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DES BREVETS

D E C I S I O N
of 19 April 1994

Case Number: T 0887/92 - 3.5.1

Application Number: 85114955.9

Publication Number: 0190419

IPC: G06F 3/023

Language of the proceedings: EN

Title of invention:
Method for providing an on-line help facility for interactive
information handling systems

Applicant:
International Business Machines Corporation

Opponent:
-

Headword:
-

Relevant legal norms:
EPC Art. 52(2), (3), 56

Keyword:
"Inventive step (yes)"
"Technical character (yes)"

Decisions cited:
-

Catchword:

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Beschwerdekammern   Boards of Appeal   Chambres de recours

Case Number: T 0887/92 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 19 April 1994

Appellant:

International Business Machines Corporation
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Armonk, N.Y. 10504 (US)

Representative:

Schuffenecker, Thierry
Compagnie IBM France
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Decision under appeal: **Decision of Examining Division of the European
Patent Office dated 23 April 1992 refusing
European patent application No. 85 114 955.9
pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P.K.J. van den Berg
Members: R. Randes
           G. Davies

Summary of Facts and Submissions

I.   European patent application No. 85 114 955.9, filed on
26 November 1985 and published under No. 0 190 419, was
refused by a decision of the Examining Division dated
23 April 1992.

II.   The reason for the refusal was that the subject-matter
of all claims lacked an inventive step having regard to
the prior art documents:

        D1: AFIPS Conference Proceedings Vol. 40, National
            Computer Conference 4-7 June 1979, New York, pp.
            863 to 866, J. Rothenberg "On-line tutorials and
            documentation for the SIGMA message service"; and

        D2: IBM Technical Disclosure Bulletin, Vol. 18 No. 2
            July 1975, S.E. Engel et al. "Auto help", pp. 509
            to 512.

III.   The Applicant lodged an appeal against this decision on
9 June 1992, paying the appeal fee the same day. On
3 September 1992 a statement setting out the Grounds of
Appeal was filed together with new Claims 1 to 8. It was
submitted that there was an inventive step over the
prior art, and the grant of a patent based on the new
claims was requested.

IV.   In a communication pursuant to Article 11(2) of the
Rules of Procedure of the Boards of Appeal, dated
21 December 1993, the Rapporteur expressed his
preliminary view that, having regard to the disclosure
of D1, the subject-matter of Claim 1 lacked an inventive
step.

V.   Oral Proceedings were held on 19 April 1994. The
     Appellant filed new claims according to a main request
     and an auxiliary request.

     Claim 1, the only independent claim of the Main Request,
     reads:

     "1. A method to assist the operator of an interactive
     information handling system in entering command via an
     input device in response to the entry by said operator
     of a "Command Help Request"; said method involving the
     steps of:

     (1) determining what commands are valid as the next
          command based on an analysis of the current state
          of the process task being performed by the system
          at the time said request command is issued, and

     (2) displaying, in response to keying said "Command
          Help Request" at least a first help panel
          overlaying a partial portion of the information
          displayed, and containing the names of only valid
          commands determined by said processing means and
          also containing information explaining the
          functions of said valid commands, the displaying of
          said at least first help panel occurring in an area
          of the display being different to the command area
          of the screen which is normally used for entering
          the commands, so that the operator is still allowed
          to enter a command into the system while said help
          panel is being displayed,

     (3) positioning a "selection" cursor to the line on
          said help panel containing the name of the command,

(4)   executing, in response to the operator actuating
      "enter" on the keyboard, the named command selected
      by said selection cursor on said help panel."

No parts of the description or drawings were amended in
the proceedings.

VI.   The Appellant's arguments in support of his Main Request
      may be summarised as follows.

      Claim 1 is directed to a method for assisting the
      operator of an interactive information handling system
      to enter a command in response to a help request. A key
      feature of the invention is that the system displays, as
      "help" information, only those commands which are valid
      in the state of the process task being performed by the
      system at the time help is requested. Because invalid
      commands are suppressed, the operator can identify more
      quickly the particular command he needs.

