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**Datasheet for the decision  
of 7 May 2014**

**Case Number:** T 1783/09 - 3.5.05  
**Application Number:** 03737844.5  
**Publication Number:** 1550938  
**IPC:** G06F3/023  
**Language of the proceedings:** EN

**Title of invention:**

INPUT METHOD FOR OPTIMIZING DIGITIZE OPERATION CODE FOR THE  
WORLD CHARACTERS INFORMATION AND INFORMATION PROCESSING SYSTEM  
THEREOF

**Applicant:**

Su, Rongbin

**Headword:**

INPUT METHOD/RONGBIN

**Relevant legal provisions:**

EPC 1973 Art. 56, 84

**Keyword:**

Claims - clarity and support (yes - after amendment)  
Inventive step (yes - after amendment)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
Boards of Appeal  
Chambres de recours**

European Patent Office  
D-80298 MUNICH  
GERMANY  
Tel. +49 (0) 89 2399-0  
Fax +49 (0) 89 2399-4465

Case Number: T 1783/09 - 3.5.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.05**  
**of 7 May 2014**

**Appellant:** Su, Rongbin  
(Applicant) 1531 1 Middle School of Yulin City  
10 Qingfeng Road  
yulin  
Guangxi Zhuang Autonomous Region 537000 (CN)

**Representative:** Seemann, Ralph  
Patentanwälte  
Seemann & Partner  
Raboisen 6  
20095 Hamburg (DE)

**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 6 March 2009  
refusing European patent application No.  
03737844.5 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairwoman** A. Ritzka  
**Members:** P. Corcoran  
G. Weiss

## **Summary of Facts and Submissions**

- I. The present appeal is against the decision of the examining division to refuse the European patent application no. 03 737 844.5, publication no. EP 1 550 938. The decision was announced during oral proceedings on 24 February 2009 and the written reasons were dispatched on 6 March 2009.
  
- II. The decision to refuse the application was based on a main request and two auxiliary requests. The main request comprising 76 claims was filed with the letter of 16 June 2008. The first auxiliary request also comprising 76 claims was filed with the letter of 22 January 2009. The second auxiliary request comprising 75 claims was filed during oral proceedings held on 24 February 2009.
  
- III. In the impugned decision, the examining division found that the subject-matter of claim 1 of the main request did not involve an inventive step in the light of the following document:  
D5: WO 01/29976 A1.  
The examining division arrived at the same finding with respect to the subject-matter of claim 1 of both auxiliary requests.
  
- IV. According to the decision under appeal, D5 disclosed a system and a method for inputting characters of several alphabets (i.e. Korean, Latin, Chinese, Japanese, Cyrillic, Arabic, Hebrew, Thai, Malay, Devanagari, cf. Figure 5) using a single numeric keypad. In the preferred embodiment, the keypad was a standard twelve-key keypad wherein fifteen strokes were assigned to the ten basic keys (0-9). The division took the view that, contrary to what the applicant's representative argued

during the oral proceedings, each stroke was implicitly obtained by determining an area code corresponding to the code of the key depressed by the user and a position code corresponding to the number of times a user has actuated a particular key (cf. impugned decision: item 2.1 of the reasons).

- V. Notice of appeal was received at the EPO on 22 April 2009 with the appropriate fee being paid on the same date. A written statement setting out the grounds of appeal was received at the EPO on 15 July 2009. With the statement setting out the grounds of appeal, the appellant filed a main request and two auxiliary requests, said requests corresponding to those on which the decision under appeal was based.
- VI. In a communication accompanying a summons to oral proceedings, the board gave its preliminary opinion that the appellant's requests were not allowable and noted *inter alia* that it had reservations as to whether the subject-matter of claim 1 of the main request complied with the novelty and inventive step requirements of the EPC in the light of D5. Substantially similar reservations were expressed with respect to the corresponding claims of the auxiliary requests.
- VII. With a letter of reply dated 7 April 2014, the appellant filed an amended main request in which claim 65 had been amended by replacing the term "space key" with "space bar". Three auxiliary requests (auxiliary requests I, II and III) were also filed to replace the auxiliary requests on file.

