



eircom **wholesale**

Interconnect Operations and Maintenance Manual

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Title	Location
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1. Introduction

1.1 Background

- 1.1.1 The purpose of this document is to define the joint operational & maintenance procedures relating to the network of Interconnect Links between eircom and the Operator. It is not a legal document but supports the Interconnect Agreement and describes the mutually agreed processes which will be used to manage the ongoing operational activity associated with the Interconnect between the two networks.
- 1.1.2 For the avoidance of doubt the processes described relate to existing Interconnect agreements not to the implementation of new ones.
- 1.1.3 It is based on the premise that the efficient management of the physical Interconnect is to the mutual benefit of both parties.
- 1.1.4 The processes described are in general reciprocal between eircom & the Operator. They will address eircom's regulatory obligations towards the Operator. It should be noted that whilst the text refers to eircom and the Operator, that due to the reciprocity principle these roles are interchangeable unless explicitly stated otherwise.
- 1.1.5 This document is designed as a stand alone document associated with the main Interconnect Agreement. Where the Interconnect Agreement specifies an item relating to operational and maintenance matters these requirements are reproduced in full within this Document.
- 1.1.6 In the event that there is any conflict with the provisions of this document and the main Interconnect Agreement then the main Agreement shall have precedence
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1.2 Document Control

- 1.2.1 This is a working document and as such both parties recognise that it shall have free circulation to all relevant staff in both organisations.
- 1.2.2 This document may only be amended by mutual agreement between the eircom and the Operator. Document Controllers for the Operations and Maintenance Manual are specified in Appendix 11.
- 1.2.3 Such amendments may be made without reference to the Interconnect Agreement but must remain consistent with the terms and conditions of the Interconnect agreement.
- 1.2.4 The document controllers shall be responsible for the maintenance and the integrity of the document within their respective organisations and will hold identical master copies of the document. Any change in the Document Controller must be communicated in writing to his/her counterpart and the document updated accordingly.
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1.3 Definitions and Abbreviations

For the purposes of this document the following definitions and abbreviations apply.

Carrier Access/Carrier Selection	An indirect access service designed to allow the origination of traffic from one network for delivery to the other across the Interconnect.
Customer	The party purchasing Interconnect Services under the Interconnect Agreement
Customer Service Affecting	An activity which degrades the performance of an Interconnect Service below the performance stated in the service description or Interconnect Technical Handbook as appropriate. In addition network level faults in operator A's network which prevent directly connected users in accessing services on operator B's network will be deemed to be Customer Service Affecting.
Working Day	09:00-17:00 Monday to Friday excluding public holidays.
Document Controllers	The specified individuals within both organisations with the delegated authority for the overall control of the relevant documents
FRIACO	FRIACO (Flat Rate Internet Access Call Origination) is an un-metered Interconnection Service. A full description of the product can be found in the FRIACO Product Description. www.eircomwholesale.ie .
Interconnect	The connection of the <i>eircom</i> and Operator network for the conveyance of the telecommunications traffic outlined in Annex C of the reference Interconnect offer.
Interconnect Agreement	The commercial & technical agreement defining the Interconnect between the <i>eircom</i> and Operator networks.
Interconnect Link	The connection between an <i>eircom</i> Interconnect Node and an Operator Interconnect Node. This connection may be uni-directional or bi-directional depending on an Operator's traffic requirements.
Interconnect Network	The combination of all the Interconnect Links between the two Parties which represents the totality of the connection of the two Networks.
Interconnect Path	A single 2 Mbit/s circuit between an <i>eircom</i> Interconnect Node and an Operator Interconnect Node. For the avoidance of doubt an Interconnect Path can be either a voice path or a FRIACO path.
Interconnect Service	A telecommunications service for which agreement has been reached by the Parties to convey on the Interconnect.
Mass Calling Events	Events where abnormally large traffic flows are directed at a specific number or group of numbers over a relatively short time period. Typically caused by phone-in contests or offers.
Ready For Test	The point in time when the party from whom Interconnect has been ordered has completed all unilateral activities and is ready to commence



	bilateral testing.
Ready For Service	The point in time when bilateral testing has been successfully completed and that the Interconnect path is available to carry live traffic.
Delivery Date	This is the date from which billing shall commence
Routing Plan	The traffic routing principles and number plans as defined in the Technical Interconnect Network Plan.
Customer Delay	Circumstances arising when an Operators lack of readiness affects progress on provisioning or repair processes.

2. Scope

The manual deals with the normal operations and maintenance activities which arise from the operation of an Interconnect as agreed and defined in the Interconnect Agreement.

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

➤ Forecasting Process, (Section 3)

This process describes the mechanism for producing and reviewing the forecasts contained in the Network Handbook.

➤ Pre-Provisioning Processes, (Section 4)

These processes relate to the format and process for the placement of orders for Interconnect elements & services as defined in the Interconnect Agreement.

➤ Provisioning Processes, (Section 5)

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

➤ Post Provisioning Processes, (Section 6)

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

➤ Billing Processes, (Section 7)

The billing Processes describe the mechanisms and procedures for the interconnect payment system.

➤ Miscellaneous Processes, (Section 8)

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



3. Forecasting Process

3.1 Introduction

For the duration of the Interconnect Agreement, the Operator shall submit forecasts on an annual and quarterly basis to eircom commencing from the submission date. Each forecast shall cover all services expected to be in service by the close of the forecast period, and the forecast will be used by both parties to;

- Calculate the Operator's committed uptake (CU) level
- Plan resources in advance
- Provide core network facilities necessary to support future services and
- Activate the required core network capacity in the correct time frame to meet the demand in the market

In the start up phase the Operator's network it is not possible for eircom to forecast traffic volumes terminating on the Operator's network. The forecasting of traffic volumes is the responsibility of the Operator and will continue to be so until both parties agree commercially that the Operator's Interconnect network is mature.

The forecasting process applies to voice and FRIACO Interconnect Paths.

3.2 Annual Voice Interconnect Submission

3.2.1 The submission by the Operator of an annual Interconnect forecast will enable eircom to cater for its internal Capital planning processes for the coming business year. The annual submission will be accepted under the premise that the Operator has taken all reasonable endeavours to ensure that the submission is accurate.

3.2.2 This section describes the procedures and formats to be used in the exchange of Voice Interconnect Paths switch port and transmission medium forecast requirements between the Operator and eircom. The requirements for traffic and capacity forecasts are set out in section 10.5 of the main Interconnect Agreement.

3.2.3 The Operator will supply an Interconnect forecast for the quarters detailed below:

Forecast Period 1 Oct – Dec	Forecast Period 2 Jan – Mar	Forecast Period 3 Apr – Jun	Forecast Period 4 July – Sept	Forecast Period 5 Oct – Dec	Forecast Period 6 Jan – Mar
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- 3.2.4 Forecasts for six (6) quarters commencing from the submission date will be provided on an annual basis.
- 3.2.5 An Operator's annual forecast must be received by eircom no later than 15 Working Days before the start of forecast period 1 (October to December), this date constitutes the forecast submission deadline. Should an Operator not be in a position to submit their requirements by the forecast submission deadline, written confirmation of an alternate submission must be agreed with the eircom Interconnect Planning Manager.
- 3.2.6 Should an alternate submission date be unable to be agreed upon, the matter will be escalated to the eircom Wholesale Technical Operations Manager and [nominated Operator contact point].
- 3.2.7 Within 10 Working Days of receipt of forecast, eircom shall confirm to the Operator the acceptance of the forecast or request a review meeting within 5 Working Days from the date of non-acceptance.
- 3.2.8 The sum of "in service" and "on order" quantities of paths on the forecast submission date must form the baseline for the annual forecast.
- 3.2.9 If the revision of the forecasts cannot be agreed under section 3.2.8 then that matter will be escalated to the eircom Wholesale Technical Operations Manager and [nominated Operator contact point].
- 3.2.10 The forecast shall provide information for all six (6) forecast periods. The forecast will indicate the number of 2Mbit/s Interconnect Paths required to be In Service at the end of each forecast period.
- 3.2.11 Annual Interconnect forecasts shall detail each Interconnect Path via the following information: -

- eircom Interconnect Node
- Operator Interconnect Node
- Point of Interconnection
- Transmission Medium (CSI, ISI Paths / ISH Transmission and Channelised STM-1 Paths / CSH Transmission)
- Interconnect Path ownership (eircom / Operator "Owned where appropriate)

3.2.12 Each set of forecasts shall be provided electronically in Microsoft Excel to the eircom Wholesale generic e-mail address. All data exchanged should be marked "Confidential".

3.3 Quarterly Rolling Voice Interconnect Forecasts

- 3.3.1 The submission by Operator of a three quarter rolling forecast will enable eircom to cater for its internal build order program for the same period. The three-quarter forecast will carry with it a committed uptake element as described below.
- 3.3.2 The following details those processes surrounding the submission by the Operator of successive three (3) quarter rolling Interconnect Path forecasts. It is these forecasts that will constitute the basis for calculating committed uptake, as indicated within the appropriate Service Schedule of the Operator's Interconnect Agreement.
- 3.3.3 The Operator will supply an Interconnect forecast for the quarters detailed below.

