

**Wholesale Symmetrical Ethernet Access
(WSEA)**

Inter-Operator Process Manual

Version 1.5

Version Control

Issue	Status	Date	Prepared by	Summary of Change
1.0	Final	3 August 2010	eircom	
1.1		24 th February 2011	eircom	Addition of change matrix section 4.9, configuration of Loopback on WSEA circuit section 5.3.1 and Appendix 5 with high level overview of fault handling process.
1.2		26 th May 2011	eircom	Changes to the cancellation process. Section 4.6
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1.5		6 th January 2012	eircom	Revised to include WSEA logical access enhancement. Addition of circuit based class of service Option 6

Glossary

CoS	Class of Service
GUI	Graphical User Interface
NTU	Network Termination Unit
POH	Point of Handover
SAB	Service Access Bandwidth
UG	Unified Gateway
S-VLAN	Service Virtual Local Area Network
UNI	User Network Interface
WEIL	Wholesale Ethernet Interconnect Link
WSEA	Wholesale Symmetrical Ethernet Access Product

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1. Introduction

The purpose of this Inter-Operator Process Manual is to define between eircom and Operators the processes relating to Wholesale Symmetrical Ethernet Access ensuring that both Parties have an appropriate understanding of their respective roles and responsibilities.

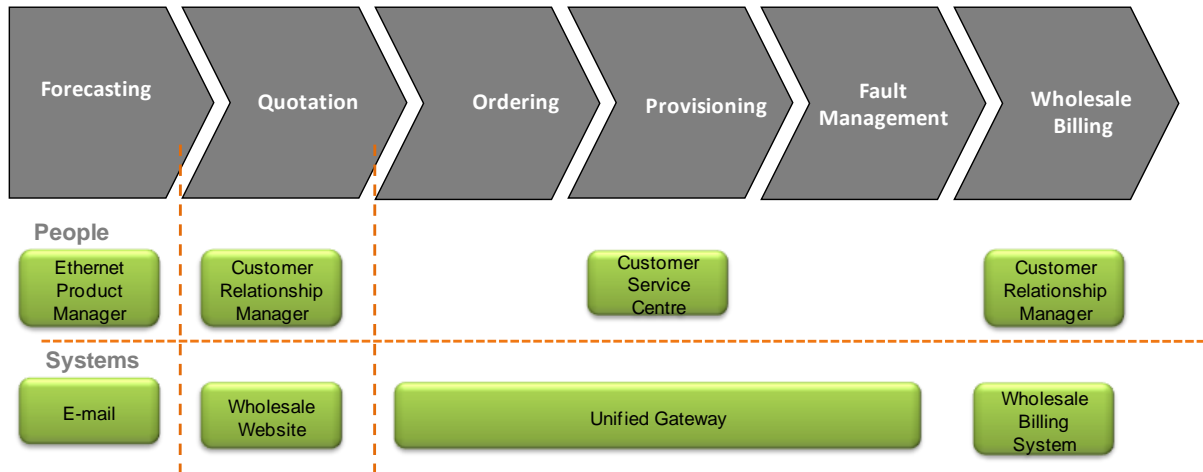
This document is subject to review and will be re-issued to reflect changes as new developments are introduced which shall be communicated in accordance with agreed practices. Any specific technology mentioned in this document is current as at date of issue and is for guidance purposes only. eircom reserves the right to adapt the technology used to deliver Wholesale Symmetrical Ethernet Access.

This document is without prejudice to any future position that may be adopted by eircom in respect of Wholesale Symmetrical Ethernet Access. It should be read in conjunction with the relevant associated eircom Wholesale documents (where appropriate, reference offer, product description and SLA).

The prevailing version of this document will always be available on www.eircomwholesale.ie.

Prior to requesting the product the Operator may find product information on the eircom wholesale website www.eircomwholesale.ie or discuss their requirements with their Customer Relationship Manager /Account Manager.

The following diagram is a high level process associated with this product:



2. Forecasting Process

This section outlines the processes to support the forecasting for Wholesale Symmetrical Ethernet Access circuits.

Operators are requested to provide forecasts on a rolling 12 month quarterly basis. Forecasts should be submitted by an Operator using the form outlined in Appendix 1. The eircom Customer Relationship Manager will e-mail the forecast form to Operators one calendar month prior to the forecast submission date. Operators will fill in the forecast form with the relevant forecast information. The form should include a 12 month forecast broken into 4 quarters. The forecasts should be submitted one quarter in advance, therefore not detailing a forecast for the quarter following submission. Operators should submit the updated forecast form by e-mail to their eircom Customer Relationship Manager (CRM).

The forecast should be submitted on the second Tuesday of the month prior to the quarter beginning. For example forecast of Qtr 1 (Jan-Mar) of 2011 should be submitted to eircom on 14th December 2010.

The forecasting process supports eircom's NTU procurement, capital forecasting and network build-out planning only and is disassociated from the Provisioning process or the associated SLA.

