

Out line of the Presentation

- Pre-history
- Motivation to develop in another plat-form
- Project initiation and partners
- Project contribution
- Achievements
- Challenges and problems faces
- Future Plans
- Sustainability



Pre-history

The situations before the start of the project.

- Prevalence of many ASCII fonts with different keyboard in many organizations developed to address their own needs.
Druk 98 in Kuensel, Jamyang in National Library, Geylong Rinchen etc..
- To address these problems DDC initiated Unicode based Dzongkha computing in 2000 in Microsoft Windows.
 - Dzongkha Unicode Open Type fonts (Wangdi and Tsuyig).
 - Standard Dzongkha Keyboard.
 - Converter.
- No Dzongkha interface and English knowledge still required to operate it.
- The project dragged on for so long (2000-2004) without visible deliveries.



Project Initiation and partners

- In 2003 end, PAN delegation came to Bhutan and showed their interest help us in the project.
- Dzongkha Development Commission
 - Apex body in the country for Dzongkha
- PAN Localization (IDRC) the funding agency
- Sherubtse College <www.sherubtse.college>
- Department of Information Technology www.dit.gov.bt
 - Looks after all the ICT related activities in the country.
- Roles: (As planned initially)
- Dzongkha Development Commission
 - To support the project pertaining to language related issues.
- Department of Information Technology
 - To care of the developmental aspects in localizing Dzongkha.
- Sherubtse College
 - Testing and Quality Control.
-
-



Project Contributions

Royal Government of Bhutan's contribution:

- Infrastructure (Space, internet, phones etc.)
- Human resource (Developers, Project leader)
- Training of End - Users

IDRC contribution

- Hiring of Translators
- Training the Bhutan Team
- Equipments (computers, Laptops, UPS etc.)
- Publishing (Manual, CDs for Dzongkha Linux etc.)
- Advertisement.



ACHIEVEMENTS

1. Office Application in Dzongkha <<http://dz.openoffice.org>>. Complete Localization of Open Office 2.2 in Dzongkha.
2. Email and web applications
Browsers (Mozilla, Fire fox, Epiphany)
Email Client (Thunder Bird, Evolution)
Chatting Software (GAIM, Xchat)
3. Content Management System
Drupal.
4. Multimedia
CD burning software (gnomebaker), Desktop publishing tools and Image manipulation software (GIMP, Scribus, Inkscape), Scanner support etc.
5. Keyboard driver based on DDC standard specification.
500 keyboards distributed.
6. Dzongkha Glossary of Technical Terms
Will be published soon.
7. Desktop
Fully localized gnome Desktop packages.
Light weight XFCE desktop localized to Dzongkha Language.



Achievements

8. Dzongkha Locale
GNU C Locale, Open Office locale.
9. Rendering Engine
Pango (Gnome applications)
Open Office (ICU)
10. Sorting rule
Very complex sorting rules implemented in the operating system and Open Office.
11. Fully customized operating system called Dzongkha Linux.
Live CD and Installer based on Morphix Linux along with Dzongkha and English manual.
Launched on 2nd June 2006.
12. Customized Debian Linux
Beta version named Bhutan Linux successfully developed.
It overcomes most of the shortcomings of the Dzongkha Linux.(IPR)
13. Training on Dzongkha Linux and Bhutan Linux
Two participants from 20 Dzongkhags(regions) of Bhutan.
14. Online Lexicon
Presently we have collected around 10,000 terms with different information on those terms.



Challenges/Problems faced

- Dzongkha Unicode open type fonts size
 - Not visible in Linux at size 12. Had to Rescale it to bigger size.
- Shortage of Human Resources
 - Two developers till year 2007.
- Collaboration with Sherubtse college unsuccessful
 - Due to distance.
- Equivalent terms for English Terms did not exist
 - Most of the terms had to be coined in collaboration with DDC.



Future Plans

Till End of Phase I (April 2007)

- Will be releasing Dzongkha version 2 and Bhutan Linux version 1 by 1st week of February.
- Online Lexicon for Dzongkha will be launched on March 2007.
- Work on localizing KDE desktop.
- Dzongkha OCR in collaboration with NECTEC.
- Develop localized version of Linux operating system targeting other groups of people like publishing industry, Education sectors, etc.
- Localization of Mobile phones.
- Presently working towards opening a Research Division at DIT(10th five year plan)



Sustainability

- Major part of Localization work is completed under PAN Localization project.
- Every six months, all the existing software are updated and new software added. Plan to upgrade our localization effort with more staff recruitment
- Have trained the Dzongkha focal personnel across the agencies
- Training for all literate sections of the people slated for 2007
- Need to localize new softwares which would further strengthen the capacity.



Conclusion

- PAN Phase I has been successful (My own rating)
- Still to do a lot in other areas.
- Bank on expertise

Thank You and TAsHi Delek

