

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ANURAG PRAKASH

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Appeal No. 2005-1975  
Application No. 09/819,292

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ON BRIEF

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Before BARRETT, GROSS, and LEVY, Administrative Patent Judges.  
LEVY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims<sup>1</sup> 1, 4-7, 9, 10, 12-14, 16, 18, 19, 25-27 and<sup>2</sup> 30-35, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

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<sup>1</sup> An amendment (August 26, 2003) filed subsequent to the final rejection (May 15, 2003), has been denied entry by the examiner (brief, page 2).

<sup>2</sup> The examiner (answer, pages 2 and 3) has withdrawn the rejection of claims 27, 33 and 34 under 35 U.S.C. § 112, first paragraph. Accordingly, only claim 30 remains before us for decision on appeal with respect to 35 U.S.C. § 112, first paragraph. As claims 33 and 34 have not been rejected over prior art, claims 33 and 34 are not before us for decision on appeal.

BACKGROUND

The appellant's invention relates to a module method for forming computer systems (specification, page 1). In particular, the invention is drawn to a mobile computing device capable of providing all of the functionalities of the mobile computer, mobile phone, PDA, etc. (specification, page 2). Modules with display screens may be folded together to enable the system to perform handheld functions, such as a PDA (specification, page 11).

Claim 1 is representative of the invention, and is reproduced as follows:

1. A system, comprising:

a first module coupled to a second module and a third module, wherein a display screen of the first module, a display screen of the second module, and a display screen of the third module are to form a first viewing area when the first module is placed adjacent to the second module and the second module is placed adjacent to the third module, wherein the display screen of the first module is to form a second viewing area when the first module is folded on top of the second module such that the display screen of the first module is visible, and wherein the first viewing area is associated with a first type of applications and the second viewing area is associated with a second type of applications.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

|                        |           |               |
|------------------------|-----------|---------------|
| Kumar et al. (Kumar)   | 5,548,478 | Aug. 20, 1996 |
| Haneda et al. (Haneda) | 5,900,848 | May 4, 1999   |
| Gouko                  | 6,222,507 | Apr. 24, 2001 |

(filed Nov. 19, 1998)

Claim 30 stands rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement.

Claims 9, 10, 12-14, 16, 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Haneda in view of Kumar.

Claims 1, 4-7, 18, 19, 25, 30-32 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gouko in view of Kumar.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed October 5, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (revised brief, filed April 9, 2004) for the appellant's arguments thereagainst.

Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered. See 37 CFR § 41.37(c)(1)(vii)(eff. Sept. 13, 2004).

OPINION

In reaching our decision in this appeal, we have carefully considered the subject matter on appeal, the rejections advanced by the examiner, and the evidence of lack of enablement and obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer. Upon consideration of the record before us, we make the determinations which follow.

We observe at the outset appellant's assertion (brief, page 4) that claims 9, 10, 12-14, 16, 26 and 27 are grouped together, that claims 1, 4-7, 18, 19, 25, 30-32 and 35 are grouped together, and that claims in each group stand or fall together. Notwithstanding this assertion, we observe that appellant presents separate arguments for independent claims 1, 18 and 31, all of which are in the group of claims 1, 4-7, 18, 19, 25, 30-32 and 35. Thus, although we could choose a single claim from the group in light of appellant's assertion, we shall separately address each of independent claims 1, 18 and 31.

We begin with the rejection of claim 30 under 35 U.S.C. § 112, first paragraph as lacking enablement. An analysis of whether the claims under appeal are supported by an enabling disclosure requires a determination of whether that disclosure contained sufficient information regarding the subject matter of the appealed claims as to enable one skilled in the pertinent art to make and use the claimed invention. The test for enablement is whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. See United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), cert. denied, 109 S.Ct. 1954 (1989); In re Stephens, 529 F.2d 1343, 1345, 188 USPQ 659, 661 (CCPA 1976).