Forecast Period 1 (e.g. Oct – Dec)	Forecast Period 2 (e.g. Jan – Mar)	Forecast Period 3 (e.g. Apr – Jun)
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- 3.3.4 Forecasts for **three (3)** quarters commencing from the submission date will be provided on a three month rolling basis, and will commence on the first day of the first month of the calendar quarter (As an example 1st January, followed by 1st April)
- 3.3.5 It should be noted when the **three (3)** quarter forecast submission is placed in conjunction with the Operator's annual forecast, the first three quarters of each submission (annual and quarterly) should be equal to each other.
- 3.3.6 An Operators quarterly forecast must be received by eircom no later than **15 Working Days** before the start of forecast period 1 (e.g. October to December), this date constitutes the forecast submission deadline. Should an Operator not be in a position to submit their requirements by the forecast submission deadline, written confirmation of an alternate submission must be agreed with the eircom Interconnect Planning Manager.
- 3.3.7 Should an alternate submission date be unable to be agreed upon, the matter will be escalated to the eircom Wholesale Technical Operations Manager and [nominated Operator contact point].
- 3.3.8 Within 10 Working Days of receipt of forecast, eircom shall confirm to the Operator the acceptance of the forecast or request a review meeting within 5 Working Days from the date of non-acceptance.
- 3.3.9 The sum of "in service" and "on order" quantities of paths on the forecast submission date must form the baseline for the quarterly forecast.
- 3.3.10 If the revision of the forecasts cannot be agreed under **section 3.3.9** then that matter will be escalated to the eircom Wholesale Technical Operations and [nominated Operator contact point].
- 3.3.11 The forecast shall provide information for all **three (3)**-forecast periods. The forecast will indicate the number of 2Mbit/s Interconnect Paths required to be In Service at the end of each forecast period.
- 3.3.12 Quarterly Interconnect forecasts shall detail each Interconnect Path via the following information: -
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- eircom Interconnect Node
- Operator Interconnect Node
- Point of Interconnection
- Transmission Medium (CSI or Non-CSI)
- Interconnect Path Ownership (eircom / Operator "Owned" where appropriate)



3.3.13 Each set of forecasts shall be provided electronically in Microsoft Excel to the eircom Wholesale generic e-mail address. All data exchanged should be marked "Confidential".

3.3.14 These forecasts represent a commitment by the Operator to order Interconnect Paths to the Committed Uptake level. The Committed Uptake level is calculated separately for forecasted capacity at each of the Network hierarchical levels i.e. Primary, Tandem and Tertiary.

3.3.15 The following constitutes the method of calculation of an Operator's Committed Uptake (CU) –

Submission #1	Qtr1 CU = 75% (e.g. Oct - Dec)	Qtr2 CU = 50% (e.g. Jan - Mar)	Qtr3 CU = 35% (e.g. Apr - June)			
Submission #2		Qtr1 CU = 75% (e.g. Jan - Mar)	Qtr2 CU = 50% (e.g. Apr - June)	Qtr3 CU = 35% (e.g. July - Sept)		
Submission #3			Qtr1 CU = 75% (e.g. Apr - June)	Qtr2 CU = 50% (e.g. July - Sept)	Qtr3 CU = 35% (e.g. Oct - Dec)	
Submission #4				Qtr1 CU = 75% (e.g. July - Sept)	Qtr2 CU = 50% (e.g. Oct - Dec)	Qtr3 CU = 35% (e.g. Jan - Mar)

- The incremental growth seen in quarter 1 of submission #1 will support an CU of 75%
- The Operator will incur those costs related to the Interconnect Paths required to reach 75% of the incremental growth in quarter 1 of submission #1 by the end of quarter 1 of submission #1
- With the advent of submission #2 the Operator will incur costs related to the Interconnect Paths required to reach the higher of: -
 - 75% of the incremental growth seen in quarter 1 of submission #2, or
 - 50% of the incremental growth seen in quarter 2 of submission #1.
- With the advent of submission #3 the Operator will incur costs related to the Interconnect Paths required to reach the higher of: -
 - 75% of the incremental growth seen in quarter 1 of submission #3, or
 - 50% of the incremental growth seen in quarter 2 of submission #2.
 - 35% of the incremental growth seen in quarter 3 of submission #1, if the total forecasted level is greater than 10 interconnect paths. If the total incremental growth for the quarter is less than or equal to 10 Interconnect Paths, no committed uptake shall apply to that quarter in that submission
- Where the total incremental growth forecast in any submission for any individual quarter is greater than 40 Interconnect Paths, a 100% Committed Uptake shall apply to all Interconnect Paths in excess of 40.
- This process of determining the greater of the costs associated with the Committed Uptake for each quarter shall continue unless agreed by both Parties



- In the event that the calculation of those costs to be incurred by an Operator in any given quarter not be an integer, eircom will round up to the nearest integer and calculate cost accordingly
- The calculation of the Operator's Committed Uptake will be based on CSI or Non-CSI Paths via the detail supplied in the Operator's three quarter rolling forecast.
- The methodology utilised to calculate the charges applied to the balance on Interconnect paths to reach the CU, will be to derive the average Interconnect Path charge for that Operator from the previous quarterly invoice, and apply that average to the number of Interconnect Paths to reach the CU.

4. Pre-Provisioning Process

4.1 Introduction

4.1.1 The Pre-Provisioning Process describes the mechanisms for the ordering of new Interconnect, modification to or augmentation of the In-Service Interconnect.

4.2 Ordering Interconnect Services

4.2.1 A single order process is described for all services to be provided across the Interconnect. This process is reciprocal for services provided by both eircom & the Operator but is written in the context of an order placed on eircom by the Operator.

4.3 Order Format

4.3.1 All orders for new, additional Interconnect Paths or Transmission Systems or additional services shall be placed using the Interconnect Order form to be made available on the eircom Carrier Services web site and in Appendix 2. All relevant sections of the order form must be completed correctly upon summation

4.3.2 Orders will be accepted by email via the Operator's Account Manager and the generic carrier services email address - carrierservices@eircom.ie.

4.4 Order Process

4.4.1 The Interconnect Service Order Process is as follows.

4.4.2 The Operator will complete and send the Order form to the eircom contact points as detailed within section 4.3.2 above.

4.4.3 The Order at this stage will follow the current published processes and procedures as detailed within the, "eircom Service Level Agreement for Interconnect Paths",

4.4.4 If eircom is unable to fulfil the order but is able to offer an alternative it will advise the Operator within 10-days of the order being submitted.

4.4.5 The Operator shall confirm if the offer is acceptable by the resubmission of the Interconnect Order form to those contact points detailed within section 4.3.2 above

4.4.6 Should a dispute arise regarding the rejection of some or all of an Interconnect Order form, the order contact points shall in the first instance address the matter. If the issue can not be resolved at this level then the matter shall be referred to the eircom Wholesale Technical Operations Manager.



5. Provisioning Process

Introduction

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

5.1 Provision of Interconnect Paths

5.1.1 General

The provisioning of new Interconnect Path includes the transmission implementation & commissioning, connection to and programming of the switch port, switch-to-switch testing and the bringing into service of the Interconnect Path.

5.1.2 Provisioning Process

- 5.1.2.1 After the order has entered the provisioning process eircom will send a "CIC" certificate to the Operator generic mailbox. ("CIC cert." only applicable to 2 Mbit/s orders i.e. not ISH or CSH transport link orders) The certificate will provide the Interconnect Link, Interconnect Path and circuit designations for the Interconnect Network. Both parties shall use these designations in all communications within the provision process. In the case of an ISH 2 Mbit/s order an additional certificate - a "payload" certificate - will be sent to the Operator generic mailbox. This certificate will contain details of the payload to be used for that order.
- 5.1.2.2 In the case of ISH transport link orders, the Operator will notify eircom of their equipment supplier. In the event that eircom has not previously carried out inter-working tests with that supplier's equipment then the Operator will supply the relevant equipment to eircom to allow for inter-working testing to be carried out.
- 5.1.2.3 In cases where eircom and the Operator are providing fibre to an ISH chamber, both parties will carry out joint testing to ensure end-to-end connectivity of the fibre and also to ensure the transmission quality of the fibre.
- 5.1.2.4 eircom will also specify which test suite of the standard testing document (SWD340) will be used for the testing of the Interconnect paths.
- 5.1.2.5 Once the "CIC" certificate has been forwarded, eircom and the Operator shall carry out the necessary activities to provision service. Any non-recoverable delay in the activities of one party shall be notified to the other party as soon as it is recognised. Both parties shall then agree any changes that are necessary.
- 5.1.2.6 eircom shall send a "DDF" certificate and a "Ready-For-Test" certificate to the Operator's generic mailbox, the latter to advise the Operator to make an appointment to bring the 2 Mbit/s path / ISH transport link/ CSH transport link into service.
- 5.1.2.7 For a 10 Working Day period following this notification eircom will be in a position to commence testing. During this 10 Working Day period testing can commence following a minimum of 3 Working Days notice to eircom.
- 5.1.2.8 If the Operator does not request testing within this period then the testing shall commence by appointment on a mutually agreed date and the matter shall be referred to the nominated Commercial contact points for review and action.
- 5.1.2.9 Testing shall be carried out with eircom working in conjunction with the Operator for inter-working tests.
- 5.1.2.10 When testing of an 2 Mbit/s/ transport link order is completed to the satisfaction of eircom, notification, via an "in service" certificate sent to the Operator's generic mailbox, will be forwarded to the Operator to inform that the testing of the Interconnect Paths has been successfully completed in



accordance with the specified test suite. At this point the paths shall be deemed to be ready for Service. Full billing of the Operator shall start at this point.

- 5.1.2.11 If the results of the testing 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 there is any dispute regarding unacceptable test results then in the first instance the issue shall be addressed via the specified provisioning contact points. If the issue cannot be resolved at this level then it shall be referred to operational dispute procedure in section 8.4

5.2 Customer Delay

5.2.1 Customer Delay Process

In the event that the Operator delays installation or repair of the service for any reason, this will constitute a Customer Delay, stopping the SLA clock.

A Customer Delay notification will be sent to the Operator contact point via e-mail using the form contained in Appendix 16.