- VIII. Oral proceedings were held as scheduled on 7 May 2014. During the oral proceedings the appellant maintained the amended main request as filed with the letter of 7 April 2014. The appellant further submitted an amended version of the main request as a first auxiliary request and withdrew the three auxiliary requests filed with the letter dated 7 April 2014.
- IX. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1, 65, 66, 75, 76 filed with letter dated 7 April 2014 and claims 2 to 64, 67 to 74 as originally filed (main request) or alternatively on the basis of claims 1 to 64 submitted during oral proceedings before the board as a first auxiliary request.
- X. Claim 1 of the main request reads as follows:  
"An encoding and input method of world characters used in a computer device for encoding and inputting the world characters, said computer device comprising a numerical keypad;  
said method comprises the steps of:  
- for each category of world characters, on the basis of the basic stroke elements or alphabet elements or pronunciation elements thereof, allocating some basic elements forming the character of this category or capable of determining the character of this category to the corresponding number keys on the numerical pad, the code of said each basic element is uniquely determined by area code and/or position code, where said area code is the number of the key at which the element is located, said position code is the position number in the number keys to which the basic element pertains;  
- selecting the category of the characters to be inputted;

- for each character of the character category to be inputted, splitting it as a combination of some of said elements;
- arranging in order the codes corresponding to each element in said combination and taking them as the code of the character; and
- inputting the code of the character or the word."

XI. Claim 1 of the first auxiliary request reads as follows:

"An encoding and input method of world characters used in a computer device for encoding and inputting the world characters, said computer device comprising a numerical keypad;

said method comprises the steps of:

- for each category of world characters, on the basis of the basic stroke elements or alphabet elements or pronunciation elements thereof, allocating some basic elements forming the character of this category or capable of determining the character of this category to the corresponding number keys on the numerical pad, the code of said each basic element is uniquely determined by area code and position code, where said area code is the number of the key at which the element is located, said position code is the position number in the number keys to which the basic element pertains;
- selecting the category of the characters to be inputted;
- for each character of the character category to be inputted, splitting it as a combination of some of said elements;
- arranging in order the codes corresponding to each element in said combination and taking them as the code of the character; and
- inputting the code of the character."

XII. Insofar as they are relevant to the present decision, the written and oral submissions made on behalf of the appellant during the present appeal proceedings, may be summarised as follows:

- (i) Concerning the amendment to claim 65 of the main request according to which the term "space key" was replaced by "space bar", the appellant noted that the present application was based on the Chinese language international application WO 03/104963. The amendment to claim 65 was a correction of the translation of the original Chinese language application documents pursuant to Art. 14(2) EPC.
- (ii) With respect to claim 1 of the main request, the appellant submitted that the subject-matter thereof involved an inventive step over D5. The appellant contested the view expressed in the impugned decision according to which the repeated actuation of a selected key in D5 corresponded to the "position code" of claim 1.
- (iii) According to the appellant, the "position code" of the present invention was a numerical code to be entered in order to determine the "basic element". The appellant referred in this regard to one of the embodiments disclosed in [0157] of the published application according to which the individual characters of the word "china" can be entered using the following sequence of area codes and position codes:  
23(c), 41(h), 42(i), 53(n), 21(a).
- (iv) The appellant submitted that this method of encoding and inputting characters using an area

code and a position code did not involve the repeated actuation of the key associated with the area code in order to input the desired character as in D5 but rather relied on two distinct key actuations per character, one for the area code and one for the position code. This input method thus reduced the overall number of keystrokes required to input a character sequence and it represented a non-obvious alternative to the input method of D5.

- (v) With respect to the first auxiliary request, the appellant submitted that claim 1 thereof had been amended in response to the objections raised by the board against claim 1 of the main request, in particular the objections arising out of the use of the conjunction "and/or" which had been interpreted to the effect that the use of a "position code" was not mandatory for all embodiments covered by claim 1. Claim 1 of said auxiliary request had been further amended by the deletion of the expression "or the word" from the final feature of the claim in response to the board's objections about a lack of antecedent basis for the term "word".

