describes procedures, which are designed to minimise the effect of Planned Maintenance work on the Interconnect Network.

Both Parties must observe safety precautions at all times. The procedures defined for Health and Safety shall apply.

Notification to withdraw plant from service will be given to The Operator Network Management Centre (The Operator NMC) where *open eir* plan to carry out work; *open eir*/National Network Co-ordination Centre (*open eir*/NNCC) in the case where an Operator plans to carry out work. The Operator will issue a reference number for all planned works. Similarly, *open eir*/NNCC will issue a reference number for all planned works.

In order to avoid problems it is essential that the planned work is planned and notified well in advance and is performed, under normal situations, within Preferred Hours as described below.

When it is not practicable and for certain categories of planned work e.g. for urgent fault investigations, relaxation of the Preferred Hours may apply. This shall be decided on a per case basis.

Preferred hours for major works



The standard periods allocated for Planned Maintenance work which requires system down time and where traffic will be disrupted are shown below.

The Categories shall be defined as follows:

- ▶ Category A: 20 % or more of the Interconnect capacity is lost in the direction of the Operator network to the *open eir* network; or

50 % or more of the Interconnect capacity is lost in the direction of the *open eir* network to the Operator network.

Any planned maintenance on an STM-x Transport Link will be treated as a Category A.

A service interruption to an offered interconnect node in either network which **prevents directly connected users in accessing services on the other operator's** network.

- ▶ Category B: any outage of service less severe than that of Category A.

Preferred Hours	CATEGORY A	CATEGORY B
ALL DAYS	0101-0400	0001-0600

Notification Process and Timescale

If either Party intends to carry out any planned work which may affect the Interconnect then the originating Party must notify the other Party of the planned work by fax/[email](#) **to the contact point as specified in Appendix 11, using the “Notification of Planned Maintenance” form (see Appendix 6).**

The minimum advance notification that is required for service outages due to Planned Maintenance is 10 working days.

Having been notified of planned maintenance the receiving Party must review and respond to the proposal within 3 working days of receipt.

On completion of the Planned Maintenance work the originating Party must notify the other Party that the work was completed as planned within 1 working day of the planned **completion time, by facsimile transmission of the completed “Notification for Planned Maintenance” form.**

A reduction of notification timescale will be allowed only under exceptional circumstances. Each occurrence will be treated as urgent planned work and the reason for the urgency should be stated.

Escalation

If the date or timing of the Planned Maintenance work is unsuitable then the receiving Party must contact the relevant inter-company escalation point so that a suitable date



and time can be agreed. In the case of the Operator this is the Operator NMC, and in the case of *open eir* this is the Manager, *open eir*/NCCSMC. If the Planned Maintenance work is critical and essential to the operation of either party's network then one party cannot veto the other party's work.

- Quality of Service and Traffic Performance

Quality of Service and Traffic Performance Reporting

Quality of Service Statistics and Traffic Performance Measurements shall be exchanged between both Parties for all in-service Interconnect Paths. The measurements shall be exchanged on a monthly basis.

The quality of service report will be produced by each operator on a monthly basis for use in the O&M Forum as described.

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.

Quality of Service and Traffic Performance Reviews

Reviews of the Quality of Service and Traffic Performance shall take place as part of the activities of the O&M forum, as described.

- Operational Performance

The mechanism for the exchange of Operational Performance statistics shall be the O&M Forum. Refer to Appendix 10.

4.3 Fault Management Process: 2mb Transport Links, and EULs

It is proposed that the current process detailed in the Wholesale O&M Manual be used for the fault management of 2mb Transport Links, and all EULs.

This process is as follows:

- Introduction

The Service Assurance Processes describe the mechanisms for dealing with the operational issues relating to the in-service Wholesale Services i.e. fault reporting & resolution, planned maintenance.

The period of non-availability will commence at the time a fault is accepted by open eir. The period of non-availability shall end from the time logged by open eir that the service is available to the end-customer, as marked **"confirmed clear permanent"**.



Service shall be deemed to have been restored when the fault condition is resolved on the open eir network and service availability restored to the end-customer.

If the fault is subsequently found to be in the Operator network (including its CPE) open eir's standard terms and conditions regarding recovery of costs for reported faults found not to be in the open eir network shall apply.

open eir reserves the right to implement scheduled outages, as per below.

- Fault Management

All information in section 4.3.2 are given as examples. For up to date information the PPC Service Level Agreement (to be developed) should be consulted and it remains the definitive document stating the SLA standards.

Fault Definitions

Leased Lines Faults: A fault is the inability to transfer data across the leased line at its nominal capacity in conformance with the relevant ITU recommendations.

Fault Locations and Types of Fault

Faults can occur in one of four locations,

- ✔ Core,
- ✔ Exchange,
- ✔ Access Network,
- ✔ Customer Premises.

Appendix 12 details all the Fault Types and their location.

Fault Reporting Principles

Each Party shall be responsible for correcting faults which occur in its own Network which affect or degrade any of the Wholesale services and Facilities of the Wholesale services or the performance of the other Parties network.

In the event that a fault is discovered by the Operator, and proven out of its own network, a fault report shall be raised and submitted to the Single Point of Contact, (SPoC) as defined for the particular Carrier Service.

Where a fault report on an EUL cannot be cleared at the EUL level, and it is suspected by open eir that the fault may lie at the Transport Link level, open eir will escalate the fault to the open eir ~~NMC~~ ~~SMC~~ for resolution at the Transport Link level. The open eir ~~NMC~~ ~~SMC~~ will contact the Operator NMC where co-operation is required to resolve any faults on a Transport Link.



Inter-operator communication will be maintained via the fault management channel through which the fault was originally reported. Once reported to a Point of Contact, an Operator will not seek updates or escalations from other open eir fault repair areas in relation to that fault report.

Responses to the fault shall be made within the time frames specified in the SLA either to notify the other Party of the resolution of the fault or as an update to the progress of fault tracking. Fault status updates will be available in real time through the Extranet.

Each Fault Report shall be closed when open eir has restored the service. Rejection of the fault clearance by the Party reporting the fault must be received within 1 SLA hour of Operator notification else the original clearance time as notified by open eir will be used for the purposes of the Wholesale services SLA. Detailed reasons for rejection of fault clearance should be noted.

Fault Reporting Procedures

The Single Point of Contact, (SPoC) is available 24 hours a day, 7 days a week. Fault reports can be logged by calling 1800-656 656 or by e-mailing the fault to “wtm@open eir.ie”.

Responding to Faults

Response Time:

- ✔ The fault has been correctly logged and acknowledged.
- ✔ Preliminary testing and fault localisation has occurred.
- ✔ Fault clearance has been instigated.
- ✔ Results of preliminary open eir testing and fault localisation provided to Operator.

The Maximum response time is T + 3 SLA hours where T is the time that the fault has been logged by open eir.

The status of faults accepted by open eir will be made available on open eir’s Extranet site.

