DOGREL AG
COMMUNICATION

info trend

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Machine translation with post-editing

Translation: More and more translations are required in ever shorter timescales. It is therefore understandable that companies and language service providers are searching for solutions that increase productivity and reduce processing times. Machine translation with post-editing is seen as just such a solution.

What is "machine translation"?
Machine translation is an automated translation process in which text is translated by a computer from the source language to the required target language without human input.
There are rule-based (machine) translation systems and statistical (machine) translation systems.

• Rule-based systems are based on a combination of language algorithms and grammar, as well as dictionaries for general vocabulary. Specialist dictionaries are used to cover special industries or subjects. Where rule-based systems are configured with such specialist dictionaries, they normally deliver consistent translations with correct terminology.

• Statistical systems do not have language algorithms. These systems "learn" translating by analysing large quantities of data for each language pair. They can be configured for special industries or subjects by extending them with the respective required data. As a rule, statistical systems deliver more fluent but less consistent translations.

However, it is a fact that translation is not simply a word for word transposition of the source text into the target language and none of the existing machine translation systems delivers translations that have the same high quality as translations produced by a "human" translator.

Content

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SYSTEM MEETS SUCCESS

Editorial

A turbulent year is slowly coming to an end. A year that was infamous for war and displacement, for escape and migration. Similarly, dark clouds obscured the business sky at the beginning of this year when the SNB quite unexpectedly abandoned the minimum exchange rate of the franc against the euro. The ensuing strong increase in the value of the Swiss franc was - and remains - a shock for the Swiss economy.

But, the past has shown that this industry rarely had the chance to rest on its laurels. In times past the strengthening of the franc forced export companies to always be one step ahead of the international competition in terms of efficiency and innovative strength, to constantly open up new markets and - time and again - to abandon business areas in which one couldn't compete.
And the experience with similar revaluation phases of the franc in the past has shown that although companies may have to battle with low margins and reductions in turnover for a certain period of time, they are nevertheless able to increase their productivity in a relatively short space of time.
So there is no reason to bury one's head in the sand. None of us know what we will have to face in the future in terms of financial and industrial politics, but every crisis also brings new opportunities and forces us to say goodbye to a certain inertia and to move out of our familiar comfort zone.

The motto must be: let's abandon well trodden paths and move towards new approaches and solutions. This also involves constantly questioning products and processes, and developing and promoting efficient processes. We as service providers also have to face this challenge again and again. We too have to constantly work on our future and the future of our services. We have selected the subjects of our newsletter with this theme in mind.

We hope you enjoy the read and encourage everyone to retain unbroken optimism, and to take enjoyment in innovation to face the coming challenges.

Arno Gander
CEO &
Head of Translation

Peter Rudnicki
CEO &
Head of Media

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Translation requires quite a bit more, for example the ability to interpret text, and experience and skill in areas such as grammar, syntax, semantics etc. In addition, it may be extremely important to be familiar with the culture in the country of the target language. For these reasons a simple machine translation can have its problems. It may be suitable for internal purposes, e.g. in order to be able to understand the content of foreign language documents. However, it is rather unsuitable for literature or creative texts. To achieve translation of a high quality, it is generally necessary to have the input of a "human" translator.

This is where post-editing comes into play.
In his book "Repairing Texts", Hans P. Krings writes:

A machine translation system (MT system) produces a translation with the help of quantities of statistically evaluated data and/or with the support of linguistic information and rules. This machine-based pre-translation may meet the minimum quality requirements and can be reviewed (repaired, post-edited) for the purpose of "honing"; failing this second process, the machine-based pre-translation is likely to be discarded owing to excessive defects, and normal translation will be resorted to.

To recap: in post-editing, text from a machine translation process is reviewed by an expert linguist, also called a "post-editor".
The post-editor will check whether a segment from a machine translation process fulfils the minimum requirements and can be revised to meet the quality criteria within a reasonable amount of time. If the minimum criteria are not fulfilled, the segment must be discarded and re-translated.

Combination with translation memory systems
There are now already some solutions where machine translation systems are combined with the translation process that uses a translation memory. In this process, the content of the TM is first used for the translation and, in a second step, all segments for which there are not yet any translations in the TM are translated by machine. The resulting draft translation is then completed by a post-editor.

Commercial viability
For post-editing to be economically viable, the review of all segments and the revision of usable segments together with the translation of the discarded segments has to be carried out in a shorter space of time than would be required for a "normal" translation of these segments.
This means that commercial viability depends on the following factors:

- Duration of review of usability
- The time required for revision
- The number of usable segments
  -> productivity advantage

It must be remembered that, in complex processes, machine translation systems have to be adapted, improved and "trained" for a certain subject in order to be able to achieve the desired results.