In the event that the Operator refuses right of entry to eircom when an appointment has been made, or delays installation or repair of the circuit for any reason, the "Standard Time" will be extended by the number of Working Days/hours delay incurred as a result. eircom will inform the Operator by close of business the following Working Day.

Should the delay last more than 5 Working Days, for installation or 1 hour for fault repair, then the "clock" shall be re-started at a mutually agreed date, to reflect the requirement for eircom to reschedule its work for this delivery and/or repair.

The customer delay rectification form should be sent by the Operator contact point via e-mail using the form contained in Appendix 17 when the Customer Delay has been removed.

5.2.2 Processes to rectify Customer Delay

In the event that orders enter a 'Customer Delayed' state, discussions will be held with the relevant Operator on a bi-lateral arrangement. It will be expected that every effort will be made by the Operator to resolve the delay quickly. In the event that a quick resolution is not possible then a forecast of the resolution will be forthcoming within two Working Days of the Customer Delay notification from the relevant Operator.

Requests from eircom for information on the progress of the problem causing the Customer Delay must be given to eircom in a timely manner.

5.3 Implementation of Call Origination Routing Plan

- 5.3.1 The implementation of a Call Origination Routing Plan covers the activities necessary to implement the necessary switch routing data fill, testing and the bringing into service of the routing plan, where the plan is submitted separately to the transmission orders (or where there is no requirement for transmission). eircom will carry out the work and inform the Operator of completion within 6 weeks.

- 5.3.2 Where the implementation of a Call Origination Routing Plan is dependant on the implementation of any new or additional Interconnect Paths the timescales for the implementation of Call Origination Routing Plans shall be not less than those for the new or additional Interconnect Paths.

- 5.3.3 If the results of the testing 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 there is any dispute regarding unacceptable testing then in the first instance the issue shall be addressed via the specified Provisioning Contact Points. If the issue cannot be resolved at this level then it shall be referred to operational dispute procedure in section 8.4

5.4 Implementation of Network Alterations

The implementation of network alterations and the determination of those costs involved (if any) shall be dealt with in accordance with Section 11 of an Operator's Interconnect Agreement.



6. Post Provisioning Process

6.1 Introduction

6.1.1 The post provisioning processes describe the mechanisms for dealing with the operational issues relating to the in-service Interconnect. These items include fault reporting & resolution, performance monitoring, planned maintenance etc.

6.2 Fault Management

6.2.1 Alarm Thresholds

6.2.1.1 The eircom 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.

6.2.1.2 An A1 alarm shall result in a Priority A fault

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

6.2.1.4 Priority A and Priority B faults shall be handled according to the fault reporting procedures outlined in Section 6.2.2 below.

6.2.2 Fault Reporting Procedures

6.2.2.1 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.

6.2.2.2 In the event that a fault is discovered by either Party, and proven to be 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 of an e-mail as specified in Appendix 3. Either Party may also contact the Single Point of Contact by phone to relay details of a fault but a Trouble Ticket with the fault details must also be sent following the call.

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

6.2.2.4 The Party receiving the Trouble Ticket shall provide a written acknowledgement, via email, 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 4.

6.2.2.5 The priorities shall be defined as the following:

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

6.2.2.6 Responses to the ticket shall be made within the time frames specified in Appendix 4, either to notify the other Party of the resolution of the fault or as an update to the progress of fault tracking.

6.2.2.7 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.



- 6.2.2.8 In the event that a Trouble Ticket has been open with a fault unresolved for longer than the time period specified in Appendix 4 and no evidence of progress exists to clear the fault, the escalation procedures may be used to resolve the fault.

6.2.3 Fault Reporting Escalation procedures

The escalation of the problem may occur at two levels.

- If the target times for response specified in Appendix 4 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.

6.2.4 Planned Maintenance Notification Procedure

6.2.4.1 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.

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

6.2.5 Planned Maintenance Procedures

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

6.2.5.2 Both Parties must observe safety precautions at all times. The procedures defined in section 8.3 for Health and Safety shall apply.

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

6.2.5.4 In order to avoid a problem 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 section 6.2.6.below.

6.2.5.5 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.

6.2.6 Preferred hours for major works

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

6.2.6.2 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 eircom network; or
- 50 % or more of the Interconnect capacity is lost in the direction of the eircom network to the Operator network.



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

6.2.7 Notification Process and Time-scale

- 6.2.7.1 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 e-mail to the contact point as specified in Appendix 5, 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**.
- 6.2.7.2 Having been notified of planned maintenance the receiving Party must review and respond to the proposal within 3 Working Days of receipt.
- 6.2.7.3 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 e-mail transmission of the completed "Notification for Planned Maintenance" form, Appendix 6.
- 6.2.7.4 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.

6.2.8 Escalation

- 6.2.8.1 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 eircom this is the Manager, eircom/NNCC, (eircoms National Network Co-Ordination Centre). 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.

6.3 Network Management

6.3.1 General network traffic management

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 given in section 6.3.1.2 below. Network management assumes that the network is adequately engineered to meet the normal levels of traffic.

The general principles to be adopted by both parties are:



- a) 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.
- b) 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 (e.g. a failure) to allow trunk capacity to be available for call attempts which have a higher probability of being effective.
- c) 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.)

6.3.2 Network management actions

- 6.3.2.1 The application or removal of network management controls shall be based on reported faults and planned outages as described in section 6.2 and 6.3 and any known events that are likely to impact the performance of either parties network. This may also include Mass Calling Events as described in section 6.3.8.
- 6.3.2.2 Performance data shall also be used to measure the effect of any network management control taken, and to indicate when a network management control should be modified or removed.
- 6.3.2.3 Network management actions are divided into two categories:
 - "Expansive" actions, intended to make available lightly loaded parts of the network to traffic experiencing congestion;
 - "Protective" actions intended to remove traffic with a low probability of resulting in successful calls from the network during congestion.
- 6.3.2.4 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.

6.3.3 Expansive actions

- 6.3.3.1 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:
 - Establishing temporary alternative routing arrangements in addition to those normally available;
 - Where there is more than one access point switch, temporarily reorganising the distribution of the affected traffic or services;

6.3.4 Protective actions

- 6.3.4.1 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.
- 6.3.4.2 Protective actions that may be taken include:
 - 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.
 - 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.



- Inhibiting direct traffic – This action reduces the traffic accessing a trunk group in order to reduce the loading on the distant network.
- 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.

6.3.5 Actions during disasters

6.3.6.1 In the event of disasters, whether man-made or natural, that result in damage to the telephone 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 Crisis Management Centre of the party or parties affected by the disaster.

6.3.6 Process for initiation of network management actions

6.3.6.1 Network management actions may be taken:

- According to plans, which have been mutually agreed by both parties prior to the event or incident, for which the application of controls is deemed necessary; or
- According to ad hoc arrangements, which have been mutually agreed by both parties, at the time of an event or incident for which the application of controls is deemed necessary.
- If either party deem it necessary to take urgent network management action in order to protect their network. The party, which has taken the necessary urgent network management, must immediately inform the other party of the actions taken, and clearly any action taken will endeavour to ensure minimum impact on other networks.

6.3.7 Process for Notification or Request for Network Management action

- 6.3.7.1 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.
- 6.3.7.2 The party requiring controls to be applied originates the form and is denoted as the originated party. The party to whom the notification/report is initially sent is denoted as the receiving party.
- 6.3.7.3 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.
- 6.3.7.4 If the party originating the request is applying the controls it shall, after verbally informing the Network Management Contact Point of 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.
- 6.3.7.5 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.
- 6.3.7.6 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.
- 6.3.7.7 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.

- 6.3.7.8 If the originating party agrees to remove the controls it shall remove the controls and complete section D of the form in and send it to the receiving party to indicating that the controls have been removed.
- 6.3.7.9 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 operations dispute process as described in section 8 of this document.
- 6.3.7.10 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 NMICP 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.
- 6.3.7.11 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.
- 6.3.7.12 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 operations dispute process as described in section 8 of this document.
- 6.3.7.13 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.
- 6.3.7.14 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.
- 6.3.7.15 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.
- 6.3.7.16 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.

6.3.8 Mass Calling Events

- 6.3.8.1 Mass calling events can have catastrophic effects on both the Interconnect and one or both Operators' 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 & to disseminate this information as outlined below.
- 6.3.8.2 Where an event terminating on one network which has not been notified causes quality degradations in the other network both Operators reserve the right to block future access to the terminating number(s) in question.
- 6.3.8.3 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.



6.3.9 Mass Calling Event Procedures

- 6.3.9.1 Advance notice of mass calling events will be given using the form in Appendix 8. At least 5 Working Days notice is required.

6.4 Quality of Service and Traffic Performance

6.4.1 Quality of Service and Traffic Performance Reporting

- 6.4.1.1 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.
- 6.4.1.2 The quality of service report will be produced by each Operator on a monthly basis for use in the O&M Forum as described in section 9 of this document.
- 6.4.1.3 The Quality of Service and Traffic Performance parameters to be reported are defined in Appendix 10 and typical examples can be seen in Appendix 9.
- 6.4.1.4 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.

6.4.2 Quality of Service and Traffic Performance Reviews

- 6.4.2.1 Reviews of the Quality of Service and Traffic Performance shall take place as part of the activities of the O&M forum, as described in section 9.
- 6.4.2.2 Where the busy hour traffic (see Appendix 9) on any interconnect route exceeds 70% fill this shall prompt a joint review by the O&M Forum of the capacity on the route in question.