3. Quotation Process

- An Operator may request a quotation for the product using the quotation tool (Web GUI): The Quotation Tool is located on the UG Web GUI under the Data Product menu and via the QDC order type. See Appendix 2.
- In order to access the Quotation Tool, Operator system administrators will need to add the new QDC order type to user profiles.
- If an Operator does not have access to the Data Products menu or they do not have any access to the Web GUI they should contact their eircom Customer Relationship Manager.

eircom will provide an indicative quote, which will be subject to full site survey. eircom quotations are estimates and are not contractually binding.

Wholesale Symmetrical Ethernet Access orders are physically delivered over fibre, which is subject to survey and availability. The lead-time is classified as “standard” with a defined lead-time or “non standard” where eircom will provide a forecasted due delivery date. The standard price applies where the end user’s premises is served by useable eircom owned duct¹ and is within 500 metres of an available eircom access fibre which can connect to the serving eircom NGN node.

On-site appointments for installation of fibre and NTU will be required and will be arranged through an Operator contact.

Quotations for additional WSEA logical accesses can be obtained by using the Quotation Tool.

4. Ordering Process

This section outlines the Operator processes to support the ordering of eircom’s Wholesale Symmetrical Ethernet Access product.

Orders for WSEA IBH will require infrastructure build between the NGN Node and the Operator’s co-location rack. The infrastructure build quotation and provide processes (QIB and PIB) are outlined in the “Process Manual for Physical Co-Location”.

4.1 Order Types

The following order types are supported:

- Provide

¹ Useable duct for fibre assumes that there is sufficient space in the duct to draw in a subduct

- Change
- Move
- Cease
- Cancel

4.2 Order Format

Following the quotation process all requests for WSEA should be placed by an Operator via the Unified Gateway (UG) web GUI². The UG is an order management and fault handling system designed to be the primary interface between eircom and an Operator. A high level overview of the UG system can be found in Appendix 3.

Please note that there will be no change to the current eircom Wholesale process for providing SLA Order Process Point notifications which is via automated email.

It should be noted that all status information provided via the Unified Gateway is for information purposes only. Only SLA Order Process Point notifications will be treated as formal notifications for the purposes of SLA penalty calculations.

4.3 Orders for Wholesale Symmetrical Ethernet Access (WSEA)

Orders for the WSEA must be submitted via the UG².

The following minimum details are required when ordering a WSEA:

- Operator information details
- End user Site address
- End user Site contact name, number and email address
- Required by date for the WSEA, if appropriate
- Remarks (eg details of any site specific access requirements)
- Handover type CSH/IBH
- Required Bandwidth
- Class of Service

² With the exception of all order types for additional WSEA logical accesses on an NTU at an end user site which must be ordered via the eircom manual order form (available on eircom wholesale website or from Account Manager). This eircom Wholesale form can only be used for additional WSEA logical access order types and may be replaced in the future

- Circuit-Based: options 1-6
- Traffic Based: EF% - AF%
- Associated SAB and WEIL Circuit reference numbers^{3*}
- NTU UNI interface presentation (electrical or optical) and port setting
- NTU power supply : single PSU (default) or dual PSU

When a WSEA order is acknowledged by eircom, the WSEA circuit reference number will be provided to an Operator. All subsequent service transactions – including fault reporting - will be managed using this WSEA circuit reference number.

On completion of the provision of each WSEA order eircom will provide an Operator with the S-VLAN IDs associated for each end user site's traffic aggregated on an Operator's nominated WEIL. The purpose of the S-VLAN is to allow an Operator to distinguish between traffic on a WEIL (and associated SABs) for different WSEAs.

In certain cases the Wholesale Symmetrical Ethernet Access and its associated Wholesale Ethernet Interconnect Link connection may be within the same serving exchange area and therefore may be connected to the same eircom NGN Node. Wholesale Symmetrical Ethernet Access / Wholesale Ethernet Interconnect Link connections served off the same eircom NGN Node provide the capability to configure the Wholesale Symmetrical Ethernet Access logical connection as an uncontended connection. The eircom NGN Node is a non-blocking device and therefore the Operator may inventory manage the Wholesale Ethernet Interconnect Link to ensure that it is not overbooked, i.e. that the sum of the Wholesale Symmetrical Ethernet Access bandwidths do not exceed the Service Access Bandwidth on the Wholesale Ethernet Interconnect Link (see Section 5.2. of the Technical Handbook for description of Service Access Bandwidths). In this scenario QoS is not required on the Wholesale Symmetrical Ethernet Access as the connection is uncontended and is not carried across the eircom core NGN network (Circuit based CoS Option 5 as described in Section 6.1.1 of the Technical Handbook should be specified for these connections).

