

## SATS: A Computer Aided Translation Engine

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Computer used language translation is a controversial subject. Even though many research studies have been done in this area of study, still there are no machine translation systems available for Sinhala – Tamil – English translations with a reportable accuracy. The complexity of Sinhala and Tamil languages makes the language processing, specifically machine translation a difficult task. Among the available tools for translations, Google translation engine performs better and it also has a wider usage. However, it has weaknesses like regional slangs specifically for Tamil. The system is tuned more towards Indian Tamil slang, because, the Tamil content that were used to train the Google Translator were created mostly by Indian Tamil speakers. This research proposes a mechanism which can be used professional language translations with the aid of computers. The proposed method has a Statistical Machine Translation (SMT) engine, to assist human translators for the translation, which is built using Moses as a framework with giza++ for word alignment and IRSTLM for language modelling. When a user requests for a translation, which can be a word, phrase or small paragraph, it will be sent to SMT engine first. Engine will generate suggestions and will send to a professional translator among the SATS (Sinhala and Tamil Speakers) group automatically along with the request. Next the translator makes correction or approves the translation suggested by the SMT. Thereafter it will be sent to the requested user. More importantly, the translation which was approved by translators will also be stored in a Translation Memory (TM) so that in future, translations can be pulled from TM if someone makes the same request for translation. The system provides accurate translations due to the involvement of experts. However, with the time the system will evolve as an expert language translation system.

**Key words:** Computer Aided Translation, Moses, Statistical Machine Translation, Translation Memory, Translation Engine