6.5 Operational Performance

- 6.5.1 The mechanism for the exchange of operational performance statistics shall be the O&M Forum. Refer to section 9

7. Billing Process

Introduction

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

7.1 Production of Interconnect Bills



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- 7.1.1 Each Party shall bill and reimburse the other Party in accordance with the terms of their Interconnect Agreement.
- 7.1.2 Invoices are due and payable in Euros. Invoices are payable within 30 calendar days from the date of issue of the invoice.
- 7.1.3 The Billing Party shall provide with the invoice a breakdown of each charging category to validate the invoice.
- 7.1.4 The Interconnect usage report shall be provided by the Billing Party to the other Party together with the resulting invoice not earlier than 2 weeks and not later than 5 weeks after the end of each Billing Period. (Interconnect Usage Report – as per Interconnect Agreement).
- 7.1.5 The Billing Period for Interconnect Traffic shall be monthly commencing from 00:00:00 hours on the first day of each calendar month.
- 7.1.6 The invoice shall be sent to the Interconnect Invoicing Address listed in Appendix 5. All invoice queries shall be addressed to the Interconnect Billing Contact Point listed in Appendix 5.
- 7.1.7 A soft copy of the shall be sent electronically, to the agreed Interconnect Billing Contact Point listed in Appendix 5
-

7.2 Billing Test Process

- 7.2.1 The billing test process specification detailed within Annex E “The Network Plan” of an Operators Interconnect Agreement will be used to validate call handling and CDR production with the Operator before the service and Interconnect Path can be opened for use.
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- 7.2.2 A billing Test Specification will be produced and agreed with the Operator, depending on the type of Interconnect provided. The four categories provided are: -
-
- First Time Interconnection
 - The Introduction of a New Switch Type
 - Routes to switches which are not previously interconnected
 - Any change from one-way to both-way working on routes
- 7.2.3 Testing will be carried out over an agreed test period. This should be agreed and documented in the billing test specification. During the test period all calls made to the Operator network will generate CDR’s. In order to maintain the integrity of the test and to aid in the reconciliation process, contact between testing personnel will be by way of mobile phone.
- 7.2.4 Testing personnel will make a series of test calls in accordance with the test spec and record the details manually on the billing test document which forms part of Annex E “The Network Plan” of an Operators Interconnect Agreement.
- 7.2.5 All calls records generated during the testing period will be collected from the eircom mediation sites and transferred to the eircom billing centre. A copy of CDR’S will be translated into an ASCII comma separated file for later reconciliation. These CDR’s will also be made available to the Operator as an ASCII comma separated text file.
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7.2.6 Operator mediation systems will collect CDR's for the duration of the testing period. These call records will be made available as an ASCII comma separated text file. The call records produced in this format shall contain, as a minimum, the following fields: -

- A number
- B number
- Call Start Time
- Call Duration
- Route Information (if relevant)

7.2.7 Copies of the test recording sheets from the Billing test specification will be exchanged between eircom and the Operator. The details of the test calls will be compared and both parties will produce a report outlining and discrepancies or anomalies.

7.2.8 When both parties have reached agreement on the reconciliation then the tests will be signed off and the route considered In Service.

7.2.9 All aspects of the billing testing will be co-ordinated by those listed in the Interconnect Billing Test Contact point listed in Appendix 5.

7.3 Invoice Query's

Invoices that are not in dispute, and where payment has not been stopped can be queried by contacting the billing manager at the email address csbilling@eircom.ie. When emailing a query all relevant information should be provided such as contact details, nature of the query and referencing any correspondence.

7.4 Billing Systems Integrity Check

7.4.1 Each calendar quarter Operators shall exchange CDR samples to ensure that the integrity of both billing systems in order.

7.4.2 The format of the submission shall be agreed on a case by case basis with the Interconnect Billing Contact Point listed in Appendix 5.

8. Miscellaneous Processes

8.1 Opening or Modification of Operator Number Ranges in eircom Network

This section details the process for the opening of access to new number ranges within the eircom network.

8.1.1 Number Ranges Accessible via the Operator Network

8.1.1.1 The Operator shall submit a request utilising the form attached at Appendix 11 for the opening of a new number range, which they have obtained from the National Regulator, within the eircom network via the Contact point specified in Appendix 5.

8.1.1.2 Where there is a request to open a new number range, the request should include 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.



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- 8.1.1.3 Within 5 Working Days the eircom contact point shall acknowledge receipt of the request in writing.
 - 8.1.1.4 For reference, there is a separate inter-operator process and templates provided for activation of number ranges between Operator networks, please see Appendix 13.
 - 8.1.1.5 eircom shall implement the opening of the requested range within three (3) weeks of the acknowledgement of the receipt of the request.
 - 8.1.1.6 Upon implementation of the range eircom will notify the Operator via the contact point.

8.1.2 Number Ranges Accessible via the eircom Network

- 8.1.2.1 eircom shall issue a bulletin detailing new eircom number ranges accessible via its network together with activation dates and mapping to Interconnect nodes. The bulletin will consist of an Internet list server.
- 8.1.2.2 The Operator will implement the number ranges within three (3) weeks of them being posted on the server.

8.2 Notification to Operators of number range introduction and movement in the eircom network

8.2.1 Introduction

In order to address the issue of number ranges introduced or reparented in the eircom network between publications, the following process complements the changes and improvements already introduced in the quarterly publication of the "eircom call origination and call termination routing schemes" on the eircom.ie website.

8.2.2 Opening of new numbers and movement of existing numbers

The opening of new numbers and movement of numbers within the eircom network will utilise a new notification process, the number information and routing scheme details critical to the Operator will be entered into the appropriate template tailored for the purpose of notification of opening of new numbers or movement of existing numbers (See Appendix 15).

8.2.3 Notification to Operators

It is proposed that the Data Management Amendment form is sent via email to a distribution list of nominated Operator contacts ensuring timely and consistent notification to all Operators. This notification applies to numbers designated by the National Regulator as eircom geographic numbers only.

In the case of new numbers, the guide completion date is 15 Working Days from date of notification. In the case of number movements, the scheduled date for the number movement will be provided.

8.3 Technology Changes Which Affect the Interconnect

Technology changes in either Software or Hardware which Affect the Technical Parameters of the Interconnect must be forecasted in the Network Plan.

The time scales 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:

- Upgrades to software in network element such as switch, transmission or signalling systems
- Upgrades to software in network monitoring or management systems



- Upgrades to operational support systems such as provisioning or billing systems

8.4 Health and Safety

Both parties shall comply with any statutory national safety regulations that are applicable, such as the Safety, Health and Welfare at Work Act 1989.

Both parties shall also comply with any specific eircom or Operator health and safety practices that may be applicable, including any site-specific requirements.

All eircom internal Health and Safety Guidelines shall be complied with at all times by both parties.

8.5 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. 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 in section 6.2.3.

The points of contact between the two parties shall be the respective Operations Managers. The communication shall be in the form of a written Complaint.

The party who sends the Complaint shall be called the Complaining party. The party receiving the Complaint shall be called the Receiving party.

The Receiving party shall acknowledge receipt of the complaint in writing within 5 Working Days of reception of the complaint.

The Receiving party shall respond in writing to the Complaining party within 10 Working Days of the acknowledgement.

If the dispute can not be settled by the Operations Managers within 20 Working Days after the Receiving party has returned its initial response, the dispute shall be reported to senior management within the Operations Manager's organisations. Senior management shall then attempt to resolve the dispute and prevent further erosion in the quality of service level for the same reasons that provoked the complaint.

If senior management parties fail to resolve the issue within a further 10 Working Days, then the parties may proceed in accordance with the dispute resolution procedure set out in clause 17 of the Standard Interconnect Agreement.

Note: The above timescales in this section are recommended and for guidance only

8.6 Penalty Processes and Payment Management of Penalty Credits

8.6.1 Introduction

The calculation and payment management of penalty credits describes the method of calculating the penalties and the mechanism of paying them.

Note: Penalty credits due will only be calculated in the month the order is completed.

8.6.2 Penalty Statement Process

All penalty credits will be made on a quarterly basis. eircom will supply monthly penalty statements to all Operators, which will outline any penalties that are due.



8.7 Penalty Queries / Contact Points

8.7.1 In the event that the Operator is of the opinion that a penalty liability has been incorrectly calculated the Operator has one month to query the statement. A delivery query must be submitted in writing, using the SLA penalty query form, a repair query is submitted using the repair penalties query form. Both forms can be provided by the Penalty Manager on request or downloaded from the eircom Wholesale website (www.eircom.ie/wholesale) for use by the Operator. Multiple queries can be submitted on the one form. Any incomplete queries will be rejected on an individual basis. In the event of a query, any supporting documentation must be supplied within ten Working Days of a request by eircom. Please see diagram 1 below which describes the penalty queries timetable.

