Internet eXchange Point of Nigeria Ltd/Gte.

Memorandum of Understanding

[Version 3.0, dated 4th July 2009]

Contents

i. Purpose
ii. Definitions
iii. Objectives of IXPN
iv. Legal Structure of IXPN
1. Prerequisites to apply to become an IXPN member
2. Responsibilities and services to be provided by IXPN
3. Member Responsibilities
4. Membership Status
5. Technical Requirements
6. Non-compliance
7. Communication
8. Funding
9. Fees
10. Publicity
11. Confidentiality
12. Insurance and Liability
13. Governing Law
14. Dispute Resolution
15. Changes
16. References
APPENDIX 1

i. Purpose

This Memorandum of Understanding (MoU) states the objectives of IXPN, the prerequisites for joining IXPN and being an IXPN member or associate member, the services that IXPN provides to its members and the commitments of members and associate members to IXPN.

It shall be signed by all new members upon joining, and forms a formal agreement between the member and IXPN.

This MoU is placed in the public domain to help organisations that wish to join IXPN to understand what IXPN is, and what the requirements and commitments are.

ii. Definitions

"Associate Member" means any organisation admitted into associate membership by the members upon such admission terms and conditions (save that they shall have no rights to vote or ownership) as the members may from time to time determine

"Core Activity/ies" means an activity undertaken in furtherance of object (iii.1) of the MoU

"Board" is the Board of Directors as defined in the Memorandum and Articles of Association - see Clause 16 "References".

"Fees" are the charges levied for services, and which are documented in IXPN Fees Schedule - see Clause 16 "References"

"Fees Schedule" refers to the document that sets out fees payable by a member for services - see Clause 16 "References"

"Joining Fee" refers to the one-off payment made to IXPN by a new member as documented in IXPN Fees Schedule - see Clause 16 "References"

"Membership Fee" refers to the quarterly payment made by IXPN members as documented in IXPN Fees Schedule - see Clause 16 "References"

"Joining Procedure" refers to the procedure for joining IXPN - see Clause 16 "References"

"IXPN" means the Internet eXchange Point of Nigeria managed by IXPN LTD/GTE., which is a registered legal entity

"Member" refers to an organisation that has (1) successfully met and continues to meet IXPN joining requirements as detailed in Clause 1 "Prerequisites to apply to become an IXPN member", (2) has signed a copy of this MoU, (3) has signed a copy of the Mandatory Multi-Lateral Peering Agreement (MMLPA) and (4) has complied with the Joining Procedure. A member is eligible to receive IXPN services under the terms of this MoU.

"Member Equipment" means any equipment owned by, leased to, or otherwise controlled by a member, who is here referred to as the "owner" irrespective of the actual method of control or ownership

"Memorandum of Understanding" or "MoU" means this agreement between the member and IXPN, together with its appendices, as well as its schedules, procedures and definitions

"Non Core Activity" means an activity undertaken in furtherance of object (iii.2) of the MoU

"Services" refers to the services provided to a member by IXPN - see Clause 16 "References"

"Services Definition" refers to the document that sets out the services - see Clause 16 "References"

"Technical Requirements" means those requirements to which all members shall adhere and which are appended to this MoU as Appendix 1

iii. Objectives of IXPN

IXPN has two primary objectives.

1. To provide efficient interconnectivity within the Federal Republic of Nigeria for the Internet (Core Activity)

2. To promote the interests of its members (Non-Core Activity)

iv. Legal Structure of IXPN

IXPN is run as a Nigerian company limited by guarantee. All members of IXPN are members of this company and are bound by the Company's Memorandum and Articles of Association set out in Clause 16 of this document. Associate members are bound by such rules and regulations as the members from time to time determine.

1. Prerequisites to apply to become an IXPN member

There are four main prerequisites to becoming an IXPN member:

1.1 Candidates for membership shall be a recognised legal entity

1.2 Candidates for membership shall have an ASN (Autonomous System Number) and use BGP4+ for peering. A private ASN can be used subject to a maximum period of three (3) months.

1.3 The candidates' business shall include the Internet transmission of third party content or services

1.4 Where such business requires a license for operation in the Federal Republic of Nigeria, the candidate must possess such license

These prerequisites, and all other terms and conditions laid out in this MoU, including but not limited to those referenced in member responsibilities (Clause 3), achievement of full membership status (Clause 4) and the technical requirements (Appendix 1), constitute continuing requirements for IXPN members. Failure to maintain these prerequisites may lead to non-compliance under Clause 6 of this MoU.

