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D E C I S I O N
of 10 January 1996

Case Number: T 0462/94 - 3.5.1

Application Number: 87400004.5

Publication Number: 0274281

IPC: G06F 15/38

Language of the proceedings: EN

Title of invention:

Method using a programmed digital computer system for translation between natural languages

Patentee:

GACHOT S.A.

Opponent:

Siemens Nixdorf Informationssysteme Aktiengesellschaft
Logos Computer Integrated Translation GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 56, 111(1)

Keyword:

"Inventive step (not decided)"
"Remittal to first instance (yes)"
"New claim was never examined by the Opposition Division"

Decisions cited:

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Catchword:

-



Case Number: T 0462/94 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 10 January 1996

Appellant: GACHOT S.A.
(Proprietor of the patent) 26 bis, Avenue de Paris
F-95230 Soisy-sous-Montmorency (FR)

Representative: Keib, Gérard
Bouju Derambure (Bugnion) S.A.
52 rue de Monceau
F-75008 Paris (FR)

Respondent: Siemens Nixdorf Informatonssysteme
(Opponent 01) Aktiengesellschaft
Fürstenallee 7
D-33102 Paderborn (DE)

Representative: Fuchs, Franz-Josef, Dr.-Ing.
Postfach 22 13 17
D-80503 München (DE)

Respondent: Logos Computer Integrated Translation GmbH
(Opponent 02) Mergenthaler Allee 79-81
D-65760 Eschborn (DE)

Representative: Nix, Frank Arnold, Dr.
Kröckelbergstrasse 15
D-65193 Wiesbaden (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 2 May 1994 revoking
European patent No. 0 274 281 pursuant to
Article 102(1) EPC.

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: W. B. Oettinger
G. Davies

Summary of Facts and Submissions

- I. The appeal contests the Opposition Division's decision to revoke the European patent No. 0 274 281, which was granted on patent application No. 87 400 004.5 filed on 5 January 1987.
- II. Subsequent to the grant, first a "third party" presented observations (Article 115(1) EPC), followed by a notice of opposition deemed not to have been filed (Article 99(1) third sentence EPC).
- III. Thereafter two admissible oppositions were filed invoking the ground of lack of patentability (Article 100(a) EPC), more particularly exclusion from patentability (Article 52(2)c)), lack of novelty (Article 54) and lack of inventive step (Article 56), and moreover invoking the ground of insufficient disclosure (Article 100(b) EPC).

Concerning the lack of novelty and inventive step objections, the following prior art documents were cited and considered:

D1: EP-A-0 012 777

D2: Final Report on Computer Set AN/GSQ-16 (XW-2), "The Mark II Language Processing System", Research Report RC-1130, IBM Watson Research Center, New York, 23 September 1963, 58-66

D3: Winfried Lenders, Gerd Willée: "Linguistische Datenverarbeitung", Westdeutscher Verlag, Opladen, 1986, 94-101

- D4: Sonderforschungsbereich Elektronische Sprachforschung: "Automatische Lemmatisierung - Zielsetzung und Arbeitsweise eines linguistischen Identifikationsverfahrens", 3. Berichtsteil Linguistische Arbeiten 15, Universität des Saarlandes, Saarbrücken Juni 1976, 43-48
- D5: W. J. Hutchins: "Machine Translation - past, present, future", Ellis Horwood Limited, Chichester 1986, 209-223
- D6: B. Henisz-Dostert et al: "Machine Translation", Mouton Publishers, The Hague - Paris - New York 1979, 102-107 and 112-113
- D7: loc. cit. D5, 40-49, 70-75, 96 and 102
- D8: Occasional Papers on Machine Translation No. 30, R. R. Macdonald: General Report 1952-1963, Georgetown University, Washington June 1963, 26-28, 35-36, 39, 41-42, 46, 68-69, 74-76, 90, 112, 121 and 166
- D9: loc. cit. D6, 6-7, 20-21, 24-33, 104-127, 134-137
- D10: Germano Porta: "Textnormierung und Wörterbuchsuche im System SUSY", Dokumentation A2/8, Sonderforschungsbereich Elektronische Sprachforschung, Universität des Saarlandes, Saarbrücken Mai 1984, 7
- D11: Hans Eggers et al: "SALEM - Ein Verfahren zur automatischen Lemmatisierung deutscher Texte", Max Niemeyer Verlag, Tübingen 1980, 81-83

