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Datasheet for the decision of 22 July 2020

Case Number: T 1054/15 - 3.4.03

Application Number: 08006061.9

Publication Number: 1975865

IPC: G06Q10/00, H04L12/58

Language of the proceedings: EN

Title of invention:
System and method for generating a graphical user interface

Applicant:
NTT DOCOMO, INC.

Headword:

Relevant legal provisions:
EPC Art. 52(1), 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Case Number: T 1054/15 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 22 July 2020

Appellant: (Applicant)	NTT DOCOMO, INC. 11-1, Nagatacho 2-chome, Chiyoda-ku Tokyo 100-6150 (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 12 December 2014 refusing European patent application No. 08006061.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	T. Häusser
Members:	S. Ward
	T. Bokor

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division refusing European patent application No. 08 006 061 on the grounds that the claimed subject-matter was not new within the meaning of Article 54 EPC and did not involve an inventive step within the meaning of Article 56 EPC.

II. At the end of the oral proceedings held before the Board the appellant confirmed that its sole request was that the decision under appeal be set aside, and that a patent be granted on the basis of the claims of the main request filed with letter dated 25 May 2020.

III. The following document is referred to:

D1: US 5 946 647

IV. Claim 1, including (in square brackets) the feature numbers proposed by the appellant during oral proceedings, reads as follows:

"[1] A communications terminal comprising:

[1.1] a display (14);

[1.2] a first storage unit (18c) configured to store data including a first text string;

[1.3] a second storage unit (18b) configured to store a plurality of information sets,

[1.3.1] each information set including a name of a communications recipient and at least one of a first communications address associated with the name of a communications recipient and a second communications address associated with the name of a communications recipient;

[1.4] a first display controller (15) configured to display, on the display (14), the first text string expressed by data stored in the first storage unit (18c); and

[1.5] a second display controller (15) configured to:

[1.5.1] identify, among names stored in the second storage unit (18b), a name ("TARO YOSHIDA", "BUSINESS A") that corresponds to a name indicated by a second text string included in the first text string displayed by the first display controller,

[1.5.2] determine whether the identified name ("TARO YOSHIDA", "BUSINESS A") is associated with only one of the first communications address and the second communications address,

[1.5.3] when the identified name ("TARO YOSHIDA") is associated with only the first communications address, display on the display (14) a screen comprising the first text string in which the second text string has a predetermined appearance, associate with the second text string a link to the first communications address (TELEPHONE NUMBER) for starting up a telephone call application program and, in response to the second text string being selected by a user, immediately start up the telephone call application program, and

[1.5.4] when the identified name ("BUSINESS A") is associated with only the second communications address, display on the display (14) a screen comprising the first text string in which the second text string has a predetermined appearance, associate with the second text string a link to the second communications address (EMAIL ADDRESS) for starting up a mail application program and, in response to the second text string being selected by the user, immediately start up the mail application program,

wherein the second display controller (15) is further configured to:

[1.5.5] determine whether the identified name ("TARO YOSHIDA", "BUSINESS A") is associated with both of the first communications address and the second communications address;

[1.5.6] when the identified name ("TARO YOSHIDA", "BUSINESS A") is associated with both the first communications address and the second communications address, determine whether the first text string displayed by the first display controller includes a first related text string ("phone") or a second related text ("email") string, the first and second related text strings being words representative of communications performed by the first and [sic] *communications address, respectively;*

[1.5.7] when the first related text string is included, display on the display (14) a screen comprising the first text string in which the second text string has a predetermined appearance, associate with the second text string a link to the first communications address (TELEPHONE NUMBER) for starting up the telephone call

application program and, in response to the second text string being selected by a user, immediately start up the telephone call application program; and

[1.5.8] when the second related text string is included, display on the display (14) a screen comprising the first text string in which the second text string has a predetermined appearance, associate with the second text string a link to the second communications address (EMAIL ADDRESS) for starting up the mail application program and, in response to the second text string being selected by the user, immediately start up the mail application program."

