

Feasibility of Introducing speech based post-editing in international organizations

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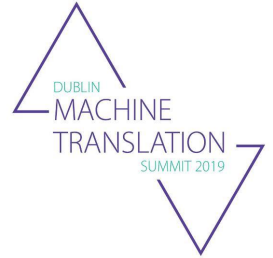
Research Question

- Machine Translation
- Post-Editing machine translation suggestions by typing
- Post-Editing by speech: (very!!) less explored

Objective

- To understand the current situation of technology usage (specifically speech technologies) in selected international organizations
- Investigating the prospect of introducing speech technologies to post-edit MT within such organizations
- Productivity (Temporal / Technical effort), User satisfaction/comfort, Final translation quality

Surveying the potential of using speech technologies for post-editing purposes in the context of international organizations: What do professional translators think?



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Quantitative and Qualitative experiments

1. 6 international organizations (5 in Geneva, 1 Luxembourg)
2. Current translation workflow (translating from scratch, post-editing by typing, post-editing by speech, and use of dictaphones).
3. Information about their usage of ASR as compared to other input methods (e.g. typing), and their likes and dislikes about it.
4. Their attitude towards different methods of translation, including speech based post-editing.
5. **Quantitative experiments on effort/productivity (Trados + Dragon + MT)**

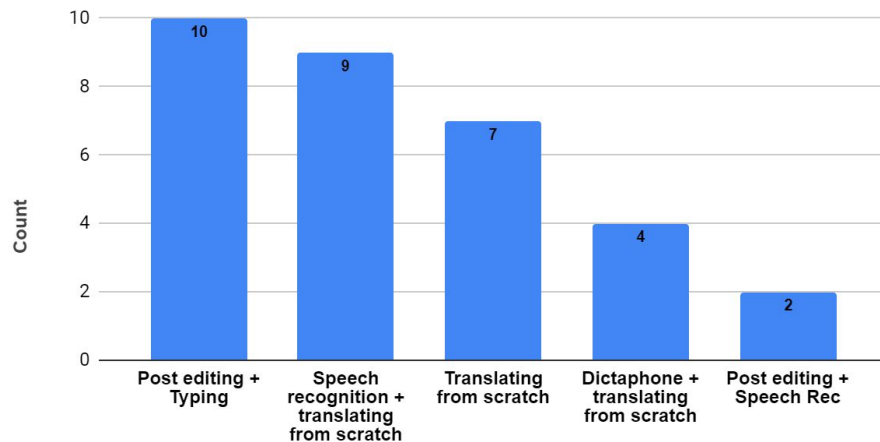
Tool usage in organizations ...



Category	Details
CAT tools used	Eluna, SDL Trados and Multitrans, DtSearch, MultiTerm, Groupshare, Euramis, memoQ, SmartLing.
MT tools	WipoTranslate, DeepL, eTranslate
Usage of dictaphone	2 organizations out of 5. One out of those two uses the dictaphone very rarely.
Speech recognition usage (e.g. Dragon)	4 organizations out of 5 use speech recognition.
Machine translation usage	4 organizations out of 5 use machine translation.
Post-editing using typing	4 organizations out of 5 use post-editing using typing.
Post-editing using speech	Only one translator of one organization could be found using post-editing using speech.

Translation technology usage among translators

Distribution of translation workflows among translators



Usage of speech for the purpose of translating is not uncommon in the selected environments (at least 9 out of 17 translators)

Usage of speech-based input methods

Reason	Mean
Using speech is less tiring for me	3.9
Using speech is faster for me	2.4
Using speech is easier for me	3.7
Speech is a cool technology	6
Not many other alternatives for me	7.1
Personal preference	5
Speech technologies are accurate	4
Speech helps me with ergonomomy	2.6

