

The opinion in support of the decision being entered today was **not** written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRUCE TOGNAZZINI, JAKOB NIELSEN,
and BOB GLASS

Appeal No. 2000-0971
Application No. 08/642,224

ON BRIEF

Before HAIRSTON, KRASS, and DIXON, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 3-5, 8, 14-16, 20 and 24-26. Claim 9 has been indicated as allowable by the examiner.

We AFFIRM-IN-PART.

BACKGROUND

Appellants' invention relates to a tilt-scrolling of information on a computing device, such as, the Sun pad having the tilt sensor attached or mounted to an article of wearing apparel. An understanding of the invention can be derived from a reading of exemplary claim 3, which is reproduced below.

3. A method for displaying information on a display of a computing device, comprising the step of:
 - a. providing an element for performing the step of scrolling said information as a function of tilt of a separate control element with respect to a reference in which the control element is mounted on an item of wearing apparel.

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

Takano	4,890,099	Dec. 26, 1989
Tsuji et al. (Tsuji)	5,056,629	Oct. 15, 1991
Koyayashi et al. (Kobayashi)	5,355,352	Oct. 11, 1994
Russell	5,481,265	Jan. 02, 1996
Donahue et al. (Donahue)	5,526,022	Jun. 11, 1996 (Filed Jun. 6, 1993)
Matsuzawa et al.(Matsuzawa)	5,578,999	Nov. 26, 1996 (Filed Nov. 30, 1994)
Motosyuku et al. (Motosyuku)	5,602,566	Feb. 11, 1997 (Filed Aug. 23, 1994)

Claims 3, 4, 14, 15, 24 and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Motosyuku in view of Donahue. Claim 5 stands rejected under

Appeal No. 2000-0971
Application No. 08/642,224

35 U.S.C. § 103 as being unpatentable over Motosyuku in view of Donahue and Russell. Claims 3 and 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Motosyuku in view of Kobayashi. Claims 8 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Motosyuku in view of Takano and Tsuji. Claim 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Motosyuku in view of Matsuzawa.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 22, mailed Dec. 6, 1999) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 21, filed Sep. 21, 1999) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The examiner maintains that the combination of Motosyuku and Donahue would have taught or suggested the claimed invention. Specifically, the examiner relies upon the teachings of Donahue to teach the placement of the control element for scrolling of displayed information on an article of apparel worn on the body of a user. (See answer

at page 3.) We agree with the examiner that Donahue teaches the placement of a sensor for control of scrolling on some portion of the body which would be an article of wearing apparel. The examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Motosyuku and Donahue to use head movements in a hands free mode for unimpaired performance of a task. (See answer at page 3.) We agree with the examiner that it would have been desirable to have a hands free mode of operation where the device of Motosyuku could be set down and still control the scrolling as taught by Donahue. Therefore, the examiner has established a *prima facie* case of obviousness and the burden shifts to appellants to rebut this *prima facie* case.

Appellants argue that Donahue does not teach or suggest "mounting the sensor on an item of normal wearing apparel." (See brief at page 4.) This argument is not commensurate with the language used in independent claim 3. Therefore, this argument is not persuasive. Appellants argue that none of the control devices of Donahue are items of normal wearing apparel that would be donned absent the control function offered by the device. (See brief at page 4.) We disagree with appellants' conclusion and appellants have provided no support for this conclusion. First, appellants' conclusion relies on the use of a relative term "normal" which is not even present in the language of claim 3 and second, relies upon an unsupported statement

of who would be the demographic group, what environment, etc. would be used to evaluate "normal." Therefore, this argument is not persuasive. Appellants argue that the devices in Donahue as in Russell are not designed to be worn for ornamentation. (See brief at pages 4-5.) We find no support in the language of claim 3 for this argument. Therefore, this argument is not persuasive.

Appellants argue that Donahue does not teach "attaching the unit to a conventional glove." (See brief at page 5.) Again, we find no support in the language of method claim 3 for this argument. Therefore, this argument is not persuasive. Additionally, appellants argue that the goggles of Donahue are not "eyeglasses which are a prosthetic that corrects the vision of the wearer for normal functions, but goggles used as a computer output device." We find no support in the language of independent claim 3 or dependent claim 24 for this argument. Therefore, this argument is not persuasive.

We find that Donahue is a basic teaching of incorporating a sensor or control device into some article to be worn or attached to some portion of the body. (See Donahue at col. 7, lines 28-31 and lines 43-44.) Donahue clearly teaches and fairly suggests the placement of the control sensor in a wide range of locations on the body and on articles worn on the body. Appellants argue that the goggles are not eyeglasses, per se. We agree with appellants, but find that the various placements of

sensors, taught by Donahue, would have suggested the use on eyeglasses or articles worn on the head.

