

WIPO Translate updates

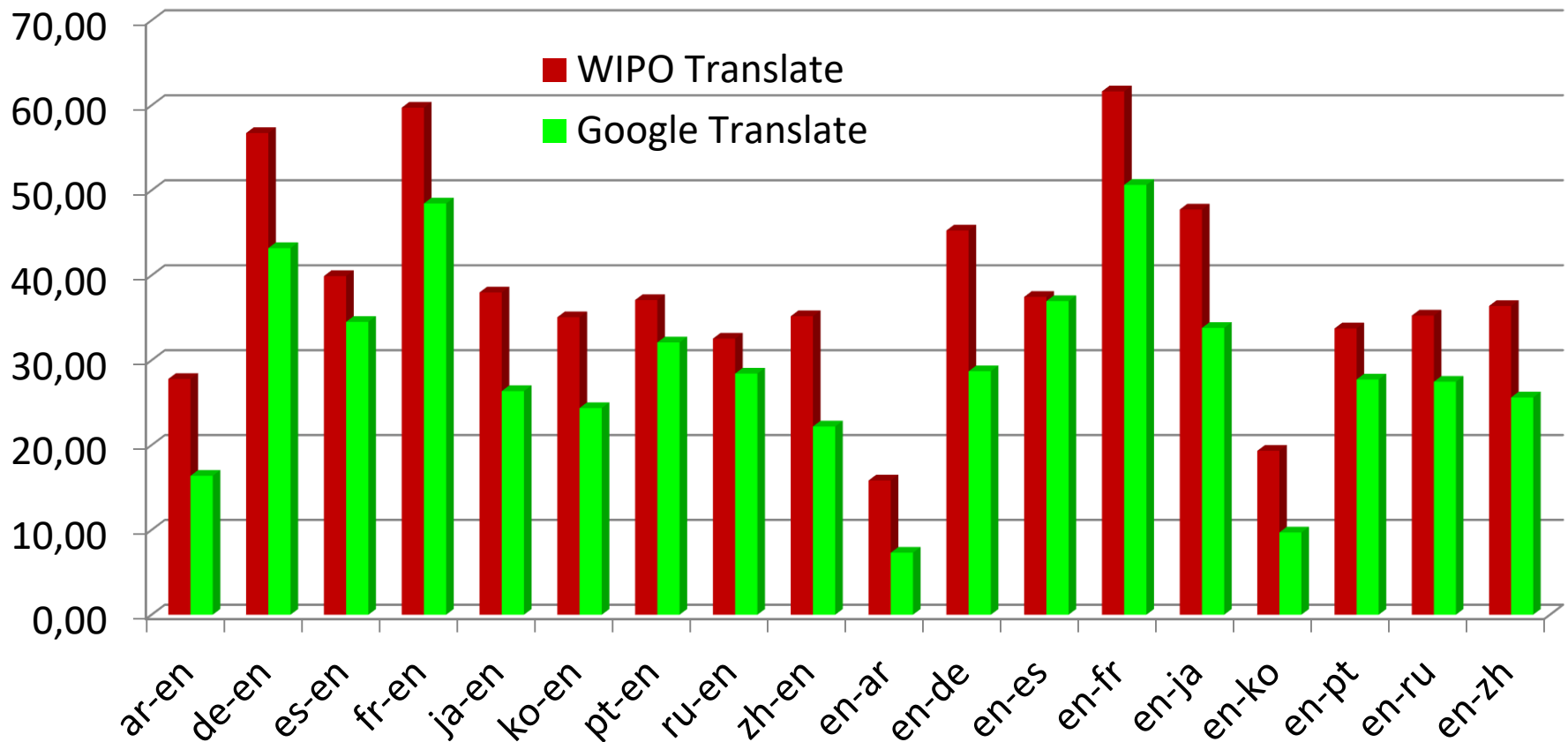
All 10 official PCT languages use Neural
Network machine translation

Fast and accurate

What's new in WIPO Translate

- All is neural
- Fast (using GPUs)
- Bibliographic data & result list:
 - Arabic as a new language
 - Translation through pivot (through English)
 - Allow any language combination
 - e.g. Chinese into Russian
- Fulltexts: 10 PCT languages from/to English

WIPO Translate / other MT engines



BLEU score comparison between WIPO Translate and Google Translate (both using NMT models), testset containing titles and abstracts from patents published after July 2017(except Arabic). Tested uniquely with new sentences NOT used in the training of WIPO Translate

Japanese → English evaluation...

BLEU scores

WIPO Translate: 37.98
Google Translate: 26.36
MS Translate: 24.64
NTCIR(JPO): 22.88
Baidu translate: 17.72

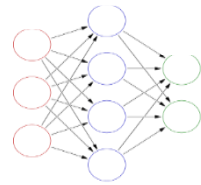
第2不揮発メモリは、第1不揮発メモリよりも速い読み書きが可能である



- **Reference:** The second non-volatile memory can perform write and read faster than the first non-volatile memory
- **WIPO Tr:** The second nonvolatile memory is capable of reading and writing faster than the first nonvolatile memory
- **GNMT:** The second nonvolatile memory **is capable faster** read and write than the first nonvolatile memory
- **MsTr:** The second nonvolatile memory **can be read and write faster** than the first nonvolatile memory.
- **NTCIR Tr:** It is possible to **write 2 non-volatile memory is faster** than the 1 nonvolatile memory.

WIPO Translate

- Latest Neural Machine Translation development
- Fast and accurate
- Will improve (quality, coverage, usability etc.)
- API for private companies



How does it work?

E.g. translating: “une grande maison bleue” into “a big blue house”

Attentional encoder-decoder [Bahdanau et al., 2014], implemented in Marian & AmuNMT [Junczys-Dowmunt et al. 2016]