Conversely, the Operator may inventory manage the Wholesale Ethernet Interconnect Link which may result in the Wholesale Ethernet Interconnect Link being overbooked, i.e. that the sum of the Wholesale Symmetrical Ethernet Access bandwidths exceed the Service Access Bandwidth on the Wholesale Ethernet Interconnect Link (see Section 5.2. of the Technical Handbook for description of Service Access Bandwidths). In this scenario QoS may be required on the

³ If the associated Wholesale Ethernet Interconnect Link (see separate WEIL Product Description, IPM and SLA documents) has been ordered but not yet delivered, then the WSEA can be ordered using the SAB Circuit reference number once the SAB has been allocated a number at the Order Acknowledgement stage.

Wholesale Symmetrical Ethernet Access and the required level of circuit based class of service should be specified by an Operator.

It should be noted that more than one eircom NGN Node may be installed in some serving exchange sites. These eircom NGN Nodes within the same serving exchange site will not be connected locally.

4.3.1 Additional WSEA logical accesses:

An Operator must first place an order via UG for an associated WSEA (physical and logical) connection. Orders for additional WSEA logical accesses must then be placed via the eircom Wholesale manual order form (available on eircom wholesale website or from Account Manager). The following minimum details are required:

- The associated UG WSEA order reference number and/or WSEA circuit reference number (WESxxxxxx)
- NTU UNI port number for the additional WSEA logical access
- The new bandwidth of the associated WSEA physical
 - (this may need to change as a result of ordering the additional WSEA logical accesses)

4.4 Sales Process Points

- Order Receipt (OR): the forwarding of a valid order to eircom on a standard order form. The SLA “clock” begins when the order form is received by eircom.
- Order Acknowledgement (OA): the acceptance of an order form by eircom and acknowledgement to an Operator that the order has been received, the order form is correctly filled in and is being processed.
- Order Validation (OV): confirmation, or otherwise, that an order is deliverable by eircom within the standards set down in the WSEA SLA. Standard order delivery time is in accordance with the delivery times listed in the WSEA SLA. Where appropriate this step shall include a site survey. If new duct/poles and/or fibre build work is required then additional charges may apply. At the end of the Order Validation Step four events are allowable:
 - The order is determined to be within the definition of a “standard” order and a delivery date is set in accordance with the appropriate SLA;

- The order is determined to be a “non-standard” order under the allowable exceptional circumstances set out in the WSEA SLA;
 - The order is determined to be a “project” order when it is ordered as part of an agreed project;
 - Should an Operator request a circuit to be delivered on a date after the calculated Delivery Due Date (Standard or non-standard or project) then this date shall become the Due Delivery Date and shall be taken as the standard delivery date for the purposes of SLA compliance calculations.
- Order Forecast (OF): Notification to an Operator of a delivery date of an order that is validated as “non-standard”. This delivery date shall be taken as the “standard” date for the purposes of SLA compliance calculations.
 - Delivery Confirmation (DC): prior to the delivery date eircom shall confirm in writing to the Operator as to whether the delivery date will be met. This will enable Operators to better manage their customers’ expectations. In the event that the Delivery Confirmation advises that the Delivery will not be met eircom must advise the Operator of the Revised Delivery Date (RDD) within three (3) Working Days of the original due delivery date. Should the new delivery date be in excess of ten (10) Working Days of the previous Due Delivery Date (DDD) then the cancellation process may be triggered, otherwise the confirmation process recommences.
 - The Delivery Confirmation/Reconfirmation shall be considered a single process for Service Credit calculation purposes.
 - Delivery of Service: the provision of the purchased service by eircom.
 - Delivery Notification (DN): date of issuance of a completion notice by eircom to an Operator.
 - Completion of order: An order is deemed to be completed on dispatch of Delivery Notification (DN) and working service by an Operator. An Operator has two (2) Working Days to accept the circuit as completed as specified. At Delivery Notification the service delivery “clock” is stopped. If an Operator cannot accept the circuit because it is faulty the “clock” starts again until such time as the circuit is accepted. If an Operator does not inform eircom of its acceptance or otherwise of the circuit, it will be deemed to be accepted by the Operator for the purpose of any SLA penalty calculation.
 - If the fault is subsequently found to be in an Operator network or no fault is found, the original date of the completion notice shall apply to the order. eircom’s standard terms

and conditions regarding recovery of costs for reported faults found to be not in the eircom network shall apply.

- Service Provision: the activation by eircom of the ordered service.
- Working Day: 09:00 – 17:00 Monday to Friday excluding public or bank holidays in Ireland.

4.5 Customer delay process

- In the event that the Operator delays installation of the service for any reason, this will constitute a customer delay, stopping the SLA clock.
- In the event that the end-user refuses right of entry to eircom when an appointment has been made, or delays installation of the circuit for any reason, the “Standard Time” will be extended by the number of working days delay incurred as a result. eircom will inform the Operator by close of business the following day.
- Should the delay last more than 5 days, 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. The customer delay notification will be sent to the Operator contact point via e-mail using the Customer Delay Notification (CDN) form.

