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**Datasheet for the decision
of 16 October 2008**

Case Number: T 1405/05 - 3.5.05

Application Number: 01923810.4

Publication Number: 1272920

IPC: G06F 3/033

Language of the proceedings: EN

Title of invention:
User interfaces and methods for manipulating and viewing
digital documents

Applicant:
Picsel (Research) Limited

Opponent:
-

Headword:
User interfaces and methods/PICSEL

Relevant legal provisions:
EPC Art. 52(1)

Relevant legal provisions (EPC 1973):
EPC Art. 54(1) and (2)

Keyword:
-

Decisions cited:
-

Catchword:
"Lack of novelty"

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Beschwerdekammern   Boards of Appeal   Chambres de recours

Case Number: T 1405/05 **-** 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 16 October 2008

Appellant:	Picsel (Research) Limited Titanium Bldg Braehead Business Park King's Inch Road Paisley PA4 8XE (GB)
Representative:	Cooper, John Murgitroyd & Company 165-169 Scotland Street Glasgow G58PL (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted 30 May 2005 refusing European application No. 01923810.4 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman:	D. H. Rees
Members:	P. Corcoran
	P. Schmitz

Summary of Facts and Submissions

I.   This appeal is against the decision of the examining
        division announced in oral proceedings held on
        25 February 2005 with written reasons dispatched on
        30 May 2005 to refuse the European patent application
        No. 01 923 810.4.

        The decision made reference to the following prior art
        documents:
           D6: BÖHMER, S. et al.: "Word for Windows 6.0", 1994,
           pp.38-43, BHV-Verlag, Korschenbroich, Germany.
           D7: WO 97 36225 A.

        According to the decision the subject matter of
        independent claim 1 of the main request lacked
        inventive step over the prior art of D7 combined with
        general knowledge about window-based user interfaces.
        The subject matter of independent claim 1 of an
        auxiliary request was likewise found to lack inventive
        step for substantially similar reasons.

II.   In the statement of grounds of appeal it was alleged
        that the examining division had erred in its assessment
        of the inventive merit of claim 1 of the main request
        and detailed observations were presented in support of
        this submission. A precautionary request for oral
        proceedings was also submitted.

III.   The appellant submitted, *inter alia*, that the extent to
        which the claimed subject matter was anticipated or
        rendered obvious by the available prior art depended on
        the interpretation of the expression *"gesturing process
        for detecting predefined movements representative of*

commands" and associated terms, (cf. statement of grounds, § 1.3). The appellant further submitted that the user interface of the claimed invention was distinguished from a "conventional GUI", arguing that pointer movements in such a "conventional GUI" are not in themselves representative of commands, (cf. statement of grounds, § 4.5).

IV.   In a communication accompanying a summons to oral proceedings to be held on 16 October 2008 the board noted that the appellant's request was understood to be for the grant of a patent on the basis of claims 1-38 of the main request on which the impugned decision was based.

The board gave its preliminary opinion that the appellant's request was not allowable and referred, in particular, to D6. The board likewise made reference to an extract from a textbook which had been submitted by the appellant during the first instance proceedings, (cf. letter dated 26 May 2004):

   D8: J. Preece et al: "Human-Computer Interaction", pp.290-299, ISBN 0-201-62769-8, Addison-Wesley, 1994.

Pursuant to Article 114(1) EPC, the following additional documents were introduced by the board of its own motion:

   D8a: J. Preece et al., "Human-Computer Interaction", pp.211-236 and pp.714-715, ISBN 0-201-62769-8, Addison-Wesley, 1994;

   D9: A. Kramer, "Classifying Two Dimensional Gestures in Interactive Systems", Proceedings of International Gesture Workshop, Sept. 17-17, 1997, published as

Lecture Notes in Artificial Intelligence Vol. No. 1371, pp.37-48, ISBN 3-540-64424-5, Springer Verlag, 1998.

D8a comprises further extracts from the textbook cited by the appellant during first instance proceedings. D9 was cited primarily for the purpose of clarifying the meaning of the term "gesture".