Fault Management Escalation Procedures

Introduction

The purpose of escalating a fault should be to inject some urgency or expediency into the resolution of a fault. The escalation process needs to be standardised and regulated so that escalations are effective and produce results. Escalations should **always take place at a “peer to peer” level i.e., the designated escalation level P.O.C.** in the Operator should only escalate to his or her corresponding designated escalation level P.O.C. in open eir and vice-versa.



PPC Escalations:

The escalation of Leased Line Faults may take place at two levels:

- If the maximum Response time of T + 3 SLA hours has not been met the Operator may escalate to Level 1 in open eir. Subsequent levels of escalation may be made for every 4 SLA hours after this time that a Response has not been made. (Escalations levels are detailed below). Due to the changing nature of the SLA offerings, the SLA hours defined per plan details can be found on www.openeir.ie site.
- For the purpose of escalations, since there is no maximum Repair time, a **“notional target” NT, Repair time of 8 SLA hours** should be adopted. **Subsequently, in order to introduce the notion of “jeopardy management”** the escalation at first level may take place 7 SLA hours after the fault is first logged by open eir. Subsequent levels of escalation may be made at 4 SLA hour intervals after the first escalation. The open eir Points of Contact for escalations are set out in the table below (Table: 1 - Escalations Points of Contact)
- If escalation is made and a voicemail left by the Operator "escalator", the open eir "escalatee" has 30 minutes to respond to the Operator "escalator"). If a return call is not received by the Operator "escalator", they may escalate to the next level, themselves.
- The escalation points are shown in Appendix 13.

Exclusions

The circuit will be deemed available to the customer and is therefore excluded for the purposes of calculating credits if the non-availability arises from or is otherwise caused or contributed to by the following circumstances:

- Where continuous access to the customer premises is not available to open eir on request from the time the fault is reported.
- Where the fault is caused by third party activities such as cable damage.
- Where the fault is caused by severe weather conditions such as storms, flooding or lightning
- Where a fault occurrence is due to changes in Customer provided apparatus, or due to the malfunction of any element which is owned or maintained by the customer.
- Where the fault is not in the open eir network



- Where the customer or its agents are not available to open eir, at reasonable notice, for the purpose of conducting diagnostic tests between the open eir network and the customer CPE.
- Where a fault is reported and no fault is detected when the service is tested from end to end.
- Any period of scheduled outages notified to the Operator in accordance with the planned works procedure
- A failure of the Customer to allow access to premises or equipment when requested
- The Customer failing to operate the service in accordance with open eir terms and conditions for the provision of the service
- A failure of the customer to report the fault in accordance with the fault **reporting procedures specified under “Fault Reporting”**
- Faults relating to the use of non-type approved or CE certified equipment by the customer.

Please see **Appendix 14** for a complete list of **“Clear Codes Excluded from the Service Availability Measurement”**.

Fault Resolution Definition

Service shall be deemed to have been restored when the fault condition is resolved on the open eir network and service availability restored to the end-customer, notification will be provided to open eir via the Operator. open eir reserves the right to put in place **‘Temporary Patching’ to restore service (e.g. fibre/radio link re-route)** while repairs to network fault are undertaken. Restoration may also mean that service is restored through diverse routing until the network fault is fully cleared.

On completion of repair, a fault ticket is given a "Unconfirmed Clear" status and that ticket is parked i.e. the clock is stopped until the fault clear is either accepted by the Operator as cleared and the ticket is manually permanently closed

or

- 8 working hours (for standard SLA faults) has elapsed from the unconfirmed clear notification time and the ticket is automatically permanently closed
- or
- 24 clock hours (for premium SLA faults) has elapsed from the pending clear notification time and the ticket is automatically permanently closed.
- Rejected by the Operator then the ticket is un-parked, the clock is re-started and repair work recommences.



On completion of repair, the "unconfirmed clear" status is applied again, Operator is notified and the fault is parked and the process above is repeated.

In order to permanently close the fault ticket is un-parked and given a "Confirmed Clear Permanent" status together with an associated final clear code and the fault ticket is automatically closed and the clear details time-stamped to the actual time that the fault was set to unconfirmed clear. Tickets can be manually closed at any time up to the system auto-closure of the ticket."

The SLA clock for the purpose of escalation continues from the time the ticket was parked. (Leased line example, ticket is un-parked at NT (7 SLA Hrs.), first escalation is NT + 4). On completion of repair, the "Unconfirmed Clear" status is applied again, customer is notified and the fault is parked and the process above is repeated.

Repair Time. The duration between the time a fault is first accepted by open eir in accordance with the fault reporting procedures and the time marked by open eir as a "Confirmed Clear Permanent".

Non Availability. The period of non-availability will commence at the time a fault is first reported to open eir in accordance with the fault reporting procedures. The period of non-availability shall end from the time logged by open eir that the service is available to the end-customer, notification will be provided to open eir via the Operator.

Dispute Procedures

In the event of any dispute between the parties in respect of service availability or otherwise, open eir reserves the right to determine the period of availability for the purposes of the credit rebates payable.

If the fault is subsequently found to be in the Operator network (including its CPE) open eir's standard terms and conditions regarding recovery of costs for reported faults found to be in not in the open eir network shall apply.

"Parked" Times Definition

Circumstances outside the control of open eir and /or delay resulting from customer related issues which impede the ability of open eir to begin or continue with repair of a fault will result in the fault ticket being parked for the affected period. This parked time will be removed from the out of service time used in calculating service availability.

Specifically:

- Requested access to customer premises not available to open eir.
- Awaiting requested information form Operator, required by open eir to progress fault clear.
- Awaiting decision form Operator **regarding "call out charges", due to the changing nature of the "call out charges", the charges details can be found on www.open eir.ie site,**
- **If the customer doesn't accept the "call out charges" within 1 hour, the fault is "Parked" until 9am the next working day.**



- When a " Un-Confirmed Clear " has been presented to the Operator on the Extranet and open eir are awaiting for confirmation that service has been restored.

At the time that the Extranet is fully deployed, the WTM desk will continue to provide a phone call to the Operator, once the status of **the ticket has changed to "Un-Confirmed Clear"**. **This will be reviewed on a quarterly basis.**

Remote Maintenance Test Process

The same Fault Reporting Procedures, section 4.3.2.4 above are followed, the Operator contacts the open eir Single Point of Contact, (SPoC) and request a remote maintenance test.

A ticket is opened, the report is logged as a test request and assigned to the SMC for action. The open eir SMC carry out the test.

SMC/WTM monitor the ticket. If the test result shows no errors SMC/WTM will inform the Operator and the ticket receives an "unconfirmed clear". The ticket is marked with a chargeable clear code.

If the test result shows errors the ticket is queued for a dispatch by the SMC. SMC/WTM informs the Operator. If the Operator agrees to the dispatch, the event is treated as a live fault. The initial remote maintenance test is not chargeable.

In a small number of cases where the test shows errors the fault may have resolved itself in the meantime, the Operator informs open eir of this when the SMC/WTM make contact. In these cases the ticket is given a permanent clear with no chargeable items.

- Maintenance Management

Maintenance Definition

The act of maintaining or the state of being maintained, reducing the occurrence of fault conditions.