The Federal Circuit has set out a number of factors that are relevant to whether undue experimentation would be required to practice a claimed invention. They include "(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the

breadth of the claims." In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

The examiner's position (answer, page 4) is that "[t]here is no description or drawings in the specification of means for activating the second type of applications when using the second viewing area." Appellant asserts (brief, page 5) that the first type and second type of applications may be activated based on whether the multiple modes of the foldable mobile computing device are folded or unfolded. Specifically, it is argued (id.) that when the multiple modules are unfolded such that their display screens are adjacent to one another, the mobile computing device may run applications such as Word®, typically associated with a laptop. When multiple modules are folded on top of one another, the mobile computing device may execute applications such as a PDA, typically associated with a hand-held computing device.

From our review of the entire record, we note that in making the enablement rejection, the examiner has not addressed any of the Wands factors, and has not made any assertion that experimentation, let alone an undue amount of experimentation, would have been necessary for an artisan to make and use the invention. From our review of the disclosure, we find that, as

shown in figure 2, module 210 and module 205 may be attached to each other by a hinge or slide (specification, page 7). The mobile computing device may operate in different modes depending on the orientation of its modules (specification, page 7). In one embodiment, the mobile computing device does not have a visible power-off switch, and the action of placing the modules in the closed position may automatically trigger a power switch which sets the mobile computing device in low power mode (specification, pages 7 and 8). When the mobile computing device 300 of figure 3 is opened from its closed position, the power is switched on or is resumed from its low power setting. For example, the power may be switched on by a switch attached to the hinge (specification, page 8). Figure 4 shows two modules folded in a back-to-back open position (specification, page 8), which is referred to as a note position. When the mobile computing device is placed in the note position, appropriate software is activated to place the device in a PDA mode, and PDA applications may be started (specification, page 9).

From our reading of the specification, we find that the device will go to power mode and the software will be activated by operation of the switch in the hinge, upon folding the modules into the PDA or note position. Thus, we find that little

experimentation, if any, would have been required to switch the device from laptop to PDA modes and to activate the software for the selected mode. From all of the above, we find that the subject matter of claim 30 is enabled and that the examiner has failed to establish a prima facie case of lack of enablement of claim 30. The rejection of claim 30 is therefore reversed.

We turn next to the rejection of claim 9, which is representative of the group of claims including claims 9, 10, 12-14, 16, 26 and 27. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); Ashland Oil, Inc. v.

Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness.

Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole. See id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The examiner's position (answer, pages 4 and 5) is that Haneda does not teach that the viewing areas are associated with different types of software or hardware applications. To overcome this deficiency of Haneda, the examiner turns to Kumar for a teaching of a display panel controlled by two different software applications related to a position of the display panel in a laptop mode or in a tablet (touch-screen) mode. The examiner asserts (answer, page 5) that it would have been obvious

"to employ a specific software application (driver) for a respective position of a display panel as it is shown by Kumar et al in the device by Haneda et al in order to support functioning of the display of the computer in different modes."

Appellant's position (brief, page 7) is that Kumar does not specifically teach the display panel being controlled by two different software applications. It is argued (id.) that "Kumar does not specifically teach the display panel being controlled by two different software applications." Appellant additionally (brief, page 8) makes a general assertion that "neither Haneda nor Kumar, individually or in combination, teach or suggest a method as claimed in claim 9. Moreover, neither the references themselves nor the art generally contain a suggestion or motivation to combine the referenced teachings as suggested by the Examiner." However, appellant presents no specific arguments to support the assertion.

From our review of claim 9, we observe at the outset that the claim only requires two modules. In addition, the claim recites that the first and second modules form a first viewing area that interacts with a first type of applications configured to run with the first viewing area. The claim additionally recites that the display screen of the first module is used as a

second viewing area to interact with a second type of applications configured to run with a computer system having the second viewing area. The claim does not recite that the modules are folded or unfolded to create the different viewing areas. Nor does the claim recite that the modules are hinged or slid together or that there is a switch in a hinge that causes the second type of applications to be run. Nor does the claim preclude the same application(s) from running on both the first and second viewing areas. Thus, we find claim 9 to be very broadly drafted. Turning to Haneda, we generally agree with the examiner's description of the reference. However, the examiner's broad reference to figures 1-19 (answer, page 4) and to col. 5- col. 12 (answer, page 5) is not very helpful.

