[creative words]

Machine Translation

Types, use cases and Post-Editing

[E-BOOK

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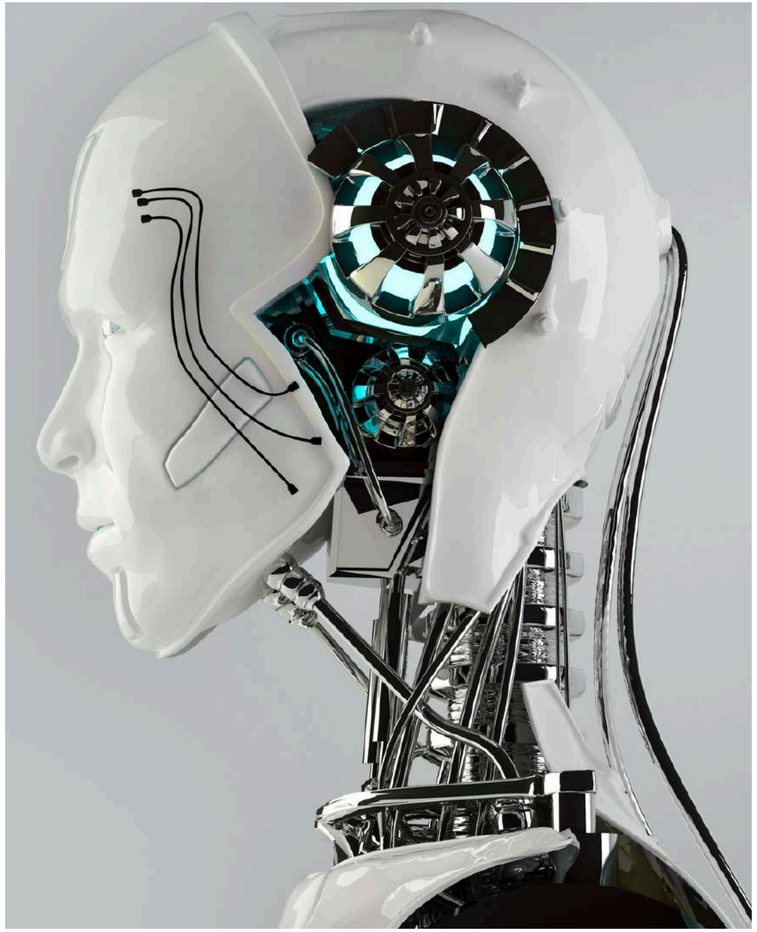
Introduction

Machine Translation refers to the translation done by a software or portal capable of translating texts from one language to another without any human interaction.

The first attempts at machine translation dote back to the post-World War II period: however, the commercial use of this technology became relevant only in the current millennium.

It is only starting from 2017, however (with the launch of the first AI- and deep learning-based systems), that machine translation has boomed.



Rule-based Machine Translation systems

Rule-based Machine Translation **(RBMT)** systems were the first commercial systems based on language rules. RBMT relies on a large number of embedded language rules and bilingual dictionaries for each language combination.

- Rules and terminology are highly controlled
- Once you have established a set of grammar rules for a given language pair, you con create new projects relatively quickly
- Terminology is consistent

- Developing a set of rules and a dictionary for each language pair is extremely time-consuming
- Applications of this approach are limited, as the source content must be well written to generate good output
- Translations ore often literal

Statistical machine translation

Statistical machine translation **(SMT)** learns how to translate by analyzing existing human translations (usually in the form of bilingual corpora). Compared to the RBMTapproach, which is usually based on words, most recent SMT systems are phrases-based. The analysis of bilingual text corpora (source and target languages) and monolingual corpora (target language) generates statistical models that transform the text from one language to the other.

- ✓ Once the learning system is created, the development of new engines is a quick process
- ✓ Translations are relatively fluent and show a certain sensitivity to the context
- ✓ It can be applied to different types of text

- ✗ Large, poor-quality language databases are needed
- ✗ The engine cannot be directly influenced
- ✗ There's no control on terminology