Maintenance Principles

The Customer agrees that from time to time it may be necessary for open eir to temporarily suspend service on the PPCs(s) during periods of repair, essential maintenance or alteration or improvement to open eir's telecommunications network. Where possible open eir will give the Customer notice prior to such suspension and open eir will restore service as soon as possible after such suspension.

Planned Maintenance Notification Procedure

open eir reserves the right to implement scheduled outages. These will be used to carry out essential network maintenance or alteration procedures, for instance upgrading network management software. These will be excluded from availability calculations. Save in the case of emergency open eir shall provide no less than 5 working days written



notice to the customer of such outages. It is recognised that planned maintenance work is a regular and normal occurrence, and that this section refers only to planned maintenance work which directly affects *open eir* Wholesale services.

The notification shall be made to the SPoC for planned works, by either facsimile or E-mail. The planned maintenance notification will be sent to the Operator contact point via e-mail using the planned maintenance notification form contained in Appendix 15.

Planned Maintenance Procedures

This section describes procedures, which are designed to minimise the effect of Planned Maintenance work on the *open eir* Wholesale services..

Both Parties must observe safety precautions at all times. The procedures defined in section 8.4 of the Interconnect O&M for Health and Safety shall apply.

In order to avoid problems it is essential that the planned work is planned and notified well in advance and is performed, under normal situations, within Preferred Hours as described in table below.

When it is not practicable and for certain categories of planned work e.g. for urgent fault investigations, relaxation of the Preferred Hours may apply. This shall be decided on a per case basis.

Preferred hours for major works

ALL DAYS	00:01-06:00
----------	-------------

Unplanned Maintenance Procedures

It is recognised that unplanned maintenance work is an unfortunate occurrence, and that this section refers only to unplanned maintenance work, which directly affects *open eir* Wholesale services. Any unplanned maintenance work, which may result in the temporary interruption of any of the *open eir* Wholesale services, offered by the *open eir* network or the temporary unavailability of a network element will result in *open eir*'s carrying out its best endeavour to supply the Operator with as much notification prior to the work.

Notification Process and Time-scale Escalation

If the date or timing of the Planned Maintenance work is unsuitable then the receiving Party must contact the relevant inter-company escalation point so that a suitable date and time can be agreed. In the case of the Operator this is the Operator NMC, and in the case of *open eir* this is the Manager, *open eir*/NNCC. If the Planned Maintenance work is **critical and essential to the operation of either party's network then one party cannot veto the other party's work.**



A reduction of notification time-scale will be allowed only under exceptional circumstances. Each occurrence will be treated as urgent planned work and the reason for the urgency should be stated.

Resolution of operational disputes and issues

This process shall be used to resolve serious service affecting operational disputes and serious issues that arise between the two parties. The escalation process for STM-x and 2mb/EULs will be to different points as specified in the Interconnect O&M and the open eir Wholesale services O&M respectively. This procedure shall only be used for disputes, which are not related to specific faults. Disputes relating to specific faults shall be handled via the Fault Escalation Process described above.

5. Data Circuit Order Information

For all Data Circuit orders, it is possible, via a new UG GUI order type, to access various data fields with data pertaining to each order.

For all Data Circuit orders, it is possible, via a new UG GUI order type (Search by Circuit ID), to access various data fields with data pertaining to each order.

The operator will populate the new order type using the circuit ID. On submitting the order it will complete in a few moments. The UG will then present a list of data fields related to the circuit ID such as **'Order Application Date', 'Due Delivery Date', 'Status' as it relates to that Data Circuit. A full list of the data fields available can be found in Appendix 16.** These data fields will be grouped under a number of extendable/collapsible sections on the UG. Where multiple orders have been placed against a particular Data Circuit over a period of time, it will be possible to view the data fields **relating to each of the order types i.e. 'Provide order', 'Change order', 'Cease order'** etc..

A once off data load will be provided to each operator on their Data Circuits on request. Daily download files will be made available to operators via the UG, providing access to: 1) Current Order Data (**using the 'Daily Current Orders Report' order type**) and 2) Archive Order Data (using the **'Daily Archived Orders Report' order type**). This data can be used by Operators for reporting purposes should they wish to do so. Where data circuit details are available to view on a circuit level



basis via UG but not available in these standard reports, open eir will endeavour to provide reports on this additional data circuit detail to Operators on request

Where a customer has an exceptional request to have a data circuit delivered ahead of its due delivery date (DDD), open eir will endeavour to meet this request on a best effort basis. The request should be logged <http://www.openeir.ie/contactcustomercare/>, **populating the fields 'Product Details, selecting Data Order Query' then 'Query Details, selecting Expedite'**.



APPENDIX 1: PPC Transport Link Forecast

Operator:

Date of submission:

Product	Forecast incremental quantity of Links required to be in service by y/e March [current year + 2]
STM-1 CSH Transport Links	
STM-4 CSH Transport Links	
STM-16 CSH Transport Links	
STM-1 ISH Transport Links	
STM-4 ISH Transport Links	
STM-16 ISH Transport Links	

Comment [DS9]: Update for IBH?

[There are no plans to look for forecasts for IBH.](#)



APPENDIX 2: open eir Wholesale PPC Order Request

Operator:		Order Date:	
Operator order reference:		Order placed by:	
Operator contact tel. No.		Operator account number:	
		Operator contact email:	

Services Required					
Provision of new service		Upgrade of existing service			
Change of end user address		Downgrade of existing service			
Move end to new Transport/ Subsidiary Link		Cross-referenced provide and cease			
Cessation of existing service					
Category	Service	Capacity	Quantity	Presentation	Date Required - as per SLA
X	Partial Private Circuit 2mb CSH Transport Link	1984kb		G703	
Y	Partial Private Circuit End User Link (data): 64kb	64kb		X21 <input type="checkbox"/> V35 <input type="checkbox"/>	
	>64kb			X21 <input type="checkbox"/> V35 <input type="checkbox"/>	
	1984kb	1984kb		X21 <input type="checkbox"/> V35 <input type="checkbox"/>	
	2048kb	2048kb		G703BNC <input type="checkbox"/> G703RJ45 <input type="checkbox"/>	
	45mb	45mb		G703BNC <input type="checkbox"/> G703RJ45 <input type="checkbox"/>	
	34mb	34mb		G703BNC <input type="checkbox"/> G703RJ45 <input type="checkbox"/>	
	STM-1	155mb		G703BNC <input type="checkbox"/> G703RJ45 <input type="checkbox"/> G. 957 <input type="checkbox"/>	
	2mb Subsidiary link	1984kb		G703	
	To be provided off Transport Link / 2mb Subsidiary link no. (open eir cct ID)				



Category Y	Payload Position / Timeslot (T/S / KLM / JKLM)				
	Service	Existing Capacity	Required capacity	Upgrade/Dow ngrade From Circuit ID	Date required as per SLA
	Upgrade/Downgrade End User Link				

Circuit Connection Information

A-end Information
Contact Name: Telephone no. Fax no. Address: <i>open eir</i> telephone number (if different from above):* This information is required to confirm the serving exchange at which the Transport Link terminates

