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D E C I S I O N
of 27 October 1998

Case Number: T 0243/95 - 3.5.1

Application Number: 85111799.4

Publication Number: 0175357

IPC: G06F 15/38

Language of the proceedings: EN

Title of invention:
Translation system

Patentee:
Sharp Kabushiki Kaisha

Opponent:
Xerox Corporation

Headword:
-

Relevant legal provisions:
EPC Art. 56, 100(a), 104(1), 114(1)

Keyword:
"Inventive step (no)"
"Costs - apportionment - (no)"
"Fresh ground for opposition considered (no)"

Decisions cited:
G 0001/95, G 0010/91

Catchword:
-



Case Number: T 0243/95 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 27 October 1998

Appellant: Xerox Corporation
(Opponent) Xerox Square
Rochester, New York 14644 (US)

Representative: Grünecker, Kinkeldey,
Stockmair & Schwanhäusser
Anwaltssozietät
Maximilianstrasse 58
80538 München (DE)

Respondent: Sharp Kabushiki Kaisha
(Proprietor of the patent) 22-22 Nagaike-cho
Abeno-ku
Osaka-shi
Osaka-fu 545 (JP)

Representative: Selting, Günther, Dipl.-Ing.
Patentanwälte
von Kreisler, Selting, Werner
Postfach 10 22 41
50462 Köln (DE)

Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 10 January
1995 concerning maintenance of European patent
No. 0 175 357 in amended form.

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: R. R. K. Zimmermann
V. Di Cerbo

Summary of Facts and Submissions

- I. Patent No. 0 175 357 was granted on the European patent application No. 85 111 799.4 claiming several priority dates between 19 September 1984 and 9 October 1984. The grant of the patent was published on 29 April 1992.
- II. In an opposition filed on 29 January 1993 complete revocation of the patent was requested on the ground that the subject-matter claimed lacked an inventive step (Article 100(a) EPC in combination with Article 56 EPC). The opponent (appellant) filed inter alia the following documents as means of evidence (cited as DO1 and DO2):

DO1: M. Kay "The Proper Place of Men and Machines in Language Translations", October 1980, Xerox Corp., Xerox Palo Alto Research Center, pages 1 to 27

DO2: M. Kay "The Mind System" in: Courant Computer Science Symposium 8: 20 to 21 December, 1971, Natural Language Processing, ed. by Randall Rustin, Algorithmic Press, Inc. New York, pages 155 to 188

Taking account of amendments submitted by the patent proprietor (respondent) the opposition division decided in an interlocutory decision dated 10 January 1995 that the patent and the invention to which it relates met the requirements of the EPC. Claim 1 as amended reads as follows:

- "1. *A translation machine comprising*
- *a central processing unit (1) for processing a translation process and other necessary processes,*

- a main memory (2) for storing programs which are developed in order to execute the translation process,
- a data entry means for entering data necessary for translation processing, such as an original text in a source language,
- a display means (3) for displaying data such as translations of the original text into a target language, and
- a translation module (5) for executing, with respect to the original text in the source language to be translated, comprising
 - means for consulting a translation dictionary (51) with respect to every word included in the original text which is provided in the translation module,
 - means for morphemic analysing for obtaining grammatical data such as a part of speech and an equivalent of the word,
 - means for constructional analysing for determining the construction of each sentence contained in the original text in the source language, such as subordinations between or among the words contained in each original text, and
 - means for generating a sentence in the target language corresponding to each sentence in the source language (54) according to the results of the foregoing analysis,characterized in that
- there are provided means for displaying a designated sentence in the source language and the sentence in the target language being equivalent thereto on the display means (3) in such a manner that both correspond to each other, and

-there are further means such that upon operating cursor movement keys and function keys of said data entry means a plurality of translations are capable to be obtained according to the possible subordinations between and among the words obtained as results of the constructional analysing and be displayed so as to be able to designate one of them.