V.   In a letter of reply submitted by telefax on 3 October 2008, the appellant's representative informed the board that the appellant would not be attending the oral proceedings and withdrew the request for oral proceedings. No submissions were made in respect of the issues raised by the board in the aforementioned communication and no new requests were filed.

During the oral proceedings which took place as scheduled in the absence of the appellant, the board verified the appellant's request. The appellant had requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-38 of the main request on which the decision under appeal was based.

VI. Claim 1 of the sole request reads as follows:
"A computer device having a system for simulating tactile control over a document, comprising

a processor, memory (15), and a display (26),

system code stored within the memory (15) and adapted to be executed by the processor, said system code for providing a digital representation

of a document (11) including data content and a page structure representative of a page layout of the document,

a rendering engine (18) for rendering at least a portion of the page layout of the digital representation on the display,

a screen monitor for monitoring the screen to detect movement of an object across an image presented on the display,

an interface process for processing the detected movement to detect a motion representative of a command to alter the rendered page structure of the digital representation, and

a navigation module responsive to the interface process for changing the rendered portion of the page layout, wherein altering the rendered portion of the page layout allows a user to navigate through the digital representation of the document, and wherein:

the interface process includes a gesturing process for detecting predefined movements representative of commands for selecting a portion of the page layout to be rendered, said predefined movements comprising command strokes, each of said command strokes being associated with a user interface command for manipulating and viewing documents."

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

Reasons for the Decision

1.   *Preliminary observations*

1.1   The board notes that at least two different uses of the
term "gesture" can be identified in relation to user
interfaces for computing devices, (cf. D9: section 2.,
"Two-dimensional Gestures"). The first use denotes a
three-dimensional movement of the limbs or the body which
is picked up by an input device and then interpreted and
used by the application. The second use denotes a
movement of an object such as an electronic pen, one or
more fingers, or a mouse, over a two-dimensional surface,
in order to issue a command. In this case the "gesture"
results in a stream of 2D coordinates, potentially with
further attributes, which are then processed by the
application to execute the desired command.

1.2   The term *"gesturing process"* as used in claim 1, when
taken by itself, suggests a process which performs or
executes gestures. Hence, this term suggests
functionality which is not entirely consistent with the
description.

However, when the term is read in the overall context of
the claim and interpreted in the light of the description,
in particular p.23 l.28 - p.24 l.3 and p.33 l.22 - p.35
l.6, (see also Figs. 12A-12G), it is evident that the
appellant's intention is to define a gesture <u>recognition</u>

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process, i.e. a process for recognising a "gesture" in the sense of the movement of an object over a two-dimensional surface by a user, i.e. a gesture according to the second use of the term as discussed in 1.1 above.

1.3   Claim 1 recites *"a screen monitor for monitoring the screen to detect movement of an object across an image presented on the display"*. It is not immediately apparent from the wording of the claim whether the term "object" is intended to denote a physical object, (e.g. a pointing device or a finger moving across a touch-sensitive surface), or a virtual object (e.g. a cursor or similar graphical artefact which moves across a display in response to user actions via an input device such as a mouse). When read in the light of the description, in particular p.6 l.6-13 and p.23 l.15-19, it is evident that the present formulation was intended to be broad enough to cover both physical and virtual objects.

1.4   As may be inferred from the foregoing, the board has some reservations concerning the semantic clarity of claim 1. Notwithstanding these reservations, when the wording of the claim is interpreted in the light of the description the board finds that it is sufficiently clear to permit an assessment of compliance with the requirements of Article 52(1) EPC as detailed below.

2.   *Observations re. the appellant's submissions*

2.1   The appellant has argued, *inter alia*, that the claimed invention is distinguished from a "conventional GUI" in which pointer movements are not in themselves

representative of commands, (cf. statement of grounds,
§ 4.5).

2.2   The term "conventional GUI" used by the appellant is
        understood by the board as being intended to denote what
        is commonly called a "WIMP" graphical user interface
        (GUI). A WIMP GUI is a familiar type of graphical user
        interface in which user interaction is based on Windows,
        Icons, Menus and Pointing devices.