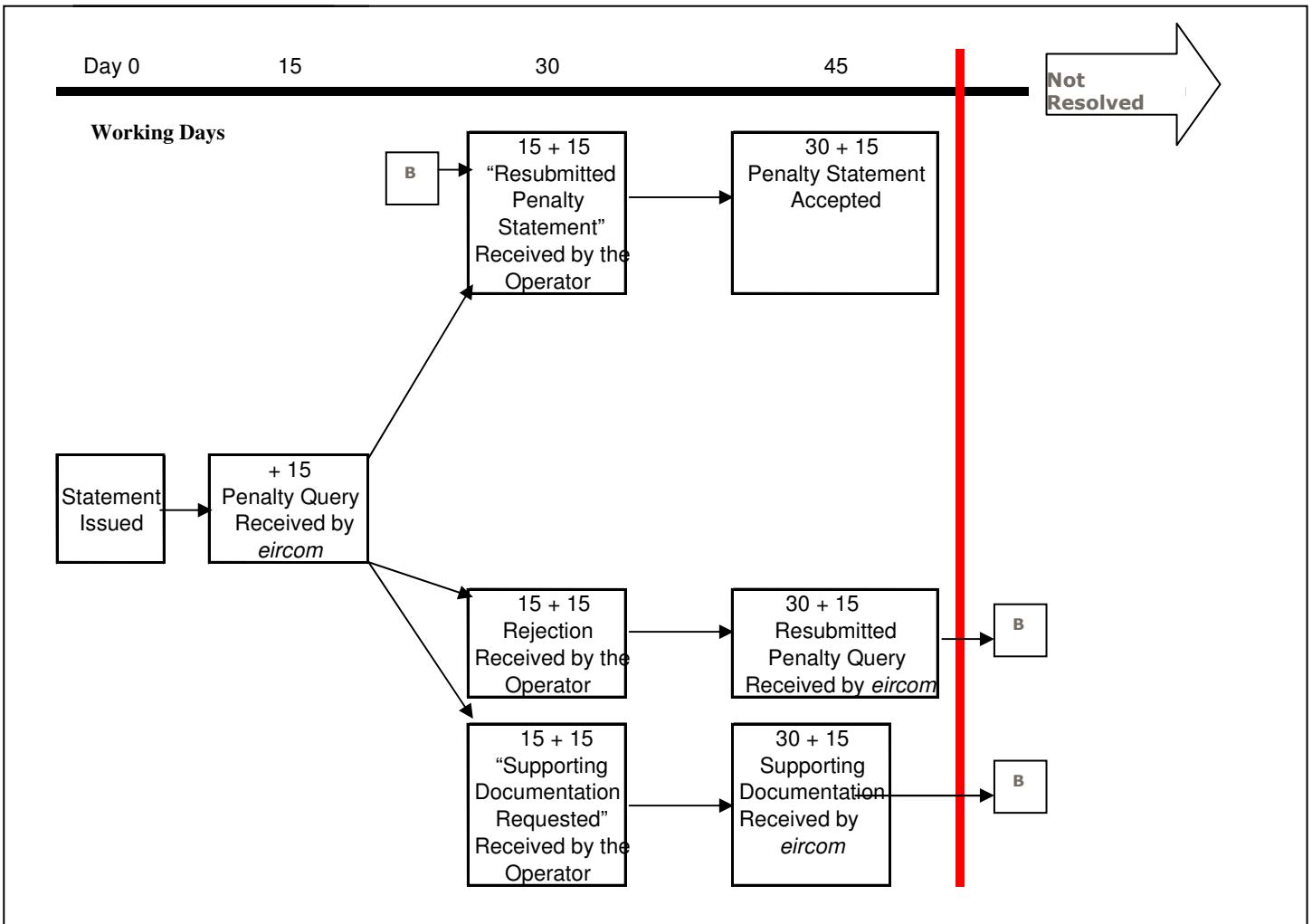


Diagram 1 - Penalty Queries Timetable



8.7.2 Penalties queried in month 1 that are resolved within the 45 Working Day timeframe (before the red line) are credited to the customer's bill for that quarter. Penalty queries submitted in month 2 or 3 roll over into the next quarter and hence are credited to the customers' account in this quarter.

8.7.3 The eircom Penalty Manager will make their best endeavour to provide a high-level description of the resolution of the penalty query.

8.7.4 The quarterly bill credit will be made up of:

- The resolved disputed penalties for months 2 & 3 in the last quarter,
- The resolved disputed penalties for month 1 of the current bill quarter,
- Undisputed penalties for months 1 2 & 3 of the current bill quarter.

8.7.5 In order for the Operator to reconcile the penalty statement with their quarterly bill, the eircom Penalty Manager will make the best endeavour to send via e-mail, a high level penalty breakdown for the months 1 2 & 3 of the current bill quarter, with a list of the disputed penalties excluded from the bill.

8.7.6 Disputed payment claims must be submitted within three calendar months of the date on which the Bill issued. Where an Operator has a query, the undisputed amount that is due will be paid. The eircom point of contact for penalty and payment queries is set out in Directory of Contacts, Appendix 5

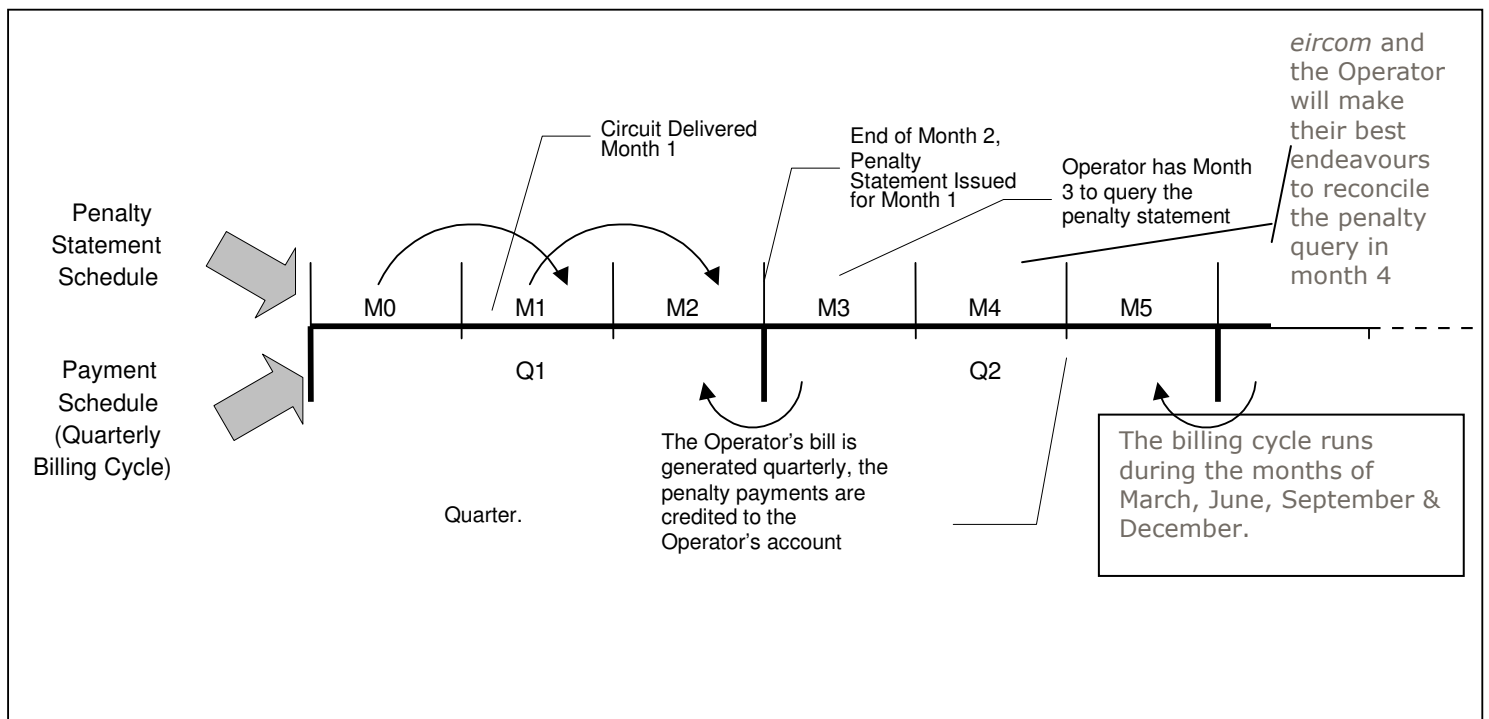
8.8 Payment Method

When a penalty payment is applicable, eircom will credit the Operator's Interconnect bill with the amount due.

8.9 Payment Frequency

Please see diagram 2 below, detailing the penalty statement and payment schedule timelines.

Diagram 2





8.10 Method of Delivery

- 8.10.1 The principle format for all correspondence between eircom and the Operator will continue to be hard copy paper format. eircom will facilitate any operator who wishes to receive an email with soft copies of the documents attached.
- 8.10.2 An operator wishing to receive soft copies of the correspondence as well as hard copy needs to email their details to the eircom Penalty Manager who will respond.
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9. Interconnect Operations and Maintenance Forums

The following sections detail the framework for the establishment of Interconnect Operations and Maintenance Forums between eircom and Operator.

9.1 Terms of Reference

In establishing a forum for bilateral discussion surrounding the O&M Manual the following terms of reference shall be adhered to: -

- Only RIO operational issues should be discussed at the forum as provided for in the O&M manual;
- At a minimum the O&M manual should make provision for forecasting, ordering and service delivery of Interconnect circuits, repair and maintenance procedures, billing, escalation procedures, contact names for queries and disputes;
- The forum should have sufficient flexibility to provide for sub forums on as needed basis.
- The forum to meet at a minimum once every six months and a review of the manual should occur annually.

