

# OpenIXP Memorandum of Understanding

[version 1.0, August 17<sup>th</sup> 2005]

## 1. PURPOSE

With the advance growth of the Internet, it is now necessary to reduce routing cost and increase availability. The Internet Registries has also acknowledge the need of corporates having multiple upstreams. The small multi homing policy of portable IP addresses for corporates has the right vision to achieve this, however, the common acceptance of deploying Internet Exchange Points for ISPs only, has limited the routability of small multi-homing networks, since it is uncommon for non ISPs to connect directly to a IXP.

The idea of establishing a more open IXP was conceived by the ISPs, Corporates, Internet Cafes, and the Internet community in Indonesia. The OpenIXP would achieve routing efficiency for all routable networks without the constraints of having to obtain a government ISP license to connect to an IXP or the common practice of having to be a member of an ISP association. These are some of the constraints that has happened in connecting networks to a local Internet Exchange where the RIR has assigned Small Multihoming addresses to non ISPs.

Having a more efficient path and reduce routing cost associated with Internet connectivity is the main objective of an OpenIXP. Being an Open Exchange will reduce discrimination of routable traffic, where any entity be it an ISP or a Corporate or even an Internet Cafe will have the same right to route its network directly to a local Exchange. Networks will be crossed checked with the RIR databases to determine its routability within the OpenIXP. Autonomous System Numbers (ASN) will be strongly encourage to grow the traffic exchanged and at the same time hopefully reduce the number of IPv4 assignments by the RIR.

The OpenIXP will also be developed with an IPv6 stack with the goal of encouraging the local Internet to deploy IPv6 within their network sooner rather than later. As the OpenIXP is a community based effort, it will be developed as a non-profit exchange and will to the best of the communities efforts have no fees to connect to it.

## 2. DEFINITIONS

**2.1 Peers** is defined as the organization whose network is connected directly to the OpenIXP and has route announcements within the exchange and/or receive route information from the exchange. The organizations have also met all the requirements and prerequisites in becoming a Peer with the acknowledgment of all the rules and regulations affirmed with a signed copy of the Memorandum of Understanding and the Multilateral Peering Agreement.

**2.2 Fees** are the charges levied for Services.

**2.3 Joining Procedure** refers to the procedure for joining the exchange.

**2.4 Peer Equipment** means any equipment owned by, leased to, or otherwise controlled by a Peer which equipment is used to connect to OpenIXP.

**2.5 Memorandum of Understanding or MoU** means this agreement between the Peer and the OpenIXP.

**2.6 Services** refers to the services provided to a Peer by the OpenIXP.

**2.7 Technical Requirements** means those requirements to which will be met by all Peers on a technical non Administrative nature.

## 3. PREREQUISITES

**3.1** Peers shall be a recognized network by means of referrals to the RIR database. The main database used will those of the APNIC's (whois.apnic.net).

**3.2** Peers shall preferably have an network assigned directly from the RIR and/or local NIR. Also preferably having an ASN (Autonomous System Number) and use BGP4(+) for peering. Network assignments from an Upstream provider can only be accepted with a

written statement from the Upstream Provider with a minimal of a /24 address and the network has not been announced or is part of a larger network within the OpenIXP.

#### **4. OpenIXP SERVICES**

Daily technical activities of the OpenIXP shall be carried out by the OpenIXP administrator. OpenIXP will not offer services outside of peering.

#### **5. PEER RESPONSIBILITIES**

- 5.1** Peers are expected to contribute towards the running of OpenIXP by providing volunteer assistance.
- 5.2** Peers shall maintain up-to-date contact information including 24x7 technical contact telephone numbers, email addresses and/or trouble ticket site.
- 5.3** Peers shall ensure that at least one member of their staff is subscribed to the mailing lists of the OpenIXP.
- 5.4** Peers shall ensure that their connectivity to the OpenIXP is maintained if the connectivity is done through Telco Operators services.