*Not Mandatory

B-end Information
Contact Name: Telephone no. Fax no. Address: <i>open eir</i> telephone number (if different from above):* This information is required to confirm the local exchange in which the lines are connected

*Not Mandatory

Specific Requirements
Remarks:

Operator Billing Address



Contact Name:
Address:

Thank you for your order - please send to Wholesale@openeir.ie
File name should be in the following format:
“**ORDER**-[Operator NAME]-[CIRCUIT TYPE]-[Operator REF]-[**DATE**]”



APPENDIX 3: STM-x Transport Link Order Form

FORM TO BE ADDED TO APPENDIX 2 OF RIO SERVICE SCHEDULE 100

Order Form for PPC STM-x Transport Link (Section 4)

To: [open eir Order contact point]		From: [Operator X Order contact point]	
		[Operator X survey contact point]	
Date:	Operator X Reference No.:		
Order Type :			
Provide	Rearrangement	Cessation	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Signed on behalf of Operator X			

Transmission Information

Type of Transport Link (ISH <u>or</u> , CSH <u>or</u> IBH):	
Capacity required (STM-1, STM-4 or STM-16):	
Presentation: Electrical / Optical	
A-End (open eir Node / PPC Annex A exchange) :	
B-End (Point of Interconnect / PPC Point of Handover): If ISH, provide x, y co-ordinates with address	
Date site access available to open eir	
Channelised structure (34mb, 2mb):	
New B-End (In case of Rearrangement) :	
Circuit ID (In case of Rearrangement) :	
Comments :	

open eir use only

Account Number :	Equipment Code : CSH/ISH soc does
Service Order Number :	DPL Circuit No's :
Signed on behalf of open eir:	
Date:	



STM-X TRANSPORT LINK PROTECTION ORDER FORM

Order Form for PPC STM-x Transport Link Protection

To: [open eir Order contact point]		From: [Operator X Order contact point]
		[Operator X survey contact point]
Provide <input type="checkbox"/>	Cessation <input type="checkbox"/>	
Date:	Operator X Reference No.:	
Product	Description	Mark only one of the following options per order form
Mandatory	Desktop Survey Order	<input type="checkbox"/>
Mandatory	Site Survey Order	<input type="checkbox"/>
Option 1	Protect CSH 2 Node 1 ADM	<input type="checkbox"/>
Option 2	Protect CSH 2 Node 2 ADM	<input type="checkbox"/>
Option 3	Protect CSH 3 Node 1 ADM (open eir)	<input type="checkbox"/>
Option 4	Protect CSH 4 Node 1 ADM	<input type="checkbox"/>
Option 5	Protect CSH 3 Node 1 ADM (operator)	
Option 6	Protect ISH 2 Node 1 Chamber	<input type="checkbox"/>
Option 7	Protect ISH 2 Node 2 Chamber	<input type="checkbox"/>
Signed on behalf of Operator X		

Existing Transport Link Transmission Information

Type of Transport Link (ISH or CSH):	
Capacity required (STM-1 or STM-4 or STM-16):	
A-End (open eir Node / PPC Annex A exchange) :	
B-End (Point of Interconnect / PPC Point of Handover): If ISH, provide x, y co-ordinates with address	
Date site access available to open eir	
Circuit ID of existing Transport Link	
Comments :	

open eir use only

Account Number :	Equipment Code : CSH/ISH soc codes
Service Order Number :	DPL Circuit No's :



Signed on behalf of <i>open eir</i> :	
Date:	



ORDER FOR CARD PROTECTION ON AN EXISTING TL

Provision <input type="checkbox"/>		Cessation <input type="checkbox"/>	
To: [open eir contact point]		From: [Operator X contact point]	
		[Operator X survey contact point]	
Date:	Operator X PPC account number:		
Signed on behalf of Operator X			

Transport Link circuit id						
TL Capacity (please tick)	STM-1	<input type="checkbox"/>	STM-4	<input type="checkbox"/>	STM-16	<input type="checkbox"/>
Presentation (please tick)	Electrical	<input type="checkbox"/>	Optical	<input type="checkbox"/>		
Single Ended or Both Ended Protection	Single	<input type="checkbox"/>	Both	<input type="checkbox"/>		
Type of card protection required (please tick)	N+1	<input type="checkbox"/>	1+1	<input type="checkbox"/>		
Date of provision of pre-order process results						
A-End (<i>open eir</i> Node / PPC Annex A exchange)						
B-End (Point of Handover) address						
Comments :						

open eir use only

Account Number :	Equipment Code :
Service Order Number :	DPL Circuit No's :
Signed on behalf of <i>open eir</i> :	
Date:	



APPENDIX 4: 2mb Voice Interconnect Order Form

FORM TO REPLACE SECTION 1 OF APPENDIX 1 TO RIO SERVICE SCHEDULE 101

Order Form for Interconnect Paths 2Mbit (Section 1)

Order Details - sent by Operator X to open eir.

To: [open eir Order contact point]	From: [Operator X Order contact point]
Date:	Operator X Reference No.:
Order Type :	
Provide <input type="checkbox"/>	Rearrangement <input type="checkbox"/>
	Cessation <input type="checkbox"/>
Signed on behalf of Operator X	

Transmission Information

Type of Interconnect (ISI, CSI, STM-1 interconnect access bearer, ISH, CSH)	
A-End (<i>open eir</i> Node / PPC Annex A exchange) :	
B-End (Point of Interconnect / PPC Point of Handover):	
Bearer No (to be completed by Operator) 1 st , 2 nd , 3 rd . or 4th STM-1 (where applicable)	
Port no. on STM-1(VC12)	
Date Site Access available to <i>open eir</i> (not applicable to PPC interconnect paths)	
New B-End (In case of Rearrangement) :	
Circuit ID (In case of Rearrangement) :	
Number of Paths :	
Comments :	

Switching Information

<i>open eir</i> Node :*	
Operator X Interconnect Node	
New Operator X Interconnect Node (In case of Rearrangement) :	
Circuit ID (In case of Rearrangement) :	
Number of Paths :	
Comments :	



--	--

Order details (to be completed by open eir)

Account Number :	Equipment Code :
Service Order Number :	DPL Circuit No's :
Signed on behalf of <i>open eir</i> :	
Date:	



APPENDIX 5: Interconnect Trouble Ticket Usage Guide

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

Faults may be advised by phone in parallel to faxing the form or e-mailing a trouble ticket to OAOdesk@open.eir.ie, however the fax or e-mail will be the official trouble reporting mechanism.

Interconnect 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:	open eir Ticket Reference:

Designation Information

Time of Fault Start: :	
Description of Fault:	
Interconnect Link(s) Affected:	
No. of Circuits Affected:	
Interconnect Path(s) Affected:	
Services Affected:	
Proportion of Calls Affected:	
Initial Response:	
Time of Identification of Fault: :	
Update Number X	(An entry shall be made for each update)
Time of Fault Stop: :	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 6: Notification of Planned Maintenance Usage Guide

The form in this section should be used for the notification of planned Maintenance Activities relating to the Interconnect.