9.2 Reporting Structure

The reporting structure of bilateral O&M forums shall be agreed with each operator on a case by case basis, however at a minimum the structure will reflect the following topics:

- Forecasting
- Ordering
- Service Delivery
- Repair
- Maintenance Procedures
- Billing
- Outstanding Escalated Issues

9.3 Meeting Schedule



-
- 9.3.1 The Operations and Maintenance forum will meet at a mutually agreed venue will alternates between eircom and the Operator at mutually agreed intervals. The Operations manager of the two parties will be responsible for the arrangement of the meeting.
- 9.3.2 The agenda for all O&M forum meetings will be agreed between both parties Operations Managers no later than 3 Working Days before the date of the meeting.
- 9.3.3 Both eircom and the Operator will produce all relevant reports to discuss those topics as detailed within each meeting agenda.
- 9.3.4 The Party hosting the meeting will be responsible for the creation of a set of minutes and responsible for its contents. The minutes shall include at a minimum detailed of all results from the meeting, actions due and their due dates. All minutes shall be issued to the other Party no later than three (3) Working Days from the date on which the meeting was held.
-

9.4 Emergency Meeting

- 9.4.1 If conditions exist where there are problems between the Parties which shall have a serious impact to either Parties Operations or Maintenance abilities, it shall be possible to convene an extraordinary emergency meeting.
- 9.4.2 The meeting shall be arranged by the Operations Managers of both Parties and shall take place within one (1) Working Day of the request to hold the meeting. In calling an emergency meeting the initiating Party must produce a specific agenda and brief for the meeting upon request.
- 9.4.3 The meeting shall deal only with those issues detailed within the emergency meetings agenda and/or brief.
- 9.4.4 The party initiating the emergency meeting shall be responsible for the creation of minutes and a detailed list of action points with agreed associated due dates for these actions along with responsibilities. The minutes shall be issued within two (2) Working Days. The approving party shall provide feed back or approval of the minutes within two (2) Working Days from receipt of the minutes. A system of negative approval shall be implemented for non-response.
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Appendix 1 Forecast forms for both the Annual and Quarterly Interconnect Forecasts

Appendix 1 usage guide

The "Excel" form is to be used to generate the forecasts for switching and transmission requirements for Interconnect in accordance with Section 3 of this manual.

The forecast forms can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website (www.eircom.ie/wholesale) for use by the Operator.

Appendix 2 Order Form for Interconnect Paths

Appendix 2 usage guide

This form is to be used for the ordering of new Interconnect paths and the re-arrangement or cessation of existing paths.

A number of possibilities exist

- 1) New CSI Interconnect Path
- 2) New ISI/ISH Interconnect Path
- 3) Re-arrangement of an existing Path
- 4) Cessation of an existing Interconnect Path

It should be noted that all orders require a minimum of 5-Working Days to acknowledge, as such submission time frame should cater for this accordingly.

The order form from the eircom Wholesale website for use by the Operator can be provided by the Interconnect Planning manager if required, or downloaded.

Appendix 3 Interconnect Trouble Ticket

Appendix 3 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 e-mailing the form; however the e-mailed form will be the official trouble reporting mechanism.

The form for the trouble ticket can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website for use by the Operator.



Appendix 4 Fault Resolution and Escalation Timescales

All trouble tickets submitted as part of the fault handling procedures should be acknowledged, by sending an e-mail message 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.
- The initial response to tickets at **Priority B** shall be within a period of 60 minutes after 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	60 Minutes	every Working Day	3 Working Days after reporting	4 Working Days after reporting	5 Working Days after reporting



Appendix 5 Directory of Contact Points

Document controllers

<i>Operator</i> Document Controller		<i>eircom</i> Document Controller	
Name		Name	Peter Mc McCluskey
Title		Title	Technical Operations Manager
Address		Address	5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8, IRELAND
Phone		Phone	+353-1-6004633
Fax		Mobile	+353-85-1744633
E-mail		E-mail	Pmcccluskey@eircomwholesale.ie

Forecast Contact Points

<i>Operator</i> Forecast Contact Point		<i>eircom</i> Forecast Contact Point	
Name		Name	Pat Conlan
Title		Title	Interconnect Manager
Address		Address	5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-600 4594
Fax		Mobile	+353-85-1744594
E-mail		E-mail	pconlan@eircomwholesale.ie

Order Contact Points

<i>Operator</i> Order Contact Point		<i>eircom</i> Order Contact Point	
Name		Name	Pat Conlan
Title		Title	Interconnect Manager
Address		Address	5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-600 4594
Fax		Mobile	+353-85-1744594
E-mail		E-mail	pconlan@eircomwholesale.ie



Provisioning Contact Points

The following provisioning contact point relates to the provisioning of Interconnect Paths.

<i>Operator</i> Order Contact Point		<i>eircom</i> Order Contact Point	
Name		Name	<i>Eircom</i> Account Manger for Operator
Title		Title	<i>Eircom</i> Account Manager
Address		Address	5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	
Fax		Fax	
E-mail		E-mail	Carrierservices@eircom.ie

The following provisioning contact point relates to the implementation of a call origination routing plan.

<i>Operator</i> Forecast Contact Point		<i>eircom</i> Forecast Contact Point	
Name		Name	Pat Conlan
Title		Title	Interconnect Manager
Address		Address	5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-600 4594
Fax		Mobile	+353-85-1744594
E-mail		E-mail	pconlan@eircomwholesale.ie



Fault Reporting Contacts

SPOC for Fault Handling / Trouble Reporting:

		<i>eircom</i> SPOC	
Name		Name	<i>eircom</i> OLO Desk
Contact Hours		Title	24 Hour Duty
Address		Address	<i>eircom</i> Bianconi Avenue City West Business Park Dublin 22
Phone		Phone	+353 1 701 7901
Fax		Fax	+353 1 4177430
E-mail		E-mail	Olodesk@eircom.ie

Technical Contact for Fault Escalation (1st level):

		<i>eircom</i> 1st level Fault Escalation	
Name		Name	<i>eircom</i> NMC Duty Manager
Title		Title	24 Hour Duty
Address		Address	Eircom Bianconi Avenue City West Business Park Dublin 22
Phone		Phone	+87 2595944
Fax		Fax	+353 1 4177430
E-mail		E-mail	Olodesk@eircom.ie

Managerial Contact for Fault Escalation (2nd level):

		<i>eircom</i> 2nd Level Escalation	
Name		Name	Danny Hatton
Title		Title	Switching Manager
Address		Address	<i>eircom</i> Bianconi Avenue City West Business Park Dublin 22
Phone		Phone	+353 1 7017839
Fax		Fax	
E-mail		E-mail	dhatton@eircom.ie



Managerial Contact for Fault Escalation (3rd level):

		<i>eircom</i> 3rd level escalation	
Name		Name	Samantha McCarthy
Title		Title	Head of Service Management
Address		Address	<i>eircom</i> Bianconi Avenue City West Business Park Dublin 22
Phone		Phone	+353 85171 5223
Fax		Fax	
E-mail		E-mail	samantha.mccarthy@meteor.ie

Managerial Contact for Fault Escalation (4th level):

		<i>eircom</i> 4th level escalation	
Name		Name	Peter Mc McCluskey
Title		Title	Technical Operations Manager
Address		Address	5 th Floor <i>eircom</i> HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-6004633
Fax		Mobile	+353-85-1744633
E-mail		E-mail	Pmcccluskey@eircomwholesale.ie

Planned Maintenance Contacts

<i>eircom</i> Planned Maintenance Contact: Hours: <i>08:00 - 23:59, weekdays</i> <i>10:00 - 23:59, Sat. & Sun.</i>	<i>eircom</i> National Network Co-ordination Centre: <i>eircom</i> NNCC Unit 4 Naas Rd Industrial Park Old Naas Rd Dublin 12 Telephone: 01 415 8950 Facsimile: 01 408 0060 E-mail: NNCC@ <i>eircom</i> .ie
---	---



Operator Planned Maintenance Contact: Hours:	Name Address Telephone: Facsimile: E-mail:
---	--

Mass Calling Event Contact Points

Operator Mass Calling Event Contact		eircom Mass Calling Event Contact	
Name		Name	<i>eircom</i> OLO Desk
Contact Hours		Title	24 Hour Duty
Address		Address	<i>eircom</i> Bianconi Avenue City West Business Park Dublin 22
Phone		Phone	+353 1 701 7901
Fax		Fax	+353 1 4177430
E-mail		E-mail	Olodesk@eircom.ie

Interconnect Invoicing Address

The following contacts relate to billing issues:

<i>eircom</i> Interconnect Invoicing Address	Interconnect Billing Manager <i>eircom</i> Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND Tel : 01 6004600
<i>eircom</i> Wholesale E-mail address	E-mail :Carrier_Services@eircom.ie
Operator contact point for billing:	



Interconnect Billing Contact Point

The following contacts relate to billing issues:

<i>eircom</i> Interconnect Billing Contact Point	Brendan Kearns <i>eircom</i> Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND Tel : (01) 6008153
<i>eircom</i> Wholesale E-mail address	E-mail :Carrier_Services@eircom.ie
Operator contact point for	

Interconnect Billing Test Contact Point

The following contacts relate to Interconnect billing test issues:

<i>eircom</i> Interconnect Billing Contact Point	John Hall Eircom Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND Tel : (01) 6004600
<i>eircom</i> , Eircom Wholesale E-mail address	E-mail :Carrier_Services@eircom.ie
Operator contact point	

Contact for Number Changes Which Affect the Interconnect

<i>Operator</i> Forecast Contact Point		<i>eircom</i> Forecast Contact Point	
Name		Name	Pat Conlan
Title		Title	Interconnect Manager
Address		Address	<i>eircom</i> Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-600 4594
Fax		Mobile	+353-85-1744594
E-mail		E-mail	pconlan@eircomwholesale.ie



Contact for Technology Changes Which Affect the Interconnect

		<i>Eircom Contact</i>	
Name		Name	Peter Mc McCluskey
Title		Title	Technical Operations Manager
Address		Address	eircom Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	+353-1-6004633
Fax		Mobile	+353-85-1744633
E-mail		E-mail	Pmccluskey@eircomwholesale.ie

Contact for Penalty Manager

		<i>eircom Contact</i>	
Name		Name	
Title		Title	Penalty Manager
Address		Address	<i>eircom</i> Wholesale 5 th Floor eircom HQ 1 Heuston South Quarter St. John's Road Dublin 8 IRELAND
Phone		Phone	
Fax		Fax	
E-mail		E-mail	

Nominees For Operations and Maintenance Forum

Activity	<i>eircom</i> Nominee	OPERATOR Nominee
Operations Manager	Peter McCluskey	
Provisioning	Pat Conlan	
Fault Handling (including Planned Works)	Pat Conlan	
Network Performance	Peter McCluskey	
Forecasting and Planning	Pat Conlan	



Appendix 6 Notification of Planned Maintenance

Appendix 6 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.