V. The appellant's arguments, insofar as they are relevant to the present decision, are summarised as follows:

(i) The "string library" of D1 could not be identified with the claimed second storage unit. The second storage unit was defined as being configured to store a plurality of information sets, each set including the name of a communications recipient and at least one of first and second communications addresses associated with the name (claim 1: feature [1.3.1]). Hence, it might be possible to identify the telephone book of D1 with the second storage unit, as it contained both names and telephone numbers (first communications addresses). However, the "string library" stored only names and not communications addresses, and hence it could not be identified with the second storage unit.

In the light of this interpretation, none of the features [1.5.1] to [1.5.8] were disclosed in D1.

(ii) According to feature [1.5.1], a name in a displayed text string was identified among names stored

in the second storage unit. In the corresponding feature in D1, a displayed name was identified among names stored in the string library, which could not be identified with the claimed second storage unit.

(iii) Feature [1.5.2] defined that the second display controller was configured to determine whether the identified name was associated with only one of the first communications address and the second communications address. There was no disclosure in D1 of any such determination.

In D1, when a name was identified and selected, a pop-up menu would appear containing the possible actions shown in box 420 of Fig. 4. Selecting "Call person (retrieve #)" would initiate an attempt to retrieve the telephone number from the telephone book. If successful, the user would be able to make the call; if not, the user would be informed that no telephone number was available. D1 did not disclose any check to see which communications addresses the identified name was associated with in the manner of feature [1.5.2], nor would the skilled person find any reason to include such a feature.

(iv) Features [1.5.3] and [1.5.4] defined that when the identified name was associated with only the first or second communications address respectively, selection of the second text string (the identified name) by a user would lead to the corresponding application (telephone call or e-mail) being immediately started up. This had the technical effect of providing an improved and more efficient interaction with the graphical user interface, whereby fewer selections would be required than in the prior art.

(v) Features [1.5.5] to [1.5.8] defined a way of starting up a unique communications channel even if the selected name was associated with both the first communications address and the second communications address. At least for the applications with which the invention was concerned, such as "to do" lists, these features would lead to the correct communication channel being started up in an efficient manner.

(vi) The technical effect of the above distinguishing features of claim 1 was to provide an improved input mechanism by reducing the number of interactions/ selections required in cases in which an appropriate unique action could be accurately determined.

Starting from D1, the skilled person would not be motivated by the disclosure therein to incorporate the above distinguishing features; in fact, the teaching of D1 would lead the skilled person away from the invention. D1 disclosed that it was advantageous that the system could recognize, identify and highlight multiple types of structures (column 2, lines 5 to 20; column 6, lines 8 to 12), and not just names. In addition, D1 disclosed that it was advantageous to associate multiple candidate actions to each type of structure and to provide the user with a range of possible actions (column 1, line 66 to column 2, line 9). Hence, according to D1, a menu was displayed in response to selecting a detected structure, which would lead the skilled person away from the present invention, according to which a particular application program was immediately started up in response to selecting an identified name.

Reasons for the Decision

1. The appeal is admissible.

2. *Interpretation of Claim 1*

The general terms "first communications address" and "second communications address", which were present in claim 1 as originally filed, have been retained in the current version of claim 1. However, claim 1 now defines that when the identified name is associated with only the first communications address, the telephone call application program is started (claim 1, feature [1.5.3]), and when the identified name is associated with only the second communications address, the e-mail application program is started (claim 1, feature [1.5.4]). Hence, as the claim now stands, it is implicit that the first communications address is the telephone number of the identified name, and the second communications address is the e-mail address of the identified name.

3. *Inventive Step: Closest Prior Art*

3.1 As in the contested decision, D1 is seen as the closest prior art, and the first task is therefore to determine which of the claimed features can be identified in D1.

3.2 Terms such as "first storage unit", "second storage unit", "first display controller" and "second display controller" are not seen as having any fixed or standard meaning in the art; the Board regards them as being merely convenient labels denoting hardware and/or software means for achieving the corresponding functions as set out in claim 1. Where the same functions can be identified in the communications

terminal of D1, the same labels can equally be applied to the corresponding (explicit or implicit) means for providing such functions.

