

TECH TACTICS

AI Enables Real-Time Translation

Star Trek's science fiction has become reality

Google recently unveiled Duplex, an artificial intelligence (AI) assistant at its developer conference. As your personal assistant, Duplex can call to book a hair appointment or make a restaurant reservation. The people on the other end of the phone won't even realize that they're talking to an AI.

Duplex uses AI, machine learning, cloud computing and bandwidth — all of which are exponentially improving technologies that also enable real-time translation.

The Era of Real-Time Translation

Universal real-time translation has always fascinated humanity thanks to its use in fictional stories like *Star Trek* and Douglas Adam's *Hitchhikers Guide to the Galaxy* (with the Babel fish). But it's no longer science fiction.

At CES 2018, I tested several hardware devices offering real-time translation including the Mars earbuds, which was a CES 2018 Best of Innovation Honoree in the headphones category. Mars' promo video shows a date with people communicating in two languages.

Other companies with translating earbuds include Waverly Labs Pilot, Mymanu Klik+, Google Pixel Buds, Bragi Dash Pro, while Ili and the Travis Translator are handheld devices. With Google Translate you can now use your smartphone and an internet connection to perform two-way, real-time translation from English into 32 languages without spending hundreds of dollars on hardware.

But if you're sitting in an auditorium listening to a speaker in a foreign language, having translation earbuds is much more practical than using your phone's speaker and disturbing others.

Some of these hardware vendors are at a disadvantage, however, because the Google

Translate app has been downloaded half a billion times, potentially turning away billions of smartphone users who already can access two-way, real-time language translation devices.

This technology highlights how Moore's Law — the idea that CPU power doubles every 18 months while staying at the same price point — has resulted in a smart-

phone having the same power as a \$30 million 1982 Cray supercomputer, despite costing \$1,000 and being pocket sized.

While none of these products offer perfect translation now, with the rapid advance in the underlying enabling technologies, it's only a matter of a few years until they'll be better than human translators.

Try It Out

Once you download the Google Translate app, it is incredibly easy to use. When you open it, select the "conversation" option (with the two-microphone icon) and choose your language, then the language you'd like to translate into and speak into your phone's microphone. Maybe you're exploring Paris and ask, "Which way is the Eiffel Tower?" Out of your speaker will come the translation of the phrase in French.

When you use this technology for the first time, I promise you will be amazed.

Implications

This is particularly beneficial for the global tourism industry, enabling tourists to interact easily with locals. Tourism is a \$2.3 trillion global industry with 1.2 billion travelers. It will certainly spell trouble for publishers of foreign phrase books.

It will also have implications for professional translators. Globally the language services industry is a \$45 billion market and it will ultimately be disrupted. Of course, translation in high stakes situations — closing business deals, court cases, or ambassadors debating at the United Nations — will still use professional translators, but in areas that aren't high stakes, these tools will proliferate. ■

Jim Harris is the author of Blindsided. Follow him on Twitter @JimHarris

TRANSLATING EARBUDS

- Mars Earbuds by Naver and Line using Naver's Papago
- Waverly Labs Pilot
- Mymanu Klik+
- Google Pixel buds
- Bragi Dash Pro
- ili
- Travis the Translator
- iTranslate application for iPhones



Courtesy of Bragi