2. Responsibilities and services to be provided by IXPN

2.1 The day-to-day running of IXPN is carried out by IXPN Chief Executive Officer and IXPN staff. Affairs of IXPN are overseen by the Board.

2.2 IXPN shall only monitor any port/connection where:

2.2.1 This information is required by law; or

2.2.2 The information gathered is generic in nature and is harvested solely for statistical or network management purposes only; or

2.2.3 The board reasonably believes a violation of this MoU has occurred.

2.2.4 IXPN agrees that it shall make reasonable efforts to ensure that any monitoring will neither adversely affect the services rendered to a member nor compromise member confidentiality.

2.3 IXPN shall not undertake new projects or offer new services, outside of IXPN's core business of peering facilitation, which would be competitive to those of its members.

3. Member Responsibilities

3.1 Members are expected, if requested, to contribute towards the running of IXPN by providing volunteer assistance. IXPN agrees to provide adequate notice (which shall include an estimate of required resources) along with details of the work required,

before it starts. Members agree to make reasonable efforts to provide the requested assistance.

3.2 Members shall ensure that all contact information which is held by IXPN in connection with their membership is correct and kept up-to-date, specifically:

3.2.1 Members shall provide 24x7 operational contact details for the use of IXPN staff and other members. The personnel available by this means shall understand the requirements of this Memorandum of Understanding and shall be able to speak and understand spoken and written English or to have immediate access to other personnel who are able to speak and understand spoken and written English. Failure to provide this information may be regarded as "Non-Compliance" in accordance with Clause 6 of this MoU.

3.3 Members must endorse and implement the Mandatory Multi-Lateral Peering Agreement (MMLPA) of the Exchange. Failure to do so would be regarded as "Non-Compliance" in accordance with Clause 6 of this MoU.

3.4 Members shall not refer their customers or any agent of their customers, directly to IXPN support staff unless specifically sanctioned by a member of IXPN staff by email.

3.5 Members shall ensure that at least one member of their staff is subscribed to the following mailing lists:

3.5.1 IXPN-announce@ixp.net.ng which is intended to carry announcements of an urgent operational nature.

3.5.2 IXPN-discuss@ixp.net.ng which is intended to notify relevant and authorised personnel of any changes to this document which shall have a binding affect on IXPN members, such changes being in accordance with Clause 15 "Changes". And also to serve as a peer review forum for IXPN members and can be used to discuss IXPN issues including operational, technical, business and financial issues.

Failure to do so would be regarded as "Non-Compliance" in accordance with Clause 6 of this MoU.

IXPN and all other members and associate members are entitled to assume, and to act, as if each member and associate member reads and appropriately deals with messages as sent to these lists. IXPN may, for the protection of its own infrastructure, take such reasonable and proportionate action as is necessary if this is not the case.

4. Membership Status

4.1 A prospective member is required to submit an application for IXPN membership, which can be completed and submitted online or by email attachment. The application is available online at http://ixp.net.ng/ixpn-application-form/

4.2 A prospective member shall be granted temporary member status upon:

4.2.1 The prospective member's application being successful; and

4.2.2 The prospective member paying the fees set out in the invoice generated following the submission of such application (which should include the joining fee and the pro-rated membership fee and pro-rated port charge); and

4.2.3 The prospective member's compliance with the Joining Procedure

4.3 As a prerequisite to obtaining full membership status, the temporary member must comply with the Joining Procedure of IXPN within one (1) month of being granted temporary membership. Failure to do so may result in temporary membership status being withdrawn and it shall be necessary for the new member to re-apply for IXPN membership. In this event any fees paid to date shall be deemed to be non-refundable and any subsequent membership application shall incur additional fees as per Clause 9 of this document.

4.4 A connection to IXPN shall only proceed after:

4.4.1 IXPN has received a copy of this MoU signed by an authorised representative of the temporary member;

4.4.2 IXPN has received a copy of the MMLPA signed by an authorised representative of the temporary member; and

4.4.3 IXPN has received a connection form from the temporary member, duly completed and giving all information required therein - see Clause 16 "References"

4.5 A temporary member shall only be deemed to have full membership status including voting rights once they meet all the requirements listed above and have achieved and maintained operational peering with IXPN route servers and all existing IXPN members. This shall be confirmed to the Chief Executive Officer via email to the address <ceo@ixp.net.ng> by including a copy of the output from the member router summarising the BGP4+ peering at IXPN. Failure to maintain operational peering with all members for any period in excess of 7 days may be regarded by IXPN as non-compliance under Clause 6.