3.3 Reference will be made to the feature numbers introduced above under point IV.

4. *Features [1], [1.1] and [1.2]*

D1 discloses a communications terminal (Figs. 1, 2) comprising a display (element 240 in Fig. 2, see column 4, lines 11-17) and a first storage unit configured to store data including a first text string, i.e. the means for storing the text data of document 210 (Fig. 2), which is displayed in window 510 (Fig. 5). Hence Features [1], [1.1] and [1.2] are disclosed in D1.

5. *Features [1.3] and [1.3.1]*

5.1 The appellant did not dispute that features [1.3] and [1.3.1] were disclosed in D1, arguing that the claimed second storage unit could be identified with, for example, the electronic telephone book (D1: column 5, lines 6-18; Fig. 4), which would store names and corresponding telephone numbers. Since the "first communications address" corresponds to a telephone number (see above, point 2.), the electronic telephone book may be described as storing a plurality of information sets, each including a name and at least one of first and second communications addresses associated with the name, as claimed.

5.2 The Board accepts that this would be one possible identification of the claimed second storage unit in D1; it is not, however, the only possible identification.

For example, another possibility would be to identify the second storage unit with the e-mail address book (D1: column 5, lines 6-18; Fig. 4), since e-mail addresses correspond to the claimed "second communications address" (see above, point 2.). More generally, the second storage unit could be identified with the *combination* of the electronic telephone book and the e-mail address book.

5.3 The "string library 420" of D1 is not disclosed as storing "information sets" in the sense defined in claim 1; it stores "important names" (D1: column 5, lines 6-18; Fig. 4) but is not disclosed as storing communications addresses. The appellant is therefore correct that the string library, on its own, could not be identified with the second storage unit.

However, claim 1 does not define that the second storage unit stores *only* such information sets, and the Board sees nothing which would prevent the second storage unit being identified with the combination of all of those units defined in D1 as storing what might be referred to as "contact data". That is to say, the second storage may be identified with the combination of the electronic phone book and the e-mail address book (each storing "information sets"), the string library (which does not store information sets, but rather "important names") and the postal address book.

5.4 All of the identifications set out above are equally possible, and the analysis of inventive step may proceed from any of the them. As stated in oral proceedings, the Board's analysis is based on regarding the claimed second storage unit as corresponding to the combination of the electronic telephone book, the e-

mail address book, the postal address book and the string library of D1.

6. *Feature [1.4]*

It is not disputed that D1 discloses a first display controller according to feature [1.4] (i.e. D1 implicitly discloses a combination of hardware and software which serves to generate the text shown in Fig. 5 on the display screen).

7. *Feature [1.5]*

The text generated by the first display controller (Fig. 5) is subsequently modified by, for example, adding highlighting and providing pop-up menus (column 5, lines 35-40, column 6, lines 9-13, Figs. 6 and 7). The means which generates such modifications may be considered to be (part of) a "second display controller". Thus feature [1.5] is disclosed in D1.

8. *Feature [1.5.1]*

8.1 The appellant argued that feature [1.5.1] constituted a first difference over D1 on the grounds that the communications terminal of D1 was configured to identify a name included in the first text string from among names stored in the *string library* (column 5, lines 25-28; column 6, lines 43-47; Fig. 4), whereas, according to claim 1, the identification was made from among names stored in the *second storage unit*.

For the reasons given above under point 5., the Board takes the view that the string library may reasonably be regarded as being comprised in the second storage unit. Under this interpretation the name identified in

D1 is "from among names stored in the second storage unit", and the combination of hardware and software performing such identification may be considered to be part of the "second display controller". Hence feature [1.5.1] is disclosed in D1.

8.2 The remaining features of claim 1 ([1.5.2] to [1.5.8]) are not disclosed in D1.

9. *First Difference over D1: Feature [1.5.2]*

9.1 According to the appellant, the technical problem solved by the invention is to provide more efficient interaction with fewer user selections. Whether this problem is solved by features [1.5.3] to [1.5.8] (in combination with feature [1.5.2]) will be examined below. It is clear, however, that this problem is not solved by feature [1.5.2] *per se*, and hence this problem does not provide a basis for an inventive step analysis of feature [1.5.2].

