

Bilingual web client for accessing world knowledge

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Language has been a major barrier for dissemination of knowledge for people in developing countries. The use of mother tongue alone limits further studies while the use of English alone reduces better understanding of the subject. Numerous researches have shown that the use of bilingual approach addresses both issues. We have developed a bilingual program concerning the translation from English to Sinhala.

Our bilingual program has been developed as an Expert System, which can be connected with any web client such as Internet Explorer or Netscape. The program is named as BEES, an acronym for Bilingual Expert for English to Sinhala. BEES is based on an English parser and a Sinhala parser, which are developed as a part of this project. While viewing a web page appeared in English, one can invoke BEES to display the text in Sinhala. With the bilingual approach, the text will not be hundred percent translated into Sinhala, but purposely leaving English terms as they are, for example, parser may use the word "software" as it is, even when Sinhala word for it is in the dictionary. BEES facilitates various levels of translations depending on the user. If the translation is below a threshold percentage BEES recommends improving the dictionary. Using BEES user can develop his/her own English vocabulary while Sinhala helps the better understanding of the subject matter. BEES takes a holistic approach by considering entire paragraph, instead of words to words translation. As such, BEES handles syntax, semantics and pragmatic aspects of Sinhala language. SWI-Prolog has been used for implementing parsers and the translator in BEES. XML has been used to extract texts from Web pages and passing translated documents as Web pages. Hence BEES has been entirely developed using Open source software. BEES is platform independent. The current version of BEES has successfully implemented syntactic aspects while the other aspects are under development. BEES is ideal for browsing the Internet by students and general public. The applicability of BEES can be extended to translate any text document if the source is available in HTML format.

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