It is important to note that an Operator is the eircom customer and problems regarding customer delay are a matter for an Operator to resolve with their own customers.

4.5.1 Required Operator Activities (to avoid customer delay)

For timely connection of service the following requirements must be met by an Operator prior to requesting service.

- That a suitable place and conditions for eircom's apparatus are provided and ready when orders are placed with eircom. Suitable space and facilities includes power supply, environmental conditions, lighting and appropriate electrical fittings at the customer's premises to allow eircom to install and provide the circuit.
- If service is to be provided to a 'green field site' then the building should be near completion when orders are received by eircom.
- That the appropriate personnel (including security personnel) on the sites are aware of a visit by eircom staff.

- That the end customer contact persons or a suitable substitute is available when eircom staff call at the site. The customer delay rectification will be sent to the Operator contact point via e-mail using the Customer Delay Rectification form.

4.5.2 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 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.

4.6 Cancel process

An Operator may cancel their WSEA order⁴.

In the event the Operator cancels an order for a Wholesale Symmetrical Ethernet Access circuit, eircom shall be entitled to invoice the Operator for the connection the cancellation charges as set out in the eircom Network Price List.

The Wholesale Symmetrical Ethernet Access SLA document, section 2, describes the cancellation process in the event of cancellation at Order Forecast and where Delivery Due Date is missed.

4.7 Change WSEA orders:

The following changes can be made to the WSEA: Change Bandwidth, Change CoS, Change associated SAB.

4.7.1 Change Bandwidth: upgrade and downgrade Orders

An Operator may increase or decrease their WSEA bandwidth.

In certain cases, high bandwidth upgrades may be non-standard – see section 4.9.

Change Bandwidth orders should be submitted via the UG⁵.

⁴ Cancel orders for additional WSEA logical accesses must be placed via the eircom Wholesale manual order form

⁵ All order types for additional WSEA logical accesses on an NTU at an end user site must be placed via the eircom Wholesale manual order form

The following details are required when ordering a Change Bandwidth Upgrade/Downgrade:

- WSEA circuit reference number
- New bandwidth

4.7.1.1 Additional WSEA logical accesses:

The following details are required:

- Additional WSEA logical access circuit reference number(s)
- New bandwidth(s)
- New bandwidth of the WSEA Physical
 - (this may need to change as a result of ordering the additional WSEA Logical accesses)
- WSEA Physical circuit reference number (SEAxxxxxx)

4.7.2. Change Class of Service

An Operator may change their WSEA Class of Service parameters.

Change CoS orders should be submitted via the UG⁶

The following details are required when ordering a Change Class of Service:

Change to circuit based Class of Service:

- WSEA circuit reference number
- New CoS : options 1-6

Change to traffic based Class of Service:

- WSEA circuit reference number
- New CoS: EF% / AF%

4.7.3. Change associated SAB

An Operator may move their WSEA from one SAB to another SAB, which may be on the same WEIL or on a different WEIL.

Change associated SAB orders should be submitted via the UG⁶.

The following details are required when ordering a Change associated SAB:

⁶ All order types for additional WSEA logical accesses on an NTU at an end user site must be placed via the eircom Wholesale manual order form

- WSEA Circuit reference number
- New SAB Circuit reference number

Major re-arrangements of WSEA circuits onto a new SAB/WEIL will be managed as an agreed project between eircom and an Operator. The project will be subject to “non-standard” mutually agreed lead-times.

4.8 Move WSEA

A move order will allow the Operator to change the physical location of the WSEA at the end user site. Depending on the new location of the end user site a move order or a cross referenced cease and provide order will be raised by eircom. It should be noted that a cross referenced cease and provide order will result in a change of WSEA logical and WSEA physical circuit reference numbers.

Move WSEA orders should be submitted via the UG⁷.

The following details are required when ordering a Move WSEA:

- Operator information details
- WSEA Circuit reference number
- New end user Site address
- New end user Site contact name, number and email address
- Required by Date, if appropriate
- Remarks (eg details of any site specific access requirements)

These activities may require site visits and these will be co-ordinated via the Operator contact point specified on the order.

4.9 Change Matrix

The below table outlines the order actions that maybe requested and the billing implications of same.

			Circuit Reference Changed (Y/N or N/A)				
	Circuit	Bill Text	Provide	Change	Move	Cease	Cancel

⁷ For Move WSEA orders where additional WSEA logical accesses exist an Operator must contact their eircom Wholesale Account Manager before placing orders

	Reference Number			(i.e. Bandwidth or CoS)			
WSEA Physical	SEAxxxxxxx	W/S Sym Eth Access (10M-1G)	N/A	No/Yes****	Yes/No*	N/A	N/A
WSEA Logical	WESxxxxxxx	WSEA Cct / Traf base option [1-6]/[1-85] [10M-1G]	N/A	No/ Yes****	Yes/No**	N/A	N/A
WEIL	EILxxxxxxx	Wholesale [CSH/ISH/IBH] EIL 1Gb	N/A	N/A	Yes***	N/A	N/A
SAB	SABxxxxxxx	Transaction Charge	N/A	No	N/A	N/A	N/A

A WSEA Change order can be raised to: Change Bandwidth, Change CoS, Change associated SAB.
A SAB Change order can be raised to Change Bandwidth or Change Aggregate Expedited Forwarding/Assured Forwarding Bandwidth.