We note that in Haneda, the two screens can be visible at the same time (figure 3) with both screens facing the user, or, as shown in figure 4, the screens can be in the closed state. As shown in figure 5, the screens are in the tablet state with one display covering the other. In figure 6, the second display is shown inverted so a user and a person sitting opposite the user can simultaneously view the screens. Haneda further discloses a lid body detecting section for detecting which of the states the lid body is in. A control section controls the lighting state of

the lighting section of the main body and the lighting section of the lid body, according to the result detected by the lid body detecting section (col. 2, lines 22-27). Haneda discloses a main body 1 and a lid body 2, connected by rotatable arms 9 (col. 5, lines 1-4). The rotating arms 9 allow the lid to be switched between four states: a closed state, a double screen state, a stacked state and an inverted state (col. 5, lines 4-6). The main body input section 7 and the lid body input section 8 (figure 3) are touch panels for touch input and pen input. The lid body detecting means is composed of a main body sensor 16 (figures 7a-7c) for detecting rotation of arms 9 with respect to main body 1, and a lid body sensor 17 for detecting rotation of lid body 2 with respect to rotatable arms 9 shown in figures 8a-8c (col. 6, lines 18-24). Protrusion 19 on rotatable arm 9 blocks the light of light sensor 18. The two examples of main body sensor found in figures 7a and 7b represent non-contact switches. Figure 7c shows a contact switch having a micro switch 22. Protrusion 19 of rotatable arm 9 contacts and turns on micro switch 22 (col. 6, lines 25-47). Figures 8a-8d show the use of A switch 24 and B switch 25 in the operation of the lid as it moves between the four states of closed, double screen, tablet and inverted states (col. 6, line 42 -col. 7, line 18).

From our review of Haneda, we find that although the reference discloses the use of sensors and switches in the detection of the positioning of the rotatable arms (and the position of the lid), we find that the lid body detection results in the lighting or turning off of the lighting of the two displays. Haneda additionally discloses (col. 11, lines 4 and 5) that "[t]he display state is controlled at the same time with the lighting state control." Haneda further discloses (col. 13, lines 25-28) that "appropriate display and lighting states can be obtained with the information processing apparatus . . . in accordance to the states of the lid body 2."

It is additionally disclosed that when the apparatus is in the inverted state, "control for changing displays on the main body display section 3 and the lid body display section 4 is carried out in response to outputs from the main body sensor 16 and the lid body sensor 17" (col. 11, lines 59-62). When the lid body is moved to the inverted state, information of the same content is displayed on the main body display section 3 and the lid body display section 4 (depending on the cursor location) (col. 12, lines 3-28). In addition (col. 13, line 66 through col. 14, line 4) when the lid body is in the inverted state, it is possible to carry out a display which can be easily recognized

by a person sitting opposite from the user, by displaying information of the same content on both main body display section 3 and lid body display section 4. Additionally, "[t]he user can easily make a presentation to the other person only by moving the lid body 2 into the inverted state" (col. 14, lines 4-6). Two persons can talk to each other while looking at the information on the respective screens, by inputting instructions on one screen and carrying out a special display at the other (second) location. The same information is displayed on the user's side and the other person's side, in different languages such as Japanese and English (col. 14, lines 4-16). We additionally find from our review of Haneda that an additional software application of a telephone book (figure 11a) can be accessed.

From the disclosure of Haneda, we find that moving the lid to the inverted state can cause the display on the main body to be displayed on the lid display, in an inverted fashion. Thus, Haneda uses the position of the lid to invoke a display, as well as to light or turn off the light of a display.

