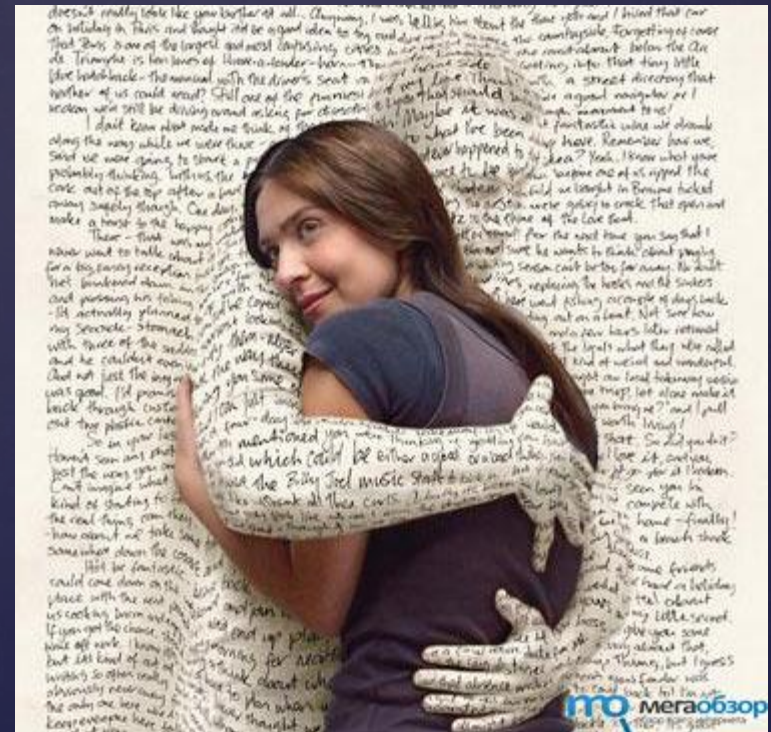# Translation memory

A _translation memory_, or TM, is a **database** that stores "segments", which can be sentences, paragraphs or sentence-like units that have previously been translated, in order to help human translators.

The **translation memory** stores the source text and its corresponding translation in language pairs called **"translation units".**

Software programs that use translation memories are sometimes known as translation memory managers (TMM); or translation memory programs

# How do the translation memory programs work?

The program breaks the **source text** (the text to be translated) into segments, looks for matches between segments and the source stored in a translation memory, and presents such matching pairs as **translation candidates**. The translator can accept a candidate, replace it with a fresh translation, or modify it to match the source. In the last two cases, the new or modified translation goes into the database.

# Fuzzy matching algorithms

Some translation memories systems search for 100% matches only.
That means that they can find only those segments of text that match entries in the database exactly, while others employ fuzzy matching algorithms.

**Translation Memory R.I.P**
(The matches just got fuzzier and fuzzier.)
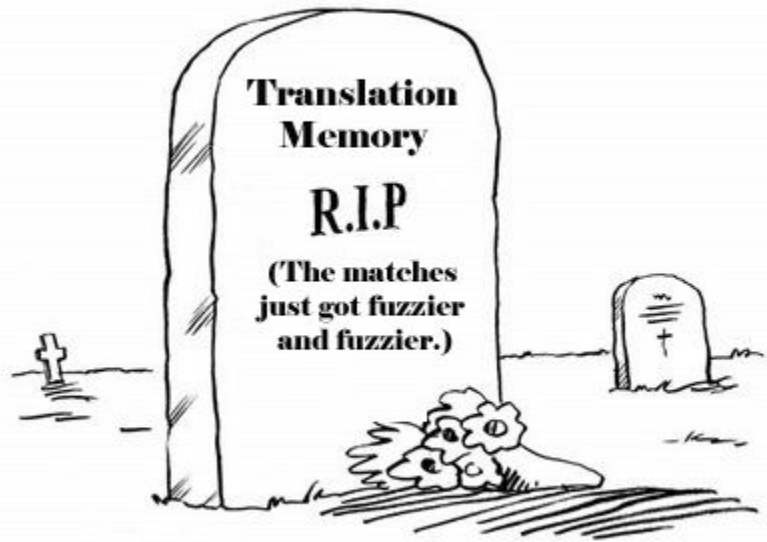
**Fuzzy matching** is the technique of finding matches that match a pattern approximately (rather than exactly).

Translation memories work best on texts which are **highly repetitive**, such as technical manuals. They are also helpful for translating changes in a previously translated document, corresponding, for example, to minor changes in a new version of a user manual.

Traditionally, translation memories have not been considered appropriate for literary or creative texts, for the simple reason that there is so little repetition in the language used



Пирожки в ассортименте
Patty in assortment
Самса
Samsa
Сосиска в тесте
Sausage in the father-in-law
Курник
Patty with chicken

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# Main benefits:

- Ensuring that the document is completely translated (translation memories do not accept empty target segments)
- Ensuring that the translated documents are consistent, including common definitions, phrasings and terminology. This is important when different translators are working on a single project.
- Accelerating the overall translation process; since translation memories "remember" previously translated material, translators have to translate it only once.
- Reducing costs of long-term translation projects

# Main obstacles:

- A guiding principle of translation is that the translator must translate the **message** of the text, and not its component sentences. And its difficult to make a computer understand the message of a text.
- Translation memory managers do not presently support all documentation formats
- Full versions of many translation memory managers can cost from $500 to $2,500
- Sometimes usability and quality of TM matches are decreased due to the fact that the maintenance of translation memory databases still tends to be a manual process
- The quality of the text recorded in the translation memory is not guaranteed

# History of translation memories

In 1970s there was an infancy stage for TM in which scholars carried on a preliminary round of exploratory discussions.

The original idea for TMS is often attributed to Martin Kay's "Proper Place" paper

Another people named Alan Melby and his group at Brigham Young University were also claimed to be the founding father of TM

The real exploratory stage of TMS would be 1980s. One of the first implementation of TMS appeared in Sadler and Vendelmans' Bilingual Knowledge Bank

The aim of Bilingual Knowledge Bank is to develop a corpus-based general-purpose knowledge source for applications in machine translation and computer- aided translation

TM technology only became commercially available on a wide scale in the late 1990s

# Recent trends

One recent development is the concept of 'text memory' in contrast to translation memory. Text memory within xml:tm comprises 'author memory' and 'translation memory'. Author memory is used to keep track of changes during the authoring cycle. Translation memory uses the information from author memory to implement translation memory matching.

Translation memory tools from majority of the companies do not support many upcoming languages. Recently Asian countries like India also jumped in to language computing, and there is high demand for translation memories in such developing countries.