



IOSN
software for all

International Open Source Network

Background

Information technology is changing the way governments, businesses and educational institutions provide services. It has revolutionized networks across borders and cultures, promoting new opportunities for economic and social development. However, there are barriers to entry for new users as access to ICT is severely limited in developing countries due to high costs. Developing countries have to contend with priorities such as health care, food, shelter, electricity and basic economic priorities amidst other challenges: expensive communication infrastructure, applications and computer hardware.

Free/Open Source Software (FOSS) presents itself as an access solution for developing countries. It represents an opportunity for these countries to adopt affordable software and solutions toward bridging the Digital Divide. It represents an alternative to importing expensive proprietary software and applications.

The Vision

Developing countries in the Asia-Pacific Region can achieve rapid and sustained economic and social development by using affordable yet effective Free/Open Source Software (FOSS) ICT solutions to bridge the digital divide.

International Open Source Network

While FOSS has become more accepted, there is a lack of understanding on its benefits, policy implications and resources available to Governments to implement FOSS solutions. FOSS software refers to applications and operating systems with open source codes for other parties to review, comment, refine, and extend. Very often this model includes a bug reporting process and is often quoted as a good model for producing resilient software. This open concept allows easy customization of the software to users' needs. FOSS represents an opportunity for developing countries to adopt affordable software and solutions toward bridging the digital divide. Cost-savings will allow funds to be used on other priorities and development objectives.

The International Open Source Network (IOSN) is a Center of Excellence for FOSS in the Asia-Pacific Region. It shapes its activities around FOSS technologies and applications. Via a small secretariat, the IOSN is tasked specifically to facilitate and network FOSS advocates and human resources in the region. The secretariat will:

- Serve as a clearinghouse for information on FOSS in Asia-Pacific
- Strengthen current FOSS capacities
- Assist with the development of needed toolkits and resource materials, including localization efforts
- Assist in the coordination of FOSS programmes and initiatives through information sharing and networking in the Asia-Pacific region.

Much of the IOSN coordination work will be undertaken online via the IOSN Portal so that governments, individuals, advocates, and others can have access to information, tools, resources, and discussion. IOSN is an initiative of the Asia-Pacific Information Development Programme (APDIP), which has been supporting the strategic and effective use of Information Communication Technology (ICT) for poverty alleviation and sustainable human development in the Asia-Pacific region since 1997.

Last modified 2004-07-15 12:11 PM

Goals and Objectives

"Development and deployment of open-source software should be encouraged, as appropriate, as should open standards for ICT networking"

The Tokyo Declaration of the January 2003 World Summit on the Information Society (WSIS) Asian Regional Conference

Goal

Developing countries in the Asia-Pacific Region can achieve rapid and sustained economic and social development by using affordable yet effective Free/Open Source Software (FOSS) ICT solutions to bridge the digital divide.

Overall Objectives

The overall objective of the project is to create an International Open Source Network (IOSN), which will serve as a Center of Excellence and Clearinghouse for Information on FOSS. The Network will shape its activities around FOSS solutions, tools, technologies, and applications. It will:

- Help to strengthen current FOSS capacities
- Assist with the development of needed toolkits, resource materials and *localization* efforts.
- Generally assist in co-ordination of FOSS programs and initiatives through networking.

The IOSN will be a reference point and resource base for the FOSS community, programmers, governments, NGOs and institutions for networking and information exchange in open source solutions, especially as regards to R&D and dissemination of localization packages. It will have its own resources in assisting countries and communities adopt and localize affordable software solutions. The Network will conduct R&D on other aspects of FOSS as well. The Center will also assist governments and policy makers formulate policy based on best practice and research.

The IOSN will coordinate training sessions for the Linux Operating System and related applications. Training sessions will be organised in conjunction with partners already active in this field. The IOSN will base its work primarily on Linux but it will not be limited to one operating system. Going further, the IOSN may enter into agreements with partners to provide technical support for governments and educational institutions in the Asia-Pacific region.

The IOSN will actively address FOSS licensing issues. Licensing pertaining to FOSS can get complex, especially when applications are used in tandem with proprietary software. Here, IOSN will aid programmers, governments and institutions to clarify the issues through awareness programs. IOSN will be active in writing *Primers* or short FAQs on particular aspects of FOSS targeted for the FOSS community in Asia-Pacific. These *Primers* will aid technicians and other programmers seeking solutions to many of the technical problems on localization and other technical issues.

