

Ministry of education
Sengsavanh College

ICT development in Lao PDR

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Main point of presentation

- ◆ Review of ICT development
- ◆ Internet development in Lao
- ◆ Some Important Internet project
- ◆ Information Technology center

ICT infrastructure

- ◆ 4 telecommunication operators. ETL. Laotel. LAT. Milicom-Lao
- ◆ 5 province have a fiber Optic Network connectivity to Vientiane (ETL has plants to cover capitals of 13 province by this year and 142 districts headquarters by 2005)
- ◆ In may 2003, there are 72.235 PSTN lines in services from 3 operators, which 1.706 subscribers in the rural province. And there are only 300 public telephones, which all of them are located in the big city only.
- ◆ There are about 10.000 computers in the country and growing at about 300per month currently.
- ◆ Most of government ministries are running some form of local area network (LAN). Which each of them designed their network specifically
- ◆ Starting to use Wireless system and Optic fiber

ICT Education

- The percentage of expenditure on tertiary in Laos is the lowest of all ASEAN at 7,4%. Formal education related to IT is only available at the tertiary level. There is no curriculum incorporation of IT at all at the primary or secondary levels
- Department of the mathematics and Physic of NUOL do provide the computer application.
 - Information Technology Center of STEA (IT engineer. Trainers and government offices)
 - Smart school project at Sikhottabong high school and Champasack high school.
 - The Private Training school
 - Business administration school
 - Computer retaillers.
 - The Information technology Center has also regularly conducted seminars and training courses on e-commerce in Vientiane.

The demand for the IT related training is growing rapidly. This reflected by the shortage of IT skilled works in the workforce

ICT Industries and services

- ◆ ICT industry was established In early 1980s. However it has not so much developed The Lao IT industry was limited to small computer stores, which can be divided into four sector.
 - Computer retailers: Computer retailing and servicing
 - Internet Service: Provided Internet Access. Design and hosting web sites
 - Education : IT related training
 - Wireless Network solution: Design and install wireless LAN and WAN
- ❖ The Lao IT market it very small (mainly gov & org). Therefore specialization inn one particular sector of this market is usually unprofitable
- ❖ Low-cost computers are usually imported by retailers form China, Thailand and Vietnam or assembled locally from imported parts. Larger retailers import brand name equipment mostly from Malaysia. Singapore and Taiwan.
- ❖ There is a 5% tariff on all imported hardware. There is also 10% turnover tax applied to all computer retailers. These two tax are passed on directly to customers, along with additional 20%-50% markup profits.

E-business & e-Commerce

- There is little in the way of e-business, which the 5 reasons:
- ◆ Overall Internet access and the number of Internet users are too low to justify the investment required to establish and E-business. The only real feasible business endeavors related to tourism.

E-Business & e-Commerce 2

Some initiatives related to the promotion

- The ministry of Commerce has established the Trade Information Center Which also created portal website for trade promotion as well as organize the E-commerce seminar.
- The national tourism Authorities has established the Tourism information center. Which also provide the online information for promotion the tourism activities and Business.
- MPDF just launched a project on establishing .
- The ISPs also provide the E-business and e-commerce solution for some private companies such as design and hosting websites for them.
- With the E-ASEAN framework, the national taskforce is also working out on cyber law and LAL

Government guideline for IT Policies

Expectation:

1. Utilization of ICT should be expanded to all area to become one of the priority factors for social-economy development and national security matter.
2. The National ICT network should be extended throughout the country. With the capacity and capability to carry more data at higher speed. Better quality and cheaper prices

The policy must be including following matter:

1. The increased utilization of ICT is a priority in the national strategy for social-economic development. ICT is also the basic tool to accelerate the development and expansion of the industries and other developed counties.
2. To create and increase the human resource on ICT fields as this is necessary for improving ICT utilization and development in the country

Project on formulation e-policies & e-strategies

- ◆ Background: In April 2003. APDIP launched the program to strengthen the national capacities for new ASEAN members countries in the formulation of national e-policies through national participatory consultations and under south-south cooperation principles and the e-ASEAN framework.
- ◆ Objective: To develop and consolidate, through a participatory process, national ICT policies/strategies and action plans for the Lao PDR. Such policy would be the foundation for formulation and implementation of strategic and action plans in Lao PDR over the next 2 years period
- ◆ Implementation: Assist to Lao government (STEA) in formulating a cross-sectoral draft based on inputs from a broad range of stakeholders. There will be levels of human resources on place to ensure the successful implementation of he project at local level:
 - ◆ Steering committee
 - ◆ National and International Facilitators
 - ◆ Working group (Infrastructure & Industry:Application: Standardization & localization: Human resource development: legal framework

Internet development in Lao PDR

Development index

Description	2000	2001	2002	2003
Local ISPs	2	3	6	7
Internet Café	11	30	60	200
Subscriber Users	1934	2482	2900	3800
ISP Service fees	2\$/h	1,5\$/h	1\$/h	0,5\$/h
Café Service fees	0,05\$/m	0,03\$/m	0,01\$/m	0,008\$/m
Bandwidth	265k	1M	2M	5M

Internet development in Lao PDR the inhibition to growth.