The notification form can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website for use by the Operator.

Appendix 7 Notification/Request for Network Management Action

Appendix 7 Usage Guide

The form in this section should be used to request/notify Network Management Actions as detailed in the body of the manual.

The notification/request form can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website for use by the Operator.

Appendix 8 Notification of Mass Calling Event

Appendix 8 Usage Guide

The form in this section should be used to notify of Mass Calling Events as detailed in the body of the manual.

The Mass Calling Events form can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website for use by the Operator.



Appendix 9 Quality of Service and Traffic Performance Parameters

General Quality of Service Parameters

The following general service quality parameters are applicable to both *eircom* and the Operator networks. The parameters represent a minimum set to be measured and recorded by both parties in accordance with the process set out in the Interconnect Operations and Maintenance Manual.

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

The order form can be provided by the Interconnect Planning manager if required, or downloaded from the *eircom* Wholesale website for use by the Operator.

Appendix 10 Typical Quality of Service and Traffic Performance Report

Appendix 10 Usage Guide

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

The templates can be provided by the Interconnect Planning manager if required, or downloaded from the *eircom* Wholesale website for use by the Operator.

Appendix 11 Typical Operational Performance Report

Appendix 11 Usage guide

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

The templates can be provided by the Interconnect Planning manager if required, or downloaded from the *eircom* Wholesale website for use by the Operator.

Appendix 12 Numbering Activation Request Template for numbers on the *eircom* Network

Appendix 12 Usage Guide



The form for this appendix shall be completed and submitted to *eircom* when requesting the activation of numbering on the *eircom* network.

See process in section 8.1 for further information.

The template can be provided by the Interconnect Planning manager if required, or downloaded from the *eircom* Wholesale website for use by the Operator.

Appendix 13 Numbering Activation Request Template & Process for activating numbers on Operator Networks

Appendix 13 Usage Guide

The process outlined below should be used by Operators wishing to open number ranges on other authorised Operator (OAO) networks.

The template in this appendix shall be completed and submitted by an Operator when requesting the activation of numbering on another *Operator's* Network.

Recommended Notification Process for Number Activation

This process is based upon a document created by the Numbering advisory Panel (NAP), document NAP 73, and recommendation number 6 ;-

having considered

- That during the course of two consultations on the Numbering Conventions, support was expressed for the idea of developing an agreed industry process for notification by operators of the activation of number ranges and codes;
- Comreg referred this issue to the Numbering Advisory Panel, for its consideration;
- That the NAP having considered the matter, believes there is merit in having a standard format which all operators could use to notify each other of their activation of new number ranges or codes in order that those codes may be properly opened on all other relevant networks;

and having taken into account

- That document NAP 15 explains the background to this issue;
- That while contractual arrangements must also be completed in respect of opening access, such matters are outside the scope of this Recommendation;

recommends

- That the outline process shown in Figure 1 should be the norm for notification of number activation;
- That the templates shown in Figure 2 should be used as the basis for implementing the notification;
- That the normal communication mechanism for the notification shall be by email. However, letter post and/or fax are also considered to be acceptable;
- That the Comreg Numbering Plan Management (NPM) should set up an email distribution list (an 'email exploder') holding the email addresses for the relevant contact points to be notified of number activation at each network operator. By sending an email to this list a requesting operator will be deemed to have reached the appropriate person in each organisation;
- That each network operator should be informed of the list and that it shall then become the operator's responsibility to always ensure that the Comreg NPM is provided with the current email address of its contact point;
- That Comreg should consider including this process and its templates as a recommendation to operators in a new annex to the National Numbering Conventions.





Figure 1: Recommended Number Activation Process

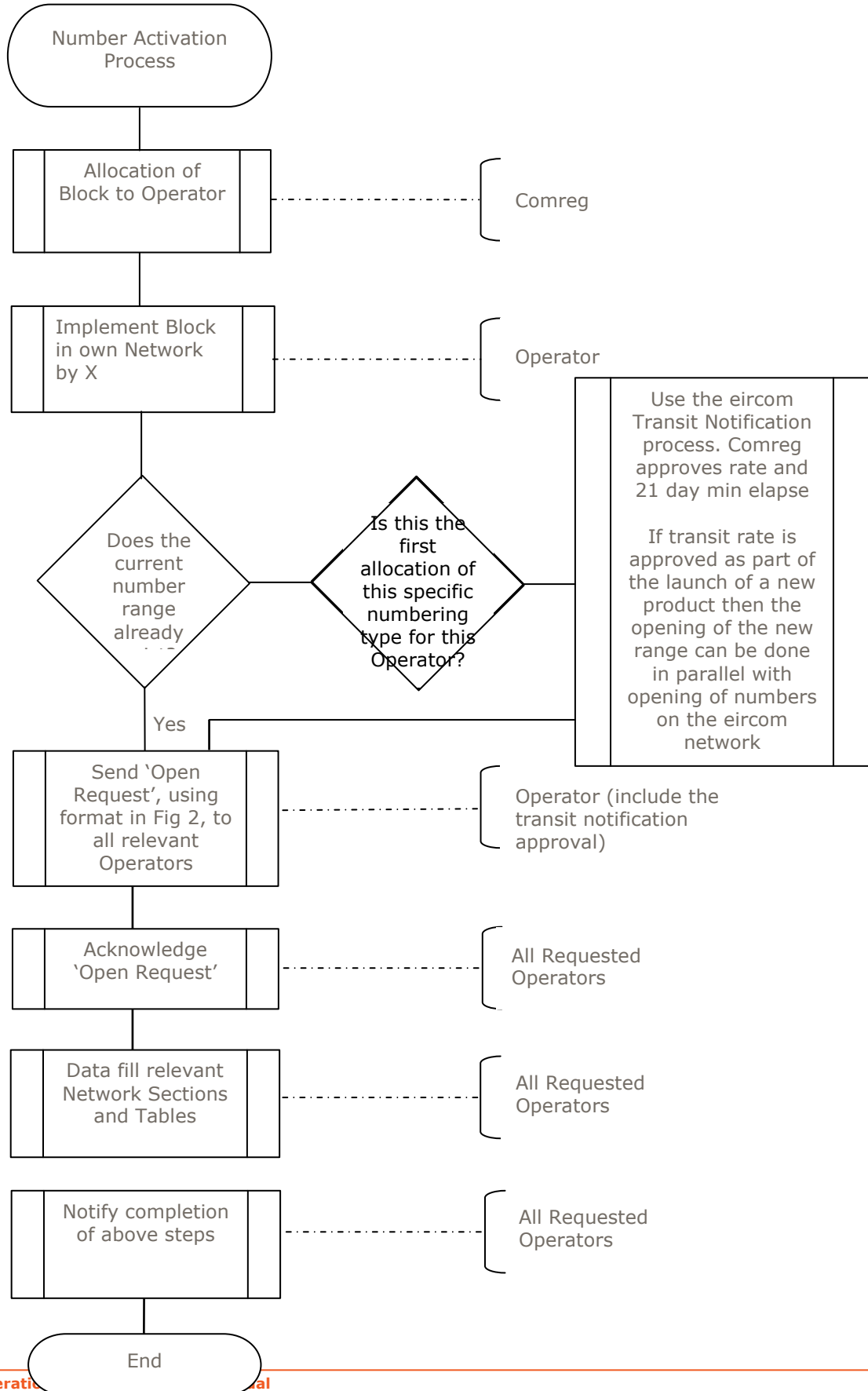




Figure 2: Activation Request Template

Operator Short Code, Geographic & Non-Geographic Number Range

Activation Request Template

For the Attention of:

_____, _____, Numbering Manager.
(Requested Operator Name) Dept/Section Name (if known)

We hereby request you to open access to the numbering facilities listed in the attached page.

Requesting Operator: - "Name"

Operator Name	<i>Operator - X</i>
Contact Details of Applicant	<i>Numbering Manager Postal Address Phone Number Fax Number e-mail</i>
Date of Request	<i>June 1st 2002</i>
Requested Completion Date	<i>July 16th 2003</i>
Number Designation	<i>Geographic, Non-Geographic, Carrier Access, Mobile, DQ, etc...</i>
Terminating POI(s) on Operator 's Network	<i>MSC 1, Node #1 or Node #2 etc...</i>

Requested Operator's Internal Use only: -

Ref. Number	
Request Status	
POI / Routes (of Requested Operator)	
Service Schedule	



Appendix 14 Forecast Model Supporting Documentation

Forecasting Model Supporting Documentation Issue 3.0

Effective from 01/11/03



Revision history

Version	Date	Revised by	Revision details
3.0	01 November 2003	eircom	Original

Associated documents

Title	Location
	www.eircomwholesale.ie



Introduction

The introduction of the forecasting model as described in Section 3 of eircom's Interconnect Operations and Maintenance (O&M) Manual, introduced the concept of the committed uptake (CU) of Interconnect capacity as a function of the Party's Quarterly Interconnect Forecast.

It is the intention of this section of the O&M Manual to support the working model of the forecast calculator designed to determine the committed uptake resulting from any given forecast submission and support the calculation of any monetary penalties that may be accrued as a consequence.

This appendix should be read in conjunction with Section 3 of the Interconnect (O&M) Manual. eircom can provide a forecasting model which is available as a tool for Operators if required.