- D12: Peter Hellwig: "Formal-desambiguierte Repräsentation - Vorüberlegungen zur maschinellen Bedeutungsanalyse auf der Grundlage der Valenzidee", HochschulVerlag, Stuttgart 1978, 152
- D13: C. E. Byrne et al: "Optimization of LOGOS I System (Phase II)", Final Technical Report RADC-TR-71-142, Rome Air Development Center - Air Force Systems Command, New York July 1971, I-4a-c and -13
- D14: K. E. Harper and D. G. Hays: "The Use of Machines in the Construction of a Grammar and Computer Program for Structural Analysis", Proc. Int. Conf. on Information Processing, UNESCO, Paris 1960, 190-191
- D15: A. D. Booth: "Machine Translation", North-Holland Comp. and John Wiley & Sons Inc., Amsterdam - New York 1967, 150-151 (O.S. Kulagina and I.A. Mel'čuk: "Automatic translation: some theoretical aspects and the design of a translation system")
- D17: C. Vigroux: "Bilan d'une expérience de traduction automatique trilingue de l'espagnol vers le français et l'anglais", Centre d'études linguistiques pour la traduction automatique, 1985, 13-16
- D18: P. P. Toma et al: "Optimization of SYSTRAN System, Final Technical Report RADC-TR-72-73, Rome Air Development Center
- Air Force Systems Command, New York April 1972, 1-2 and 6-13

IV. In the decision under appeal, it was stated that the claimed subject-matter met the requirement of being an invention within the meaning of Article 52(1) EPC (non-exclusion from patentability by Article 52(2) and (3) EPC) and the requirement of being novel (Article 54 EPC).

However, the patent was revoked on the ground that the subject-matter of claim 1 as granted (and of an auxiliary request claim 1 having merely a different two-part form) did not involve an inventive step (Article 56 EPC), having regard to D1, D2, D3, D4 and D6.

V. The appeal against this decision, which was issued on 2 May 1994, was lodged by the proprietor of the patent on 3 June 1994.

On 29 June 1994, by way of a complementary payment, the required fee for appeal was received.

On 26 August 1994, the appellant filed a statement of grounds including new claims.

VI. The independent claim reads as follows (designations (d) (e) (f) added by the Board):

Method for translation between source and target languages using a programmed digital system, the steps comprising:

- (a) storing in a main memory of the computer a source text to be translated;
- (b) scanning and comparing such stored source words with dictionaries of source language words stored in a memory and for each source text for which a match is found, storing in a file in main memory

each word, and in association with each such word, coded information derived from such dictionary for use in translation of such word, the coded information including memory offset address linkages to a memory in the computer system where grammar and target language translations for the word are stored;

- (c) analysing the source text words in its file of words, a complete sentence at a time, and converting the same into a sentence in the target language utilizing the coded information and including the steps of
 - (1) using the memory offset address linkages for obtaining the target language translations of words from a memory; and
 - (2) reordering the target language translation into the proper target language sequence;

the step of analysing additionally comprising the steps of analysing each source word in multiple passes through each sentence of the source text, assigning codes thereto, considering all the codes which previous passes have attached to a word and assigning target language synthesis codes attached to the meaning with which the code functions in the sentence, placing the word into a form corresponding to the target language dependant upon the analysis and consideration of all relevant codes assigned to the words,

characterized

- (d) in that said dictionaries of source language words comprise entries containing a source language stem, the coded information associated to such entry

comprising an offset address linkage relating to the set of valid endings permitted for said source language stem,

(e) in that said method further includes the steps of:

- storing a dictionary of high frequency source words and associated offset address linkages, the offset address linkages identifying the storage location of grammar and meaning information for the source words;
- comparing each source language text word with the high frequency dictionary words and, upon detecting an equality with a word, storing the word and associated offset address linkages together in a high frequency file; and
- if no equality is detected, storing the word in a low frequency file, and

(f) in that, for each source text word stored in the low frequency file, the step of comparing such word with dictionaries of source language words comprises the steps of:

- inspecting said dictionaries to determine whether a particular entry thereof matches said source text word,
- if no match is found, dropping the last letter of said source text; and
- repeating the sequence of said steps of inspecting and dropping the last letter until a match is found with a source language stem entry of said dictionaries, the number of letters

dropped being less than a predetermined number representing the maximum ending length for said source text word, and upon finding a match,

- inspecting the set of valid endings attached to said source language stem entry until finding a match between said source text word and a stem and ending combination.

VII. In conclusion, the appellant requested that the decision under appeal be set aside and the patent maintained as amended on the basis of the claims proposed on 26 August 1994.

In support, it contended that their subject-matter would involve an inventive step over D1 in view of D2, D3, D4 and D6.

VIII. The respondents (opponents I and II, cf. point III) questioned whether the amendments made to the claims were admissible, and contested the appellant's submissions in respect of patentability. In conclusion, they requested that the appeal be dismissed.

Respondent I based its contentions on the documents just mentioned (VII), whereas respondent II relied, in addition and in particular, on D18 and submitted that it would even be sufficient to consider D18. In this context, it made specific reference, *inter alia*, to pages 14-15 of this document.

