**Bible Translation Acceleration Initiative**

***The Next Generation***

***Phase II Proposal***

**March 2011**

**Introduction**

BTAI-NG has been an active, funded project for six months (Wycliffe project #90100). Significant accomplishments have been achieved in that time period to see the vision realized that was expressed in the original project proposal. That Vision is re-iterated in the following section.

This document is a review of progress and a request for additional funding to 1) complete the proof of concept of the crowdsourcing project and 2) define a transition plan to SIL oversight and execution of the future activities of BTAI-NG.

**Vision**

The impact of the spread of the Internet augmented by the explosion of cellular-based smartphones cannot be denied. Today, individuals in the largest cities as well as in the smallest villages have access to communications technology that makes it possible to utilize and create information that changes lives, cultures, and nations. We believe that this technology can be harnessed to bring God’s Scriptures into the hands and hearts of individuals in their own heart language.

For many years the paradigm of Bible translation has required that missionaries relocate to the villages and towns of a target language group to work with mother tongue speakers in a process that creates lexicons/dictionaries, creates orthographies (alphabets), produces various translations of useful documents, delivers literacy training, and produces a translation of some or all of the Bible. This process typically takes many years but has been shortened more recently by expanding the resources available especially through the use of mother tongue translators. We believe that this process can be exponentially accelerated through the application of new technologies involving the Internet and “web 2.0” techniques such as “crowdsourcing” and social networking.[[1]](#footnote-1)

**Project Accomplishments**

Building on the successful collaboration with SIL in the Bible Translation Acceleration Initiative (begun in 2006), we have been exploring methods of accelerating language development and translation through new and innovative processes and software. The combination of technological innovations, applied research, and expanded teamwork with SIL led to the creation of a follow on project currently labeled BTAI - Next Generation in early 2010. The goal of the new project is to accelerate Bible translation through the application of certain Web 2.0 technologies, such as crowdsourcing, facilitated by the rapidly expanding ability to access the Internet through traditional computers but also through cellular technology. Using these technologies, a widely dispersed diaspora of minority language speakers can be engaged with highly trained linguistic experts to produce high quality translations of materials especially centered on the Bible.

**Phase I Proof of Concept**

As the BTAI-NG project began to develop in concept and resources began to be acquired and solicited, we recognized that evidence was needed to actually demonstrate that Web 2.0 technologies could be used in language development and translation. The proof of concept approach that was adopted was the building of a crowdsourced dictionary for a language community that already had some language development work in process. If time and resources allow, this will be expanded to several language communities with diverse demographics to get as broad a results base as possible for evaluation of the techniques. Phase I was funded internally by Wycliffe USA to start the proof of concept work while consideration was given to resourcing the completion of the proof of concept and plan the future work with new technologies.

Recognizing that SIL is a center of expertise in linguistic data collection methodology, creator of some of the world standards for linguistic data storage, and highly experienced in the realities of translation in the field, we initiated early contacts with SIL so that none of our work was done in isolation and we early on committed to SIL that any applications we created would use the SIL standards and integrate with the key SIL Bible translation software products such as Fieldworks. Consequently, SIL technical and linguistic leadership has been included in the early conceptual stages of BTAI-NG. Through discussions with their technical experts in lexicon/dictionary building it was decided that the new software would be based on the WeSay[[2]](#footnote-2) product developed by SIL and would support their LIFT data format developed by SIL for dictionary storage. WeSay is a desktop application that operates under the Windows operating system. The first requirement of this project was the creation of a Web-based version of WeSay (a significant, but partial, re-implementation with a completely new user interface).

Key to the Phase I accomplishments was the building of the conceptual framework and gaining collaboration between the various stakeholders. The conceptual framework was influenced by the stakeholders so the early development process dwelt heavily on working through the issues. High level stakeholders included Chuck Devries, Les Kline, Gary Simons (SIL), Chip Sanders (SIL), and Forrest Flaniken. Leadership in the project was established with Mike Cochran and myself defining the conceptual framework and developing the goals for the project. The core team for implementation is built mostly of volunteers working to implement the proof of concept. In addition to Wycliffe senior staff, myself in IT and Mike Cochran in SIL Language Software Development, the team consists of David Stacey (technical expert and former developer with Google), Per Einar Evenson (experienced in IT and MS Degree in Applied Linguistics), David Rogers (PhD candidate in Computer Science and mobile device developer), Tom Sudyk (visionary and fund raiser), Ron Lockwood (translator for the Laki[[3]](#footnote-3) language), and several others with extensive relevant credentials. SIL has assigned Cambell Prince to work with the project. Cambell works in the Payap Language Software Development Group, part of the Linguistics Institute at Payap University in Thailand. He is responsible for dictionary programs such as WeSay and storage repositories (e.g. *Language Forge*) for holding dictionary and lexical data. In addition, we have worked out agreements with K-Koncepts in Singapore to host our servers which do not trace back to our organization (critical for sensitive language and country projects) and with the University of Central Florida (UCF) Institute for Simulation and Training to develop our smartphone-based applications. The UCF team lead by David Rogers and David Metcalf committed to developing prototype mobile interfaces and assisting us in seeking institutional funding. UCF has committed a two week block of programming time beginning April 1, 2011 to build the mobile interface at no cost to the project.