4.6 A member shall have the right to terminate its member status for any reason and at any time upon thirty (30) days prior written notification to IXPN. Upon termination of a member's membership, IXPN agrees to refund all fees paid in advance by a member, excluding the joining Fee and those that have accrued for services provided by IXPN prior to the date of termination.

5. Technical Requirements

Members shall ensure that their usage of IXPN is not detrimental to IXPN network at all times. The term "detrimental" refers to usage which, in the reasonable opinion of IXPN board either:

a) Does not conform to the Technical requirements; or
b) Causes undesirable load and/or traffic patterns; and
c) Adversely affects other members and/or the entire exchange.

6. Non-compliance

6.1 Failure of a member to comply with the technical requirements (Clause 5) or any other material requirement of this MoU may result in sanction being taken against a member. Such sanction shall be at the sole discretion of the Board, but not unreasonably imposed, and may, depending on the severity of the incident, take the form of any or all of:

6.1.1 Immediate disconnection from the services pending resolution of the non-compliance by the member

6.1.2 Suspension of membership with a view to terminate. This shall have the following effects:

6.1.2.1 Suspension shall be immediately announced to the IXPN membership.

6.1.2.2 The member shall be disconnected from all services while suspended.

6.1.2.3 The member shall not be entitled to vote or to make use of any other right of membership with the sole exceptions that:

a) The member may attend General Meetings of the Company;
b) The member may exercise the right of appeal in 6.2.

6.1.2.4 The member shall not be entitled to a refund for any fees paid to IXPN before the suspension and, if not terminated, shall still be required to pay any applicable fees for the period of suspension.

6.1.2.5 As part of the notice calling any General Meeting, the Board shall include a list of suspended members. For each such member separately:

a) The Board or any three (non-suspended) members may call for a formal vote on the termination of membership for that member at the General Meeting, such vote to be by simple majority;

b) Failing such a call, or if the vote is in favour, the membership terminates at the end of that General Meeting and 6.3 applies.

6.1.3 Notification to IXPN membership of member Non-Compliance and subsequent action taken by IXPN Board.

6.2 A member may appeal against the decision of the Board in respect of suspension of their membership in accordance with IXPN Appeal Procedure which is documented at

6.3 Any member whose membership to IXPN has been terminated in accordance with Clause 6.1.2 above may reapply for IXPN membership, however any such application shall be in accordance with Clause 4 of this document.

7. Communication

The primary means of communication with IXPN Staff and other members and/or associate members shall be via email.

8. Funding

The fees shall be reviewed annually by the members. A review typically will occur in the November before the start of the fiscal year beginning 1st of January. The aforementioned meeting shall be a formal General Meeting (thus at least twenty one (21) days notice of the proposed resolutions) and shall include a presentation by the Board in connection with any proposed resolution regarding the fees.

9. Fees

9.1 Members shall pay the fees in accordance with the Fees Schedule.

9.2 Membership Fees will be due quarterly on the 1st January, 1st April, 1st July, and 1st October of each year, for the quarter starting on that date. The port charge fees will be invoiced monthly and due on the 1st of each month. Payment shall be made within fourteen (14) days from the date of the invoice. If the payment is not made thirty (30) up to sixty (60) days from the date of the invoice, a penalty charge shall be applied to any and all unpaid fees at 2% per annum above the average lending rate of Nigerian Banks in force at the date the invoice was raised. Such penalty charges shall be added to the next quarterly invoice issued to the member.

9.3 When a new member joins they shall immediately pay the non-refundable joining fee, membership fee and port charge. The membership fee and port charge will be pro-rata from the month in which they join to the end of that billing period as appropriate.

9.4 The fees for any new service will be payable in accordance with 9.2 above.

9.5 Notwithstanding the above, all fees from a member shall be due immediately if any of the following happen:

a) if an individual, upon death, or if he or she becomes bankrupt, petitions for bankruptcy, or makes any arrangement with his or her creditors generally, or becomes of unsound mind, or is convicted of any indictable offence concerning fraud or financial irregularity, or of any indictable offence for which he or she is sentenced to a term of imprisonment (excluding suspended sentences unless later put into effect);

b) if an organisation, goes into liquidation or administration, makes any arrangement with its creditors generally, or if it petitions to be wound up;

c) if at any time in the preceding twelve (12) months part or all of the member's Service was suspended or cut off because of failure to pay or delay in paying.