*For the WSEA physical if a move involves moving to a different exchange we would have to cease the existing and re-provide a new circuit to the new address – SEAxxxxxxx would change. For a move in the building or within the exchange area there would be no change to circuit reference.

**If a cease and reprovide is required for the WSEA physical the same will have to be done for the WSEA logical – cease and reprovide resulting in new circuit reference.

***For the WEIL – any move requiring change of address will have to be managed as a project and may result in all circuit references changing as any dependent circuits will have to moved (point to a SAB on a different EIL for WSEAs) and or ceased and reprovided (SABs will definitely need this)

**** At APT Reach sites (see Rollout Plan), high bandwidth (eg >300Mb/s) upgrade orders will be non-standard, resulting in a change of circuit reference number and a scheduled outage.

4.10 Cessation process

Cease WSEA orders should be submitted via the UG⁸

The following details are required when ordering a Cease WSEA:

- WSEA circuit reference number
- Date of cessation

Operators are required to give a minimum of one-calendar months' notice of the date of cessation, which expires on the last day of the calendar month following that in which the notice is given ("notice period"). eircom will discontinue service and cease billing at the end of the notice period unless a longer period is agreed between the parties.

Additional WSEA logical accesses must first be ceased via the eircom Wholesale manual order form. Once these are completed the associated WSEA connection may be ceased via UG.

The cessation of the WSEA physical component includes the decommissioning of the product and the recovery of eircom equipment from the end customer premises. An appointment will be required to retrieve equipment.

⁸ All order types for additional WSEA logical accesses on an NTU at an end user site must be placed via the eircom Wholesale manual order form

5. Fault Management Process

5.1 Introduction

This section outlines the processes to support the fault management of Wholesale Symmetrical Ethernet Access.

All WSEA faults should be logged by an Operator via the Unified Gateway (UG).

The period of non-availability will commence at the time a fault is accepted by eircom. The period of non-availability shall end at the time logged by eircom 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 eircom network and service availability restored to the end-customer.

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

5.2 Fault Definitions

Fault:

A fault is the inability to transfer data across the WSEA at its nominal capacity for the particular circuit.

Repair Time:

The duration between the time a fault is first reported to eircom in accordance with the fault reporting procedures and the time marked by eircom as a "Confirmed Clear Permanent", excluding Parked Time (see section 5.1.11).

On completion of repair, a fault ticket is given a "Pending Clear" status and that ticket is parked i.e. the clock is stopped until the fault clear is either accepted by the Operator or 3 working hours from the pending clear Operator notification time has elapsed.

If the fault has either been accepted by an Operator or 3 working hours has elapsed from "Pending Clear" Operator notification, 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 permanently closed.

If an Operator responds with a rejection of repair the ticket is un-parked, the clock is re-started and repair work recommences. On completion of repair, the "Pending Clear" status is applied again, Operator is notified and the fault is parked and the process above is repeated.

Single Point of Contact: The Single Point of Contact, (SPOC) who is available 24 hours a day, 7 days a week.

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

5.3 Fault Reporting

An Operator – after proving the fault out of their network – should log a fault for this service against any of the WSEA circuit reference numbers via the UG.

Faults in relation to performance or intermittent faults can be logged on the UG under the intermittent error report type. The remarks field can be used to outline the nature of the fault.

Faults reported against the WSEA physical circuit reference number will be rejected.

If all WSEA logical accesses are not working at an end use site the Operator should include 'hard down' in the remarks field when logging a fault.

5.3.1 Configuration of Loopbacks on WSEA Connections

An Operator can request for a loopback to be configured on an eircom Wholesale WSEA connection. The loopback will be internally configured on the end-user facing port (UNI) on the eircom NTU deployed at the end-user site.

The Operator should use one of the following methods to submit a request for a loopback to be configured:

- The Operator can request for a loopback to be configured via the Unified Gateway by selecting 'Provide Loop on Circuit on B-end' on the fault reporting screen and referencing the WSEA Circuit ID (WESxxxxxxx).
- The Operator can log a request for a loopback to be configured by calling 1800-656 656. The Operator must request NGN Loopback process and reference the WSEA Circuit ID (WESxxxxxxx).
- The Operator must submit an additional request to have the loopback removed using the contact options outlined above (the WSEA Circuit ID must be referenced in all cases). The length of time that a loopback is applied should not exceed 24 hours.

