

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

**Datasheet for the decision
of 5 March 2008**

Case Number: T 1188/04 - 3.5.01

Application Number: 00300925.5

Publication Number: 1026574

IPC: G06F 3/033

Language of the proceedings: EN

Title of invention:

Graphical user interface allowing processing conditions to be set by drag and drop

Applicant:

SHARP Kabushiki Kaisha

Opponent:

-

Headword:

Graphical user interface / SHARP

Relevant legal provisions:

EPC Art. 52(1)(2)(3), 123(2)

Relevant legal provisions (EPC 1973):

EPC Art. 54, 56

Keyword:

"Setting parameters by direct manipulations on a graphical screen - inventive step (yes - after amendment)"

Decisions cited:

-

Catchword:

-



Case Number: T 1188/04 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 5 March 2008

Appellant: Sharp Kabushiki Kaisha
22-22 Nagaike-cho
Abeno-ku
Osaka 545-8522 (JP)

Representative: Brown, Kenneth Richard et al.
R.G.C. Jenkins & Co.
26 Caxton Street
London SW1H 0RJ (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 26 April 2004
refusing European application No. 00300925.5
pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chairman: S. Steinbrener
Members: K. Bumès
A. Pignatelli

Summary of facts and submissions

- I. This appeal is against the decision of the examining division to refuse European patent application No. 00300925.5, published as
- A2: EP-A2-1 026 574,
- for lack of novelty over
- D1: US-A-5 777 616.
- II. The appellant requests that the decision under appeal be set aside and a patent be granted on the basis of an amended set of claims 1 to 10 filed at oral proceedings before the Board on 5 March 2008.

Claim 1 reads:

"1. An information processing apparatus comprising:

a pointing device (6);

a display unit (2) operable to display a plurality of icons;

a detection unit (51) for detecting a predetermined operation performed on a first icon which has been dragged to a second icon wherein said predetermined operation is a reciprocated movement performed on the first icon, said first icon being displayed on the display unit (2) and capable of being moved with movement of the pointing device (6);

a condition update unit (54) for changing processing conditions of the information processing, which is represented by the second icon and which is to be performed on a document represented by the first icon upon detection of the operation performed on the first icon, such that the processing conditions are set depending on the number of times the first icon is reciprocated with respect to the second icon."

Claims 2 to 5 are apparatus claims dependent on claim 1.

Claim 6 reads:

"6. A method of processing information in an information processing apparatus including a pointing device (6) and a display unit (2) for displaying a plurality of icons, comprising the steps of:

detecting a predetermined operation performed on a first icon which has been dragged to a second icon wherein said predetermined operation is a reciprocated movement performed on the first icon, said first icon being moved with movement of said pointing device (6);
and

changing processing conditions of the information processing, which is represented by the second icon and which is to be performed on a document represented by the first icon based on a result of said detection of the operation performed on the first icon, such that the processing conditions are set depending on the number of times the first icon is reciprocated with respect to the second icon."

Claims 7 and 8 are method claims dependent on claim 6.

Claims 9 and 10 read:

"9. A computer readable recording medium on which a program is recorded for execution of an information processing method according to any one of claims 6 to 8.

10. A computer program comprising computer program code means adapted to perform all the steps of any one of claims 6 to 8 when said program is run on a computer."

III. In an annex to summons, the Board directed the discussion of novelty and inventive step to the following prior art documents:

D1: US-A-5 777 616;

D2: "Double-click direct manipulation to override defaults", IBM Technical Disclosure Bulletin, vol. 35, No. 7, December 1992, pages 183-184, XP 000332971;

D3: EP-A-0 684 541; and

D10: CA-A-2 201 830.

IV. The appellant's main argument is that the skilled person has to take a number of steps from the graphical user interface of D3 (considered as the closest prior art) to get to the claimed information processing apparatus. As D3 provides a comprehensive system for setting printer parameters, the skilled person has no incentive to modify its operation in the first place. Moreover, while D3 shows that the setting of a printer parameter can be initiated by manipulating icons on a screen, the prior art document consistently teaches the use of a graphical dialogue box as an intermediate step. Abandoning that central element of D3 cannot be obvious. Even D10, which discloses a graphical technique of setting the value of a parameter, does not prompt the skilled person to do away with a dialogue box. In particular when a plurality of parameters have to be set, a manipulation technique not using a dialogue box does not derive from a combination of D3 and D10 or any other prior art document cited.