The type of actions which require to be notified are activities directly affecting the interconnect **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 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 Interconnect Path/Switch and will necessitate the following break in service:-

Interconnect Link(s) Affected: _____

 Interconnect Path(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 7: Fault Response and Escalation Timescales

All Trouble Tickets submitted as part of the fault handling procedures should be acknowledged, by sending a facsimile message or an e-mail within 30 minutes of receipt of the Trouble Ticket

Response times for investigating and answering the Ticket shall be as follows:

- The initial response to Tickets at Priority A shall be within a period of 60 minutes after receipt of the Ticket and status updates shall continue at 60 minutes intervals until the ticket is closed. Only when the solution has been implemented satisfactorily by both Parties shall the Ticket be closed.
- Tickets at Priority B shall be answered within 1 working day of receipt of the Ticket and status updates shall occur at each daily interval thereafter until the Ticket is mutually closed by both Parties.
- Trouble Tickets with Priority A shall be closed or may be escalated to the first level within 4 hours, or subsequently may be escalated to the second level within a further 2 hours.
- Trouble Tickets with Priority B shall be closed or may be escalated to the first level within 3 working days, or subsequently may be escalated to the second level within 1 working day.

The above response times are summarised in the table below:

Ticket Priority	Initial Response	Status Updates	First Level Escalation	Second Level Escalation	Third Level Escalation
A	60 minutes	Every 60 minutes	4 hours after reporting	6 hours after reporting	8 hours after reporting
B	1 working day	Every working day	3 working days after reporting	4 working days after reporting	5 working days after reporting



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 *open eir* and Operator X networks. The parameters represent a minimum set to be measured and recorded by both parties in accordance with the process set out in the Operations and Maintenance Manual.

The current state of implementation of systems to measure and report on these parameters shall be confirmed between *open eir* and Operator X. 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
Ccts available	The total number of circuits available on the trunk group
Actual Ccts	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 (ADPOH), 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 ADPOH 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 <i>[tba]</i> and the % loading is given as $\% \text{ loading} = \frac{\text{total traffic}}{\text{critical traffic value}} \times 100\%$
Total Calls Lost	The total number of calls lost due to congestion on the trunk group The answer seize ratio, defined as the number of answered seizures to total



ASR %

seizures i.e.:

$$\text{ASR \%} = \frac{\text{answered seizures}}{\text{total seizures}} \times 100\%$$



APPENDIX 9: Typical Quality of Service and Traffic Performance Report - Usage Guide

The forms in this appendix are templates for the reports to be produced as inputs to the O&M forum.

Typical Quality of Service and Traffic Performance Report

Section A: Traffic Performance **Date:Measurement Period, Week Ending:**

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



APPENDIX 10: Typical Operational Performance Report -Usage guide

The forms in this appendix are templates for the reports to be produced as inputs to the O&M 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 12hrs	% cleared within 24hrs	% cleared within 48hrs
A						
B						

Part B: Planned Maintenance

	<i>open eir</i>	Operator X
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
New Interconnect Path - existing Interconnect Link to an existing POI	8weeks					
New Interconnect Path - Interconnect Link to an existing POI	10 weeks					
New Interconnect Path - New Interconnect Link to a new POI using CSI	16 weeks					
New Interconnect Path - New Interconnect Link to a new POI using CSH	As per forecast					
New Interconnect Path - new Interconnect Link to a new POI using ISI.	26 weeks					
New Interconnect Path - new Interconnect Link to a new POI using ISH.	As per forecast					
Rearrangement of existing Interconnect Path Pol	As for new provision					



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
Rearrangement of existing Interconnect Path in terms of Operator node	6 weeks					



APPENDIX 11: Directory of Contact Points

For STM-x Transport Links and Voice Interconnect paths Only

Comment [DS10]: A number of the contacts below have HSQ as the address. I assume they need to be updated. Are the phone number (+353-1-6008322) still valid?

Directory of Contact Points

Document controllers

open eir Document Controller		OPERATOR X Document Controller	
Name		Name	
Title	Technical Operations Manager	Title	
Address	5C , 1 Heuston South Quarter St. John's Road Dublin 8	Address	
Phone	+353-1-6008322	Phone	
Fax	+353-1-4	Fax	
E-mail	Wholesale@open eir.ie	E-mail	

Forecast Contact Points

The following contacts relate to the forecasting of new Interconnect Paths:

open eir Forecasting Contact Point	open eir Account Manager for Operator X 5E , 1 Heuston South Quarter St. John's Road Dublin 8 Tel : +353-1-6008322 Fax :
open eir, Wholesale services E-mail address	E-mail :Wholesale@open eir.ie
Operator X contact point for Forecasting	

Order Contact Points

The following contacts relate to the ordering of new Interconnect Paths:

open eir Order Contact Point	open eir Account Manager for Operator X 5E , 1 Heuston South Quarter St. John's Road
------------------------------	--



	Dublin 8 Tel : +353-1-6008322 Fax :
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X Order Contact	

Provisioning Contact Points

The following provisioning contacts relate to the provisioning of Interconnect Paths.

open eir Provisioning Contact Point	Account Manager for Operator X 5E, 1 Heuston South Quarter St. John's Road Dublin 8 Tel : +353-1-6008322
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X Provisioning Contact	

Provisioning Contact Points

The following provisioning contacts relate to the implementation of a Call Origination Routing Plan.

open eir Order Contact Point	Account Manager for Operator X 5E, 1 Heuston South Quarter St. John's Road Dublin 8 Tel : +353-1-6008322
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X Order Contact	

Fault Reporting Contacts

SPOC for Fault Handling / Trouble Reporting:

	open eir SPOC
Name	Name open eir OAO Desk



Contact Hours	Title	24 Hour Duty
Address	Address	open eir Bianconi Avenue City West Business Park Dublin 22
Phone	Phone	+ 1800 656 656
Fax	Fax	
E-mail	E-mail	OAOdesk@open eir.ie

Technical Contact for Fault Escalation (1st level):

	open eir 1 st level Fault Escalation	
Name	Name	open eir NMC Duty Manager
Title	Title	24 Hour Duty
Address	Address	open eir Bianconi Avenue City West Business Park Dublin 22
Phone	Phone	+ 1800 656 656
Fax	Fax	
E-mail	E-mail	OAOdesk@open eir.ie

Managerial Contact for Fault Escalation (2nd level):

	open eir 2 nd Level Escalation	
Name	Name	
Title	Title	Switching Manager
Address	Address	open eir Bianconi Avenue



	City West Business Park Dublin 22
Phone	Phone +353-1-6008322
Fax	Fax
E-mail	E-mail

Managerial Contact for Fault Escalation (3rd level):

	open eir 3 rd level escalation
Name	Name
Title	Title open eir NMC Manager
Address	Address open eir Bianconi Avenue City West Business Park Dublin 22
Phone	Phone +353-1-6008322
Fax	Fax
E-mail	E-mail

Managerial Contact for Fault Escalation (4th level):

	open eir 4 th level escalation
Name	Name
Title	Title Interconnect Operations Manager
Address	Address 1 Heuston South Quarter
Phone	Phone +353-1-6008322
Fax	Fax
E-mail	E-mail