2.3   The board notes that, contrary to the appellant's
        assertions, at least some sequences of pointer movements
        typically supported by WIMP GUIs can be considered
        representative of commands.

2.4   D9, for example, states that a subset of command
        execution operations commonly supported by personal
        computer operating systems and applications, *viz.* drag
        operations and text- and object-selection operations,
        "could be classified as gestures", (cf. D9: section 2.
        entitled "Two-dimensional Gestures", p.39 l.18-20).

2.5   The foregoing interpretation of the term "gesture" also
        finds support in D8, a textbook extract cited by the
        appellant, which refers on p.294 (second paragraph) to
        the use of "gestural syntaxes" in the context of WIMP
        GUIs. The corresponding entry for the term "gestural
        syntax" in the glossary of the textbook states that *"in
        systems such as mouse-based systems, some sequences of
        gestures will make the computer carry out one or more co-
        ordinated actions. Other sequences of actions will not,
        The differences between such gestures can be described by
        gestural syntaxes which allow the computer to distinguish*

between gestural sequences such as 'press-drag-release'
and 'click-position-click'", (cf. D8a, p.714, emphasis
added).

2.6   The application itself likewise refers to dragging
        operations in the context of detecting *"a motion*
        representative of a known command", (cf. p.23 l.15 - p.24
        l.8), and likewise to a *"command stroke ... for clicking*
        and dragging a document to cause page movement", (cf.
        p.35 l.7-10). Hence, the application itself also treats
        at least some sequences of pointer movements typically
        supported by WIMP GUIs, e.g. drag operations, as a type
        of "gesture" or "command stroke".

2.7   In view of the foregoing, the board cannot concur with
        the appellant's submissions asserting that pointer
        movements supported by conventional WIMP GUIs are not in
        themselves representative of commands. At least some
        sequences of pointer movements supported by such GUIs can
        be considered as "gestures" or "predefined movements
        representative of commands" in the sense of claim 1.

3.   *Novelty*

3.1   D6 is an extract from a manual for "Word for Windows 6.0"
        which is a word-processing program designed to execute on
        a general purpose computer system, such as a desktop
        personal computer. It is considered implicit in the
        teaching of D6 that the computer program described
        therein is executing on a general purpose computer system
        comprising, *inter alia*, a processor, a memory and a
        display as recited in claim 1.

3.2   When executing the word-processing program of D6, the
       implicitly disclosed computer system allows a user to
       perform various operations such as scrolling through a
       document, (cf. D6: section entitled "Blättern", p.40-41),
       and moving / arranging document windows, (cf. D6:
       sections entitled "Verschieben" and "Anordnen", p.42).

       On this basis the board concludes that the disclosure of
       D6 implicitly comprises:
           "A computer device having a system for simulating
           tactile control over a document, comprising

               a processor, memory, and a display,

               system code stored within the memory and
           adapted to be executed by the processor, said
           system code for providing a digital representation
           of a document including data content and a page
           structure representative of a page layout of the
           document,

               a rendering engine for rendering at least a
           portion of the page layout of the digital
           representation on the display."

3.3   The "conventional" Windows-based GUI of D6 supports,
       inter alia, operations such as paging/scrolling (cf. D6:
       p.40 section entitled "Blättern"). By selecting and
       dragging a GUI object ("Schieber") the user can navigate
       through a displayed document.

The computer device of D6 is thus found to comprise, at least implicitly, the following further features of claim 1:

" a screen monitor for monitoring the screen to detect movement of an object across an image presented on the display

an interface process for processing the detected movement to detect a motion representative of a command to alter the rendered page structure of the digital representation, and

a navigation module responsive to the interface process for changing the rendered portion of the page layout, wherein altering the rendered portion of the page layout allows a user to navigate through the digital representation of the document."

3.4   Referring to the description, (cf. p.35 l.7-10), it is evident that the predefined movement underlying the scrolling operation of D6 represents a *"command stroke ... for clicking and dragging a document to cause page movement"*. The board thus finds that the drag-based scrolling operation disclosed on p.41 l.1-3 of D6 is performed by means of a predefined movement representative of a command for selecting a portion of the page layout to be rendered and that the predefined movement comprises a command stroke "associated with a user interface command for manipulating and viewing documents" as recited in the concluding part of claim 1.