Note: As with other loopbacks there is not a charge for requesting a loopback however the clear code associated with the loopback (018) is chargeable.

5.4 Fault Response

When a fault has been correctly logged and acknowledged, eircom will undertake preliminary testing and fault localisation. Following this, fault clearance will be instigated. The results of preliminary eircom testing and fault localisation are provided to an Operator. The maximum response time is T + 3 SLA hours where T is the time that the fault has been logged by eircom.

5.5 Fault Resolution

An Operator can check the current fault status on the UG at any time throughout the lifecycle of a fault.

Service shall be deemed to have been restored when the fault condition is resolved on the eircom network and service availability restored to the Operator. Notification will be provided by eircom to an Operator. eircom reserves the right to put in place temporary service restoration while repairs to a fault are undertaken.

On completion of repair, a fault report is given an "Unconfirmed Clear" status and it is parked. Please see Appendix 5 for a high level overview of the Fault Handling Process.

5.5.1 Parked Time

Where circumstances arise which are outside the control of eircom that impede the ability of eircom to begin or continue with repair of a fault, this will result in the fault report 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 the end customer premises not available to eircom.
- Waiting for requested information from an Operator, required by eircom to progress fault clear.
- Awaiting decision from an Operator regarding "call out charges", due to the changing nature of the "call out charges". The charges details can be found in the Network Price List on www.eircomwholesale.ie.
- If the operator doesn't accept the "call out charges" within one hour, the fault is "Parked" until 9am the next working day.

5.6 Out of Hours Charging Principles

If Operators request action (outside of SLA coverage hours) specific to their service then this work is chargeable.

If eircom initiate specific work to repair network faults which also affect multiple circuits, this work is not chargeable to the Operator.

All specific requests will be subject to the availability of resources. If resource is unavailable when requested then the fault will remain open for the purposes of calculating percentage of circuit downtime.

5.7 Fault Management Escalation Procedures

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 single point of contact (SPOC). An Operator should only escalate to his or her corresponding designated escalation level SPOC in eircom and vice-versa.

The escalation of WSEA Faults may take place as detailed below:

- Fault Response:

If the maximum Response time of T + 3 SLA hours has not been met an Operator may escalate to Level 1 in eircom. Subsequent levels of escalation may be made for every 4 SLA hours after this time that a Response has not been made.

- Fault Resolution:

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 eircom. Subsequent levels of escalation may be made at 4 SLA hour intervals after the first escalation.

If an escalation is made and a voicemail left by an Operator "escalator", the eircom "escalatee" has 30 minutes to respond to an Operator "escalator". If a return call is not received by an Operator "escalator", they may escalate to the next level themselves.

The eircom Points of Contact for escalations are set out in the table below. Each Operator should notify eircom of their Peer Escalation Level names and contact details.

Escalation Level	Title	Escalate Fault Resolution after:
1	WTM Team Leader	7 SLA hrs
2	WTM Manager	7 + 4 (ie 11hrs)
3	Customer Relationship Director	7 + 8 (ie 15hrs)
4	Director of Wholesale	7 + 12 (ie 19hrs)

Table: 1 – 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 eircom 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 eircom.

6 Maintenance

This section outlines the processes to support the maintenance management of Wholesale Symmetrical Ethernet Access. It is designed as the optimal process for the maintenance management of Wholesale Symmetrical Ethernet Access Services using existing processes where possible.

6.1 Maintenance Definitions

Maintenance is defined as the act of maintaining or the state of being maintained, reducing the occurrence of fault conditions.

Maintenance Notification is the notice to withdraw plant from service and will be given to the Operator’s Network Management Centre (The Operator NMC).

6.2 Planned Maintenance Notification Procedure

Any planned maintenance work which may result in the temporary interruption of any of the Services offered by the WSEA or the temporary unavailability of a network element in the WSEA 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 a WSEA or an outage on an offered NGN Node.

The notification for planned works shall be made to an Operator by e-mail using the “Notification of Planned Maintenance” form (see Appendix 4).

6.3 Planned Maintenance Procedure

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 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.

6.3.1 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.

Preferred hours: 00:01 – 06:00

6.4 Notification Process and Timescale for Planned Maintenance

eircom will notify an Operator of the planned work by email using the “Notification of Planned Maintenance” form (see Appendix 4).

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 Operator must review and respond to the proposal within 3 working days of receipt.

On completion of the planned maintenance work eircom must notify the Operator that the work was completed as planned within 1 working day of the planned completion time, by emailing the completed “Notification for Planned Maintenance” form.

6.5 Escalation Process

If the date or timing of the Planned Maintenance work is unsuitable then the Operator must contact eircom so that a suitable date and time can be agreed. If the Planned Maintenance work

is critical and essential to the operation of eircom's network then an Operator cannot veto the work.