V. The Board pronounced its decision at the end of the oral proceedings.

Reasons for the decision

1. *The invention*

In a graphical user interface (GUI) according to the present application, the mouse pointer is used not only to drag and drop a first icon (representing a document) onto a second icon (triggering some type of processing of the document) but also to change conditions of the document processing (e.g. print parameters) by operating the first icon in a predetermined manner when the first icon has been dragged to the second icon.

The independent claims 1 and 6 as amended specify that the predetermined operation consists of a reciprocated movement of the first icon and that the processing conditions are set depending on the number of times the first icon is reciprocated with respect to the second icon (see in particular paragraphs 0034 and 0035 of the description in A2). In other words, a plurality (see paragraph 0014 of A2) of processing conditions (e.g. print parameters) can be set by the manner in which the first icon (= document symbol) is manipulated over the second icon (e.g. printer symbol).

2. *Article 123(2) EPC - Original basis of amendments*

The Board is satisfied that the subject-matter of the amended claims does not extend beyond the content of the application as filed.

2.1 In particular, reciprocating movements (horizontal and vertical) are disclosed in relation to Figures 4A and 4B (A2, column 4, lines 30 to 34; column 7, lines 12 to 23). The feature that a plurality of processing conditions are set depending on the number of times the first icon is reciprocated with respect to the second icon is based on column 3 (lines 17 to 20) and column 7 (lines 30 to 32) of A2.

2.2 Dependent apparatus claim 2 corresponds to original claim 5 and is also based on A2, paragraph 0037, for example. Dependent claim 3 corresponds to original claim 6 and is also based on A2, paragraph 0047, for example. Dependent claim 4 corresponds to original claim 8 and is also based on A2, paragraph 0038, for example. Dependent claim 5 corresponds to original claim 12. The dependent method claims 7 and 8 mirror corresponding apparatus claims and therefore lie also within the content of the application as filed. Finally, claims 9 and 10 correspond to original claims 17 and 21.

3. *Article 52(1)(2)(3) EPC - Technical character of the invention*

The examining division has not objected to any feature on the ground of lack of technical character. The Board is also convinced that the use of a pointing device (e.g. computer mouse) and a graphical pointer to directly control the operation of a standard computer constitutes technical subject-matter. In particular, the operation of the claimed man-machine interface is defined in terms of functional features rather than cognitive or aesthetical content.

4. *Article 52(1) EPC and Article 54 EPC 1973 - Novelty*

4.1 The Board concurs with the appellant in considering the graphical user interface of D3 as the closest prior art. According to D3 (see e.g. Abstract), the first icon (source object, e.g. a document symbol) which has been dragged to the second icon (target, e.g. a printer symbol) is either dropped on the second icon to trigger a default operation or is paused ("hovered") over the target for a predetermined amount of time. When the user has delayed dropping of the source object, a dialogue box (Figure 4) is opened to prompt him for new parameter values. The dialogue box enables him to override default parameters of the action intended by the drop, i.e. he can change a condition for the processing of the document.

However, D3 fails to disclose the idea of detecting a reciprocated movement of the first icon after the first icon has been dragged to the second icon. In particular, the graphical user interface of D3 does not count the number of times the first icon is reciprocated with respect to the second icon in order to automatically set the document processing conditions accordingly (which would allow the processing conditions to be set without using a dialogue or control box).

Therefore, the information processing apparatus and method according to claim 1 and 6, respectively, are novel over D3.

4.2 D1, Figure 4B shows a GUI operation in which a data file icon 114 is dragged onto a printer icon 150 (see drag pointer 170). The data file icon 114 may be

dragged onto either a control region 152 or a print region 154 of the printer icon 150 (see column 7, lines 23 to 64). When data file icon 114 has been dropped onto control region 152, the user can control the operation of the printer (D1, column 7, lines 10 to 18).

However, the features novel over D3 (see point 4.1 *supra*) are also novel over D1.

- 4.3 According to D2, when a first icon is dragged to a second icon, the drag can be tagged as special by a double-click over the first icon. When a tagged first icon is dropped onto the second icon, the user is prompted for changes to the default settings; this can be accomplished by opening a dialogue box which allows the user to make any pertinent changes.

Again, the features novel over D3 (see point 4.1 *supra*) are also novel over D2.

- 4.4 D10 does not relate to the dropping of icons for processing purposes.

- 4.5 Therefore, the information processing apparatus according to claim 1 and the corresponding method defined in claim 6 are novel over each of the cited documents.

5. *Effects of the distinguishing features; technical problem to be solved*

- 5.1 When the first icon (= document symbol) is conventionally dragged to the second icon (e.g. printer symbol) and dropped in order to initiate some

processing (e.g. printing) of the document, that type of direct manipulation effectively constitutes a graphical shortcut for instructing the information processing apparatus (e.g. computer) to start processing of the document in a predetermined way.