The predefined movement representing the command stroke is recognised by detecting and monitoring the movement of an object across a display surface, the object being in

this case a GUI scrollbar artefact, (i.e. the "Schieber" as mentioned in point 3.3 above).

On this basis, D6 is found to disclose, at least implicitly, an interface process which includes *"a gesturing process for detecting predefined movements representative of commands"* in correspondence with the concluding part of claim 1.

3.5 According to the appellant's submissions, claim 1 is intended to seek protection for a user interface arrangement which supports a different style of user interaction from a conventional WIMP GUI, i.e. an interface which allows a user to enter commands in the form of graphical marks or symbols such as disclosed on p.33 l.22 - p.35 l.6, (see also Figs. 12A-12G). The board finds, however, that the current wording of claim 1 fails to realise this intention.

3.6 Based on the interpretation which it applies to claim 1, in particular the concluding part thereof, (cf. observations under 2. above), the board concludes that the claimed subject-matter does not comprise any features which can distinguish it from a computer device for viewing and manipulating digital representations of documents via a "conventional GUI" as disclosed, at least implicitly, in D6.

3.7 It is noted that the appellant submitted no response to the objections based on D6 which were set forth in the communication accompanying the summons to oral proceedings.

3.8   In view of the foregoing, claim 1 of the appellant's sole
      request is found to lack novelty in the sense of
      Articles 54(1) and (2) EPC 1973. This request is
      therefore not allowable. In the absence of an allowable
      request the appeal must be dismissed.

4.   *Further observations*

4.1   The board additionally notes by way of *obiter dictum* that
      even had the appellant succeeded in establishing a
      distinction between the user interface arrangement of
      claim 1 and a conventional WIMP GUI on the basis of p.33
      l.22 - p.35 l.6 of the application, the provision of a
      gesture-based user interface as described in the cited
      passages of the description would not appear to require
      the exercise of inventive skill when due account is taken
      of the general technical knowledge of the skilled person
      at the claimed priority date.

4.2   The available prior art indicates that non-WIMP gesture-
      based interfaces of the kind described in the
      aforementioned passages of the description were generally
      known at the claimed priority date.

      D9, for example, discloses that *"[...] gestures are
      commonly used in Personal Digital Assistants e.g. Apple's
      Newton [39], GO's PenPoint [42], Microsoft's Windows for
      Pen Computing [43], and research prototypes e.g.
      Sketchpad [31], Tivoli [24, 26], Electronic Napkin [9],
      SILK [20], Translucent Patches [16-19], Digital Desk
      [35]"*, (cf. D9: section 2. Two-dimensional Gestures, p.39
      l.21-24).

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D8a likewise discloses the use of such gesture-based user interfaces in the context of pen-based and touchscreen systems, (cf. D8a: in particular, p.228-229 and p.233). It is noted in this regard that the disclosure of the present application encompasses computer systems comprising pen-based and touchscreen interfaces, (cf., for example, p.6 l.6-13; p.33 l.22-27; p.39 l.26 - p.40 l.3).

4.3   The application itself likewise refers to screen monitoring processes which *"are known in the art"* and states that *"any suitable process may be employed"*, (cf. p.23 l.15-25). The application further states in relation to the interface process that it *"may be a separate process or may be part of the screen monitor process, <u>as is common in the art</u>"*, (emphasis added, cf. p.23 l.28 - p.24 l.3).

4.4   Thus, even had the appellant succeeded in establishing that claim 1 should be interpreted as seeking protection for a computer device with a user interface of the particular kind disclosed on p.33 l.22 - p.35 l.6 of the application, this would not have sufficed to convince the board of the inventive merit of the claimed subject-matter. The state of the art in respect of user interfaces as evidenced for example by D8a and D9, indicates that the provision of such an interface represents a known, obvious design alternative to the "conventional GUI" of D6.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Götz   D. H. Rees

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