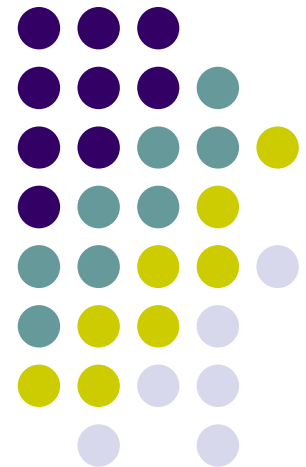




# NEPAL COUNTRY REPORT

## Local Language Computing Initiatives



***Er. Saroj Devkota***

*Vice-Chairman, High Level Commission for IT*

*Government of Nepal*

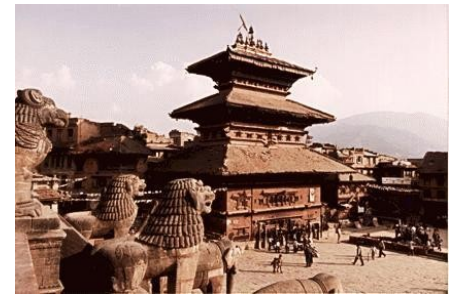
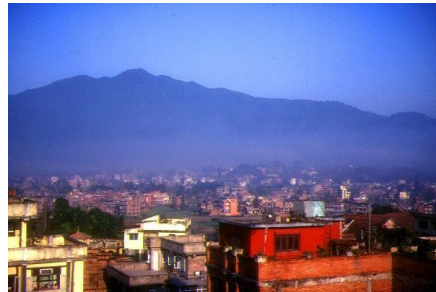
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02/10/07

# NEPAL- Background



Nepal

# NEPAL- Background- Geography



- Area: 1 47,181 sq, km.
- Population 25 million (diversity in cast, ethnicity, religion and culture)
- Ecological Zones  
Himalaya 15%  
Hills 68%  
Terai 17%
- Development region: 5, 75 administrative districts, 3914 village development committees and 58 municipalities
- Language Ninety languages fall either Aryan or Tibeto Burman family, out of them only 5 have scripts. Nepali is official language written in Devnagari Script. 16% understand English and English is compulsory subject from grade 4-12.
- Literacy 55 % literate and even lower in rural area and minorities live.

# Nepal- ICT and Local Language



- High Level Commission for Information Technology (HLCIT), which is an apex body formed under the Chairmanship of the Prime Minister has undertaken a number of initiatives aimed at facilitating localization of IT in the country
- HLCIT formed a steering committee to promote use of Nepali Language in Information Technology (NLIT) comprising of a number of professionals and domain experts from government, academia and private sectors.
- Madan Puraskar Pustakalaya (MPP), having strong portfolio of activities in localization of IT which has development of Nepali version of Linux, and Unicode based Nepali font among others
- Kathmandu University have been actively engaged in promoting use of Nepali language in IT by developing a number of resources in localization arena.

# Local language computing-development



- NLIT has developed the glossary of 2300 technical words related to computers into Nepali. It has to be updated.
- Nepalese Standards of Character Code for Information Inter exchange has been prepared.
- NLIT has its awareness programs for local language computing and has organized a number of Standardization training / workshops with the support of CICC, Japan.
- Nepali Font Standardization Project undertaken by Madan Puraskar Pustakalaya (MPP) in co-ordination with the Ministry of Science and Technology and funded by UNDP in March 2002 is one of the first works on Nepali language computing in Nepal. Direct outcome was two keyboard drivers, Nepali Unicode Romanized and the Nepali Unicode Traditional.

## Public Organizations working local language computing



| <b>Public Organizations</b> | <b>Role</b>   |
|-----------------------------|---|
| Madan Puraskar Pustakalaya  | A local NGO / library actively involved in the development of Nepali Language has been actively involved in the area of local language computing. It has developed Unicode based Nepali Font. Involved in various other activities. |
| Kathmandu University        | A university promoting Natural language Processing (NLP) through Language processing research lab (LPRL).   |
| Tribhuwan University        | A university promoting Computational Linguistics through its Central department of linguistics.   |

# IT infrastructure



- Nepal Telecom (NT), the largest telecom service provider and has made remarkable achievements in the telecom sector.
- Fiber optic backbone laid long east – west highway covering the country lengthwise and linking with both India and China
- NT network has been linked to India and then on to submarine network via fiber optics to the rest of the world apart from its Satellite earth station.
- IT park in Banepa has been established and 1 International organization is operating from there.
- 4 National level government supported university are running various type academic programs in IT.
- Organizations dealing with Training and Education (67.84%), Hardware and Software (15.74%), Cyber Net (13.50 %), Domain Registration and Internet Service Providers (less than 2 %). (source : CAN 2003)