**Phase II Proof of Concept**

Wycliffe USA leadership recognized the significance of BTAI and provided initial Phase I funding to allow the team to meet and organize and to engage the lead technical expert to begin the development of the Web-based application. We have characterized the work done under the initial funding allocation as Phase I. This proposal is a request for support and funding to continue the development through a merged development group in conjunction with the SIL development team that is now being formed(now Phase II) and to test the application in a limited but public trial on the Internet and then to go fully public in the trial. We anticipate a third phase which will be the transition phase of fully turning over the software, project deliverables, and team to the SIL Language Software Development Team.

Based on the initial success of the crowdsourcing application, development of the base software will continue through Phase II. Key efforts in development need to include:

* Improving the user interface based on early user experience
* Add functionality for the trained linguist/translator (this is referred to as the “backend”)
* Test and improved the linguist’s control of contributed information to accept quality materials while rejecting low quality entries
* Build out the export capability of the web site to produce data in LIFT formatthrough a direct connection to LanaguageForge to eliminate steps in the export of data and import to LanguageForge
* Continue to translate the interface and internal message files into the first target language either by internationalizing the user interface or by mining the language forge information to provide these localizations.

As the base implementation of the crowdsourcing application becomes more stable and reliable (bug free), the trial needs to be expanded to other languages:

* Contact the other language projects that have expressed interest in being part of the trial
* Build new team or sub-team to work with next language projects
* Follow-up meetings with Language Program Coordinators to construct plans for further implementation of the crowdsourcing techniques
* Research and design next steps to include crowdsourced translation of various documents (This is the project that World Vision would like to fund and participate in.)
* Expand development team (with Wycliffe members or volunteers but also through contracting for team members)
* Add servers to support more projects and/or work with Kalaam Media to provide the localized community sites and Language Forge to provide the sites that host the language data (in this case the LIFT dictionary.

Funding for Phase II is projected in the section below. Funding is needed to continue the engagement with David Stacey as lead developer. Miscellaneous expenses include equipment and contracts to test cellular technology and continue support and the support of one or more web servers. Travel expenses for the team to meet once, leadership to meet once, and the team to meet for transition to SIL of the completed work. In addition, funds are included to expand the team with additional contractors which may include technical staff either locally or remote.

The key reason for the leadership to meet is the need to develop the longer-term proposal for project funding. Phase II will include the development and submission of a Wycliffe/SIL project funding proposal for consideration of funding for FY2012. Leadership will also work to develop proposals for foundations or institutional funders that would be submitted through Wycliffe USA.

**Transition to SIL Ownership and Management**

As mentioned above, we have met with SIL leadership to discuss and plan the transition of this project into the Language Software Development Team. The senior executive over LSD at SIL, Chip Sanders, has agreed to accept this project and to submit the project funding proposal.

We expect this transition to take place in the last quarter of the calendar year.

**Phase I Expenditures**

See attached document. Expenses are lagging by about two months due to invoicing and payment delays.

**Phase II Budget Need**

See attached document.

Individuals and organizations that have been involved in the earlier phases of this project or who have met with us have expressed interest in providing funding for part of the long term project for applying Web 2.0 technology to language development and Bible translation. World Vision’s interest is mentioned above. The University of Central Florida interest and commitment to partner with us in funding proposals is expected to result in funds for the project and, in particular, to engage their technical teams in developing smart/cell-phone applications to be used in project implementation. Tom Sudyk, who was instrumental in raising funds for the original BTAI project, is committed to assisting in promoting this project in the donor community as well as in preparing funding proposals for submission to institution (and other) funders. Wycliffe USA has funded what became Phase I above and is expressing interest in some part of Phase II.

Submitted by: Joe Snyder

1. If the reader is unfamiliar with these terms, s/he is encouraged to go to Wikipedia.org to find explanations. [↑](#footnote-ref-1)
2. This product was developed by Wycliffe, SIL, and partners and is available on various web sites as an open source product that can be downloaded by those who are interested for inspection or use. [↑](#footnote-ref-2)
3. Pseudonym for first language site for dictionary building. [↑](#footnote-ref-3)