

Roughlate service for in-house customers

Pertti Nuutila

Nokia Telecommunications, P.O.Box 33, FIN-02601 Espoo, Finland

pertti.nuutila@ntc.nokia.com

Besides for translating customer documents, we apply machine translation to producing rough translations (or roughlations) of various internal texts. Through our roughlate service it is possible to order a rough English translation of a Finnish text. The translation is produced by TranSmart machine translation software designed by Kielikone Ltd. (Arnola et al, 1).

Background

The main field of application of the machine translation system in our translation department is in assisting our professional translators in translating customer documents. We began our work with machine translation in the late 1980s to help cope with customer document translation. At that time, we were interested in acquiring a "pure" MT system for translating documents the first time. At present, however, we have to make new versions of previously translated documents and therefore our attention has shifted more to a translation memory system in that area (Nuutila, 4). Translation memory helps in ensuring better translation consistency across an entire document. The modular structure of the TranSmart system enabled Kielikone to add such a module to the system — at first, a simple one relying on the pattern-matching principle. At present, we are testing their new intelligent translation memory (Juntunen, 2).

This paper is, however, mainly about an application area where translation rules play the most important part. In addition to translating customer documents, our department also offered a service for the translation of internal documents for various user groups. It became evident that there was a need for "quick-and-dirty" translations for information retrieval purposes, and therefore the ROUGHLATE service was initiated. The rough translation can provide the basic idea of the source text and you can decide whether farther translation by a professional human translator is necessary.

Characteristics of the service

It can be argued that machine translation has a proper place beside human translation as an alternative technique for achieving different communicative objectives. In our case, for example, the service can be used in several ways. Firstly, employees with no knowledge or very little knowledge of Finnish may use it for information retrieval. They can translate memos, minutes, instructions, or email messages just to see if they are relevant for their purposes. Secondly, Finnish software designers, for example, may produce a rough translation of a text and then

finalise it in English. This helps them in using consistent terminology, which the system finds in our termbank. An additional use might be in extracting terms i.e. producing a list of special terms in a text with equivalents in English.

It might also be possible (if not recommended) for employees with no knowledge of English to produce an English translation of a Finnish text. In this case, the user should ensure that the Finnish text is as good as possible. The Finnish original text should therefore consist of concise, simply constructed sentences, and be grammatically correct. Idiomatic expressions and colloquial style should be avoided.

Most texts translated by our service thus far have been short email messages, memos, etc., but instructions of a few hundred pages have also been translated. In the beginning, many people wanted to challenge the limits of the system by sending in texts with puns, proverbs, etc. just to see how amusing the translations would be. A similar phenomenon is likely to occur every time we introduce the service to new user groups.

At present, roughlate is only available in our VAX/VMS environment as we are still gathering experience and user feedback. As for the text format, the system only accepts plain ASCII text. The TranSmart system, however, understands SGML tagging and also has a built-in converter for RTF texts.

Process

This section deals with the actual roughlate process. A text for translation is sent either directly to the machine translation software or via the rough translation service operator (Roughguy, a professional translator). The process is also illustrated in Figure 1.

Request for translation

The service is initiated by entering the command ROUGH, after which the program prompts the user for required parameters. In addition to filename, feedback language, subject area, and service level are given.

Feedback language. The user may request that evaluation and other feedback is given in English or Finnish. By default, the feedback language is the language of the selected user interface.

Subject area. By selecting subject area the user may guide the selection of translation dictionaries. At present, these include telecommunications, internal instructions and general.

Service level. Basically, we wanted to offer rough translations and somewhat improved translations. Where do we draw the line then? You cannot just offer translations that are, say, 25% or 50% of an optimum translation. It is rather difficult for translators to stop when they are 50% pleased with the translation. Therefore, we tried to define clear tasks which when completed would improve the quality of the rough translation. The following three tasks were proposed: adding missing words, correcting spelling mistakes in the source text, and editing the translation briefly.

You can see quite easily when all missing words are added into the translation dictionaries. Spelling mistakes in the source text are also easy enough to correct. What is difficult, however, is to define when the translation has been edited briefly. This is actually rather relative and mainly depends on how much time is available.

Thus, the roughlate service offers the customers the following three service levels which might also be considered as quality levels. The service level also inversely indicates the relative time it takes to accomplish the task. Thus, for example, the translation that is 1st level in quality takes the longest time to translate.

1st level. Unknown terms are added to the system dictionaries as far as possible. Both the original text and the translation are edited briefly. The rough translation is evaluated.

2nd level. Unknown terms are not added to the system dictionaries. The original text and the translation are edited briefly. The rough translation is evaluated.

