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Microsoft Machine Translation development

Speech translation in human-to-human interaction: Skype Translator

The error rate of speech recognition has come down enough, and the quality of machine translation has gone up enough to allow us to combine the two and achieve useful results. When building a translation system between humans who are not trained to talk via an interpreter, we need to take into consideration much more than the raw quality scores. Humans do not talk like machines, they do not even talk like the other humans who write down what they have to say: Spoken language is surprisingly different from written language. That's a hurdle we can overcome in speech translation, by a technique we call *TrueText*: making spoken language look more like written language. Translates much better. Humans need an interface to work with and to interact with. There are multiple ways to address the spoken translation user interface, and many of them do not have the hoped-for result. How far can we expect the human to lean into the presence of machine interpretation? It turns out, not that far. We can design the speech translation system to be lenient and useful at the same time. With *Skype Translator* we have explored many aspects of user interaction and behavior, and arrived at two implementations targeting long distance, human-to-human conversations. Each implementation has advantages and disadvantages – we'll discuss the two in comparison.

Chris Wendt graduated as Diplom-Informatiker from the *University of Hamburg*, Germany, and subsequently spent a decade on software internationalization for a multitude of *Microsoft* products, including *Windows*, *Internet Explorer*, *MSN* and *Bing* – bringing these products to market with equal functionality worldwide. Since 2005 he is leading the program management team for *Microsoft's Machine Translation development*, responsible for *Microsoft Translator* services, including *Bing Translator, Skype Translator,* the *Translator API* and *Microsoft's self-service MT customization system*, the *Translator Hub*. Chris is responsible for the design of these products, connecting *Microsoft*'s research activities with its practical use in services and applications. That includes *Microsoft*'s own applications, but more importantly third party applications and enterprise use. Chris' goal in life is breaking down language barriers between the humans inhabiting earth. He believes it'll take us a while to get there, but that we are moving in the right direction. Slowly, but occasionally moving a bit faster. We are right in the middle of one of these occasions. He is based at *Microsoft* headquarters in Redmond, Washington, USA.