- ◆ Lao PDR has been one of the last countries in Asian region to establish full internet connectivity, Lao PDR has largely remained disconnected from transnational world of cyberspace.
- ◆ Government ministries make little use of the global network and the business sector has equally been slow to implement internet related application
- ◆ The price still very high and each service provider are defining the fee by their own equipment for using the internet still expensive
- ◆ Most of service are concentrating to the foreign customer and big companies.
- ◆ The service quality still very low and not so upgrading
- ◆ Lack of local manual and hand book of internet
- ◆ Lack of content in Lao language

Related internet regulations

Utilization and Management of Internet in Lao PDR

Concerning Internet organization, service and utilization in Lao PDR

- ✿ Ministries concern such as : Ministry of information ad Culture;
- ✿ Ministry of Telecommunication Post Transport and Construction;
- ✿ Ministry of National Security and STEA also issued their own

Regulation related to the internet management and promotion

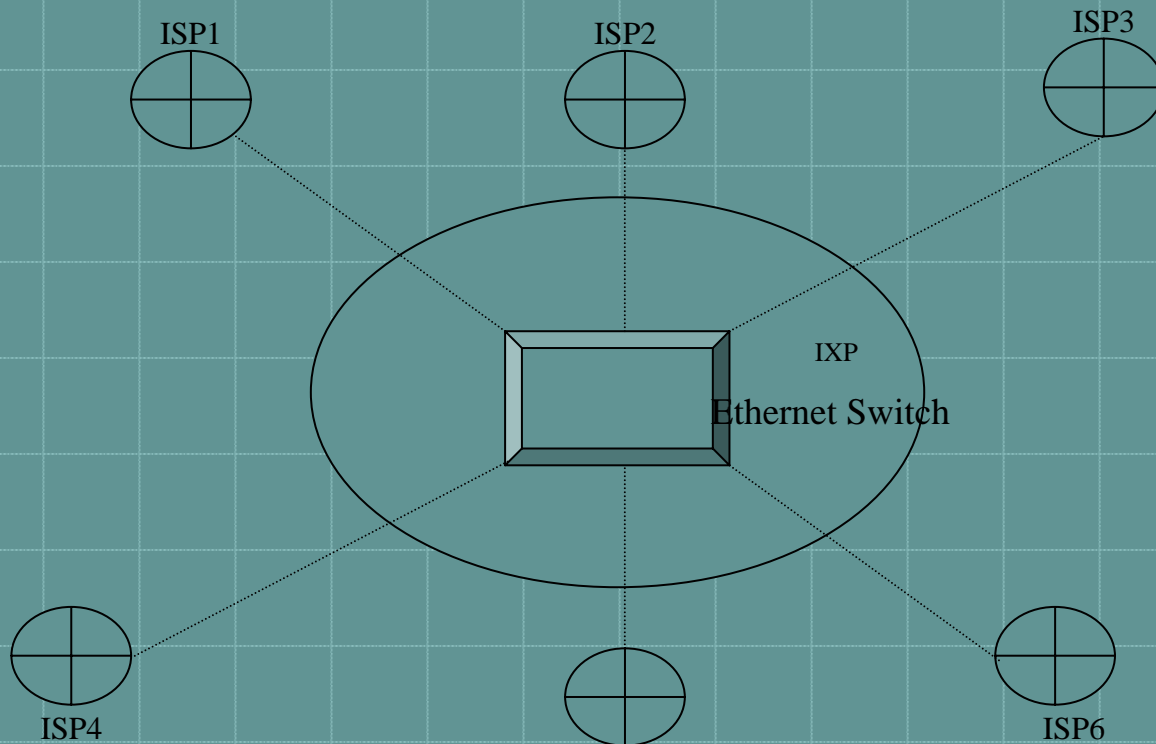
According to their responsible authorities

National internet gateway and government ISP

- ✿ Provide the internet access for government organizations and academy institutes
- ✿ Provide the web hosting
- ✿ Provide the domain name registration under gov.la; org.la, edu.la and etc.
- ✿ Arrange and distribute the IP address for ministries networks.
- ✿ R&D of E-government Application.
- ✿ Issue:
 - ✿ - ISPs have their own separate internet Gateway
 - Low bandwidth for the international link
 - Authority organization could not control the access sites being provided by ISPs
 - ✿ Solution:
 - Local traffic management requires all members ISPs to be physically linked to common interconnection(routing information exchange and protocol)
 - ✿ Assistance:
 - 1st phase: international Development Research Center (IDRC)- 2nd phase: Swedish international Development Agency (SIDA)