9.6 Members canceling either their membership of IXPN or any services supplied by IXPN shall give at least thirty (30) days notice of such cancellation via email to sales@ixp.net.ng Fees shall be applied until the end of the calendar month in which the membership or service terminates, and a final invoice shall make any necessary corrections for payments in advance or arrears.

9.7 Membership of IXPN and services supplied by IXPN shall be deemed to be ordered on an ongoing basis unless formal cancellation has been received by IXPN from the connected member wishing to terminate membership and/or services.

9.8 The Board retains its right under Clause 6 "Non-Compliance" to take sanction against any member who does not adhere to IXPN payment terms set out in this MoU and in the Fees Schedule.

9.9 All invoices issued for IXPN fees are calculated in Naira (N) and where funds received are less than the invoiced amount, IXPN reserves the right to reclaim the shortfall in future invoicing.

9.10 Where a member requests that an invoice be issued in other currency (limited to Euros, U.S. Dollars, or British Pounds), the fees shall still be calculated in Naira and invoiced in the required currency at the Central Bank of Nigeria's current rate of exchange in force at the date the invoice was raised.

The member shall be responsible to IXPN for any and all losses arising due to currency fluctuations between the date of the invoice and the date of payment, and all such losses will be recovered in future billing.

9.11 IXPN reserves the right to reclaim commission payable by IXPN to its credit card processing agent in respect of any credit card payment for IXPN fees.

10. Publicity

Members shall not publish any press release mentioning IXPN unless the text of that press release has previously been cleared for publication by or on behalf of the Board in writing.

IXPN shall not publish any press releases mentioning a member's name unless the text of such a press release has been cleared in writing by that member.

The Board shall normally issue a joint press release with new members upon their joining, subject to approval of both parties.

Members shall adhere to IXPN Corporate Identity Guidelines set out in Clause 16 for use of IXPN name and trademarks.

A member who is suspended under clause 6.1.2 shall not describe themselves in any manner as a member of IXPN unless the wording "membership suspended for breach of the rules" is clearly included as part of the description.

11. Confidentiality

Members, as well as IXPN, have a duty of confidentiality to the other IXPN members and associate members in IXPN affairs. As such, all and any information, not already in the public domain, passed between IXPN and/or its members or associate members shall at all times be kept confidential and shall not be passed or revealed to any third party outside of IXPN membership, without the prior written consent of the party to which it relates.

12. Insurance and Liability

In the event of any claims made by an IXPN member against IXPN, except where the claim stems from fraud or willful concealment on the part of IXPN, the maximum amount payable for whatever reason shall be limited to a maximum of the fees paid by the member to IXPN for the IXPN financial year in which the incident occurred or if the twelve (12) months of the applicable financial year has not passed, the amount expected to be paid by the member during the entire financial year.

Members shall not hold IXPN liable for any loss whatsoever resulting from the illegal use or use not conforming to the terms of this MoU by another member or an associate member.

Any remedy that IXPN shall have against a member for breach of provision of this MoU shall be limited to:

a) Liability for actual damages in any twelve (12) month period (the first twelve month period starting from the date of signature of this Agreement) is One Million Naira (N1,000,000) or an amount equal to 100% of the fees billed to that member by IXPN in that twelve (12) month period, whichever is the less

   A member shall not be liable for special, indirect or consequential loss, loss of profits, business, revenue, goodwill, or anticipated savings.

b) Members shall arrange suitable insurance to cover their equipment while it is within any of IXPN locations, as determined by the member in its sole discretion. This should cover damage to the equipment howsoever caused (including damage by IXPN or third party staff or equipment) and third party liability in the event of the member's equipment causing damage to IXPN or third party staff or equipment.

13. Governing Law

The Governing Law of this MoU is that of Nigeria, and the jurisdiction recognised is that of Nigerian courts.

In the event of any inconsistencies between the text of this MoU and that of the Memorandum & Articles of Association, the former shall take precedence.

14. Dispute Resolution

IXPN shall operate a dispute resolution service. Its scope shall be limited to IXPN Core Activities. Its use shall be voluntary and non-binding. Costs shall be covered by the participants. The details of the service shall be determined by the Board and are described in the Dispute Resolution Procedure set out in Clause 16.

15. Changes

This MoU and the further governance documents listed in Clause 16.1 shall only be modified by ordinary resolution of the company in General Meeting. In all events this MoU shall not be unilaterally modified by IXPN as it pertains to a member without resolution passed at a formal General Meeting. Unless stated otherwise in the amending resolution, the change shall take effect, and where relevant be binding on existing members, from the end of the General Meeting which passes the resolution.