Neural Machine Translation

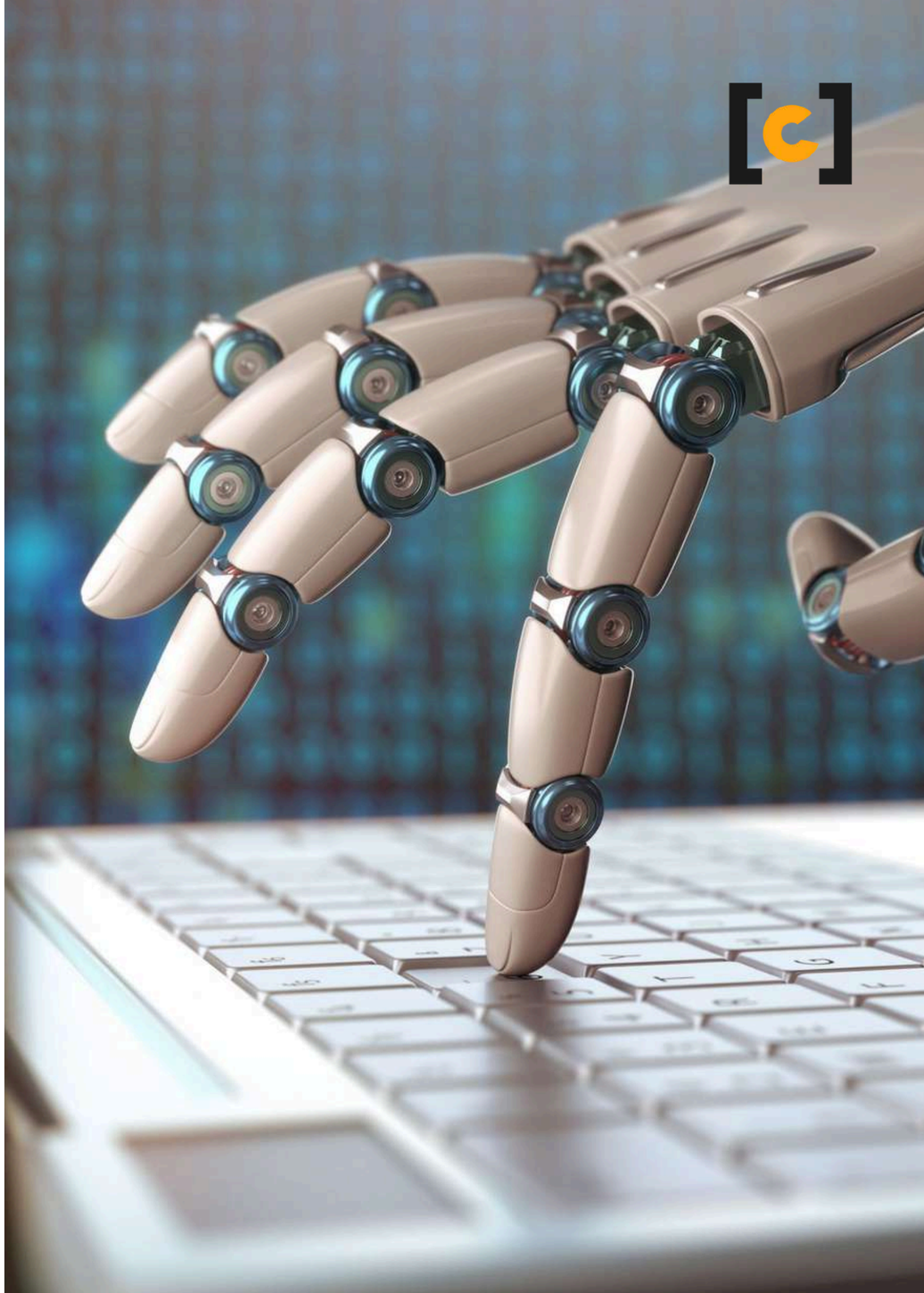
Neural Machine Translation **(NMT)** is the latest type of machine translation, capable of creating much more accurate translations than previous models. This type of technology is based on the model of neural networks of the human brain, where information is sent to different "levels" to be processed before output. These systems use Deep Learning techniques to learn how to translate the source language based on existing statistical models.

- The output is very fluent
- The interpretation of relations within the sentence is correct
- Quality is high

- Terminological consistency is lacking
- Content is added or deleted unpredictably
- The output is "nice" to read, but potentially incorrect

Machine Translation **can be used** in technical texts, which follow very precise writing rules (the so-called controlled language). This kind of text is ideal for Machine Translation. The same goes for user-generated content or all those texts that are "consumed" in a short time. In general, Machine Translation is useful in all cases where cost savings and speed are more important than quality.

On the contrary, MachineTranslation **should not be used** for texts in which the work of a professional translator can make a difference in terms of creativity, cultural competence, understanding of the context. Marketing and sales texts, as well as those with legal and/or security implications, are not suitable for Machine Translation.



The solution

Machine Translation Post-Editing

Despite the high quality achieved by neural Machine Translation, human intervention is always necessary. Machine Translation Post-Editing (MTPE) consists of a professional linguist reviewing the translations carried out by a Machine Translation engine.

Depending on the customer's specific instructions, different levels of Post-Editing can be applied. For texts that are not intended to be published or when time-to-market is not enough and conveying the general meaning is the only important aspect, light post-editing can be a good choice. For this type of post-editing, only the most obvious errors that affect the ability to understand the text (mistranslations, omissions, additions, etc.) are to be fixed.

For content intended for publication, full post-editing is required; the final text must have the same level of quality as a human translation. In this scenario, it's about following the customer's terminology, adapting to the style and format of the source text, maintaining consistency and, of course, fixing every single error detected.