3rd level. Unknown terms are not added to the system dictionaries. Neither the original text nor the rough translation are edited. No evaluation of the rough translation is prepared.

The 1st and 2nd service levels are more suitable for novice or casual users as the evaluation report indicates how reliable the translation might be. The 3rd level, on the other hand, is more suitable for users who are familiar with the system, and who are in a hurry.

As soon as the service level is selected, the program emails the file and parameters to the rough translation service operator (Roughguy) or directly to the MT system (TranSmart). The processes involved are discussed in the following two sections.

No Roughguy intervention

If service level 3 is selected, the email is sent directly to the TranSmart system in UNIX with parameters in the subject line of the email message. The program then translates the file, checks who sent it and returns the translated file to the sender. In this case, no evaluation is given.

Roughguy intervention

If service level 1 or 2 is selected, Roughguy will help in producing a better rough translation. This will, naturally, take longer to process than service level 3 as the text is translated at least twice. The first run is needed for finding out misspelled words and missing terms. Thus, Roughguy first extracts the file from the mail system, adds required control tags, and prepares a machine translation. The control tags are used to skip untranslatable sections like tables or figures, for example.

Dictionary update. The machine translation system also produces a list of unknown words which the operator may add into the translation dictionaries. Sometimes dictionary update i.e. the preparation of translation rules for unknown terms can be a time-consuming job. Additionally, the text may include informal or slang expressions which have to be added into the morphological dictionary. The Finnish term 'sähköposti' ('electronic mail'), for example, is often referred to as 'meili' or 'maili' in everyday usage. 'Meili' does not (yet) belong to the Finnish lexicon, but 'maili' does; the English equivalent for 'maili', however, is 'mile'.

Corrections. The operator may correct typos in the original text before machine translation. The first machine translation round also lists words which may be typos along with words that are missing from the translation dictionaries.

As soon as the translation dictionaries are updated, the text is machine translated again, after which the operator may glance through the rough translation for the most obvious errors. The translation is not, however, thoroughly edited before being returned.

Evaluation. Evaluation of a translation, whether it is produced by a human translator or a machine, is a difficult task. In a sense, it is "easier" to evaluate a machine translation than a translation produced by a colleague — you cannot hurt a machine's feelings. Both of these are, however, difficult to measure.

When measuring the overall performance of the TranSmart system during the initial development phase, we evaluated it by counting various types of mistakes on the structural and lexical level. When the same text was evaluated once or twice a year, we obtained a diagram indicating the general direction of development. In a sense, you might say we presented qualitative measures in a quantitative disguise. One should not, however, mix up subjective and objective measures, as King (3), for example, warns. Accordingly, in the hope that different personal preferences would cancel each other out, we divided the evaluation task between several translators. In this way, we expected to gain at least a degree of objectivity

With the roughlate service, however, we do not have enough time for detailed analysis like that (and our customers are not really interested in it either). Therefore, in evaluating rough translations, Roughguy is strictly subjective. He glances through the translation and grades it according to the following scale.

Not recommended. The translation does not correctly convey the contents of the original. It may contain a lot of substantial errors and is stylistically very obscure. The translation is not recommended as such, but may be of some use for a reader well acquainted with the subject matter in question.

Adequate. The translation may give a misleading picture of the contents of the original text. It may contain several substantial errors and is stylistically obscure. Correct understanding of the text requires good background knowledge of the matter in question.

Fairly good. The translation satisfactorily conveys the contents of the original, but may contain some substantial errors on the word-level. The text is stylistically poor and partly obscure.

Good. The translation correctly conveys the contents of the original text. It contains no substantial errors and is stylistically relatively clear.

User feedback

After about six months service, we sent a questionnaire to some of the most frequent users to see how they felt about the service and how we could improve the system. All users had a technical background ranging from R&D to testing. The sample was quite small, but nevertheless here is a brief overview of the questions and answers.

What kind of texts do you usually send for translation? Email messages 45%, product-related documents 27%, various instructions 18%.

Would you have them translated if the roughlate-service didn't exist, and how? Summary-like oral translation by colleagues 44%, no translation 33%, translation by a professional translator 23%.

Have your requirements/expectations been met? Yes 50%, make do 50%. (Perhaps we sent our questionnaire to the right persons!)

Would you like to have your translated texts briefly edited? Yes 50%, no 33%, sometimes 17%.

What would you like to improve? It is OK as it is 33%, translation quality could be improved 33%, unknown terms should be presented in another way 17%, additional text formats and mail systems should be supported 17%.

