

## **FORMAL APPLICATION FOR THE FLOSS FELLOWSHIP PROGRAM**

### **Title of Project:**

*"GNU/Linux L10n initiatives and their impact on ICT4D efforts with special relevance to management of such projects, integration and collaboration protocols, tools and methodologies".*

### **Objective of the Project**

Localisation (hereinafter abbreviated as L10n) initiatives using the Linux kernel and the complete distributions in accordance with the GNU/Linux effort have as a driving aim – the creation of an infrastructure to make computing available to the masses. Information and Communication Technologies (hereinafter abbreviated as ICT) are being gradually adapted to ensure that the 'digital divide' is successfully bridged. Using ICT for development has been the objective of ICT4D. L10n and ICT4D are possess a dynamic synergy so far as the broad aims and objectives are concerned.

In India, the major L10n initiatives include those for Hindi, Bengali, Malayalam and Marathi. These projects are being taken up for discussion as they show a considerable level of project maturity as well as proven releases of ISO images (although Marathi has till date not uploaded the release, the project roadmap is public and in place). The aim of this research project is:

- to understand the publicly available roadmaps for the formal conclusion of the first phase deliverables, to analyse the project and release management protocols in place
- to propose a framework for collaboration with other L10n initiatives in order to ensure effective and optimised sharing of technological know-how
- to analyse ICT4D efforts based on these localised GNU/Linux implementations and releases
- to study the technological limitations of working with limited releases of localised applications
- to enumerate and quantify the various economic aspects of ICT4D implementations
- to propose optimisation of existing management practices and evaluate various independent paths
- to locate and identify possible 'index cases' and test bench areas leading to a self-sustaining and viable ICT4D implementation
- to create a model for successful replication of feasible implementations
- to analyse regions of overlap between successful ICT4D installations and regional GNU/Linux L10n efforts
- to propose a model repository for various generic applications as 'inclusive ICT4D'

## **Layout and methodology of Project**

The project is research-oriented and will thus include both primary and secondary research.

The aim and scope of the proposal includes interaction with various members of Indic Consortium to understand the aims and objectives as mandated by the charter of the Consortium.

It also includes first hand research of the currently running (pilot, test case and phase-in) ICT4D implementations, analysing media reports on the same and the financial projections of such implementations.

The project will include investigation of implementations of ICT4D programs on a global scale to rationalise the objectives and strategic goals. Evaluating such short-term strategic goals and long-term tactical initiatives on the basis of a ranking scale will lead to creation of a framework leading to a proposal for guidelines of ICT4D implementations.

L10n efforts and initiatives are the delivery platform towards ICT4D. Thus the project involves detail study of various L10n initiatives and the relevant spinoff projects that are potential candidates for incorporation in an ICT4D effort. As part of the effort, it will also include investigation into 'Low Cost Computing' methods that focus on integrating Free/Libre Open Source Software development models towards dissemination of information.

The project shall be modelled on the philosophy of iterative and regular releases of whitepapers and case studies. Such releases will address either one particular domain (or aspect) of the project title or evaluate and propose methods and tools for rapid scalability of ICT4D projects. Regular releases of such project documents (if permitted under the rules of the fellowship) on mailing lists such as BytesForAll will ensure peer review and feedback on the methods employed to collate and collect data and analyse the same. The objective of the research is to produce a document that will serve as a guideline to various implementations by providing case studies and templates. The final project document release will provide a conceptual understanding of the various L10n initiatives and propose areas of collaboration and tie-up/tie-in together with methods of doing the same.

A related aspect of the project/research is conducting talks and presentations at various academic institutions which are involved in F/L OSS initiatives with the aim of creating a technologically aware volunteer/enthusiast base. Thus, it also includes constant interaction with persons interested in education to explore new avenues towards promotion and implementation of F/L OSS based ICT4D efforts using both bottom-up and top-down approach.

The project approach is two-fold:

[i] investigate existing domains of ICT4D by interaction with the existing networks in order to understand processes

[ii] participate in creation of new niche systems where ICT4D experiments can be carried out

As part of point [ii] above, a list to address the issue of 'Low Cost Computing' (and the various contributory factors) has been initiated at Freelists.org. The project also requires closer interaction with members of WSF and FSF-India involved in the technology research. Initiation of participatory discussions with technology transfer organisations like Forum of Scientists, Engineers and Technologists (FOSET) will lead to a greater appreciation of the ground-level realities of technological challenges. The project will also include discussions with senior officials of the Government in order to provide a balanced perspective of the scenario.

## **Milestones**

Assuming that the fellowship will be sanctioned before January 2004, the first phase milestones are projected as below:

February 2004: Review of L10n initiatives in respect of stated objectives and adherence to published Open Standards and evaluation of potential spinoff ICT4D implementations

February – March 2004: A review of the various funded ICT4D initiatives in West Bengal and Orissa undertaken in joint participation with academic institutions and the respective State Governments

March 2004: Complete analysis and review of Localised 'Bangla GNU/Linux OS' and LTSP implementation (1<sup>st</sup> phase) in GoWB sponsored educational institutions.

*The requirements analysis for such implementation is already in place and testing is scheduled after the complete release of the Bangla OS*

May 2004: Initial review of donor agency funded ICT4D initiatives across West Bengal, Assam, Orissa with assessment of strategic aims and methods towards attaining such stated aims.

For all the projected milestones, papers and case studies will be released under appropriate document/content licenses with possibility of peer review and iterative feedback. Assessment and evaluation will also include analysis of economic indicators and potential financial and social benefits.

The first phase includes definition and scope of ICT4D projects in light of GNU/Linux L10n initiatives. It also includes analysis of areas of implementation.

Collaboration methodologies, protocols and tools and analysis on the same will be included in this phase with the objective of proposing an optimisation in the processes by avoiding redundancy and lack of a structured information flow.

*The first phase includes a study of the impact of GNU/Linux centric activities and ICT4D efforts in West Bengal, Orissa and Assam due to the lack of availability of proper documentation and analytical perspectives. Marathi, Hindi and Malayalam L10n efforts are dealt with in the second phase. This division is of course arbitrary being based on the fact that with the imminent December 2003 release of KDE version L10n efforts will witness a significant amount of maturity in terms of character rendering and offering user friendly interfaces that are standardised across localised offerings.*