Planned Maintenance Contacts

open eir Planned Maintenance Contact:	open eir National Network Co-ordination
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<p>Hours:</p> <p>08:00 - 23:59, weekdays</p> <p>10:00 - 23:59, Sat. & Sun.</p>	<p>Centre:</p> <p><i>open eir</i> NNCC</p> <p>Bianconi Avenue</p> <p>Citywest Business Park</p> <p>Dublin 22</p> <p>Telephone: + 1800 656 656</p> <p>E-mail: NNCC@open eir.ie</p>
--	---

<p>Operator Planned Maintenance Contact:</p> <p>Hours:</p>	<p>Name</p> <p>Address</p> <p>Telephone:</p> <p>Facsimile:</p> <p>E-mail:</p>
--	---

<p>open eir Mass Calling Event Contact:</p> <p>Hours:</p>	<p>open eir OAO desk</p> <p>Bianconi Avenue</p> <p>Citywest Business Park</p> <p>Dublin 22.</p> <p>Telephone: +1800 656 656</p> <p>Facsimile: +</p> <p>E-mail: OAOdesk@open eir.ie</p>
---	--

<p>Operator Mass Calling Event Contact:</p> <p>Hours:</p>	<p>Name</p> <p>Address</p> <p>Telephone:</p>
---	--



	Facsimile:
	E-mail:

Interconnect Invoicing Address

The following contacts relate to billing issues:

open eir Interconnect Invoicing Address	Interconnect Billing Manager 5C, 1 Heuston South Quarter St. John's Road Dublin 8 Tel : +353-1-6008322 Fax :
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X contact point for	

Interconnect Billing Contact Point

The following contacts relate to billing issues:

open eir Interconnect Billing Contact Point	Interconnect Billing Manager 5C, 1 Heuston South Quarter St. John's Road Dublin 8 Tel : +353-1-6008322 Fax :
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X contact point for	

Interconnect Billing Test Contact Point

The following contacts relate to Interconnect billing test issues:

open eir Interconnect Billing Contact Point	Interconnect Billing Manager 5C ,1 Heuston South Quarter
---	---



	St. John's Road Dublin 8 Tel : Fax : E-mail:
open eir, Wholesale E-mail address	E-mail :Wholesale@open eir.ie
Operator X contact point for	

Contact for Number Changes Which Affect the Interconnect

open eir Contact:	Name Address Telephone: Facsimile: E-mail:
Operator X Contact:	Name Address Telephone: Facsimile: E-mail:

Contact for technology Changes Which Affect the Interconnect

open eir Contact:	Name Address Telephone:
-------------------	---------------------------------------



	Facsimile: E-mail:
Operator X Contact:	Name Address Telephone: Facsimile: E-mail:

Nominees for Operations and Maintenance Forum

Activity	<i>open eir</i> Nominee	OPERATOR X Nominee
Operations Manager		
Provisioning		
Fault Handling (including Planned Works)		
Network Performance		
Forecasting		



APPENDIX 12: Fault Types and their Location

Code	Description	Location	Measure
001	RWT Right when tested	N/A	N
002	FOK Found OK (Local Exchange or site		N
003	No Entry		N
004	Misoperation		N
008	Equip not maintained by		N
015	Misreport		N
016	Customer's Power		N
017	Cleared by other		N
018	Test Request		N
018	Customer Reports		N
022	Test Request Non		N
110	DROP WIRE Wires		Access Network
111	DROP WIRE Dis in	Y	
112	DROP WIRE Dis in	Y	
121	O/H (Overhead Cable) POLY Dis in	Y	
122	O/H POLY Dis (Disconnection) in	Y	
124	O/H POLY S/C (Short	Y	
127	O/H POLY Terminal	Y	
131	U/G (Underground cable)Direct U/G	Y	
132	U/G Case / cabinet	Y	
134	U/G Termination box	Y	
151	INT(Internal) WIRING Dis, Loose	Customer's Premises	Y
154	INT WIRING		Y
157	INT WIRING Loose on		Y
158	INT WIRING Split / Reversed	Y	
248	Exchange	Exchange / Core Network	Y
260	Exchange		Y
261	Exchange		Y
300	DIG. TXPower		Y
306	DIG. TXEIU		Y
307	DIG. TX2MB		Y
315	DIG. TX2MB Channel		Y
316	DIG. TX2/8		Y
317	DIG. TX8/2		Y
320	DIG. TX8MB Channel		Y
321	DIG. TX8/34		Y
322	DIG. TX34/8		Y
325	DIG. TX34MB Channel		Y
326	DIG. TX34/140		Y
327	DIG. TX140/34		Y
330	DIG. TX140MB Channel		Y
331	DIG. TX140/565		Y
332	DIG. TX565/140		Y
345	DIG. TXPower Feeding		Y
348	DIG. TXRegenerative		Y
364	DIG. TXRedundant		Y
380	DIG. TXDigital Radio		Y
381	DIG. TXDigital		Y
382	DIG. TXOptic		Y
383	DIG. TXEarth Station /		Y



Code	Description	Location	Measure
601	GEN (General) Modem Fault	Exchange / Core Network	Y
602	GEN Amplifier		Y
610	GEN M1020 Fault		Y
611	GEN M1040 Fault		Y
612	GEN Branching Panel Fault		Y
619	DIG. TX 2MB Link		Y
640	GEN Circuit Re-Routed Temporarily		Y
641	GEN DDF (Digital distribution frame) Fault		Y
642	GEN Endlink Fault		Y
643	GEN DCCS(Digital cross-connect) Fault		Y
644	GEN Inter-Nodal Link		Y
645	GEN AFLU / LTU Faulty / Changed		Y
646	GEN NTU Faulty / Changed		Y
647	GEN EIU (Exchange Interface unit)Faulty / Changed		Y
648	GEN RAD Faulty / Changed		Y
649	GEN Circuit restored to original path		Y
650	STC MUX Configuration Loss		Y
651	STC MUX Power Supply Loss		Y
652	STC MUX MCC Faulty		Y
653	STC MUX 2x2 Card / Circuit Fault		Y
654	STC MUX Nx64 Card / Circuit Fault	Y	
655	STC MUX G703 Card / Circuit Fault	Y	
656	STC MUX AF6 / AF8 Card / Circuit Fault	Y	
657	STC MUX Card Connector Fault	Y	
658	STC MUX X21 Card / Circuit Fault	Y	
659	STC MUX Miscellaneous Fault	Y	
660	MUX CASE 7120 Faulty / Changed	N	
661	MUX CASE 7150 Faulty / Changed	N	
662	MUX CASE 8XX Series Faulty / Changed	N	
663	MUX INFOTRON Faulty / Changed	N	
664	MUX ROLI Faulty / Changed	N	
666	EXCH PROBLEM	Y	
670	TCS 532 CES Fault (TCS 532 = Dassnet cross-connect)	Y	
671	TCS 532 NES Fault	Y	
672	TCS 532 PES Fault	Y	
673	TCS 532 Power Supply Fault	Y	
674	TCS 532 5318 Card Faulty / Changed	Y	
675	TCS 532 Node Free Running	Y	
676	TCS 532 BNC Re-Terminated	Y	
677	TCS 532 5311 Conference Card Fault	Y	
679	TCS 532 Miscellaneous Fault	Y	
681	E/PAC Exchange Modem	Y	
682	E/PAC Miscellaneous	Y	
683	EIRPAC TELECOM MODEM, SUBS END	Y	
684	EIRPAC MODEM Settings	Y	
704	Customer's MDF	N/A	N
900	TX Channel Modulator	Exch. / Core	Y
904	Misoperation (field to charge)	N/A	N
908	Equip not maintained by eircom (field to charge)	N/A	N
910	TX Group Modulator	Exch. / Core	Y
916	Customer's power supply (field to charge)	N/A	N
917	TX S/G Modulator	Exch. / Core	Y
970	TX Analogue Radio Link	Exch. / Core	Y
971	TX Analogue Coax	Exch. / Core	Y
999	Outdoor Call (Cust Premises Closed on Field Force arrival)	N/A	N