For the avoidance of doubt, governance documents referenced in 16.2.2 are changeable by IXPN Staff and do not require a vote at a General Meeting. Documents referenced in 16.2.3 are external documents and are not under the control of IXPN.

16. References

16.1 Further Governance Documents

Appeals Procedure
Dispute Resolution
Fees Schedule
Services Definition
Joining Procedure

From time to time the Services Definition and Fees Schedule may be separate documents or a single document, and references to them shall be construed accordingly.

16.2 Other References

16.2.1 Part of the Agreement and only changeable at a General Meeting

IXPN Memorandum & Articles of Association
Associate Membership Terms and Conditions
Associate Membership Connection Form

16.2.2 Part of the Agreement and changeable by IXPN Staff

Corporate Identity Guidelines
Location Access Procedure

16.2.3 Other References

Internet Standards

Signed on behalf of the member by:

Company: _____

Name: _____

Position: _____

Signature: _____

Date: _____

Signed on behalf of IXPN by:

Name: _____

Position: _____

Signature: _____

Date: _____

APPENDIX 1

Members use of the IXPN shall at all times conform to the relevant standards as laid out in STD0001 and associated Internet STD documents.

1. Physical

   1.1 Ethernet interfaces attached to IXPN ports shall be explicitly configured with duplex, speed and other configuration settings and shall not be auto-sensing.

2. MAC Layer

   2.1 Frames forwarded to IXPN ports shall have one of the following ethertypes

   - 0x0800 - IPv4
   - 0x0806 - ARP
   - 0x86dd - IPv6

   2.2 Frames forwarded to an individual IXPN port shall all have the same source MAC address.

   2.3 Frames forwarded to IXPN ports shall not be addressed to a multicast or broadcast MAC destination address except as follows:

   - Broadcast ARP packets
   - Multicast IPv6 Neighbour Discovery packets

   2.4 Traffic for *link-local protocols* shall not be forwarded to IXPN ports except for the following:

   - ARP
   - IPv6 ND

   Link local protocols includes but is not limited to:

   - IRDP
   - ICMP redirects
   - IEEE802 Spanning Tree
   - Vendor proprietary discovery protocols (e.g. CDP, EDP)
   - Interior routing protocol broadcasts (e.g. OSPF, ISIS, IGRP, EIGRP)
   - BOOTP/DHCP
   - PIM-SM
   - PIM-DM
   - DVMRP

3. IP Layer

   3.1 Interfaces connected to IXPN ports shall only use IP addresses and netmasks (prefix lengths) assigned to them by IXPN. In particular: IPv6 addresses (link & global scope) shall be explicitly configured and not auto-configured. IPv6 site-local addresses shall not be used.

   3.2 IP Packets addressed to IXPN peering LAN directed broadcast address shall not be automatically forwarded to IXPN ports.

4. Routing

   4.1 All exchange of routes across the IXPN network shall be via BGP4+.

4.2 AS numbers used in BGP4+ sessions across the IXPN network may be from ranges reserved for private use but ONLY for a maximum period of three (3) months.

4.3 IXPN supports good engineering practice and IXPN members are encouraged to aggregate their routes in accordance with RFC2519 "A Framework for Inter-Domain Route Aggregation".

4.4 IP address space assigned to IXPN peering LAN shall not be advertised to other networks without explicit permission of IXPN.

4.5 All routes advertised across the IXPN network shall point to the router advertising it UNLESS agreement has been made in advance in writing by IXPN and the two members involved.

4.6 All routes to be advertised in peering sessions across IXPN shall be registered in the AfriNIC database or other public routing registry.

4.7 Members may use more than one ASN for their IXPN peering provided that each ASN presented shares the same NOC and peering contact details.

5. Forwarding

5.1 Traffic shall only be forwarded to an IXPN member when permission has been given by the receiving member either:

5.1.1 By advertising a route across the IXPN network
5.1.2 or explicitly in writing

5.2 Traffic shall not be routinely exchanged between two IXPN ports owned by the same IXPN member.

6. Additional Rules for member equipment hosted at an IXPN location

Where member equipment is hosted at an IXPN location, members shall also adhere to the following Rules:

6.1 Member equipment and cabling shall be clearly labeled with the name of the member

6.2 Persons working in IXPN locations on behalf of a member shall not interfere with another member's equipment or cables without explicit permission from the owner of the equipment.

6.3 Persons working in an IXPN location on behalf of a member shall adhere to the "Location Access Procedure" - see Clause 16 - "References"

6.4 Members shall not connect more than two wide-area circuits to routers housed at any IXPN location