III. The first-instance decision refers to the document

Fujiitsu Scientific and Technical J. 1982, vol. 18, no. 1, Kawasaki, JP: Susumu Sawai et al. "Knowledge representation and machine translation", pages 117 to 133

as the document disclosing the closest prior art. This document is already cited in the patent specification. According to the reasons of the decision, the translation machine claimed would be distinguished from the prior art essentially by the automatic generation and display of the various translations possible in view of the ambiguities due to the different subordinations possible between and among the words of a source sentence to be translated. This would avoid shortcomings of the prior art in which according to the first-instance decision the translation system might possibly fail to generate and display a translation more appropriate for selection than the translation actually selected.

IV. Notice of appeal was filed against the first-instance decision on 20 March 1995, requesting that the patent be revoked in its entirety and as a subsidiary measure that oral proceedings be held. The fee for appeal was paid at the same day. A written statement setting out the grounds of appeal followed on 19 May 1995.

V. The respondent requested rejection of the appeal and subsidiarily oral proceedings. Following summons to oral proceedings arranged by the Board of appeal for the 27 October 1998 the respondent withdrew its subsidiary request and declared that it would not attend the oral proceedings.

At the oral proceedings the appellant requested revocation of the patent and apportionment of costs incurred in the oral proceedings.

The respondent did not appear at the oral proceedings.

VI. The essential arguments forwarded by the parties in the course of the appeal proceedings are summarized as follows:

The appellant argued that a translation machine as defined in claim 1 would be known from both documents, D01 and D02 so that in particular document D01 destroyed novelty of the subject-matter of claim 1, an objection raised in the appeal proceedings for the first time. According to document D01 the user of the translation machine had the choice to select between alternative translations proposed and displayed by the machine if any ambiguity is detected on the morphological or syntactical level. Document D02 offered two approaches to resolve ambiguities, according to one of them only a low number of questions should be asked to the user. This suggested that a plurality of translations are prepared and displayed for selection by the user. Therefore, the subject-matter of claim 1 would be rendered obvious by the combination of documents D01 and D02 as well as by either of documents D01 and D02 on the background of the general knowledge in the field. The appellant contradicted the interpretation stated in the contested decision and maintained by the respondent according to

which claim 1 of the patent called for a simultaneous generation and display of the translation alternatives possible with regard to the linguistic ambiguities present in the individual source sentences.

Regarding the apportionment of costs the appellant argued that the respondent had withdrawn its subsidiary request for oral proceedings too late and also communicated its intention not to attend the oral proceedings too late. Furthermore, the respondent's defence lacking so clearly any foundation would be tantamount to an abuse of the procedure.

The respondent pointed out that the prior art system of document D01 only allowed the user to replace individual words. Such a replacement did not change the subordination between and among the words and thus did not produce the same translation alternatives as the translation system of the contested patent did. Different to the teaching of document D02, the present translation machine did not ask questions for resolving such ambiguities but produced and displayed all possible translations without any human interaction, thereby avoiding the restrictions to the number of such translations present in the prior art.

VII. In a communication sent with the summons to oral proceedings the Board raised doubts whether the contested patent actually disclosed the generation and display of all translation alternatives as argued by the respondent since neither the claims nor the description nor the drawings indicated that such a plurality of translations should be displayed simultaneously on a sentence-to-sentence basis.

Reasons for the Decision

1. The appeal is admissible.
2. In the first-instance as well as in the appeal proceedings, the only objection validly raised against the patent is lack of inventive step. Although the subject-matter of the contested patent might be considered as pointing to the exclusion provisions of Article 52(2) and (3) EPC as a possible ground for opposition, such an objection has never been raised at any stage of the proceedings. In view of the decision to be taken the Board considers it neither to be necessary nor appropriate having regard to decision G 10/91 to pursue this matter on its own motion.
3. The appellant raised an objection of lack of novelty in claim 1 for the first time in the appeal proceedings.

