

IMAGINATION TO REALITY

Instant Multilingual Chat with Real-Time Machine Translation



Technology Overview

This is an application of a high-speed, real-time Machine Translation (MT) technology that enables online chats written in one language to be readable in other languages, facilitating chat communication between people of different language backgrounds.

A user only needs to select a profile language and enters the chat messages he wants to send in that language. With this selection, all outgoing and incoming chat messages will appear to him in this selected language. Similarly, other chat participants selecting other profile languages will only see messages in the respective language that they select.

This application also has the facility to standardise short-forms commonly used in chats (e.g. 'u r' for 'you are'). Users can create their own lists of such chat lingo and pair each item with a corresponding standard word or phrase. When chat messages contain this lingo, they would be invisible to recipients as only their standard forms would be translated. This user-specified chat normalisation presents a seamless approach of reducing miscommunication resulting from wrong translations of non-standard expressions.

Technology Features

- Send and receive chat messages in users' own languages
- Real-time, high-speed translation across 5 languages (English, Chinese, Malay, Indonesian, Thai)
- Allows mono-lingual users to chat with users of other languages; mono-linguality is no longer an obstacle
- User customisation of chat lingo

Potential Applications

- Applicable to SMS message translations
- Can be integrated into speech translation systems to handle spoken chat

Benefits

- Eliminates use of additional multi-language tools in chat activities
- Users can retain mono-lingual typical chatting style, even in cross-lingual situations with chat normalisation
- Customisable engines for different chat domains – Travel and tourism, information inquiry



The screenshot illustrates the user interface of the chat application. At the top, there are five circular icons representing the flags of China, the United Kingdom, Indonesia, Malaysia, and Thailand. Below these is a window titled "Translated & Original Conversation" which displays a chat history with messages in both the original language and its translation. To the left of this window is a language selection dropdown menu currently set to "Malay". Below the dropdown are "Update" and "Cancel" buttons. Below the language selection is a separate chat window showing a conversation in Malay with its English translation. The Malay messages are: "Boleh saya bantu?", "Ya, boleh anda beritahu saya jalan ke hotel anda?", and "Tolong beritahu saya di mana anda berada sekarang." The corresponding English translations are: "Can I help?", "Yes, can you tell me the way to your hotel?", and "Please tell me where you are now."

Contact Us

Industry Development Department
Institute for Infocomm Research (i2R)
1 Fusionopolis Way, #21-01 Connexis (South Tower), Singapore 138632
Tel: (65) 6408 2000 Fax: (65) 6776 1378 Email: inddev@i2r.a-star.edu.sg
www.i2r.a-star.edu.sg