
Abstract

The U.S. military must operate worldwide in a variety of international environments where many different languages are used. There is a critical need for translation, and there is a shortage of translators who can interpret military terminology specifically. One coalition environment where the need is particularly strong is in the Republic of Korea (RoK) where, although U.S. and RoK military personnel have been working together for many years, the language barrier still significantly reduces the speed and effectiveness of coalition command and control. This article describes our work on automated, two-way, English/Korean translation for enhanced coalition communications. Our ultimate goal is to enhance multilingual communications by producing accurate translations across a number of languages. Therefore, we have chosen an interlingua-based approach to machine translation that is readily adaptable to multiple languages. In this approach, a natural language understanding system transforms the input into an intermediate meaning representation called Semantic Frame, which serves as a basis for generating output in multiple languages. To produce useful and effective translation systems in the short term, we have focused on limited military task domains and have configured our system as a machine-assisted translation system. This allows the human translator to confirm or edit the machine translation. The regular Commander-in-Chief (CINC) briefings at U.S./RoK Combined Forces Command (CFC) in the RoK are presented concurrently in English and Korean. These briefings are typically presented twice daily during exercises or crisis activities, and each consists of 60 to 80 slides, including speaker's notes. Translation of the briefings puts a heavy burden on CFC personnel; therefore, we chose automated translation of CINC briefing slides as our initial application focus. Figure 1 is an example of a CINC briefing slide, showing the original slide in English and the translation produced by our system.