The cost and time input associated with this step is only warranted when it is intended to translate a large quantity of similar texts in the future. This needs to be taken into consideration when making the decision as to whether to employ machine translation or not.

Daniela Badel
Translation management

Challenge: Integration of suppliers' documents

Documentation: Options for embedding supplier documents in the customer's plant documentation (print and online solutions) (Text: Michael Payr, Technical Editor)

Initial situation

The proportion of suppliers' sets of documents (sets of external documents) of the overall volume of a set of plant documents very often is considerable, and can even be close to the 100% mark.

In accordance with document standard EN 82079-1:2012 (Preparation of instructions for use), the supplier of the plant is responsible for providing any external sets of documentation and it is therefore his duty to integrate these external sets of documentation into the overall documentation in the language of the country where the plant will be used. So that this cumbersome and time-consuming work can be completed quickly and in a structured manner, a number of different tools and methods are used at DOGREL AG, which are briefly described below.

Outline of task and objective

All external documents have to be integrated into the total documentation and issued in a format that is suitable as an online instrument and for print. The process aims to provide the following advantages:

- Documentation in consistent style
- Automatically producible TOC
- Links between different parts of the documentation
- Continuous page numbering

The form in which the whole documentation is provided depends on customer requirements regarding the updating of content, how up to date the documentation is meant to be and the necessary availability of different versions. Depending on these requirements the company will produce either a printable version of the documentation, which is also available electronically as a PDF file, or create an online version.

Solution for printable versions of documentation

In order to integrate external sets of documentation into one complete PDF document, we use a multi-stage work process.

In the first step, the structured base document is produced in FrameMaker with the appropriate chapter headings. Then the external documents are converted into PDF format unless they are already in this format. In the next step the external documents are imported chapter by chapter into the FrameMaker base document using fully automatic tools. In this process the PDF documents are automatically placed on FrameMaker pages and scaled.

Once all external documents have been imported the table of contents and page numbering are automatically created. Now all that is left to be done is to generate a PDF file that can be printed.

Solution for online documentation

The concept is "available offline, updateable online". This can be achieved in a number of ways; when selecting the appropriate method, numerous criteria have to be taken into account, the most important of which are:

- Requirements under regulations and standards
- Accessibility of documents
- Read/write authorisation
- Different versions to be available and clearly distinguishable
- Question as to who is responsible for updating the content (to be done by the customer or the service provider?)
- Should links be possible between the base documents?

The following advantages can be benefited from:

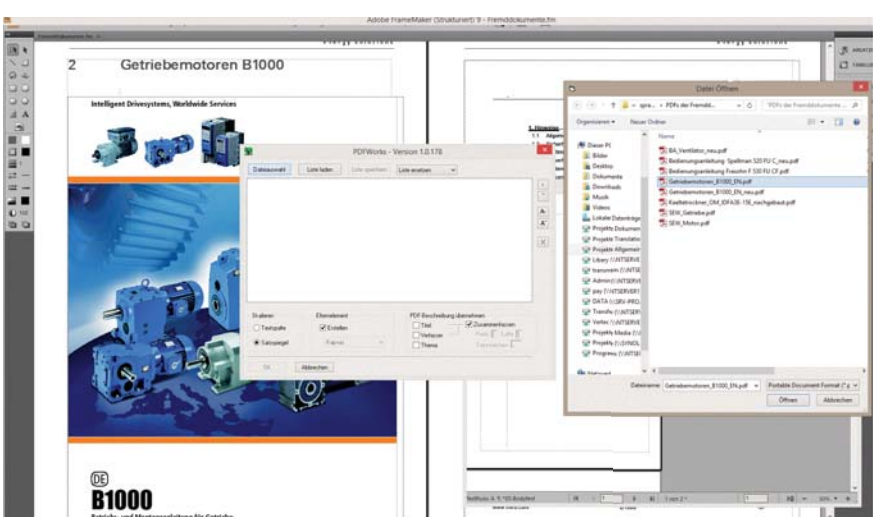
- Online editability
- Additional offline availability
- Intelligent search function
- Intelligent filter function
- Links to spare parts catalogue
- Links to maintenance manual
- Option of integrating videos etc.