6.6 Unplanned Maintenance

Unplanned maintenance is the procedure designed to minimise the effect of faults on the Wholesale Symmetrical Ethernet Access Network, essential maintenance, or alteration or improvement to the Wholesale Symmetrical Ethernet Access Network, whereby services are temporarily suspended in an unplanned manner. Where possible eircom will give the Operator notice prior to such suspension and eircom will restore service as soon as possible after such suspension.

While endeavouring to keep the unplanned maintenance to a minimum when they do occur eircom will make the best endeavour to supply an Operator with as much notification prior to the work commencing.

Appendix 1 Forecast Form for WSEA Circuits

Version 1.0

16/07/10

Using Forecasting Forms

Included in this document is the Forecasting forms for ordering WEIL and WSEA NGN Ethernet products.

All operators who wish to order these products are requested to provide forecasts each quarter on their requirements. This quarterly forecast must show the operators WEIL and WSEA requirements on a 12 month rolling, quarterly, basis.

Instructions on what data to include in the Forms:

WEIL worksheet

Forecast Information

The total number of orders for WEIL, per NGN Node, that are forecasted for each quarter must be broken down into the 3 different handover options that are available, which are outlined below:

- (1) Customer Sited Handover (CSH)
- (2) In-Span Handover (ISH)
- (3) In-Building Handover (IBH)

A total number of NTU Type (AC/DC) forecasted must be highlighted per quarter.

WSEA Form

Forecast Information

The total bandwidth, per NGN node, must be broken into the 3 different types of circuit based "Class of Service".

EF- Expedited Forwarding
AF- Assured Forwarding
STD - Standard Forwarding

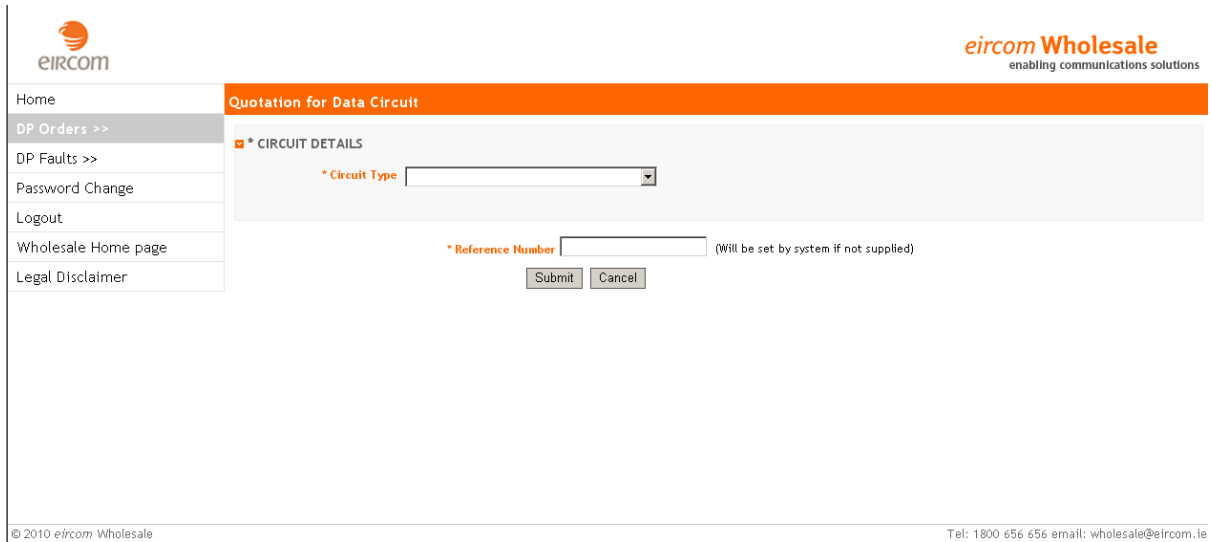
Also included in this worksheet is the Column "No. WSEA". In this column the number of WSEA's in place by the end of the quarter should be highlighted. This means the number of WSEA that have been provided.

Information on circuit based "Class of Service" is located in the WSEA Product Description Document. The total number of NTUs forecasted per quarter must be broken into NTU type (Single/Double PSU).

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<p>Sites will be added to the forecast list as the NGN Node Sites become active. Sites may also be removed from the list if necessary. This forecast form is used to identify the order levels per NGN Node site, and is necessary to maintain inventory levels. If Operators do not submit this forecast it will impact on the ability to provide orders.</p>															
Section 1															
Operator Company Name															
Operator Contact Name															
Operator Contact e-mail															
Operator Billing Address															
Section 2															
Total Bandwidth Forecasted per site in Mbit/s															
WSEAs eircom NGN Node															
Class of Service Options															
Location A															
Location B															
Location C															
Location D															
				Qtr 1 [Jul'10 - Sept'10]			Qtr 2 [Oct'10 - Dec'10]			Qtr 3 [Jan'11-Mar'11]			Qtr 4 [Apr'11-Jun'11]		
				EF	AF	STD	No. WSEAs	EF	AF	STD	No. WSEAs	EF	AF	STD	No. WSEAs