According to the constant case law of the boards of appeal (G 1/95, G 10/91), such a fresh ground for opposition can be introduced at this late stage only with the agreement of the patentee (respondent). Since, however, the objection of lack of novelty in the present case is based on a document on which an objection of lack of inventive step was based, the fresh objection of lack of novelty may be made here under the umbrella of inventive step so that the Board does admit this further ground for opposition to the proceedings as an objection of lack of inventive step.

4. Both parties considered documents D01 and D02 as the prior art documents most relevant to the translation machine as claimed.

Both documents, D02 and D01, treat of translation systems including syntactic analysis so that each one might be useful as starting point for assessing the inventive step. Document D01, however, does not describe a particular translation machine but the hypothetical phases of its development which the author envisages to be *an incremental approach to the problem of how machines should be used in language translation*. On the other hand document D02 discloses a translation system comprising all the features of the preamble of claim 1 and, similarly to the contested patent, proposes solutions to the ambiguity problem arising at the stage of syntactic analysis. Therefore, the Board considers document D02 as the closest prior art document.

As shown for example in Figures 2 to 5 of document D02, ambiguities at the syntactic or *constructional* level might arise from different possible subordinations between and among the words. According to one of the alternatives disclosed, a program component, the so-called disambiguator, is provided for resolving such ambiguities by asking appropriate questions to the human user (page 176, last paragraph).

The subject-matter of claim 1 is distinguished from the prior art system of document D02 essentially by generating and displaying the translations arising from the ambiguities present in the source sentence and by allowing the user to designate one of them, using interactive control means like cursor movement keys etc. The result achieved in the end is that the difficult problem of solving the linguistic ambiguities is shifted to the human user and the user-machine interface. The problem objectively solved by the claimed subject-matter, therefore, is to simplify the tasks to be fulfilled by the translation system itself.

Document D01 proposes an incremental approach to translation of natural languages. Beyond a text-editing functionality at a lower development stage, a word processor should allow to switch rapidly back and forth between lexical and morphological variants (page 24, second paragraph). At an advanced level, a machine translation is envisaged which, however, should be kept under tight human control to avoid the problem of linguistic ambiguities not yet solved satisfactorily from a practical point of view (see chapter titled *INTRODUCTION*, pages 1 ff. and chapter titled *Machine Translation*, pages 24 ff.). According to this concept, the human user should always be empowered to intervene in the translation process to the extent he himself specifies. If he does not intervene in the translation process itself, the selected unit is translated and the translated unit is displayed and, if necessary, interactively edited by the user.

The human control over the translation process is a basic concept of this document. Furthermore, this document indicates that the user should be able to choose interactively between different translation alternatives by using cursor control means (see page 17, second paragraph and page 24, first paragraph) and proposes that the user should have the possibility to work on text units completely translated. Incorporating these ideas into the prior art system of document D02, the skilled person arrives at a translation system as defined by claim 1. For these reasons, claim 1 lacks any feature which, even if technical, could form the basis for an inventive step in terms of Article 56 EPC. It follows that the contested decision cannot be upheld.

5. The request for apportionment of costs has to be decided on the basis of Article 104(1) EPC according to which any party to the proceedings should meet the costs it has incurred unless the instance seized decides differently for reasons of equity.

In the present case, the Board cannot identify any undue, unfair or abusive conduct in the appeals procedure on the side of the respondent. It is the right of the respondent and patent proprietor to defend its patent with any argument considered useful even if the argument proves not to succeed in the end. Concerning the withdrawal of its subsidiary request for oral proceedings, it has to be noted that the respondent informed the Board and the appellant of the withdrawal and its intention not to attend the oral proceedings one month in advance. This period gave the appellant sufficient time to reconsider its own further line of action. In addition, the Board found the oral proceedings useful for clarifying the arguments as submitted by the parties in the course of the appeal proceedings. For all these reasons, a different apportionment of costs deviating from the basic rule laid down in Article 104(1) EPC would not be equitable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.
3. The request for apportionment of costs is refused.

The Registrar:

The Chairman:

M. Beer

P. K. J. van den Berg