Basic requirements:

- Standardised integration of external documents incl. standardised naming
- Storage of files to be language-related
- Exact allocation of supplier documents to suit the respective plant

Conclusion

Producing the complete documentation in PDF form for printing is always less work than producing the documentation online. On the other hand, some of the advantages listed above are not available, e.g. live editability. Online documentation requires a certain amount of time input for updating and making document versions and document languages available, and the person in charge of the documents needs to be experienced in the operation of CMS and databases. Why not therefore use the competences of DOGREL AG and benefit from the many advantages, such as professional support when integrating supplier documents with respect to aspects of legal and standard requirements, saving time and staff resources.



Screenshot of online documentation including integrated external documents

The optimum media mix for your technical documentation

Documentation: Today's children and young persons grow up with all types of information available in digital form. It would be grossly negligent to ignore the habits of this user group, who in ten years at the latest will be the main target group for many products. But there are also many other arguments in favour of the digital provision of technical documentation. But never fear – good old paper will be with us for a long time yet.

Every medium has its potential

Paper
In many areas, printed technical documents are still a necessity, and that will not change any time soon. Compared to digital information, paper has a much longer service life because – let's be honest – whether, for example, a current online help app can still be operated or even updated in 10 years time is questionable at least. In machine and plant construction in particular, where 20 to 30 or even more years of service life are common, it is therefore necessary to print operating instructions. Obviously, this is also subject to regulations embedded in the Machine Directive and its guidelines. However, it is also possible to reduce printed documents relating to apparatus and equipment to short instructions and safety notes.

Web manuals
The wide distribution of digital end-user devices such as tablets and smartphones offers completely new opportunities for the dissemination of information. Web manuals in HTML5 format, which automatically adapt to all end-user devices (responsive design) and are accessible without installation, are a user-friendly alternative to printed operating instructions in many areas. What is important in this context is that web manuals can be generated from the same data source as printed manuals, thereby avoiding duplication.

Video & animation
By integrating videos and animations it is possible to significantly improve how complex processes in particular, such as maintenance and repair work, are understood. Whether integrated directly in the web manual or published on a dedicated YouTube channel – you are communicating with moving images.

Online catalogues
For the identification and ordering of products or spare parts, online catalogues are significantly more user-friendly than printed copies. Intelligent search functions, automatic calculation of price/delivery time and ERP article master recognition are useful features which cannot be achieved with a paper copy.

Online and/or offline?
Nowadays, stable and high-capacity internet connections are available in many countries. These systems are the result of large annual investments amounting to billions. Nevertheless, there are still many places where no or only a very weak internet connection is available. It is also possible that e.g. WLAN connections are interrupted by concrete floors and hence the network in a building is disrupted. For this reason, technical documents are often required to also be available offline. This means that the data have to be stored on a tablet, smartphone or laptop. Available offline and updateable online – surely this is the ideal approach.

Which medium for which phase of service life?
The different phases of the service life of your products require different types of technical documentation. Likewise, the target groups are usually different, for example the operator of a machine is usually not responsible for its service and maintenance.

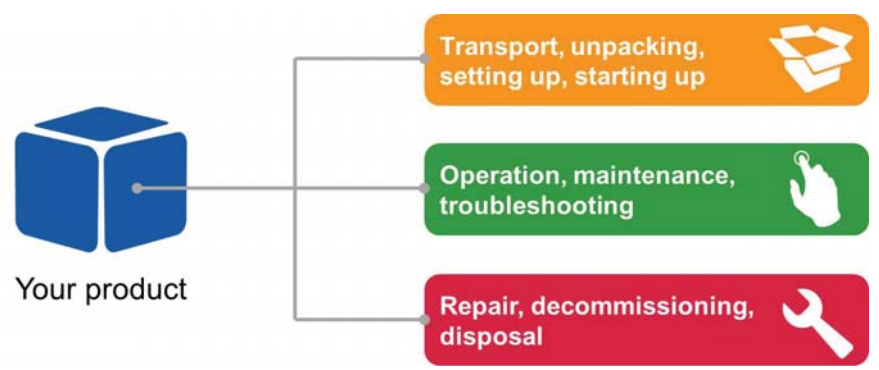
Our aim is to find the optimum medium for the best possible dissemination of information at each phase of the service life of a product.

We devise and implement a suitable mix of media – also for your products, e.g. media mixes for apparatus and equipment and/or plant and machinery.

Why not gain a competitive advantage and make use of the full potential of all media for your technical documentation? We have been working with all facets of multimedia communication for more than 15 years, and have a wide range of experience at our disposal – try us out.

In short, a communication team which, at each step of the process, focuses on customer benefit.

Günther Klammer
Head of Documentation



Here an example of a suitable grouping of a product's service life phases:

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