In this regard, the IOSN will develop awareness programs; coordinate expertise, technical support, etc toward the better use of resources in Asia-Pacific. It will establish a commons for the sharing of intellectual property where programmers will be able to put their ideas and work in this commons - if they choose to do so - and according to the level of rights they seek to retain. The IOSN will be open to different forms of *Free/Open Source* licensing, i.e. General Public License (GPL), BSD etc. IOSN will also be open to other forms of licensing such as GNU Free Documentation License (GFDL) and Open Content.

Specific Objectives of the IOSN

- Creation of a platform for networking and discussion amongst Free/Open Source Advocates; Venue for awareness raising, information exchange and discussion on FOSS issues
- Planning of Workshops; Establish training programs to strengthen human resources and expertise in the region
- Creation of online discussion groups, mailing lists and updating of web site to serve the FOSS community; resources for policy-makers and programmers on FOSS and for localization
- Creation of a repository and collaboration tools for open source applications in Asia-Pacific, including a database of open source experts
- Build on existing capacities in Asia-Pacific
- Creation of incentives and grants for FOSS programmers; testing and Q/A of software
- R&D on FOSS technologies, particularly for localization; toolkits for localization
- Promote, facilitate, and support regional software developers to build on FOSS platforms

Last modified 2004-07-16 06:21 PM

Beneficiaries

Immediate beneficiaries of the IOSN are the Asia-Pacific Free/Open Source Software (FOSS) R&D community, software developers, governments, NGO community, academics, and technicians. The resource center will be central in helping policy and decision-makers, educational institutions and others develop plans for Free/Open Source software in their respective organisations. Decision-makers and Governments will benefit from the knowledge capital and resources of such a Network. Finally, other beneficiaries include independent researchers and programmers seeking work. IOSN will be a Free/Open Source software hub for governments, institutions, and individuals.

Last modified 2004-07-15 12:11 PM

Activities of the IOSN

There are four main activities for the IOSN in its initial stages. These are:

- Free/Open Source Software (FOSS) Information Resource Facility
 - On-going Mapping of FOSS activities in Asia-Pacific
 - Collaborative database of countries, languages, fonts, and organisations in Asia-Pacific
 - Online Information Clearinghouse
 - Collaborative Website
 - Online Discussion Forum/Groups
 - Mailing Lists
 - Management of Software Repository
 - Documentation of Best Practices
 - Documentation on patches and upgrades
 - FOSS Primers
- Creation of a Database of FOSS Experts and Human Resources in the Region
 - Networking of Experts
 - Technical Support
- Training and Workshops
- Research and Development
 - Localization, including development of local fonts conforming to international (UNICODE) standards
 - Toolkits
 - Research on Equitable Access
 - Q&A on FOSS R&D/Case Studies of implementations
 - Manage a grant/fund for new and on-going initiatives

Last modified 2004-07-15 12:11 PM

Role of the IOSN

The IOSN will conduct awareness-raising activities such as conferences, seminars, and workshops. It will plan and execute events surrounding the many aspects related to Free/Open Source Software (FOSS). For example, the IOSN can facilitate the planning and sourcing of funds/participants for an annual Conference on FOSS Licensing. Alternatively, it can facilitate discussion on technical issues and other specific matters via mailing lists, discussion groups and the website.

Role of the Software Repository

FOSS is already available for government and/or educational uses, but not many know of their existence. Examples are the MySQL Database, Plone/Zope portal toolkit, OpenUSS, KEWL, and others. As a result, governments and organisations may not be using low-cost solutions. For Government and educational applications, FOSS must find a central home and be resourced toward specific uses at relevant institutions within Asia-Pacific. The IOSN will play the role of an open source information repository: identifying, documenting, and advising institutions and governments toward free/affordable software. The IOSN will also create a repository of FOSS for collaborative work, providing FOSS developers and others with either the actual software itself in its databases, or a compiled list of links to sources. The IOSN will also link up with FOSS application developer groups such as KDE, GNOME and CDS-ISIS, among others, sourcing solutions for the wider Asia-Pacific Region. The IOSN Portal will play a vital role in listing affordable FOSS packages for use in the region.

Database of Experts and Human Resource

As a center for FOSS expertise and technical support, the IOSN will create and maintain an open database of FOSS programmers, private entities, and experts in the region willing to take on challenges presented to them by governments and other institutions. Programmers will serve as resource persons to the IOSN and activities supported by it. The resource facility will also allow key experts the opportunity to take on projects secured through the IOSN. Further, experts can be sourced to teach particular training sessions organized by the Network. Such an opportunity will aid governments in adopting affordable solutions while regional programmers have the opportunity to earn income, establish/enhance reputations, and further their talents in the field.