Appellants argue that the examiner's position that Motosyuku teaches the control element separated from the processor is in error. (See brief at page 5.) We agree with appellants that Motosyuku teaches having the control element incorporated into the housing of the processor and display. While the language of independent claim 3 does not specifically state what the control element is "separate" from it is clear that the control element is a distinct element from any other element for processing and display. We find that Motosyuku does not teach or fairly suggest this separation, but Donahue clearly teaches this claimed feature. Therefore, this argument is not persuasive.

Appellants argue that the examiner has not provided a "proper technical reason or motivation to combine these references." (See brief at page 6.) We disagree with appellants. From our review of the teachings of Motosyuku and Donahue, both teach the use of a tilt sensor to interface with an input to display system. (See Motosyuku at col. 2.) Specifically, Donahue provides a motivation stating:

The input device includes a sourceless orientation sensor which generates an electrical signal representative of the physical orientation of the device, without it being adjacent to any fixed reference object. The electrical orientation signal can be used to position and otherwise control a cursor on a display screen, to manipulate virtual objects in a virtual reality environment, to control the presentation of an image on a display screen, to send orientation information to storage, or to provide feedback for a robotic device.

In our view the teaching of controlling the cursor on a display would have been a suggestion to also control the scrolling of information as taught by Motosyuku. Furthermore, we find the examiner's line of reasoning concerning the use of the device in Motosyuku in a hands free mode would have been desirable. Therefore, appellants' argument is not persuasive. Appellants argue that Motosyuku states a one hand operation and does not attempt to use a hands free mode. Therefore, there is no reason to have a separate sensor as taught by Donahue. We disagree with appellants as discussed above. Appellants argue that the examiner relied upon impermissible hindsight. (See brief at page 6.) We disagree with appellants as discussed above. Therefore, we will sustain the rejection of independent claim 3 and dependent claim 4 which has been grouped with claim 3 by appellants.

With respect to dependent claim 14, the examiner maintains that Motosyuku teaches that up/down and left/right directions may be implemented with the system and that these are orthogonal. (See answer at page 4.) We agree with the examiner that Motosyuku contemplates the use of different directions, but it is not clear that Motosyuku teaches or suggests both at the same time. (See appellants' argument at page 7 of the brief.) Donahue though clearly teaches and suggests the control of a system using a tilt sensor that detects up/down and a sensor that detects rotational motion. Clearly, the rotation would have been in an orthogonal plane to the up/down motion. Therefore, this argument by appellants is not persuasive. Appellants argue

that they do not understand how the examiner fails to find orthogonal tilts in the language of claim 14. (See brief at page 7.) We agree with the examiner that the language of claim 14 does not explicitly require the orthogonal tilt as a second recited functionality while the first tilt functionality remains present. With this said, we find that Donahue teaches two orthogonal planes of motion as control functions which would have suggested to skilled artisans the use of two orthogonal planes of tilt for varied control functions. Appellants argue that Donahue teaches only opposite and parallel scrolling, but does not teach “orthogonal scrolling.” We do not find a limitation of orthogonal scrolling in the language of claim 14, but only a different action. Therefore, this argument is not persuasive, and we will sustain the rejection of claim 14.

With respect to claim 15, appellants argue that it is not inherent or obvious to use tilt in an orthogonal direction to control the page change. (See brief at page 8.) The examiner maintains that it is inherent the tilt in the left/right direction controls the page change. (See answer at page 4.) We disagree with the examiner and find that the examiner has not provided evidence to support the conclusion. Therefore, we will not sustain the rejection of dependent claim 15.

With respect to claim 24, the examiner maintains that the teaching of goggles in Donahue would have suggested the mounting of a control element to eyeglasses and that the change in location would have been within the level of ordinary skill. (See answer at page 4.) We agree with the examiner that the control element may be

attached to any ordinary article of wearing apparel with only minimal alteration in the mode/method of attachment thereto. Appellants argue that the goggles of Donahue do not serve to correct vision and do not allow vision during normal human function. (See brief at page 9.) We find no limitation that the eyeglasses have corrective lenses therein, and we find that eyeglasses are merely glasses for the eyes. Therefore, this argument is not persuasive. Appellants argue that Donahue does not teach or suggest eyeglasses. As discussed above, we find that Donahue would have fairly suggested the use of a control element on eyeglasses. Therefore, this argument is not persuasive. Therefore, we will not sustain the rejection of dependent claim 24.

With respect to claim 26, appellants argue that Donahue does not teach or suggest the use of the display and the computing device integrated into a hand held device. We find that Motosyuku expressly teaches the incorporation of the display and the computing device into a handheld device. Therefore, this argument is not persuasive. Therefore, we will sustain the rejection of dependent claim 26.