APPENDIX 13: Escalation Points

Escalations Points of Contact

<u>Leased Line</u>			
Escalation Level	Title	Contact No.	Escalate after:
1	WTM Team	1800-656-656	7 SLA hrs (= NT)
2	WTM Team Leader	1800-656-656	“NT” + 4
3	WTM Manager	01-6008322	“NT” + 8
4	Head of W/Sale Operations	01-6008322	“NT” + 12
5	W/Sale Director	01-6008322	“NT” + 16

Escalations Points of Contact - details to be provided on a peer to peer basis with each Operator.

Note: **Escalations for all Products within the SLA must be “accepted”** by open eir and vice-versa. If the relevant previous escalations have not been made, or if the time intervals have not been observed, the escalation may be rejected by open eir.



APPENDIX 14: Clear Codes Excluded

Clear Codes Excluded from the Service Availability Measurement for 2mb Transport Links and EULs

Code	Description	Measure
001	RWT Right when tested (Remotely) *	N
002	FOK Found OK (Local Exchange or site visit)	N
003	No Entry Obtained	N
004	Misoperation	N
008	Equip not maintained by <i>open eir</i>	N
015	Misreport	N
016	Customer's Power Supply	N
017	Cleared by other PTT/Carrier	N
018	Test Request Chargeable	N
019	Customer Reports OK	N
022	Test Request Non Chargeable	N
660	MUX CASE 7120 Faulty / Changed	N
661	MUX CASE 7150 Faulty / Changed	N
662	MUX CASE 8XX Series Faulty / Changed	N
663	MUX INFOTRON Faulty / Changed	N
664	MUX ROLI Faulty / Changed	N
704	Customer's MDF	N
904	Misoperation (field to charge)	N
908	Equip not maintained by <i>open eir</i> (field to charge)	N
916	Customer's power supply (field to charge)	N
999	Outdoor Call (Cust Premises Closed on Field Force arrival)	N

Only applicable to managed circuits.

Note: The information in this Appendix 14 is only for information and the Definitive version is contained within the SLA (to be agreed)



APPENDIX 15: Notification of Planned Maintenance

Notification of Outage

open eir Date of Issue

open eir Reference

Time of Outage

Details of Outage _____

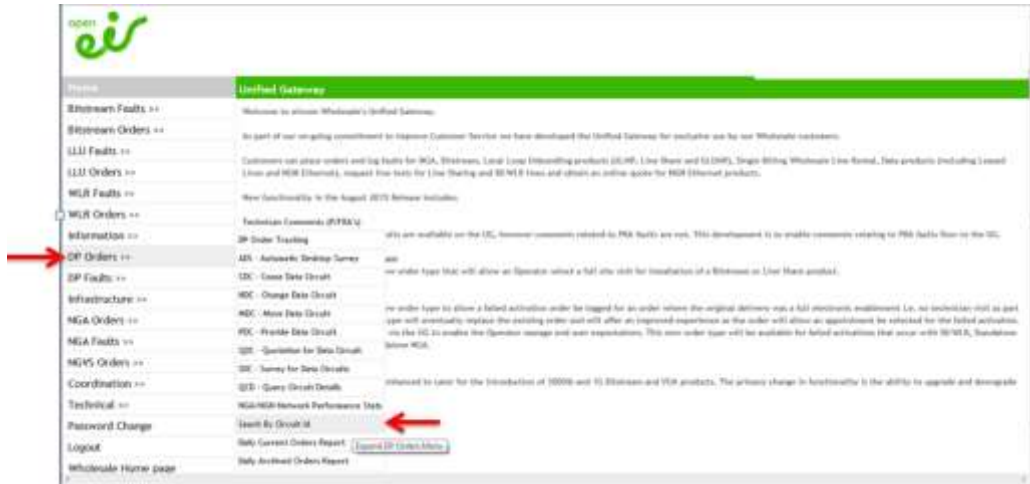




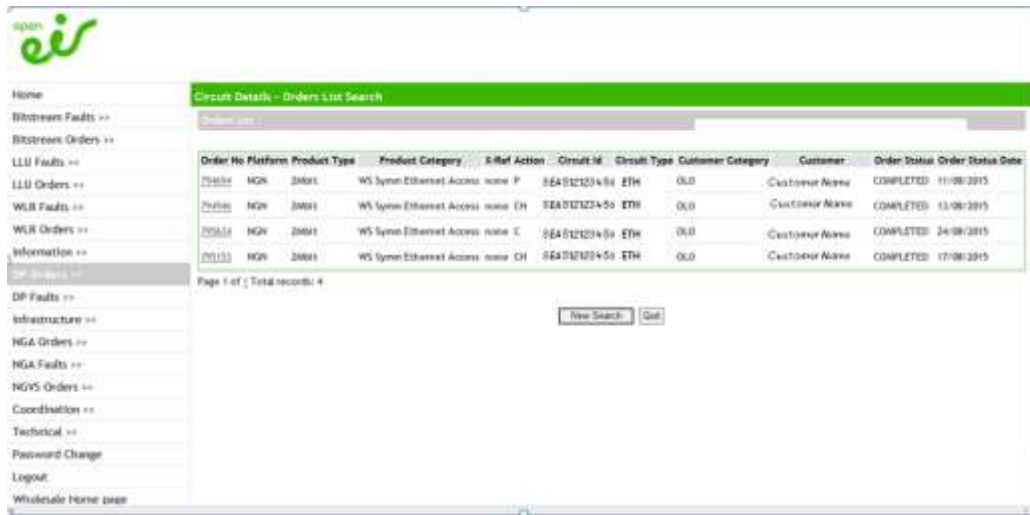
Appendix 16 - Data Circuit Order Information

Search by Circuit ID:

From UG menu, select: DP Orders / Search by Circuit ID



Below, you can see there were 4 orders related to the circuit. Click on the one of interest to proceed