Up until now, the roughlate service has only been advertised through the grapevine as we are still polishing the processes. Even so, there have been somewhat more translation requests than we were prepared to handle, and the feedback has indicated that the service is considered valuable.

Conclusions

Even though machine translation might sometimes be considered a poor substitute for human translation, it can be justified because there are not enough human translators available to translate huge amounts of documents (at least not in time). There is also demand for immediate, low cost translation which cannot be produced by human translators.

The answers to our questionnaire indicated that the roughlate service eases the pressure on colleagues and translators who have their own specific tasks. Additionally, the service was used for translating texts which otherwise would not have been translated at all.

REFERENCES

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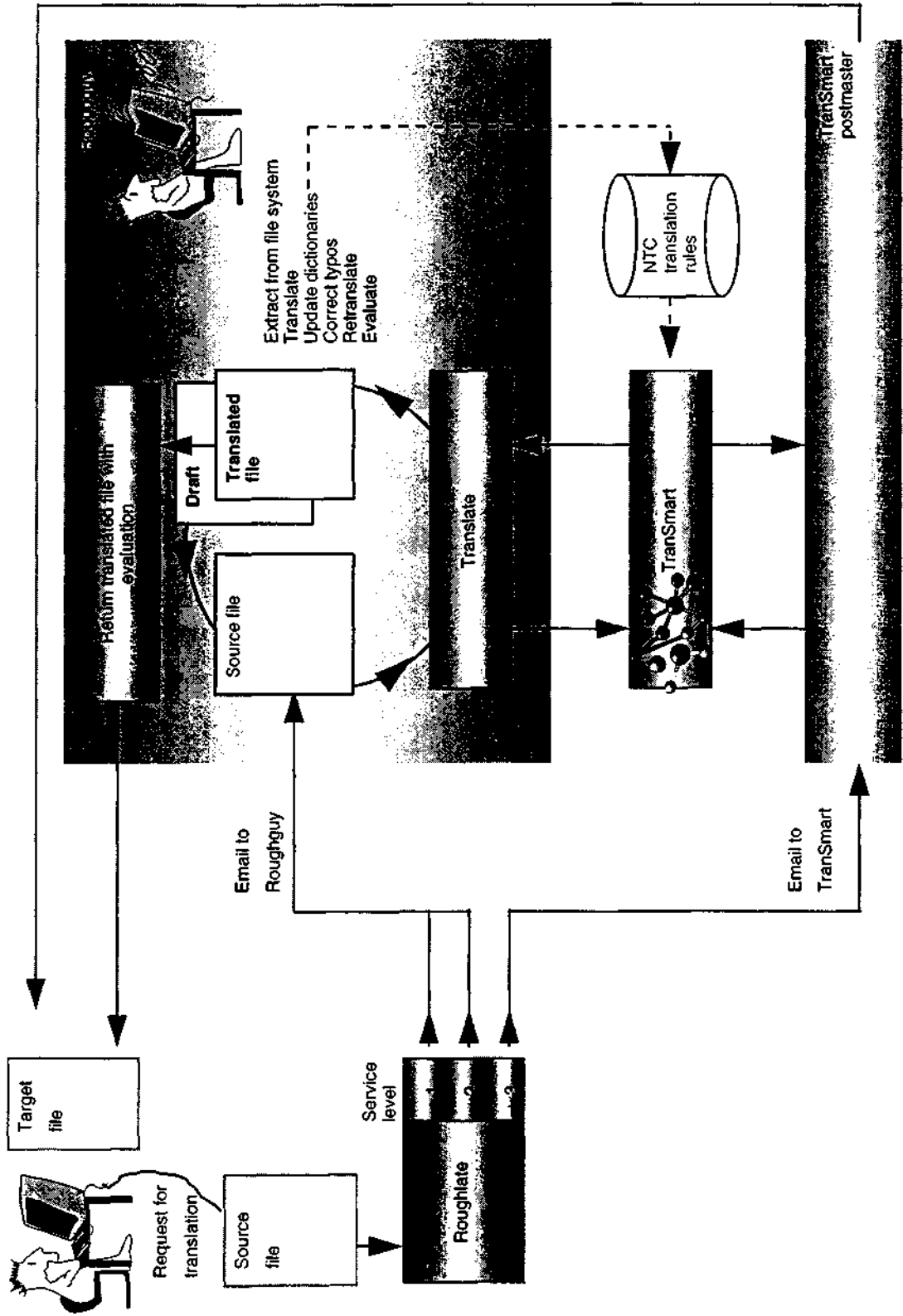


Figure 1. Roughlate process.