In the opinion of the Board, it is pertinent to ask whether the skilled person would arrive at feature [1.5.2] merely by providing an obvious implementation of the arrangements disclosed in D1.

9.2 In D1 the text of a displayed document is analysed, and structures corresponding to telephone numbers, postal addresses, e-mail addresses and names in the string library 420 are identified. An identified structure is highlighted, and a subsequent selection by the user of the highlighted structure brings up a pop-up menu of actions, the general form of which is shown in Fig. 7.

9.3 In the example of Fig. 4 (box 420), the available actions following the selection of an identified name

are: "Write letter", "Call person (retrieve #)" and "Put in electronic message folder". D1 also discloses a further communications option in providing an e-mail address book and the capacity to send e-mails (column 5, lines 6-18), and it would be obvious to the skilled person that a user might wish to communicate by e-mail with the person having the identified name. Hence, in the opinion of the Board, it would be an obvious measure to provide the additional menu action "Send e-mail" in the pop-up menu triggered by the selection of a highlighted name.

9.4 In this respect the Board does not accept the argument of the appellant that D1 teaches that selecting an identified name would always bring up a menu with precisely the actions shown in box 420 of Fig. 4. It is clearly stated in column 5, line 6 that Fig. 4 represents merely "an example", and it is nowhere stated that the proposed actions would always be limited to those shown in this figure. In fact, several of the independent claims (D1: claims 13-15, 22) envisage embodiments in which only one action may be linked to a detected structure.

9.5 Where an identified name is selected, and the action "Call person (retrieve #)" is chosen, it is, in the opinion of the Board, implicit that a telephone call to the named individual would be initiated via a retrieved telephone number. D1 does not, however, disclose *how* the telephone number is retrieved to enable the call to be placed.

9.6 The appellant accepted that in implementing a telephone call in the context of a communications device comprising an electronic telephone book, it would be

obvious to the skilled person to retrieve the telephone number by searching the electronic telephone book.

According to the appellant, the user selecting an identified name would be offered a choice of actions, as shown in box 420 of Fig. 4, and selecting "Call person (retrieve #)" would result in the electronic telephone book being consulted. If a corresponding entry were present, the telephone number would be retrieved and the telephone application activated; if no entry were present, the user would be informed that it was not possible to place a call. The skilled person would therefore find no reason to include the determination step of feature [1.5.2].

9.7 The Board agrees that it would be obvious to consult the electronic telephone book for the required telephone number, and that the sequence of actions proposed by the appellant (consultation of the electronic telephone book *after* a user selection of "Call person (retrieve #)" from the menu of actions) would be one obvious way of implementing this. An advantage of such a procedure would be that only the electronic telephone book would need to be consulted (since the user would have already indicated a wish to make a telephone call). A disadvantage of this procedure would be that, where no entry existed in the electronic telephone book for the selected name, the user would have been prompted to select an action ("Call person (retrieve #)") which would subsequently prove to be unavailable.

9.8 In the Board's view it would be obvious to the skilled person that a second possible implementation would be to arrange for the consultation after the identified

name has been selected, but *before* the menu of actions is displayed.

9.9 In this case, the consultation would take place at a point where the user had not yet indicated an intended action. It would therefore be obvious to consult all of the books containing communications addresses, namely the electronic telephone book and postal address book (to provide the actions "Call person (retrieve #)" and "Write letter" envisaged in Fig. 4) and the e-mail address book (to provide the obvious action "Send e-mail" - see point 9.3, above), after which the user would be presented with a menu of actions. This would have the disadvantage of requiring more consultations (three books), but it would have the advantage that the communications options on the menu could be restricted to those actually available.

9.10 In implementing the arrangements disclosed in D1, both of the possibilities outlined above, and their respective advantages and disadvantages, would be obvious to the skilled person, and neither can be considered to involve an inventive step.

