Cheap translations, but not replacement for humans

June 12 2013, by Max J. Rosenthal

This photo provided by Lexiphone shows the Lexiphone app displayed on a mobile phone. Israeli startup Lexiphone says it has come up with a way to overcome language barriers when conducting international business: an automated service that provides nearly instant translations between English and seven other languages with nothing more than a telephone. (AP Photo/Lexiphone)

An Israeli startup says it has come up with a way to overcome language barriers when conducting international business: an automated service that provides quick translations between English and seven other languages with nothing more than a telephone.

Lexifone allows people to get translations without paying hundreds of dollars for human interpreters. The service translates spoken conversations in real time, which Lexifone says is an improvement over free, Web-based services that are typically limited to typing in text.

Itay Sagie, the company's vice president of sales and the son of its founder, said Lexifone lets small businesses "pick up the phone and call Russia or China."

Preliminary tests by The Associated Press show, however, that while the service has promise, Lexifone doesn't offer a major leap forward in translation technology. Star Trek's universal translator will have to wait.

People have been able to test out Lexifone since October. The service formally launched in the United States this week, and Lexifone plans to devote nearly $5 million to market it.

Although a phone-based service similar to Lexifone has been offered since November by NTT DoCoMo, Japan's largest cellphone carrier, that service works only with Japanese, Korean and Chinese. Lexifone translates between English, French, Spanish, Italian, Portuguese, German, Russian and Mandarin. The service costs 15 to 40 cents a minute.

Lexifone works by having computers listen in on conversations. When Mary says something in Spanish, for instance, Lexifone runs that through four separate translation programs to analyze what's being said and determine the best translation. Bob, who already has heard the

remarks from Mary in Spanish, then hears the English, Italian or Mandarin translation from the service in a computer-generated voice. The process is reversed when Bob replies on the phone line.

Unlike Lexifone, Web-based translation services such as Google Translate use statistics to analyze patterns. When looking at a phrase or other large text, they simply use their huge reams of data to guess the patterns that are statistically the most likely to be correct. Lexifone says it tries to analyze the meaning of speech.

But how will conversations via Lexifone be received in Moscow or Beijing? Tests conducted by AP reporters in Mexico, France, Israel, China and the U.S. show that Lexifone is still far from delivering the quick and seamless translations it advertises. Using the service proved frustrating, both in the quality of translations and the length of time it took to complete phone calls.

Setting up Lexifone is easy: Users sign up for an account on the Lexifone website and then buy minutes of translation airtime. When it's time to make a call, simply dial one of several local access numbers, similar to using a calling card. Then follow a short series of directions to connect. Customers with Android phones can simplify the process by dialing directly through the Lexifone app.

But once calls begin, the system slows to a crawl. Callers have to wait for prompts both before and after speaking, which makes even short translations drag out to several times their length. The system is also prone to interrupting with reminders about commands or services that users don't necessarily need.

Sagie said Lexifone logs how many calls customers make and automatically speeds up the reminders as they gain experience.

The translations themselves are spotty. Across conversations in French, Spanish and Mandarin, Lexifone was mostly able to understand topics and provide either the gist of the sentences or key words, if not always in the proper order. It was at its best when translating a dry, businesslike dialogue about trade. Even then, details such as numbers often came out garbled.

In colloquial speech, even with simple sentences, the service often seemed helpless. When a colleague in China asked in Mandarin, "What's the issue?" the system waited several seconds before producing the translation in English: "Australian pig," it said. The results were not noticeably better than using a free service such as Google Translate.

The AP testers thought Lexifone would be useful for emergencies or simple conversations, but not everyday use. If they were trying to get important information, they said, they wouldn't trust the translations they were hearing.

Such problems are not limited to Lexifone.

All computer translation services have trouble with accuracy in normal speech, said Jon Ritzdorf, an expert on computer-assisted translation. Ritzdorf, who said he was not familiar specifically with Lexifone, teaches at several universities and works for translation firm Moravia Worldwide. Moravia provides human translators and helps refine machine translations for companies and individuals.

The unpredictable rhythms of speaking are tough for computers to understand, and there are several steps required to translate a sentence. The words spoken in one language must be converted into text by Lexifone's computers in order to be run through the translation system. They must be converted again to be spoken in the new language. That adds another layer of complexity to the process.

"We're dealing with a number of technologies having to be rolled into one, all of which have not fully matured," Ritzdorf said.

Ritzdorf said that while there are useful applications available for computer translation, the more important the information is, the less likely it is that machine translations will suffice.

Sagie readily acknowledged the limitations of the system. Even as he markets Lexifone as a tool for small businesses that can't afford human translators, he admitted that some uses are better handled by human interpreters.

"I wouldn't negotiate a $5 million deal with this," he said.

Lexifone believes the service will improve as more users sign up, giving the company a larger pool of data to help refine its translations. The company uses human linguists to analyze calls and feed better translations into the system.

And while Lexifone is currently geared for general speech, Sagie plans to partner with businesses to build specialized translations for their industries. He envisioned Lexifone someday helping hospital staffs communicate with foreign patients, for instance.

But while improvement is likely, Ritzdorf cautioned that there will always be a limit to the accuracy that computer translations can provide.

"Will it ever be perfect?" he said. "I don't think it will be. At least not in my lifetime."

2024 from https://phys.org/news/2013-06-cheap-humans.html