#### **6. PEER STATUS**

- 6.1** A candidate Peer is required to submit an application for OpenIXP peering.
- 6.2** The prospective Peer is in compliance with the Prerequisites and Joining Procedure.
- 6.3** Connection to OpenIXP may only proceed after the OpenIXP admin has received a connection request giving all information required therein.
- 6.4** A Peer shall have the right to terminate its peering to the OpenIXP for any reason and at any time upon seven (7) days prior notification to the OpenIXP administrators.

#### **7. TECHNICAL REQUIREMENTS**

Peers shall ensure that their usage of OpenIXP shall not be detrimental to the OpenIXP network at all times. The term "detrimental" refers to usage which :

- 7.1** Does not conform to the Technical requirements; or
- 7.2** Causes undesirable load and/or traffic patterns; and
- 7.3** Adversely affects other Peers and/or the entire exchange.

#### **8. NON-COMPLIANCE**

Failure of a Peer to comply with the Technical Requirements or any other material requirement of this MoU may result in sanction being taken against a Peer. Such sanction shall be discussed with other Peers before being imposed, and may, depending on the severity of the incident, take the form of any or all of:

- 8.1** Immediate disconnection from the Services pending resolution of the non-compliance by the Peer :
  - 8.1.1** Suspension of Peer with a view to Termination. This shall have the following effects:
  - 8.1.2** Suspension shall be immediately announced to all the Peers.
  - 8.1.3** The Peer shall be disconnected from all Services while suspended.
  - 8.1.4** The Peer shall not be entitled to vote or to make use of any other right with the exceptions:
    - a. the Peer may attend the General Meetings of the OpenIXP;
    - b. the Peer may exercise the right of appeal.

- 8.2** As part of the notice calling any General Meeting, the list shall include the suspended Peers. For each such Peer separately:
- a. Any five (non-suspended) Peers may call for a formal vote on the termination of membership for that Peer at the General Meeting, such vote to be by simple majority;
  - b. failing such a call, or if the vote is in favor, the membership terminates at the end of that General Meeting.

- 8.3** Notification to OpenIXP Peers of Peer Non-Compliance and subsequent action taken by the OpenIXP.

A Peer may appeal against the decision in respect of suspension of their Peer status in the OpenIXP General Meeting.

Any Peer whose membership to OpenIXP has been terminated may reapply for OpenIXP Peer Status, however any such application shall be in strict accordance with the OpenIXP rules and regulations.

## **9. COMMUNICATIONS**

The primary means of communication with the OpenIXP administrator and other Peers shall be via email.

## **10. FUNDING AND FEES**

There are no fees in relation to peer with the OpenIXP, however fees and cost could be reviewed annually by the Peers. The review shall be a formal general meeting and shall include a presentation in connection with any proposed resolution regarding the Fees, Fee Schedules, and Joining Fees.

## **11. CONFIDENTIALITY**

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

## **12. INSURANCE AND LIABILITIES**

In the event of any claims made by an OpenIXP Peer against the OpenIXP, except where the claim stems from fraud or willful concealment on the part of OpenIXP, it shall be acknowledged:

- 12.1** A Peer shall not hold OpenIXP liable for any loss whatsoever resulting from the illegal use or use not conforming to the terms of this MoU by another Peer.
- 12.2** A Peer shall not be liable for special, indirect or consequential loss, loss of profits, business, revenue, goodwill, or anticipated savings.
- 12.3** Peers shall arrange suitable insurance to cover their equipment while it is within the OpenIXP Racks, as determined by the Peer in its sole discretion. This should cover damage to the equipment howsoever caused (including damage by the OpenIXP or third party staff or equipment) and third party liability in the event of the Peer's equipment causing damage to the OpenIXP or third party staff or equipment.

## **13. DISPUTE RESOLUTION**

OpenIXP shall operate a dispute resolution service. Its scope shall be limited to the OpenIXP Core Activities. Its use shall be voluntary and non-binding. Costs shall be covered by the participants.

## **14. CHANGES**

This MoU and other documents of the OpenIXP shall only be modified in a General Meeting by the Peers, permitting certain minor and consequential changes; in all events this MoU shall not be unilaterally modified as it pertains to a Peer 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.