Forecasting Principles

The following principles detail the main points of the forecast model as contained in Section 3 of the O&M Manual.

- The committed uptake (CU) of the incremental forecasts for quarters One (1), Two (2) and Three (3) are 75%, 50% and 35% respectively
- Should the Party's incremental forecast be less than or equal to Ten (10) 2 Mbit/s Interconnect Paths for the sum of all offered eircom Interconnect Nodes (52) there shall be no committed uptake level applied for that quarter.
- For an incremental forecast greater than (40) 2 Mbit/s Paths in any given quarter, 100% committed uptake will be considered for all paths in excess of forty (40) paths, with the relative committed uptake percentage applied to those 40 paths.

Step By Step Details

The submission of quarterly forecast:

- Each quarter the Operator shall detail the following information through the quarterly submission forecast template as detailed with the Appendix 1 of the O&M Manual. (**Operator Action**)
- Once the submission is accepted, the forecast model could be used by the Operator to calculate the quarterly incremental forecast for each network layer. This calculation is based on the install base listed and the quarterly forecast given. (**Model Action**)
- The forecast model will assist in calculating, based on the incremental values for each network layer the appropriate committed uptake, that being 75% of quarter 1 from the submission in hand (e.g. – October to December), or 50% of quarter 2 from the previous submission (e.g. – July to September) and finally 35% of quarter 3 from the submission prior to that (e.g. – April to June) (**Model Action**)
- At this stage the model will indicate the level of committed uptake required by the Party for the coming quarter. The model can be saved for the period of the coming quarter – when at the end the order profile across the three network levels, data is entered based on Operator records (**Action eircom**)
- At the end of each quarter and based on the average rental of all paths on all Operators Owned Interconnect Paths an average rental is agreed with the Operator in question. (**Operator and eircom Action**)
- If there is no short-fall in an Operators order for the previous quarter then no further action is taken and the business of submitting the next quarter's forecasts is progressed. (**Operator and eircom Action**)
- Should a situation arise where an Operator's orders fall short of the committed uptake in the 75%, 50% or 35% calculations, the short-fall in capacity multiplied by the quarterly average rental will determine the penalty to be charged to the Operator in the coming quarter. (**Action eircom**)



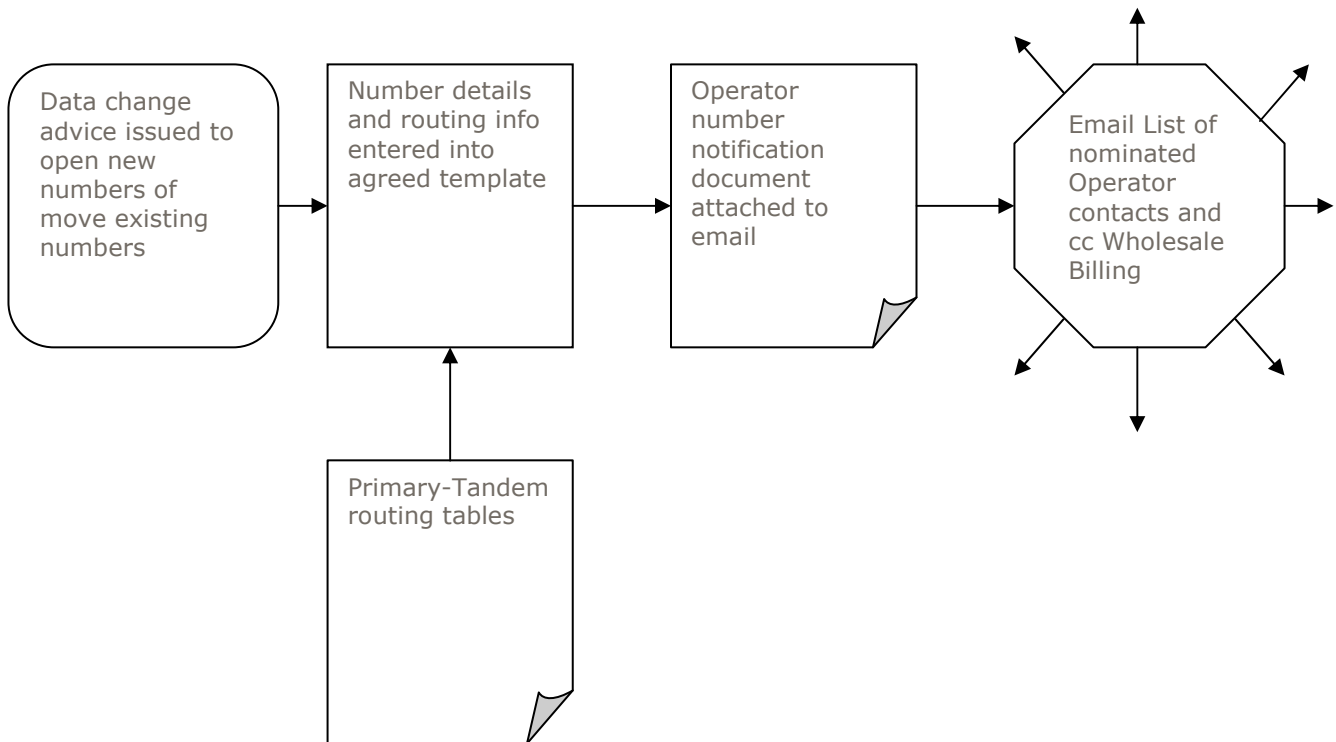
-
- In the situation where more than one of the 75%, 50% or 35% calculations results in a penalty, the greater value for that quarter shall be considered the penalty by which to proceed with. This is a manual decision based on calculations from the forecast model. **(Action eircom)**
 - The model will generate the new distribution of a customers install base. This install base is now a function of Interconnect Paths in Service, on Order and those circuits that are now considered Virtual Paths. **(Action eircom)**
 - A Virtual Interconnect Path is that Path that is being billed for as a result of an Operators committed uptake, but has not physically been ordered by the Operator. **(Action eircom)**
 - The model will clearly identify the number of Interconnect Paths "Physically Installed" i.e. – Interconnect Paths on Order or In Service and the number of Virtual Interconnect Paths. **(Action eircom)**
 - The distribution of paths is clearly indicated over the three network layers. **(Action eircom)**
 - The above sequence is continued on a quarterly basis with manual exceptions made for incremental growths above forty and below eleven. **(Operator and eircom Action)**
 - Bilateral discussions are available between eircom and each Operator at a minimum of once a quarter.

Additional Notes:

- Given the instance where an Operator fails to meet a committed uptake which was greater than 40 Interconnect Paths, the distribution of Virtual Interconnect Paths to the Physical install base shall be carried out in the same distribution of that Operators Tertiary, Tandem and or Primary existing Interconnect Paths.
- Should an Operator wish, eircom is well disposed to support Operators with the initial introduction of this new forecasting model through bi-lateral forecast planning meetings. These meetings can be arranged with Operator's Account Manger or the eircom Interconnect Planning Manager



Appendix 15: Number range introduction and movement in the eircom network



The templates for new number and reparenting can be provided by the Interconnect Planning manager if required, or downloaded from the eircom Wholesale website for use by the Operator.

New numbers notification template

Notification to OLO's

Parent (MSU):	Ship Street (SHPB)	
STD Code :	01	
New Number Range:	4127000 - 4127999	
<u>Origination</u> routing scheme	Tandem	Dolphins Barn / Priory Park
	Double tandem	Adelaide Road / Dame Court
<u>Termination</u> routing scheme	Tandem	Dolphins Barn / Priory Park
	Double tandem	All Other Tandem and Tertiary Nodes
Guide completion date:	10 working days from date of issue	
Notification issued by:	<i>eircom</i> Wholesale customer service	
Date issued:		
<i>eircom</i> escalation contact:	Damien Donnan Tel: 7011150	

Reparented Numbers notification template

Donor exchange (MSU)	Dolphins Barn (31)	
STP Code:	01	
Number Range being reparented:	4002000 - 4002999	
Recipient exchange (MSU)	Ship Street (SHPB)	
Recipient exchange <u>Origination</u> routing scheme	Tandem	Dolphins Barn / Priory Park
	Double tandem	Adelaide Road / Dame Court
Recipient exchange <u>Termination</u> routing scheme	Tandem	Dolphins Barn / Priory Park
	Double tandem	All Other Tandem and Tertiary Nodes
Effective date:	[enter date for move]	
Notification issued by:	<i>eircom</i> Wholesale customer service	
Date issued:		
<i>eircom</i> escalation contact:	Damien Donnan Tel: 7011150	



Appendix 16 Customer Delay Notification for Carrier Services

Customer Delay Notification

eircom Service Order Number	[Order_No]
eircom Circuit Reference/Number Ranges	[NumberRanges]
Place of Delay	[PlaceofDelay] - [DelayLocation]
Date of Commencement of Delay	[CommencementDate]
Delay Reason	[DelayReason]
Customer Contact Name for resolution	[ContactName]
Customer Contact Number for resolution	[ContactTel]
Date of dispatch of Customer Delay Notification	[Today]

Appendix 17 Customer Delay Rectification for Carrier Services

Customer Delay Rectification Notification

eircom Service Order Number	[Order_No]
eircom Circuit Reference/Number Ranges	[NumberRanges]
Date of Receipt of Customer Delay Notification	[CustomerNotificationDate]
Date of Customer Delay Rectification	[ExitDate]
Comments/Cause of Delay	[DelayReason]
Comments/Action Taken	[RectificationAction]
Customer Contact Name for resolution	[ContactName]
Customer Contact Number for resolution	[ContactTel]
Date of dispatch of Customer Delay Notification	[Today]