XIII. At the end of the oral proceedings the chair announced the board's decision.



## **Reasons for the Decision**

1. The appeal is admissible. The board judges that the appeal is allowable for the reasons which follow.

### *Main request*

2. *Interpretation of claim 1*

- 2.1 Claim 1 of the main request specifies that the code of said each basic element "is uniquely determined by area code and/or position code, where said area code is the number of the key at which the element is located, said position code is the position number in the number keys to which the basic element pertains" (emphasis added).

- 2.2 Due to the use of the conjunction "and/or", claim 1 effectively comprises three distinct embodiments according to which:

- (i) each basic element is uniquely determined by an "area code" only;
- (ii) each basic element is uniquely determined by a "position code" only;
- (iii) each basic element is uniquely determined by an "area code" and a "position code".

3. *Article 84 EPC 1973*

- 3.1 Referring for example to paragraphs [0155] to [0161] of the published application, the board is satisfied that the description discloses embodiments according to which each basic element is uniquely determined by an "area code" only (i.e. embodiment (i) enumerated under 2.2 above) and, likewise, embodiments according to which each basic element is uniquely determined by an

"area code" and a "position code" (i.e. embodiment (iii) enumerated under 2.2 above).

3.2 However, the description contains no identifiable disclosure of an embodiment according to which each basic element is uniquely determined by a "position code" only. Thus, embodiment (ii) enumerated under 2.2 above lacks support by the description.

3.3 The final feature of claim 1, viz. "inputting the code of the character or the word" lacks clarity because there is no antecedent basis for the term "the word".

3.4 In view of the foregoing, the board judges that claim 1 of the main request fails to comply with the requirements of Article 84 EPC 1973.

4. *Further observations re Article 52(1) EPC*

4.1 The board further notes for the sake of completeness that the embodiment of claim 1 enumerated as (i) under 2.2 above appears to be anticipated by the prior art T9 input method as disclosed, for example, in the European Patent application no. EP 1 085 401, cited as D1 during examination proceedings (cf. D1: [0012] to [0015]).

4.2 The aforementioned T9 input method is based on the principle of one key stroke per alphabet element (cf. D1: [0012]) and thus appears to be substantially identical to the input method according to the embodiment of the present invention which relies on each basic element being uniquely determined solely by an "area code" (cf. published application: [0161]).

- 4.3 It is noted that the appellant did not make any counter-submissions to contest the observations which the board made in this regard during oral proceedings.
5. In view of the aforementioned deficiencies in claim 1 of the main request, in particular the lack of compliance with the requirements of Article 84 EPC as noted under item 3 above, the request is not allowable.

*Auxiliary request*

6. *Amendments to claim 1*

- 6.1 Claim 1 of the auxiliary request has been amended to specify that the code of said each basic element "is uniquely determined by area code and position code, where said area code is the number of the key at which the element is located, said position code is the position number in the number keys to which the basic element pertains" (emphasis added). The effect of this amendment is to limit claim 1 to the embodiment (iii) enumerated under 2.2 above, i.e. the embodiment according to which each basic element is uniquely determined by an "area code" and a "position code".
- 6.2 Said claim 1 has been further amended by the deletion of the expression "or the word" from the final feature of the claim.
- 6.3 The board is satisfied that the aforementioned amendments to claim 1 overcome the objections under Article 84 EPC 1973 against the corresponding claim of the main request (cf. items 3.2 and 3.3 above).

7. *Article 52(1) EPC*

7.1 Claim 1 specifies that the code of each basic element is uniquely determined by an "area code" and a "position code". The claim further specifies that the "position code" is "the position number in the number keys to which the basic element pertains".

7.2 According to the decision under appeal, D5 implicitly discloses a position code "corresponding to the number of times a user has hit a given key" (cf. decision: item 2.1 of the reasons).