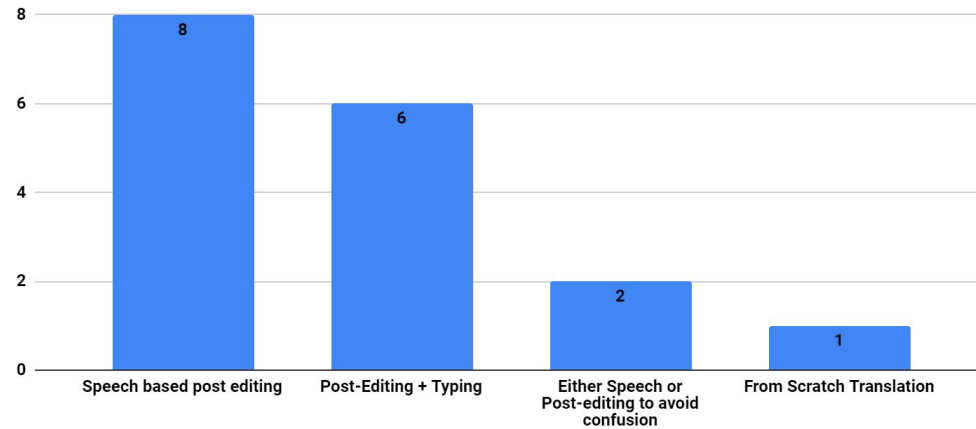
Ranking of reasons for using speech-based inputs in translation, rated on a scale from 1 (highest) to 8 (lowest).

The top reason for deciding to use ASR was that using speech was considered to be **faster** by the surveyed translators, followed by **speech helping them with ergonomomy.**

The mean value of the translator input score was neither negative nor positive with regard to the notion of speech technologies **being accurate, providing a mean value of 4.0**

Openness to different workflows

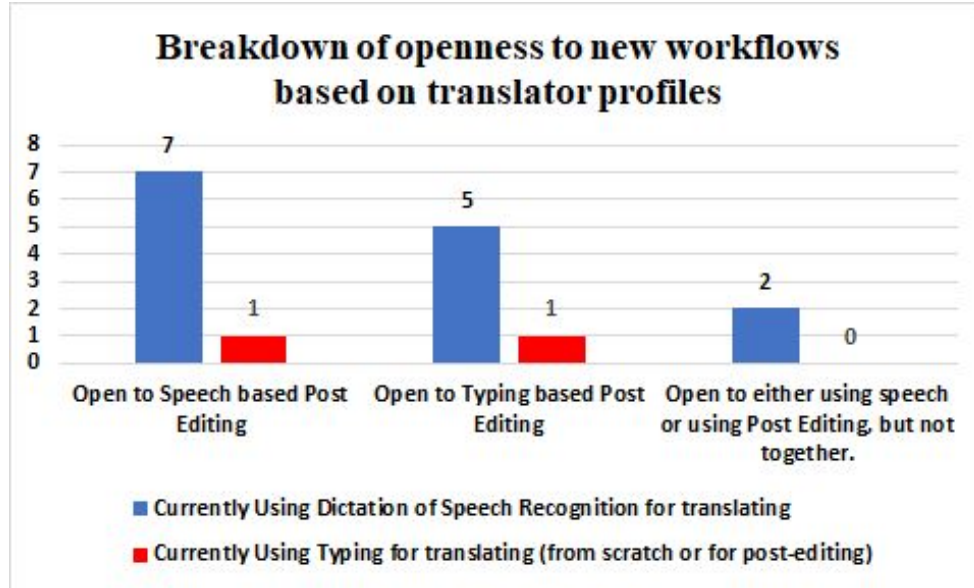
Openness to technology and different translation workflows



8 out of 17 translators were open to the idea of speech-based post-editing for translation

2 out of 17 assumed that mixing speech and post-editing together would be confusing.

Openness to the idea against current awareness of speech



7 out of 8 translators willing to use speech-based post-editing were already using either dictaphones or speech recognition tools, which explains their positive attitude.

Some findings..

- Speech as an input method (i.e. ASR or dictaphones) is mainly used by translators to translate from scratch, rather than to post-edit MT output currently .
 - However, some users already use Dragon + eLUNa to post-edit machine translation suggestions.
- The majority of the surveyed translators believed that speech is faster than typing and less tiresome (more ergonomic). However, they are still in doubt regarding the accuracy level of available speech recognition toolkits.
- Necessity of high quality MT/TM suggestions working with high-quality machine translation or translation memory suggestions, larger amounts of texts for translation, possibility to use private or protected workstations for translation purposes using ASR.

Current work



Quantitative research evaluating the productivity gains derived from speech-based post-editing.

We currently investigate how currently available CAT tools with integrated speech support (e.g. Matecat, memoQ, and SDL Trados) can be used for this purpose.

- Currently working on Matecat, SDL Trados + Dragon