      Contrary to the opinion of the Examining Division, this
      feature is not disclosed in D1. This document refers to
      commands which are "legal" in a given "state". The
      "state" in question is not that of the process task
      performed, but the state of the command window. The
      system in D1 merely analyses the input made by the
      operator; if the entered command is incorrect or
      incomplete, the system presents suggestions for "legal"
      commands, i.e. correct commands which correspond more or
      less to the command already typed. According to D1 it
      does not appear to be at all possible to get any
      information from a help panel when the "Command Window"
      is empty, i.e. when no command has been entered. A
      substantial difference between the invention and the
      disclosure of D1 is therefore the determination of the

state of the **process task** and the displaying of only
those commands which are possible in that state
according to the invention.

The only feature of Claim 1 that is disclosed by D1 is
displaying a help panel (which, however, does not
disclose valid commands in the sense of the invention)
occurring in an area of the display which is different
from the command area of the screen normally used for
entering the commands ("Command Window"), so that an
operator when using a device according to D1 apparently
also is allowed to enter a command while said help panel
is being displayed. However, the use of a "selection"
cursor in combination with an "enter" key as input means
for the execution of a valid command indicated on the
help panel is in no way disclosed by D1, according to
which the commands are typed into the "Command Window".
These features together with the fact that only valid
commands are displayed, clearly simplify the inputting
operation of commands as performed by an operator. It is
true that also according to D1 a cursor is used. This
one is, however, not used for the purpose of executing a
command, but only for the purpose of enabling an
operator to choose appropriate parameters, which are
displayed when a key (Prompt) is pressed.

D2, in fact, in one way comes closer to the idea of the
invention than D1. This document discloses a help panel
system, "Auto help", which uses a programming procedure
which automatically provides the user of a display
terminal with an error feedback. However, in this case
only the parameters of a command are displayed, whereby
the correct parameter can be chosen by selecting from
the menu of legal values on the screen. The real
commands cannot be corrected in that way; on the
contrary they must be correctly re-entered (i.e. without
the aid of a help panel) by the operator when an error

message appears. Thus, also when the selection of the
parameters in this case is considered as an execution of
sub-commands, the system of D2 does not display valid
commands in the sense of that of the present
application, but only displays a group of sub-commands
(parameters) belonging to a command which has been input
by the operator.

According to the invention the operator at every point
in the process may call up the help panel for assistance
and will therefrom get the necessary command. This can
also be done when the command to be entered is unknown
to the operator. Thus, total flexibility is achieved as
the command structure is built up hierarchically and the
operator is prompted to perform actions that logically
follow or are allowable at every point in the process
performed.

VII.   The Appellant requests that the decision under appeal be
        set aside and the patent be granted on the basis of
        Claims 1 to 8 filed during oral proceedings (Main
        Request); or on the basis of Alternative Claim 1 filed
        during oral proceedings and Claims 2 to 8 according to
        the Main Request (Auxiliary Request).

Reasons for the Decision

1.   The appeal is admissible.

Main Request

2.   *Admissibility of the amendments*

        Claim 1 contains features which were not present in the
        original Claim 1, but the application provides support
        for the inclusion thereof. Thus "the displaying of said

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at least first help panel occurring in an area of the
display being different to the command area of the
screen which is normally used for entering the commands,
so that the operator is still allowed to enter a command
into the system while said help panel is being
displayed" is disclosed at column 5, lines 47 to 53 of
the printed patent application; and the steps of
"positioning a 'selection' cursor to the line on said
help panel containing the name of the command and
executing, in response to the operator actuating 'enter'
on the keyboard, the named command selected by said
selection cursor on said help panel" is disclosed in the
original Claims 3 and 4.

Thus no objection arises under Article 123(2) EPC.

3.   *Inventive step*

Novelty not being in issue, only the question of
inventive step requires consideration.

3.1   One of the objects of the present invention is to render
the usual HELP facility provided with many programs more
user-friendly by displaying only those commands which
are "valid" when help is requested (column 2, lines 56
to 62). "Valid" commands are those which "logically
follow or are allowable at this point in the ...
process" (column 5, line 9). The set of valid commands
is thus a sub-set of all existing commands and dependent
on the state of the program execution. The description
mentions as an example a program for word processing;
after having completed a document, the operator has the
choice of printing the document or copying it, and the
HELP panel indicates those two commands only.