Case study 1

TOPIC
Electronic components

VOLUME
500,000 words (EN>IT)

CHALLENGES
- Specific terminology
- High number of ripetitions
- No translation memory

TURNAROUND TIME
4 weeks

Case study 2

TOPIC

E-commerce

VOLUME

- 152.191 words EN>IT
- 3 post-editors, 1 proofreader

CHALLENGES

- 1,244,188 words EN>IT
- 207,942 words DE>IT
- 118 post-editors, 5 proofreaders

FINAL VOLUME (JANUARY 2018)

- Over 20.000.000 words

Case study 3

TOPIC

Travel

INITIAL VOLUME (MAY 24, 2018)

- 262,166 words EN>IT

WEEKLY PEAK (JUNE 11-15, 2018)

- 724,319 words EN>IT

VOLUME (JULY 7, 2018)

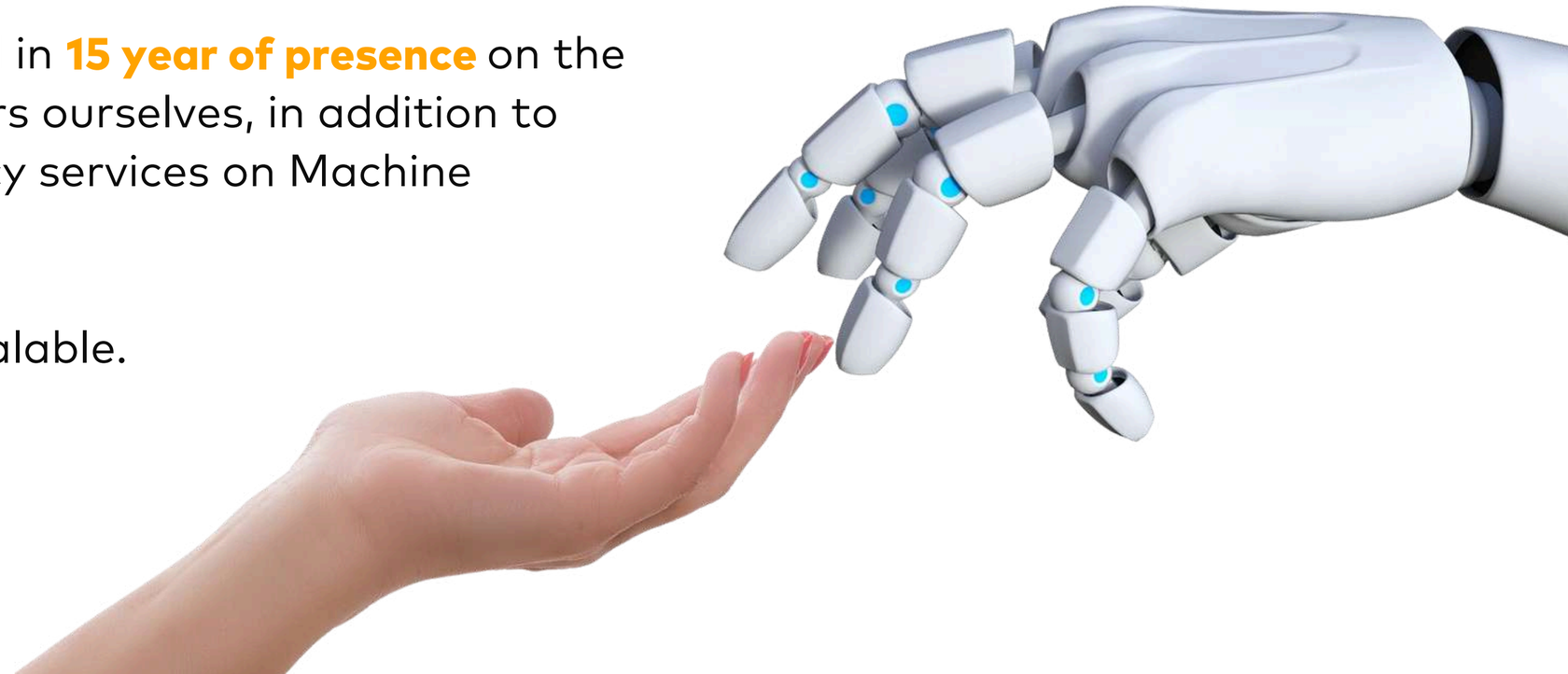
- 3,173,724 words
- 130 post-editors
- 4 proofreaders

Creative Words is one of the first companies in Italy to have obtained ISO 18587:2017, the certification of quality for the **Machine Translation Post-Editing service**.

We use different MachineTranslation engines, which we select among the most up-to-date and based on the specific needs of each client.

Thanks to the experience gained in **15 year of presence** on the market, we train our post-editors ourselves, in addition to offering training and consultancy services on Machine Translation and Post-Editing.

Our team is global, agile and scalable.



Founded in 2016, Creative Words brings over more than 15 yeors of experience in content localization and content management. Our mission is to become a long-term partner for companies to internationalize and create a global presence.

Our specializations include: technical, legal and financial translation, IT, marketing, e-commerce, e-learning and HR. Our high-tech approach and global network enables us to meet the most demanding requirements of our customers with fast, flexible and tailor-made solutions.

We offer translation, MachineTranslation Post-Editing, localization, third-party review and project management, as well as a wide range of additional services to support our clients' internationalization strategies.

Click on the button below to follow us on our website and keep in touch with us.

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Where Language meets Innovation

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