Turning back to claim 9, the disclosure of using the two display screens as a viewing area, with the lid display inverted (figures 18a and 18b) for translating sentences from Japanese into English, meets the claim limitation of interacting the two

display viewing areas with a first type of application configured to run with a computer system having a first viewing area. We additionally find that use of the display of Haneda in a stacked state (figure 11b) where the telephone directory software is displayed, meets the claimed interacting of the second viewing area with a second type of application. Thus, from the disclosure of Haneda, we find that Haneda discloses all of the limitations of claim 9.

Turning to Kumar, we find a touch screen that is movable between different positions (see figures 2-4). In particular, the display may be positioned in a variety of angular positions relative to the main unit so as to permit operation of the unit in laptop mode, keyboard mode, or slate style pen-based mode (col. 2, lines 34-38). Due to the hinge connection (by hinge 36 and hinge pin 38) between the base unit 11 and display screen 16, the unit can operate in a laptop or upright mode with the keyboard and touch screen 18 being used (figure 2). In addition, the unit can operate in a slate style mode where the keyboard is not in use but the touch screen and pen-based mode in use, as the keyboard is covered by the display (figure 4)(col. 3, lines 52-57 and col. 5, lines 10, 11, 55 and 56).

From the disclosure of Kumar, we find that although different software applications can be used when the screen is in different positions, in that the keyboard can be used in the laptop or upright modes, but cannot be used in the slate or tablet mode, we do not agree that display panel 12 is controlled by different software applications related to a position of the display panel; i.e., although different software applications are used with different display positions, Kumar does not disclose any mechanism for activating any software applications dependent upon the position of the display. Nevertheless, as Haneda discloses all of the limitations of claim 9, we affirm the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Haneda in view of Kumar, even though we have not relied upon Kumar. As claims 10, 12-14, 16, 26 and 27 fall with claim 9 (brief, page 4), the rejection of claims 10, 12-14, 16, 26 and 27 is affirmed.

We turn next to the rejection of claims 1, 4-7, 18, 19, 25, 30-32 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Gouko in view of Kumar. We begin with claim 1. The examiner's position (answer, pages 5 and 6) is that Gouko does not teach that the viewing areas are associated with different types of software applications. To overcome this deficiency of Gouko, the

examiner turns to Kumar for the same teachings as the examiner relied upon in the rejection over Haneda in view of Kumar.

Appellant asserts (brief, page 9) that "Kumar does not teach 'the first viewing area used with a first type of applications and the second viewing area is associated with a second type of applications.'" It is further argued that there is no motivation to combine the teachings of Gouko and Kumar as suggested by the examiner.

We observe at the outset that the language "associated with a first type of applications" is very broad language that is met by a software application that is displayed on a viewing area. From our review of Gouko, we find that the reference is directed to a compact personal computer having a plurality of display panels (col. 1, lines 57-59). Several embodiments are disclosed. As shown in figure 1, a primary display panel 2 is located on the front of the body and sub-panels 3 and 4 are located adjacent the main panel 2 as a secondary panel. A hinge 5 is used to adjust the angle between the main panel and the sub-panels (col. 3, lines 23-30). In the embodiment of figure 2, the sub-panels are slid to be contained in a space formed in the back of main panel 2. Rack 7 and pinion 6 are used to slide the sub-panels (col. 3, lines 40-45). The embodiment of figure 3 is similar to the

embodiment of figure 2, except that a mechanism for adjusting the angles between the sub-panels and the main panel 2 is provided (col. 3, lines 46-58). Specifically, the sub-panels are rotatable on uniaxial hinge 8 (col. 3, lines 63 and 64). In the embodiment of figure 4, a biaxial hinge 9 provides for adjusting angles between sub-panels 3,4 of main panel 2, not only in upper and lower directions, but also in forward and backward directions (col. 4, lines 11-16). Gouko further discloses (col. 5, lines 40-53) that:

According to the present invention, the personal computer has a plurality of display panels themselves. Consequently, a plurality of images are displayed in such a plurality of display panels, respectively divided into one display panel. Therefore, an image displayed therein can become larger in size. On the other hand, if a displayed image is kept in a same size as that displayed only in one panel with the other images, the numbers of the images simultaneously displayed in the main and sub panels can be further increased. In the interim, certain data sometimes requires a very wide display area. The present invention is particularly advantageous in such a case. For example, a working area can be displayed in the main panel while left and right areas or upper and lower areas can be displayed in the sub panels.