7.3 The appellant submits that the "position code" of claim 1 is a numerical code to be entered in conjunction with the "area code". The appellant has indicated that this assertion is supported by one of the embodiments disclosed in [0157] of the published application according to which the individual characters of the word "china" may be defined using a sequence of area codes and position codes (cf. Facts and Submissions, item XII (iii) above). Accordingly, the appellant disputes that the repeated actuation of a specific key in D5 is conceptually equivalent to the "position code" of claim 1.

7.4 The board takes the view that even if the teaching of D5 with respect to the repeated actuation of a given key were to be interpreted as an implicit disclosure of a type of "position code", this would not be a "position code" according to claim 1, i.e. a "position code" which is "the position number in the number keys to which the basic element pertains". The board thus concurs with the appellant's arguments to the effect that D5 does not disclose a "position code" according to claim 1.

7.5 Referring to the embodiment cited by the appellant according to which the individual characters of the word "china" may be defined using a sequence of area codes and position codes (cf. Facts and Submissions, item XII (iii) above), the board concurs with the appellant's arguments to the effect that this embodiment does not rely on the repeated actuation of the key associated with the area code in order to input the desired character as in D5 but rather relies on two distinct key actuations per character, one for the area code and one for the position code.

7.6 In the board's judgement, such an method of encoding and inputting characters would reduce the overall number of keystrokes required to input a character sequence. This approach to the encoding and inputting of characters is neither taught nor derivable in an obvious manner from D5 or from any other of the available prior art documents. For this reason, the board judges that it represents a non-obvious alternative to the input method of D5 which relies on the repeated actuation of the key associated with the area code in order to input the desired character.

7.7 In view of the foregoing, the board concludes that the subject matter of claim 1 of the main request involves an inventive step over D5.

8. *Further observations re claim 65*

8.1 Referring to the appellant's request for a correction of claim 65 of the main request (cf. Facts and Submissions, items VII and XII(i) above), it is noted that the same amendment has been submitted in respect of the corresponding claim of the auxiliary request.

Accordingly, for the sake of completeness, the board makes the following observations in respect of the requested correction which consists of replacing the term "space key" used in originally filed claim 65 by the term "space bar".

- 8.2 The term "space bar" was used in originally filed claim 69. It was also used throughout the originally filed disclosure (cf. for example p.61 l.1 to p.73 l.5 of the originally filed description, corresponding to paragraphs [0179] to [0202] of the published application).
- 8.3 It is further noted that, on the cover page of the original Chinese international application WO 03/104963, the term "space bar" appears in the English language annotation relating to item G of Fig. 29 on which the keyboard of claim 65 is apparently based.
- 8.4 The board is aware that the term "space bar" could, in principle, be read as suggesting a particular form of the input key, i.e. an elongated "bar" such as typically found on computer keyboards. On this basis it could be argued that the term "space key" would be more appropriate to denote the corresponding item of Fig. 29. However, in the present context, the board takes the view that the term "space bar" which has been used throughout the originally filed disclosure is to be understood as functional descriptor of an input key whose primary function is for inputting a "space" character without implying any specific shape of form of said key. Thus, the requested amendment which brings the wording of claim 65 into conformity with that of claim 69 is understood to be intended to ensure consistency of terminology throughout the claims and,

in the board's judgement, does not entail any significant change to the technical substance of the claimed subject matter.

- 8.5 In view of the foregoing, the requested amendment to claim 65 is accepted as a correction of the translation of the original Chinese language application documents pursuant to Art. 14(2) EPC.

*Conclusion*

9. Having regard to its findings under items 6 and 7 above, the board decides to remit the case to the department of first instance with the order to grant a patent on the basis of the appellant's auxiliary request.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent on the basis of the claims of the first auxiliary request submitted at the oral proceedings on 7 May 2014, a description and figures 1 to 29 to be adapted thereto.

The Registrar:

The Chairwoman:



K. Götz

A. Ritzka

Decision electronically authenticated