Appendix 2: Quotation Tool



Home

DP Orders >>

DP Faults >>

Password Change

Logout

Wholesale Home page

Legal Disclaimer

Quotation for Data Circuit

* CIRCUIT DETAILS

* Circuit Type

* Reference Number (Will be set by system if not supplied)

© 2010 eircom Wholesale Tel: 1800 656 656 email: wholesale@eircom.ie

Note:

All eircom wholesale supplied quotations are “subject to survey” and exclusive of VAT. Quotations are not contractually binding on either party. eircom wholesale price quotations remain valid for 21 calendar days, but may be subject to alteration to reflect the prevailing eircom wholesale pricing at the actual time of order.

Appendix 3 – Overview of Unified Gateway (UG) web GUI

The UG is an order management and fault handling system designed to be the primary interface between eircom and the Operator. Operators will be able to enter all the necessary data via structured on line screens for both ordering and fault reporting. Once all the data has been entered the order or fault can be submitted. The UG will accept and validate the relevant orders and faults and will provide appropriate notifications in response. Order and fault status updates through to completion will then be provided back to the Operator and can be viewed via the order and fault tracking screens.

SYSTEM ADMINISTRATION OVERVIEW:

An Operator will be able to create users and passwords, and set user profiles for each user. For added security, a Digital Certificate is also required for each user.

An Operator may obtain information for System Administrators from their eircom Customer Relationship Manager.

ORDERING OVERVIEW:

Operators will be able to enter all necessary data via a structured on line screen. Once all the data has been entered the order can be submitted. Operators can enter their own unique order reference number prior to order submission – this can then be used to search for the order and check status. If an Operator reference number is not submitted then a unique order reference will be provided by the Unified Gateway.

Order Tracking and Status Updates

Real time status updates will be provided for all data orders submitted via the Unified Gateway. Access is provided via the on line Order Tracking Menu and orders can be searched using:

- Operator submitted reference (customer) number
- UG Reference number
- Circuit reference number

The list below provides details of possible status updates that are available:

Status Updates
Acceptance/Rejection
Categorisation (standard / non-standard)
Delayed Notification (Forecast / Re-Forecast)
Delivery Confirmation
Completion (Delivery)
Customer Delay Start
Customer Delay End
Undeliverable

FAULT LOGGING OVERVIEW:

A new order type (FDC - Fault on Data Circuit) will be created which will allow users to directly log faults onto the Unified Gateway via a set of new web GUI screens.

They will be able to log the fault using the eircom circuit identifier and will be presented with a structured online screen consisting of a list of fault request details.

The fault reporting screen will also contain a number of additional questions which the Operator will be required to answer before submitting the fault report. Operators will also be required to enter their own fault reference (this will be a mandatory field). Once all this data has been captured on the online screen the order can then be submitted.

Fault Tracking and Status Updates

It is intended that all existing fault tracking, search and reporting capabilities that are in place for other products will be replicated for data faults.

Real time status updates will be provided for all data orders submitted via the UG. Operators will be able to track their faults using the on-line Fault Tracking Menu using the following search criteria:

- Operator Fault Reference
- UG Reference Number
- Circuit ID

The list below provides details of all possible status updates that are available:

Status Updates
Accepted
Reported
Response
Assigned to Crew
Dispatched to Crew
Park
Un-park
Pending Clear
Feedback
Completed (= Clear Permanent)

Appendix 4 - Notification of Planned Maintenance Form

Notification of Outage

eircom Date of Issue

/ /

eircom Reference

- /

Time of Outage

Details of Outage _____

Appendix 5 – High Level Overview of the Fault Handling Process

As a general rule fault diagnosis should start at the NGN aggregation node and work out towards the NTU. At a high level the steps should be:

1. Gather all relevant information (and sketch the network):
 - NGN Aggregation node and port
 - Service type (WES)
 - NTU management IP addresses/DNS names
 - S-VLAN and C-VLANs
 - QoS profiles and bandwidths
2. Verify Ethernet link port settings
3. Verify customer facing port on the NGN node (SAP - Service Access Point) port settings
4. Verify QoS at the SAP and the customer (bandwidth sharing/EIL)
5. Verify if the NTU is contactable
6. Verify the SVLAN and CVLAN configurations on each SAP
7. Verify the SVLAN and CVLAN configurations on the NTU flows

First level is Front or Back Office (dependent on SLA), escalation to Second level (Business support specialist) takes place as soon as First level has completed triage and First level standard resolution steps.

Second level escalate to vendor support after more detailed analysis of the fault conditions have been completed.

In practice, where a fault concerns a single connection on a product e.g. degraded service, the BSS assigned will be in direct contact with the OAO during the fault diagnosis and resolution as the OAO's co-operation may be required to progress fault analysis (e.g. test windows, test file downloads) and assess the success of the fix.