Small Grants Programme

The IOSN will establish a small grants program to support FOSS R&D (please see R&D & Localization below). The programme will provide grants in the range of \$500 to \$10,000 for work on localization efforts, local font development, and FOSS generally.

Technical Support

As the IOSN becomes more established, and regional competencies and networks have been established, the IOSN will be able to coordinate technical support for FOSS applications. It will do this in partnership with FOSS providers both small and large scale (eg. Red Hat, Debian.) This service would be one of the intrinsic benefits for members and providers working closely with the Network. Members can call in for assistance with technical issues while the Network can act as a clearinghouse for technical support, information, and other resources.

R&D & Localization

In the area of localization where software markets are too small for major software vendors to justify investments in developing local-language character sets, FOSS is the greatest avenue for the creation of local and relevant content. There is currently a lack of understanding over the importance of local language capabilities and language representation online.

The R&D Component will cover the following major areas:

- Fonts & Standards Development
- Localization
- Toolkits and Primers on FOS
- Equitable Access
- Q&A on OS R&D/Case Studies of implementations
- Anti-Virus Systems for FOSS based systems

Local font development based on minimal, internationally acceptable norms and standards will be a primary focus of the IOSN. This aspect is geared to assisting local communities of various languages in adopting and benefiting from the ICT revolution. The creation of fonts and standards, including standards for internationalised domain names (IDN's), are important in Asia-Pacific. R&D work on this would be subcontracted by the Center throughout the region.

Localization will involve making applications available in several languages that are common in Asia-Pacific. This is achieved primarily through the implementation of appropriate electronic interchange standards (Unicode) and designing fonts under internationally recognized standards (TrueType and OpenType). Similarly, for Operating Systems it is important that the Graphical User Interface (GUI) is geared for Asia-Pacific languages. The IOSN will work towards facilitating localized FOSS solutions for the Asia-Pacific region and provide packaged information in the form of `_toolkits` to aid the process of localization by indigenous researchers and developers in the region.

The IOSN will also mirror websites where there are resources already available. The following is a preliminary list of broad areas/subjects: fonts, localization, Linux/FreeBSD kernel source code (with LXR), LDP, and tools and resources for internationalisation (I18N). IOSN will produce technical and non-technical `_Primers` for the IOSN community and governments requiring assistance as they implement FOSS. These Primers will assist governments in understanding the issues surrounding FOSS.

Much research needs to be done in ensuring equitable access, where all communities are able to benefit from networked technologies, applications, and operating systems. The R&D dimension of the IOSN will conduct research on access methods through FOSS, standards for access by the handicapped (especially the blind), poor or disadvantaged communities. The IOSN can support new applications that will benefit disadvantaged communities toward equitable access objectives.

The IOSN itself could be involved in some testing and R&D work, as well as the production of Primers and toolkits. However, as noted above, all this work will primarily be subcontracted to the pool of researchers, developers, and other `_experts_` connected with the IOSN throughout Asia-Pacific. Programmers will be able to use the small grant scheme, which aims to assist programmers in their work. This will help build and strengthen human resources and technical capacities in the region.

R&D: Total Asia-Pacific FOSS Package (TAP)

This aspect could be undertaken in the later stages (3-4 year timeframe) of the IOSN. Presently, a user is required to download and install multiple components when setting up a FOSS operating system, especially if localized packages are involved. This is inconvenient and can be a potential barrier for people using Linux and FOSS software applications. The vision of the Total Asia-Pacific FOSS Package (TAP) is to package pertinent components such as mail clients, word processors, web browsers, and other applications into one, customized open system for developing country governments in Asia-Pacific. The TAP package can aid non-expert users, especially those with little experience in Linux, to adopt FOSS operating systems and supporting applications. Down the line when the

IOSN is more established, it could consider developing pre-packaged solutions for non-expert users in Asia-Pacific, distributed in several Languages.

Training and Capacity Building

One of the more fundamental challenges facing FOSS is the lack of expertise in guiding individuals and institutions toward adopting FOSS solutions and applications. The IOSN can facilitate training of individuals and government technicians in the Asia-Pacific. The IOSN will partner with existing organisations and experts in providing training sessions on Linux. Curriculum could follow the following themes:

- Linux and Programming
- Free/Open Source Software for localized computing, information exchange and processing
- Creating Effective Technical Support
- Free/Open Source Software and Intellectual Property Rights (IPR) models

]Other relevant courses will also be offered by the IOSN in partnership with local and national public, private, academic, research, and other organizations working on FOSS in the region.