# IT infrastructure on communication



## Some facts on the IT infrastructure indicators

| IT infrastructure indicators                         | Number   |
|--|--|
| 1. Estimated Internet/Email users (2004)             | 2,50,000 (0.97%)<br>(Subscriber only - 46,201 - 0.18%) |
| 2. Telephone (fixed line)                            | 4,95,569 (2.32%)                                       |
| 3. Mobile Telephone                                  | 9,16,639 (3.54%)                                       |
| 4. Wireless in Local Loop                            | 1,05,885 (including Limited Mobility)                  |
| 5. Number of Internet Service Providers              | 33   |
| 6. Number of telecentres (Rural Information Centers) | 200 +  |
| 7. Combined total bandwidth used by ISPs (2005)      | 40 Mbps  |
| 8. VSAT user   | 109  |

## Policy Initiatives from Government



- High Level Commission for Information Technology (HLCIT, [www.hlcit.gov.np](http://www.hlcit.gov.np)), an apex IT body chaired by the Prime Minister formed in the year 2003.
- The formation of HLCIT aimed at providing crucial oversight and policy guidances for the development of ICT sector in the country.
- The HLCIT established the Nepali Language in Information Technology (NLIT) steering committee in the year 2004. But still not established as permanent department.
- NLIT steering committee has been taking the initiatives for developing uniform standards on localisation issues (like standardization of character sets, keyboard layouts, fonts, glossary, dictionary etc.), language issues (sorting order, glyph sets, glossary etc.), font conversion, interconnectivity (cross platform, DNS, Email etc.) and locale (date, time, calendar, currency, numbers etc.).

## Localization Initiatives from Public organizations



- MPP - PAN Localisation Project (<http://www.PANL10n.net>) in the year 2004.
- Developed localized Linux distribution in Nepali, NepaLinux 1.0 (<http://nepalinux.org>), released in December 2005. Revised version, NepaLinux 1.1 was released nearly a year after in October 2006.
- The Project tenure of the PAN Localization Project has been extended up to Jan 2010.
- Microsoft developed a Nepali language pack for Windows XP and Office 2003 and released in November 2005.
- NepaLinux and Windows also have included the basic spell-checking and thesaurus for Nepali.
- English to Nepali Machine Translation Project, “Dobhase” (<http://nlp.ku.edu.np>) run by the Kathmandu University in collaboration with MPP and supported by the PAN ICT R&D program.

## Localization Initiatives from Public organization Contd..



- In the year 2005, Madan Puraskar Pustakalaya started the 3 year long Bhasha Sanchar Project (<http://bhashasanchar.org>) funded by the European Commission under the Asia IT and C program.
- The Project aims to serve the ICT needs of local communities and citizens, and provide an input into sustainable development, by developing and deploying software technologies that work for Nepali.
- Some of the works of the project include Text-To-Speech System for Nepali, a contemporary on-line dictionary for Nepali etc., which are planned to be completed by the end of the year 2007.

# Challenges



- Concept of local language computing in its formative stages.
- Still government has not prioritized and identified it as regular national activities so adequate fund is not allocated for this activity
- Policy remaining inadequate.
- Localization, which is at the heart of local language computing, is directly related to the Open Source Software Paradigm and much needs to be done in this front.
- People tend to shy away from learning and using the open source systems as they have the option to use the pirated copies of proprietary software.
- Current FOSS awareness campaigns are inadequate.
- Deep misconception of the Open Source Software as something very difficult to learn and not meant for end-users.

# Future Plans



- In the recent years, the government and the private sector have embarked on encouraging initiatives in the field of local language computing.
- In the days to come, both of these sectors need to work in close co-ordination with each other for formulating a sound local language computing policy.
- Soon HLCIT will prioritized this sector

# Conclusion



- Although Nepal does not have a well formulated local language computing policy till date, there has been positive initiatives both from the government, public and private sectors.
- Some remarkable outputs in local language computing have been achieved.
- Further consolidate the co-ordination between the two bodies so as to form a firm local language computing policy.
- Create an environment whereby the achievements attained so far could be regulated in an efficient manner thus providing maximum benefits to the society.



**Thank You !!!**