3.2   In respect of this feature the Examining Division relied
        on D1 for its argumentation. D1 describes a computer
        terminal referred to as SIGMA. SIGMA provides two kinds
        of help functions, "HELP" and "PROMPT". The PROMPT
        facility is described as follows: "When the user presses
        the key labelled PROMPT on the SIGMA terminal keyboard,
        the CLP /Command Language Processor/ remaps the working
        area of the screen as a PROMPT Window and shows all
        commands that are legal in the current state" (page 863,
        last paragraph).

        The question arises what is meant by the expression
        "legal in the current state". The Examining Division
        understood it as referring to the state of the program
        execution, which would make "legal" synonymous with
        "valid" in Claim 1. The Board, after having heard the
        Appellant's observations on this point, takes the view
        that this reading is not the only possible
        interpretation of D1, nor is it necessarily the most
        probable one. The reasons for this opinion are set out
        below.

3.3   As the Appellant argues, the word "state" might in fact
        refer to the state of the command window (where inputted
        commands are echoed). The set of "legal" commands would
        in such a case not depend on the "current state of the
        process task being performed by the system", as stated
        in Claim 1, but only on the command, or part of a
        command, which the operator has just typed. This is
        clearly something different.

        The Appellant has cited a number of instances in the
        text which point in this direction, among others the
        following:

First, it is stated that it is the Command Language Processor (CLP) which implements the PROMPT facility and thus decides what commands are "legal" (see the citation above). The general function of the CLP is to parse the user's input commands (page 863). This might imply that the PROMPT function is active only if the command window is not empty, i.e. if the operator has at least started to type one command. In contrast, the invention is intended to cover the situation where the operator does not know what command to enter.

Second, the reference to "legal" commands at the bottom of column 2 on page 863 may be regarded not as an independent statement but as an introduction to the two statements which follow: "if the user cannot recall the arguments or form of **a command he is typing** ..." and "**if he types** an ambiguous **command** ..." (emphasis added). If so, the PROMPT function appears to rely on a command input to be active.

Third, it is said on page 864 that "if the user needs a more detailed description of a command or **cannot remember which command to use**" (emphasis added), he should use the alternative HELP facility. This passage may suggest that the invention corresponds rather to the SIGMA command HELP than PROMPT.

3.4   It appears that D1 comprises merely the kind of HELP facility which displays an invariable list of all (or the most important) commands. An example of such prior art is the SERVICE FACILITIES described on page 865 (first paragraph) of D1, which "shows an Index-like list of the major topics and commands in SIGMA"; this function corresponds to the prior art acknowledged in the description of the present application (column 1, lines 49 to 66).

3.5   These points, taken together, cast doubt on the
        interpretation of D1 made by the Examining Division. In
        the Board's opinion, it would be mere speculation to try
        to determine how the skilled man would actually
        interpret the document. It may be true that the
        Examining Division's interpretation is the more
        immediate one; this impression could on the other hand
        be due to the fact that anyone reading D1 with the
        present application in mind cannot help connecting the
        word "legal" in D1 with the ideas associated with the
        word "valid" in Claim 1.

3.6   Procedural fairness demanding that an evident risk that
        a prior art document may be misinterpreted to an
        applicant's disadvantage must be excluded, the Board
        decides that, on the evidence on file, D1 does not
        disclose the feature that "valid" commands (in the sense
        of the present patent application) are determined and
        displayed by the described SIGMA system.

3.7   The Board considers D1 to be the closest prior art
        document cited. This document discloses the general
        method as identified in the first paragraph of Claim 1.
        Moreover, to some extent it discloses the first part of
        step (2) in that the Prompt Window (comparable with the
        "first help panel" in Claim 1) overlays the working area
        of the screen (but not the Flash and Status Windows
        which also display information) and, as has been
        explained above under VI, also to a certain extent the
        second part of step (2). The Prompt Window according to
        D1, however, does not display valid commands in the
        sense of the **at least first help panel** mentioned in
        step (2) of Claim 1. Starting from the teaching of that
        document, it appears that the technical problem to be
        solved by the present invention can be seen in making
        the known method more efficient and convenient for the

operator in that the handling of the complex and numerous procedures (such as keystrokes sequences) is facilitated.