In addition, the hovering technique known from D3 instructs the computer that the document processing conditions are to be changed from said default operation before the actual processing starts, such changes being accomplished by going through a dialogue box.

- 5.2 Generally speaking, a reciprocated movement (as claimed) instead of a hovering operation (D3) constitutes an alternative manner of providing the aforementioned graphical type of instruction. According to the invention, a change to the processing conditions can be triggered directly by that movement. Moreover, the number of reciprocated movements can be used to select a specific instruction to the computer. In particular, the number of reciprocated movements enables the user to select one of a plurality of processing parameters (e.g. sheet size; single sided/double-sided printing; output location) which is to be changed from a default value (see e.g. paragraph 0028 of A2).

As the parameter to be changed can be selected directly by the number of reciprocated movements of the first icon over the second icon, the dialogue box known from D3, Figure 4 is no longer necessary to select and set different print parameters. In other words, the reciprocating technique as claimed provides a graphical shortcut for choosing among processing conditions

without having to cycle through a parameter setting menu every time a parameter needs to be changed.

5.3 Therefore, starting from D3, the objective technical problem to be solved by the novel features can be formulated as how to provide an alternative graphical shortcut allowing direct setting of different processing conditions.

6. *Article 56 EPC 1973 - Inventive step*

6.1 The trouble of a user having to go through a full parameter setting menu even when he just wants to change the value of a single parameter is a problem encountered in practical use of a graphical user interface according to D3. In particular, when a same parameter has to be set frequently, the user would have some motivation to ask the GUI programmer for a shortcut command, this being an option familiar from conventional text processors, for example.

Therefore, while not mentioned explicitly in D3 or any other document on file, the formulation of the problem (point 5.3 *supra*) does not seem to amount to an inventive contribution.

6.2 The well-known drag and drop technique constitutes a basic type of graphical shortcut in the prior art (see D1 to D3). When a refined graphical shortcut is to be created in order to allow more specific, more selective and/or more direct commands to be input through a GUI, two fundamental types of solution are obviously available to the skilled person: the dropping action can be qualified by operating a mouse button (see the

tagging technique of D2, starting with a double-click on the source object) or by the manner in which the mouse pointer is operated on the screen (see the hovering technique of D3). Embarking on the second option, the skilled person seeking an alternative solution would have to contemplate some other manipulation of the mouse pointer (with the icon dragged) instead of merely pausing it over the second icon.

- 6.3 The fact that a GUI programmer may contemplate the itinerary of a mouse pointer as a way of inputting data to a computer is exemplified by D10.

The GUI according to D10, Figure 4 allows a numerical value to be set by positioning the mouse pointer (16) on a display window (14) of a control box (10) showing said numerical value, and by dragging the pointer along a circular or spiral trajectory over said window to increment or decrement the numerical value (D10, in particular page 7, last paragraph, and claim 5).

While D10 is not concerned with dropping an icon, the document does show that it was known to change a parameter setting displayed in a window by the itinerary of the mouse pointer, i.e. by the manner in which the pointer is dragged over said window on the screen.

- 6.4 Therefore, the general idea of redesigning a graphical shortcut by attaching a desired meaning to the itinerary of the mouse pointer (and icon dragged) may not yet provide a non-obvious contribution.

At the same time, a reciprocating movement obviously constitutes a basic type of itinerary.

- 6.5 On the other hand, the available prior art (including D10, the remaining documents cited in the European search report, and the two Japanese patent applications mentioned in paragraphs 0006, 0007 and 0011 of A2) does not suggest a graphical type of shortcut command which selectively allows a document to be processed and a plurality of processing conditions to be set directly by applying various ways of interaction between two icons (the first icon representing the document, the second icon representing the desired processing thereof). In particular, the prior art does not suggest that the processing conditions be set depending on the number of times the first icon is reciprocated with respect to the second icon.

With the benefit of hindsight, it may be conceivable to design a graphical user interface which uses a modified value setting technique of D10 (with a reciprocating rather than spiral movement) for selecting a parameter in the first place. However, the Board sees no obvious inspiration for the skilled person to expand the limited teaching of D10 to that general level.

- 6.6 Therefore, the Board concludes that the information processing apparatus according to claim 1 involves an inventive step.

The same assessment applies to the corresponding independent method claim 6 and the associated program claims 9 and 10.

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 set of claims 1 to 10 filed during the oral proceedings and a description to be adapted.

The Registrar:

The Chairman:

T. Buschek

S. Steinbrener