It is additionally disclosed (col. 5, lines 55-61) that:

Moreover, when a user enjoys, for example, a car chase or a car driving game by the use of the personal computer, a scene around the car can be displayed in a real manner by being divided into the sub panels, respectively. Thus, the personal computer of the present invention can be used in enjoying three-dimensional (3D) game, or the like.

From the disclosure of Gouko, we find that the three screens 2, 3 and 4 can be used with a first application, such as a 3D game. However, although we find that any one of the other display screens can be used with a different application, such as displaying photos, there is nothing in Gouko that teaches or suggests folding one screen on top of another, as the reference teaches folding or sliding screens behind one another.

Turning to Kumar, although the reference teaches moving a screen from a closed position to a laptop position, to a tablet position where the screen covers the body of the computer and the keyboard, because Gouko uses a biaxial hinge to move the sub-panels up and down and left to right, we find no teaching or suggestion to have replaced the biaxial hinges of Gouko with the hinge mechanism 36 of Kumar because both mechanisms cannot be used together, and replacing the biaxial hinge of Gouko with the hinge pin 38 and groove 31 of Kumar would defeat the operation of Gouko. Since the prior art does not suggest folding the screen of first module on top of the second module, such that the first module is visible and forms a second viewing area, we cannot sustain the rejection of claim 1. Accordingly, we find that the examiner has failed to establish a prima facie case of

obviousness of claim 1. The rejection of claim 1, and claims 4-7 and 25, dependent therefrom, is therefore reversed.

We turn next to independent claim 18. We note at the outset that claim 18, unlike claim 1, does not recite folding a first module on top of the second module so that the first module is visible and forms a second viewing area. Appellant asserts (brief, page 9) that Kumar does not teach "a first viewing area used with a first type of applications . . . the second viewing area used with a second type of applications," and that there is no motivation to combine the teachings of the references. We make reference to our findings, supra, with respect to the teachings of Gouko. From our review of Gouko, we find that the limitation argued by appellant is met because in Gouko, a first type of application (3D game) can be viewed across all three screens, whereas an image, other than from a video game can be viewed on a single screen. Accordingly, we find that Gouko meets or suggests all of the limitations of claim 18, and we need not rely upon Kumar. From all of the above, the rejection of claim 18, and claims 19 and 30, dependent therefrom, is affirmed.

We turn next to claim 31. Appellant asserts (brief, page 9) that "Kumar does not teach 'a first type of applications is used with the first display screen, and a second type of applications

is used with the second or third display screen.'" We make reference to our findings, supra, with respect to claims 1 and 18, and will affirm the rejection of claim 31 for the same reasons as we affirmed the rejection of claim 18. Accordingly, the rejection of claim 31, and claims 32 and 35, dependent therefrom, under 35 U.S.C. § 103(a) is affirmed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 4-7 and 25 under 35 U.S.C. § 103 is reversed. The decision of the examiner to reject claims 9, 10, 12-14, 16, 18, 19, 26, 27, 30-32 and 35 under 35 U.S.C. § 103(a) is affirmed. The decision of the examiner to reject claim 30 under 35 U.S.C. § 112, first paragraph, as lacking enablement, is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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| LEE E. BARRETT              | ) |                 |
| Administrative Patent Judge | ) |                 |
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|                             | ) | BOARD OF PATENT |
| ANITA PELLMAN GROSS         | ) | APPEALS         |
| Administrative Patent Judge | ) | AND             |
|                             | ) | INTERFERENCES   |
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| STUART S. LEVY              | ) |                 |
| Administrative Patent Judge | ) |                 |

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John P. Ward  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
Seventh Floor 12400 Wilshire Boulevard  
Los Angeles, CA 90025-1026