IX. The appellant also requested oral proceedings.

Reasons for the Decision

1. The appeal (cf. paragraph V) is admissible.
2. *Amendments*
 - 2.1 As a merely formal procedural point, it is noted that the newly proposed claims were, contrary to Rule 36 (cf. in particular (1), first sentence) referring to Rule 35 (cf. in particular (2) and (5)) EPC, not filed on separately numbered sheets, separate from the Statement of Grounds and suitable to replace the granted claims as published.
 - 2.2 The preamble of claim 1 (cf. VI) is substantially identical with that of granted claim 1.
 - 2.3 The characterising part of claim 1 is composed of three features of which, *roughly*, (d) and (f) are based on the characterising part of granted claim 1 and (e) is based on the steps defined in granted claim 4.
 - 2.4 Since, thus, the amendments made to claim 1 effectively restrict its scope, they do not extend the protection conferred by the patent (Article 123(3) EPC).
 - 2.5 However, as the respondents submitted, feature (e) is *not a complete* reproduction of the features defined in granted claim 4:

The feature "storing a dictionary of low frequency source words in association with grammar code meanings for each word" has been omitted.

- 2.6 Furthermore, as the respondents submitted, feature (e) is a *modified* version of the features of granted claim 4, as far as they have been taken over:

The feature "comparing the source language text words with the low frequency dictionary words and upon detecting an equality, storing the word and the associated grammar code meanings in a low frequency file" has been modified to read "if no equality (at comparing each source language text word with the high frequency dictionary words) is detected, storing the word in a low frequency file"; that is clearly not the same.

- 2.7 The appellant expressly agreed that feature (e) is "indeed distinct from old claim 4", but submits that it is "entirely supported by the description". However, no specific reference to any particular passage in the description was made, where feature (e) would be found. Where a comparison of features was made, it was with the prior art but not with the original disclosure.

It is, therefore, not immediately clear, whether the said omission (2.5) and modification (2.6) do not amend the patent in such a way that it contains subject-matter which extends beyond the content of the application as file (Article 123(2) EPC).

- 2.8 The respondents pointed to these disclosure problems in their responses to the statement of grounds of appeal.

But no response to these submissions, of which the appellant was informed in November 1994 and January 1995 respectively, was received.

3. *Inventive step*

3.1 As already indicated (2.2-2.4), the subject-matter of claim 1 corresponds roughly with that of granted claim 4.

3.2 Whereas the subject-matter of claim 1 according to the decision under appeal did not involve an inventive step, the Opposition Division did not issue any opinion on that of granted claim 4.

Claim 4, as all dependent claims, was only said not to be acceptable because it would presuppose a patentable claim 1 (which was not on file at the time).

3.3 The appellant submitted arguments in support of the patentability of claim 1 now on file, and the respondents submitted counter-arguments.

In spite of that, the Board is of the opinion that in the first place it would be up to the Opposition Division to assess the inventive step at issue. Furthermore, it would not appear to be in accordance with the nature of an appeal procedure and the Board's obligation to examine the **appeal**, if a substantively restricted independent claim were examined for the first time on appeal.

Rather, in the Board's view, the parties should, in a case such as the present, where in the appeal an entirely new situation has been created by the amendments made, be given an opportunity to defend their claims or submissions before two instances.

3.4 In this respect, it is noted that pages 14-15 of D18 were never (cf. III) cited, or considered, before the respondent II relied in his latest submissions in

particular on these pages as being very pertinent with respect to the amended claim 1. Whereas pages up to number 13 were submitted in the opposition procedure, pages 14 and 15 were not and are not available to the Board.

This means that, in the event that the subject-matter claimed (VI) or claimable (2.5-2.8) were found not to be obvious from documents D1 to D6, it will still have to be examined with regard to D18, possibly in conjunction with the afore-mentioned documents. This will best be done, if the case arises, after the missing pages of D18 have been submitted, by the Opposition Division.

4. *Conclusions*

4.1 In the circumstances, in particular since a new situation has been created (cf. 2.2, 2.3, 3.1, 3.2), the appellant's request that the decision under appeal be set aside is allowable.

4.2 For effectively the same reasons, the respondents' request that the appeal be dismissed cannot be allowed.

4.3 However, the appellant's further request that the patent be maintained as amended cannot presently be allowed either (2.5-2.8, 3.3-3.4).

Rather, the claimed subject-matter no longer being the same as that which constituted the basis for the decision under appeal (cf. point 3.2), the Board finds it appropriate, making use of the discretion it has under Article 111(1) EPC, to remit the case to the first instance department for further processing (3.3, 3.4).

4.4 In the present case, where the appellant has not so far responded to the respondents submissions (cf. 2.8), the Board does not find it appropriate to bind the Opposition Division (Article 111(2) EPC) by a final decision on the issue whether the amendments made to claim 1 are admissible in so far as the features taken over from granted claim 4 appear incomplete and moreover modified (2.5-2.7).

4.5 Since the appellant's request that the decision under appeal be set aside is allowed (4.1) and since, furthermore, this decision of remittal (4.3, 4.4) is not a final decision on the issues pending but the procedure will be continued before the first instance department, the appellant's request for oral proceedings (IX) requires, for the time being, no attention because the appellant will get, by this decision, an opportunity to request oral proceedings in the procedure(s) to come.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of the claims proposed within the statement of grounds of appeal.

The Registrar:

The Chairman:

M. Kiehl

P. K. J. van den Berg