As has been concluded above, D1 does not suggest that only "valid" commands are displayed. The Board also agrees with the Appellant's arguments concerning D2 under VI above and agrees that said document does not give a hint towards a command structure in the sense of the present invention, i.e. that a command selected from one "at least first help panel" can immediately be followed by a command selected from a subsequently called-up further help panel. It appears, therefore, that steps (1) and (2) make an important contribution to an inventive step in that they make it possible to use the simple command input means defined by steps (3) and (4), which do not require commands to be typed. Thus, the subject-matter of Claim 1 clearly involves an inventive step.

4.   The Board in this case finds it appropriate to demonstrate that the subject-matter of the present invention is not excluded from patentability under Articles 52(2) and (3) EPC. It is accepted case law of the Boards of Appeal that it is the intention of the EPC to permit patenting only in those cases in which the invention as claimed involves a contribution to the art in a field not excluded from patentability. On the other hand, when examining whether an invention as claimed falls under the exclusions pursuant to Article 52(2) and (3) EPC, the claim under consideration must be considered as a whole. A difficulty sometimes arises in determining whether a particular subject-matter or activity has a technical character and, therefore, is an invention within the meaning of Article 52(1) EPC, when the claimed subject-matter includes both technical and non-technical features.

However, when considering the features of Claim 1 added to the prior art as disclosed by D1, it immediately appears that the last steps (3) and (4), as already hinted at above, rely on a tool (a selection cursor and an enter key) for inputting a command into the processor. In fact, already this tool appears to be clearly of a technical character. Moreover, said tool apparently is a link between the display (help panel) and the processing means. In this respect this Board has in an earlier decision (T 115/85, OJ EPO 1990, 30) come to the conclusion that giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem. It, therefore, appears that the displaying of the help panel according to step (2) of Claim 1 also clearly must be considered to be of a technical character, as the displaying of only valid commands clearly reflects the status or condition of the system or apparatus.

Step (1) of Claim 1 clearly relies on a computer program and, therefore, at first glance appears to be excluded as such from patentable matter. However, when considered within the context of Claim 1 as a whole, this step (1) provides that only valid commands are displayed (as defined by step 2) at every point of the running process and that only those valid commands can be input by said tool (features (3) and (4)). Therefore, although step (1) relies on a computer program, which as such would not be patentable, it appears that in this case that program must be considered to constitute a technical means necessary for carrying out the invention (T 208/84, OJ EPO 1987, 14).

It would clearly be devious to interpret step (1) of
Claim 1 as a mental act to be performed by the operator
(in the light of Article 52(2)(c), (3) EPC which
excludes "schemes, rules and methods for performing
mental acts" as such from patentability).

All inventions require preceding mental activities on
the part of the inventor. In this respect computer
programs are not an exception: they also require such
preceding activities from their authors. Decisive for a
possible contribution of a computer program to the
solution of a technical problem is what the program
effectively does within the context of an alleged
invention as claimed.

Apparently, all the novel features added by the
invention according to Claim 1 to the prior art of D1,
taken separately or (in the case of step (1)) in
combination with other features of the claim, may be
considered to have technical character. Moreover, as has
been shown above, all of them contribute to the solution
of the technical problem and to the inventive step (see
under 3.7 above). The subject-matter of Claim 1,
therefore, clearly makes a contribution to the art in a
field outside the range of excluded matters.

5.   The Board is therefore satisfied that the subject-matter
      of Claim 1 meets all the requirements of Article 52(1).

6.   Since the Main Request is regarded as allowable, there
      is no need to examine the 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 first instance with the
        order to grant a patent on the basis of Claims 1 to 8
        according to the Main Request and a description to be
        adapted.

The Registrar: The Chairman:

M. Kiehl   P.K.J. van den Berg

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