Last modified 2004-07-15 12:11 PM

Goverance

An 8-10 member Advisory Committee for the IOSN will be created by the UNDP representing South Asia, South East Asia, North East Asia, and the South Pacific. The Advisory Committee will perform its duties virtually. The Committee will provide broad policy direction for the IOSN and help identify the priority Free/Open Source Software issues and needs in the region. The IOSN Portal will facilitate the online discussions of the Committee

Last modified 2004-07-15 12:11 PM

Incentives

The following are the incentives provided by IOSN:

- Making available expert knowledge and affordable Free/Open Source Software (FOSS) solutions; the primary incentive is to reduce costs for software and applications in developing countries; assist countries with knowledge, resources and expertise, meet IPR policy goals; develop competencies in ICT, and meet human development challenges with ICT.
- By combining the needs of several countries in software development and introducing shared costs. IOSN will be in a position to source for regional needs and to save costs for their use in more than one country. IOSN will combine collective sources of funding, and partner with the private sector in developing applications with major savings. These savings will encourage new partners to join IOSN and be an active member.
- Creation of a matching service for software development. IOSN will also benefit programmers and countries in sourcing projects. In this regard, IOSN can function as a regional clearinghouse in identifying and matching software needs with developers. Software developers will benefit from projects being sourced by IOSN. This will encourage members to remain active. Software developers will also benefit from the grants/fund set up for FOSS projects.
- Source funding for particular FOSS applications. IOSN will provide guidance on funding. IOSN can fund directly, or seek external sources of funding for projects to benefit developing countries. Sources of funds could be:
 - Direct funding by member countries; or countries coming together to support particular software applications in tandem
 - Funding by donor countries, international agencies and foundations
 - Funding and in-kind donations from corporations
 - Funding by the UNDP offices in cases where projects fall within the purview of UNDP objectives and initiated by UNDP country offices
 - Coordinating other applications and needs that are not necessarily FOSS in benefit of members, programmers and researchers.
- Technical Support for FOSS. IOSN can impart its own knowledge or will partner with others in providing technical support activities for Linux software and applications. IOSN will match programmers and

corporations/government in allowing a number of hours of technical support coordinated by the Network. Potential partners are Red Hat, Komnas, etc.

- Developing and Coordinating FOSS in the region IOSN will develop a more coherent approach and coordinated FOSS effort in Asia-Pacific taking into account specific needs and resources of the region.

Last modified 2004-07-15 12:11 PM

Expected Outcomes/Outputs

Expected Outcomes

- Awareness of Free/Open Source Software - FOSS
- Establishment of a FOSS Resource Center for Asia-Pacific
- Networking and information sharing amongst FOSS advocates
- Strengthening of existing and building of new FOSS capacities in Asia-Pacific
- Faster incorporation of ICT in developing countries; jumpstarting countries with little resources in ICT
- Closer cooperation between countries, governments, and FOS R&D communities
- Clustering of needs and expertise in FOSS
- Lowering of costs, and bridging of the digital divide, with affordable software and solutions
- Consolidation of regional outputs from applications and operating system software research and development

Expected Outputs

- Repository of FOSS Applications
- Mailing Lists, Resource Materials
- Online information exchanges
- Workshops and awareness-raising activities
- Training and advocacy center
- Localization Projects and Packages, including local fonts

- Toolkits
- IOSN portal
- New FOSS Applications and R&D Outputs
- Primers pertaining to technical issues and problems relevant to the IOSN community and Asia-Pacific Region
- Incentives for developers
- Small Grants programme

Last modified 2004-07-15 12:11 PM

Location and Sponsors

Location

The UNDP's Asia-Pacific Development Information Programme (APDIP) will incubate the IOSN while looking for a permanent home, or set of homes, for this initiative.

Considering the vast size of the Asia-Pacific region, it may be desirable to have not just one but two or three IOSN nodes. Each node would be responsible for either sub-regions such as South Asia and the South Pacific, or specialized thematic areas such as local language fonts and character sets. A number of possibilities exist in China, India, Malaysia, Pakistan, Sri Lanka, Thailand, and other countries for permanent home(s). They will all be explored.

Sponsors

The IOSN has been launched by the UNDP and is being incubated by the UNDP's Asia Pacific Development Information Programme in Kuala Lumpur, Malaysia. APDIP will work towards building a consortium of sponsors/social investors for the IOSN. This includes bilateral and multilateral sponsor, foundations, as well as corporate sponsors.

Last modified 2004-07-15 12:11 PM