National internet exchange Gateway (Phase2)

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Internet Lao PDR-Thailand Project

❁ Objectives :

- providing a internet access for 18 provincial government offices
- set up a internet Provincial service Center
- set up internet portal for provincial governors and business

❁ Provision :

- one year free bandwidth of 512 kbps to CAT
- Set up a Gateway router in STEA office
- Set up a internet router link for each province
- Set up a provincial central management system (Server)
- Train two staffs from each province to be the internet engineer.

❁ Duration: November 2003 to November 2004

❁ Implementation agencies:

- From Laos: Information Technology Center
- - From Thailand: Communication Authority of Thailand (CAT)

Information Technology Center



- ❁ Laos faced a lot problems in introducing in a big way. As there are shortage of ICT talent in the country and need expertise to develop “capacity building” through human resources development programmes. Therefore STEA has established the information Technology Center to conduct the Research, Development, Training and Service on IT
- ❁ Role and Functions:
 1. Join formulation National ICT policy & master plan.
 2. Secretary of Lao National internet Committee
 3. Conducting the IT Research and Development
 4. Provide the training for IT engineers. Trainers and government officers
 5. Join development the IT standardization and management
 6. Operate the government's ISPs and National internet Exchange Gateway .
 7. Provide the consultation and other IT service.
 8. Member of regional and imitational organization (AFLT. RINSEAP/UNESCO.SCOSA/ASCAN/ICT Global Resource Network/UN. ORBICOM/UNESCO chairs in Communications)

Networking sector

- ◆ National internet Gateway System
- ◆ ISP for the government organizations
- ◆ National internet Exchange gateway
- ◆ Internet Lao-Thailand Network
- ◆ STEA'S Local Area Network

Training Sector

Facilities

- CICC donated 19 PCs and 3 Servers for conducting the general training courses.
- IDRC donated 10 PCs and 2 Servers for conducting the advance training courses
-  Programs:
 - Training for Engineer: Expect to create 2 IT engineers for each government organization through the five advance training courses
 - Training for trainers: Expect to create 1 IT instructor for every STEA branch offices and technical colleges
 - General training for government officers. End users training course such as office automation, database, internet and etc.
-  funds:
 - Government budget
 - Overseer support:
 - Trainees Recipients:

Research & Development Sector

- ◆ Open source laboratory (Assistance from Francophone organization)
- ◆ Project on building Urban-Rural Digital link (Assistance from international Development Research Center)
 - ① Upgrading the National internet Gateway System
 - ① Provide internet access for National University of Lao PDR
 - ① Provide internet access for Luang Prabang Governor office
 - ① Establish a Multi-purpose Tele-Center in Luang Prabang
- ◆ Project on development the component for localization Dictionary, Lao lexicon, sorting system, spell check function, machine translation and etc (IDRC's assistance)
- ◆ Development of E-government application system (expecting to have an assistance from Korea's government)

Conclusion

- ◆ In country such as Laos, with so many pressing basic development needs, it is not surprising that attempts at establish internet connectivity and E-business have been hampered by a general lack of skills and resource. Low levels of PC penetration, combined with poor telecommunication network with also slow the process.
- ◆ There is currently a high level of interest in ICT development in the country ICT implementations and strategies, and the allocation of resources. From the government. Donors. And the private sectors. Towards ICT development are reflected in existing ICT related projects focusing on human resources development. Governance. Administration. And information management.
- ◆ A policy paper of Government on Governance issues addressed the needs to use ICT as a tool for improving the management practices of day-to-day working methods with move efficient and transparent manner. There is lack of co-ordination policies, which tends to lead to duplications among government entities and inefficient operations. And limit the benefits to be gained from ICT advancement.

Steps forward

- ◆ To enhancing the role of four IT center in order to be center of excellent (Upgrade to be institute)
- ◆ The urgent and greatest need in the country is for skilled professional and technical informatics experts to plan, Design, install and maintain information facilities.
- ◆ R&D the application program for E-government system in order to improve the effectiveness and efficiency of government services.
- ◆ Strengthening the promotion of IT education by establishing the Master in Computer Application Program Laos
- ◆ Bringing the ICT for agriculture and rural development
- ◆ Establish a VSAT based Internet connection to all 18 provincial governors.
- ◆ Strengthening the Internet penetration and E-business opportunity

Thank You!

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