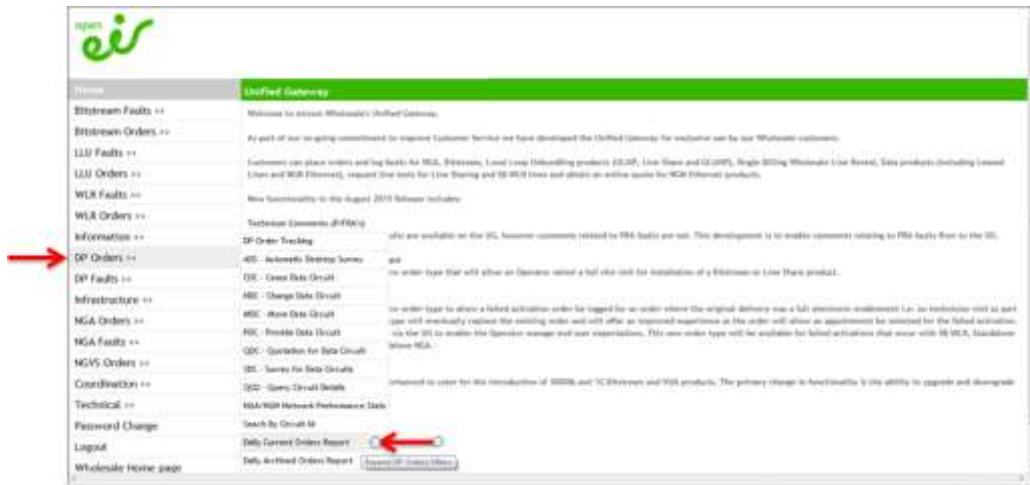
The 'Tabs' such as Order Details, OMP Details, Issues Details etc. are now available in expandable / collapsible sections for the circuit ID selected. Clicking on the green arrow/box to their left will expand / collapse to show / hide any detail available. The various data fields available under these headings are available on request.



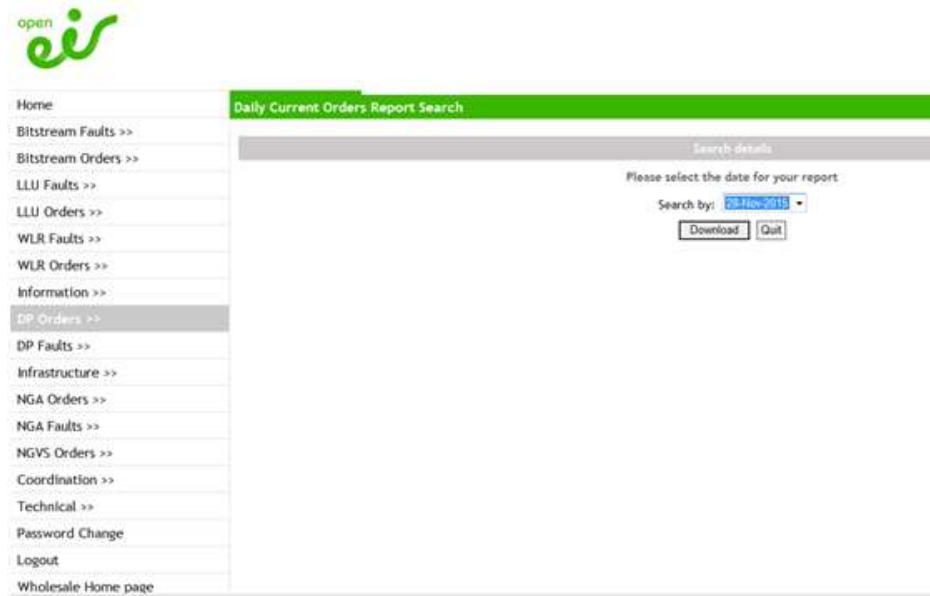


Daily Current Orders Report:

From UG menu, select: DP Orders / Daily Current Orders Report



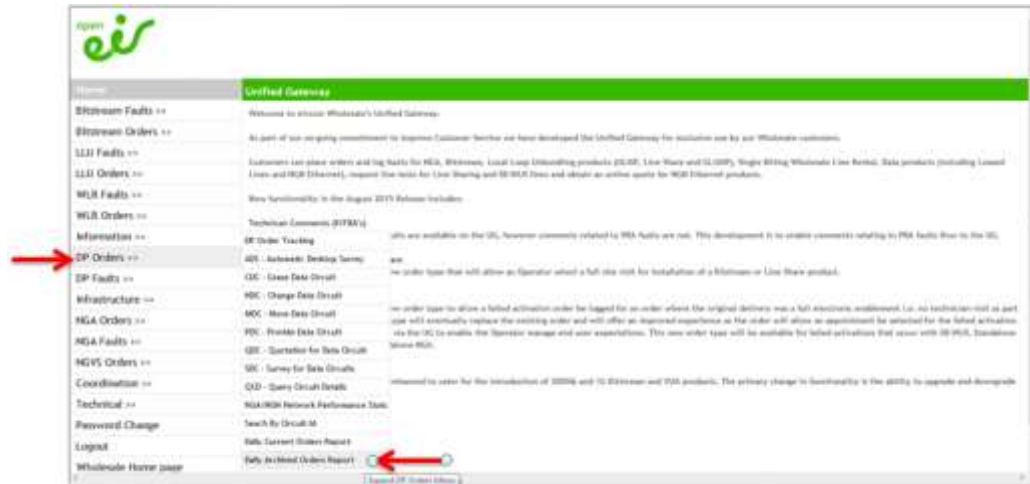
In the dropdown, select the date required, then click on 'Download'. Note: It is planned that 30 days of reports will be available after a period of time. On completion of an order, the order detail will flag in the 'Archive Orders' file after 90 days





Daily Archived Orders Report:

From UG menu, select: DP Orders / Daily Archived Orders Report



In the dropdown, select the date required, then click on 'Download'. Note: It is planned that 30 days of reports will be available after a period of time. On completion of an order, the order detail will fall in the 'Archive Orders' file after 90 days





Version Control History

Comment [DS11]: Update

Version	Status	Update	Effective Date
-		See individual process documents	30/1/03
0		Merge of individual process documents and revision of processes incorporating comments from industry at Forum Sign-off meeting of 31/1/03	
0.1		Inclusion of Subsidiary Link and comments from industry meeting 07/03/05	09/03/05
1.1		Published	12/05/05
2.0		Inclusion of 45M EUL	28/06/05
3.0		Inclusion of EUL upgrade and PPC Transport Link Protection	11/08/05
3.1		Amendments following industry meeting 18/08/05	16/09/05
3.2		Inclusion of STM-16 CSH & ISH TL	27/06/07
3.3		Revision of open eir Contact Points	08/06/09
3.3		Document rebranded from eircom to open eir	16/09/2015
3.4		Auto closure of fault tickets	21/09/2015
3.5		Addition of details Section 5. Data Circuit Order Information and Appendix 16	07/12/2015
V4.0	Final	This document is based on V3.5 Implementation of Standardised Change Control.	21/06/2017
V4.1	Propose	Addition of IBH Handover, Transport Links	01/07/2019