A. What is it?

WIPO Translate is an AI-powered, instant patent translation tool, developed by WIPO for 18 languages pairs. It is particularly powerful for translation of sentences and phrases of technical nature, since WIPO Translate was trained, and continues to be updated, by big data generated by published patent documents.

This tool is designed to give users the possibility to understand the content of a text and provide alternative translations for each segment of the text. Since September 2016, Neural Machine Translation is used to provide more accurate translation of patent texts, WIPO Translate (since September 2017) offers Neural Machine Translation in all 10 official languages of the PCT, the tool is powered by the open source “Marian NMT”\(^1\).

The interface proposes:

\(^1\) https://marian-nmt.github.io/
For example, you can enter the following sentence in the interface, click on “translate”, and the source text and the translation will be displayed:

**Source text:**

The present invention discloses a mobile communication network access authentication method, including a mobile communication network access authentication process. The present invention also discloses a corresponding system, the system includes an access point router and the location register of the user. The present invention further discloses a corresponding apparatus. The apparatus effectively avoids the unreliable network via two in-the-middle attacks, through the access point. To ensure that the access point is the real user of the access point.

**Language pairs:** Chinese-English

**Domain:** Generalities, Language, Media & Info Sci

*This automatic translation is provided for information only, it may contain discrepancies or mistakes and does not have any juridical value.*

- Please hover your mouse over parallel segments of text.
- Click to view other proposals.
- Select words or phrases on the right to access other translation proposals.

**Hovering the mouse on the left highlights corresponding segment on the right (and vice-versa)**
By clicking on a segment other proposals will be displayed. Selecting one of them will automatically change the output text.

Note that, when the text is long, parallel segments are highlighted in red, which helps identify which part of the source text is translated.

Clicking on the source or target text, allows the user to enter his own translation of the segment:

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When the user wants more proposals for a particular phrase, he can select the source phrase, the phrase will be segmented from the rest of the sentence and more proposals will be displayed.

E.g., if the user wants to look for more proposals for “torque pin”, he first selects the phrase, waits a second and gets the following display:

This functionality can also be used to further segment long sentences. In the example, the last sentence is too long for the tool to display good proposals, therefore we can select a phrase in the middle of the sentence to further split the sentence (e.g. by selecting “for transmitting torque”):
When the translation is finished, do not try to copy and paste it from the right box straight away, you first have to click on “Edit translation” (this is due to a technical behavior that would otherwise copy all the alternative translations).
You will then be able to further edit the translation before copying it (Note that the “post-edited” translations are not currently used on WIPO Translate to retrain the system).

B. How to use it?
When you first enter a text, without further input and click on “translate“ the tool will try to guess the language pair from the text (note that it is not always accurate!) and try to guess the domain it belongs to.

How to set and use domains?
The system is trained on patents belonging to specific domains. It can use this information to resolve some translation ambiguities (e.g. the English word “rope” can be translated as “corde” – a textile rope - or “cable” – a metal rope- in French). You can specify the domain by yourself or let the tool guess it from the content. In any case, if you cannot decide between several domains, you can always change it afterwards and look at how the translations differ.

C. How does it work?
The tool has been trained using a corpus of patent title and abstract pairs translated by humans. It has also been trained on aligned descriptions and claims. It is based on Machine Learning techniques, which means it tries to reproduce phrase translations it has already seen during the training.

Therefore, the tool is specific to patent texts. It will not be accurate when translating any other kind of text (news, legal texts, conversations, etc.). The typical example is “I am”, which has never been seen in training data, therefore will be badly translated in any languages.

D. Short history
In the past (since 2009), the tool was using Phrase-Based Statistical Machine Translation (using the open-source “Moses”\(^2\)), in 2016 WIPO experimented with Neural Machine Translation (“Nematus\(^3\) /Amunmt”). Since September 2017, all models are based on Neural Machine Translation, using the open source Marian\(^4\).

E. Who can use it?
Anyone can use it for free of charge. However, robots are not allowed to use WIPO Translate. To avoid robotic use, WIPO Translate requests you to register yourself if frequent uses are detected. You may be asked to enter a “captcha” (enter a text displayed on an image) to ensure that any user or program (robot) is not overloading the system. Do not use the tool with any automatic program to translate batch of texts, it will overload the system. An anti-robot system has been set up and any abuse will end-up in a black list which blocks any more use in future.

\(^2\) http://www.statmt.org/moses/
\(^3\) https://github.com/EdinburghNLP/nematus
\(^4\) https://marian-nmt.github.io/

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F. Conditions for the Usage

WIPO forbids the submission of text than more than 2,000 characters (characters in the sense of signs, “The D.N.A.” counts for 10 characters. Binary codes like Chinese/Japanese characters count for one, “電気バイク” counts for 5 characters).

G. Security and Privacy

WIPO Translate is serviced through https in a industry standard secured protocol. Your request for translation and the transmission of the translated text are made secured by the standard encrypted communication protocol.

WIPO neither publish nor provide to any party log data and identity of users of WIPO Translate. For further information, please refer to WIPO’s Privacy Policy, which is incorporated herein by this reference.

H. Disclaimers

WIPO Translate does not ensure the quality of translation matched with human translation. Be careful when using the tool: it should be used for information purposes only. The translation results may contain discrepancies or mistakes. WIPO has no liability of the quality of services provided by WIPO Translate.

While WIPO makes every effort to ensure that WIPO Translate is free of any software virus, it cannot guarantee that the material is free from any or all software viruses. WIPO is not responsible for any loss or damage howsoever caused by the software and related codes, including viruses and worms.

I. Privileges and immunities

Nothing in or relating to these Terms and Conditions shall be deemed or interpreted as a waiver of any of the privileges and immunities accorded to WIPO as international organization and specialized agency of the United Nations.

J. Dispute Settlement

Any dispute between WIPO and users arising out of or relating to these Terms and Conditions that cannot be resolved amicably shall be referred to arbitration in accordance with the UNCITRAL Arbitration Rules then in force. The parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of such a dispute.
K. Bibliography

The system has been described in the following publications (chronological order):


Tapta4UN (the same tool tailored for United Nations) has been described in the following publications:


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The same software has been installed in other UN agencies (ITU, IMO, FAO etc.):