In the case of the second possibility, all of the available communications addresses corresponding to an identified name would be determined, which would mean that it would have been determined whether the identified name is associated with only one of the first communications address (telephone number) and the second communications address (e-mail address). Hence, the Board concludes that the skilled person would arrive at feature [1.5.2] by merely implementing the arrangement of D1 in an obvious manner.

10. *Second difference over D1: Feature [1.5.3]*

10.1 A part of feature [1.5.3] is disclosed in D1, in that the communications terminal of D1 is adapted to display a screen comprising the first text string in which the second text string has a predetermined appearance (by adding highlighting and providing pop-up menus, see column 5, lines 35-40, column 6, lines 9-13, Figs 6 and 7) and to associate with the second text string a link to the first communications address (telephone number) for starting up a telephone call application program (by the user selecting "Call person (retrieve #)").

10.2 Feature [1.5.3] differs from D1 in that, when the identified name is selected by a user, and the identified name is associated with *only* the first communications address (telephone number), the second display controller is configured to "immediately start up the telephone call application program".

10.3 According to the appellant the technical effect of this difference is to provide "an improved input mechanism by allowing a command to be input in improved manner in that number of interactions/selections required is reduced in cases in which an appropriate unique action can be accurately determined" (letter dated 25 May 2020, page 6, point 5).

10.4 According to D1, placing a telephone call to an identified name would require two selections: first the selection of the highlighted name, which would bring up the pop-up menu, and second, the selection of the action "Call person (retrieve #)", which would initiate the call (see above, point 9.5).

10.5 According to feature [1.5.3] of claim 1, placing a telephone call to the identified name would require

firstly that the second text string (identified name) be selected by a user (see Fig. 10 of the application). If the identified name is associated with only the first communications address, this selection has the effect of automatically "starting up a telephone call application program". Precisely what this means is shown in Fig. 11 of the application. A screen associated with the telephone call application program is presented to the user, offering various options, one of which (bottom, middle) is "CALL". To place a call to an identified name, two selections would therefore be required (the identified name and the "CALL" option).

10.6 Hence, according to both D1 and the claimed invention, it would appear that placing a call to an identified name would require two selections on the part of the user, even if it had been determined that only a telephone number was available. The Board therefore sees no reason to believe that feature [1.5.3] would provide the technical effect asserted by the appellant of reducing the number of interactions/selections required to place a telephone call compared to D1.

10.7 Even if it were considered a simplification that, following selection of an identified name, and where only a telephone number is available, the user is directly presented with the telephone application screen, no inventive step could be recognised on this basis.

The Board has already stated its view above that, starting from D1, it would be obvious to determine whether only a telephone number ("first communications address") is stored, and to present a menu similar to that of box 420 of Fig. 4, but providing only the available options: "Call person (retrieve #)" and "Put

in electronic message folder". The "simplification" referred to above could be achieved in D1 by merely omitting to offer the user the option "Put in electronic message folder" depicted in Fig. 4, and instead going directly to the telephone application program. It would be obvious to the skilled person that a prior art system offering a user multiple options can always be "simplified" by merely suppressing one or more of those options. Hence no inventive step can be seen in feature [1.5.3].

11. *Third difference over D1: Feature [1.5.4]*

11.1 Although an action "Send e-mail" is not explicitly disclosed in box 420 of Fig. 4, it has been noted above (point 9.3) that, given that the system has an e-mail address book and the capacity to send e-mails, an obvious further action following the selection of an identified name would be to send an e-mail to the named person.

11.2 Under points 9.8 and 9.9 the Board set out what it considered to be an obvious procedure for making a telephone call, and it would be equally obvious to employ an analogous procedure for sending an e-mail. Accordingly, after selecting an identified name, the address books would be consulted, and if a corresponding e-mail address were present, the resulting pop-up menu would contain the option "Send e-mail"; selecting this would bring up an e-mail application input screen with the appropriate e-mail address.

In the case where only an e-mail address were present, it would be obvious to include only this communications option, and hence the pop-up menu would contain only

the options "Send e-mail" and "Put in electronic message folder". Selecting the former would bring up an e-mail application input screen. Two selections would therefore be required to call up the e-mail application input screen with the appropriate e-mail address (selection of the identified name and "Send e-mail").

11.3 By contrast, according to feature [1.5.4] of claim 1, in the case where only an e-mail address were present, selecting an identified name would "immediately start up the mail application program" as shown in Fig. 13 of the application, hence requiring only a single selection (identified name).

11.4 The Board therefore accepts that, in the case where only an e-mail address were present, the claimed arrangement would require fewer selections to get to the e-mail application input screen.

However, as with feature [1.5.3], the same result could be achieved in D1 by omitting the option "Put in electronic message folder", and instead going directly to the e-mail application program. Reducing the number of selections required by the obvious expedient of limiting the number of options available to the user cannot be regarded as inventive. Hence no inventive step can be seen in feature [1.5.4].

12. *Fourth difference over D1: Features [1.5.5] to [1.5.8]*

12.1 The final group of claimed features deals with the case where it is determined that the identified name is associated with both the first communications address (telephone number) and the second communications address (e-mail address).

12.2 Where the first text string includes a first related text string (e.g. "phone") representative of communications performed by the first communications address, a link is made to the first communications address (telephone number) for starting up the telephone call application program. Where the first text string includes a second related text string (e.g. "email") representative of communications performed by the second communications address, a link is made to the second communications address (e-mail address) for starting up the e-mail application program.

The appellant again argues that the technical effect of these features is to provide an improved input mechanism where the number of selections required is reduced where an appropriate unique action can be accurately determined.

12.3 The Board does not accept that the mere presence of a term such as "phone" or "telephone" in the body of the displayed text would necessarily imply, much less guarantee, that the user would wish to place a telephone call, and that the appropriate action would be to start up the telephone application. A limitless number of possible contexts could be envisaged in which the word "phone" appears in a text without any implication that the user would wish to respond by placing a telephone call to an identified name. The same is true of the presence in a displayed text of a term such as "e-mail". The Board therefore sees no reason to believe that the claimed procedure would provide an accurate determination of the user's intention.

12.4 The appellant argued that, in the context of a "To Do" application, the word "telephone" would be likely to

arise within the context of a reminder to telephone somebody. However, even in a "To Do" application, the word "telephone" could easily appear in other contexts. Moreover, claim 1 is not limited to the case where the first text string is extracted from a "To Do" application; the first text string can represent data from any source.

12.5 Where an invention is based on allowing a user to perform an action from among a range of such actions, it is clearly of primary importance that the action which the user actually wishes to perform is facilitated. Of secondary importance is the efficiency with which this action may be carried out, for example, in terms of the number of selections required.

In D1 the correct action is guaranteed, as it is the user who selects the appropriate action from a pop-up menu. The procedure defined in features [1.5.5] to [1.5.8] would fail to guarantee that the user would be directed to an action corresponding to their true intention, and, in a certain proportion of cases, would inevitably misdirect the user to an unwanted action. As a result, the invention provides, in this respect, an objectively worse outcome than that provided by D1, even if there might be efficiency gains in those cases where the hints found in the text happened to lead to the correct action.

12.6 It is the consistent case law of the Boards of Appeal that no inventive step can be acknowledged when the invention is "the result of a foreseeable disadvantageous modification of the closest prior art", if these predictable disadvantages are not compensated by any unexpected technical advantage (*Case law of the Boards of Appeal of the European Patent Office*, 9th

edition, 2019, I.D.9.19.1). For the reasons given above, the Board considers that features [1.5.5] to [1.5.8] constitute just such a foreseeably disadvantageous modification, and any advantages in terms of efficiency would not compensate for the fact that the user would be routinely misdirected to the wrong action. Hence no inventive step can be seen in features [1.5.5] to [1.5.8].

13. The Board therefore concludes that the subject-matter of claim 1 of the main (sole) request does not involve an inventive step within the meaning of Articles 52(1) and 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero T. Häusser

Decision electronically authenticated