With respect to claim 5, the examiner relies upon the teachings of Russell to teach the use of electromagnetic radiation as a mean to have a cordless input of data to a system. (See answer at page 5.) We agree with the examiner that a cordless input device would have been quite desirable to skilled artisans. Appellants argue that Russell does not cure the deficiency of the original combination. This argument is not persuasive since we do not find the base combination deficient. Appellants argue that

the hand operated device of Russell would defeat the purpose of Motosyuku. (See brief at page 10.) We disagree with appellants and find that the separate control element would provide added flexibility as maintained by the examiner. Therefore, this argument is not persuasive. Appellants argue that Motosyuku would not have a wiring harness. (See brief at page 10.) We disagree with appellants' statement, whereas some means of connecting the sensor to the computing device would have been required or integration on the same medium within the single hand held unit. We find no support in the text of Motosyuku for appellants' argument/conclusion. Appellants argue that the examiner relies upon improper hindsight in the combination. We disagree with appellants as discussed above. Appellants argue that the combination does not teach or suggest the use of "normal wearing apparel." (See brief at page 11.) We do not find this limitation in the language of dependent claim 5 nor would we find it persuasive if expressly present in the claim. Therefore, this argument is not persuasive.

With respect to claims 3 and 25, the examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the control element of Motosyuku with the feature of wearing a control element on a wrist watch so the control element would not be easy to lose. (See answer at page 5.) Appellants argue that the watch of Kobayashi is self contained and only controls the scrolling of the stored information. (See brief at page 11.) Appellants argue that the

Appeal No. 2000-0971
Application No. 08/642,224

combination of Motosyuku and Kobayashi does not show or suggest the use of a separate control element which is independent of the computing device. (See brief at pages 11-12.) We agree with appellants that this combination does not teach or suggest the use of a separate control element, on a watch or other article of wearing apparel as was discussed above with respect to Donahue, which the examiner chose not to apply in this rejection. Therefore, the examiner has not established a **prima facie** case of obviousness with respect to the combination of Motosyuku and Kobayashi, and we will not sustain the rejection of claims 3 and 25.

Appellants request that we suggest or recommend language such as “separately moveable” to distinguish claim 3 over the prior art under 37 CFR 1.196(c). (See brief at page 12.) We decline appellants’ invitation and do not find that language to distinguish the claim over the prior art applied.

With respect to independent claims 8 and 16, the examiner maintains that Takano and Tsuji teach the use of scrolling at a rate based in points per second. (See answer at page 6.) We agree with the examiner that these references teach the use of points per second and the points are a measure of font size. Appellants argue that the term “point” has 34 definitions in the dictionary and that definition # 30 states that a point is a unit of type size equal to 0.01384 inch or approx. 1/72 of an inch. (See brief at page 13 and attachment to the amendment filed Feb. 17, 1999.) But we note that a point may also be definition # 5 which is a mark or dot used in printing or writing and

definition #23 which is a single unit, as in counting, rating or measuring. From this wide spectrum of definitions, it is our opinion that a rate of “points per second” may also reasonably be considered to be a number of dots per second. Tsuji teaches the use of the dots as a measure of the rate of scroll. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to scroll based upon this rate.

Appellants argue that the scroll rate of a number of pixels or dots per second does not correspond to appellants’ constant number of font points per unit time. (See brief at page 14.) We do not find support for appellants’ argument in the language of claims 8 and 16 as to constant number of font points per unit time. Therefore, this argument is not persuasive. Appellants argue that there is a different rate of scroll between a screen that has 60 dots per inch and a screen that has 120 dots per inch whereas with appellants’ use of points per second would give the same scroll rate between the two different screens. (See brief at pages 14-15.) We do not find support for appellants’ argument in the language of claims 8 and 16 as to constant number of font points per unit time and the difference between display screens. Therefore, this argument is not persuasive. We note that claims 8 and 16 are directed to a SINGLE display which would have a single rate of scroll. Therefore, this argument is not persuasive. Appellants argue that the examiner has not provided a proper technical reason or motivation to combine the teachings of the references. (See brief at page 15.) While we agree with appellants that the examiner has not expressly expanded

upon the stated combination in the statement of the rejection, the examiner has provided a further analysis of the similarity between dots and points per inch at page 11 of the answer. In view of our discussion above, we find that the examiner has shown a convincing line of reasoning for the combination of the teachings of references and the use of dots per inch as a rate of scrolling of information on a display. Therefore, this argument is not persuasive, and we will sustain the rejection of claims 8 and 16.

With respect to claim 20, appellants argue that Matsuzawa and Motosyuku do not teach or suggest the “control device connected to separate said tilt detector and said reference store” where the control device is a timepiece controller for a timepiece worn on a person. (See brief at page 16.) We disagree with appellants. The examiner maintains that Motosyuku teaches the use of a control device 101 (processing unit) is separated from the tilt sensor in Figure 1. We agree with the examiner’s interpretation of Figure 1 of Motosyuku. The tilt sensor is shown as a separate block and the reference store is separately stored in the memory for storing the reference value thereby meeting the “separated” limitation of the claim. The timepiece of Matsuzawa is relied upon to show the use of a timepiece for an alternative function such as a remote controller and an article of wearing apparel. (See answer at page 7.) Therefore, we agree with the examiner that the teachings of Motosyuku may be properly combined with the teachings of Matsuzawa.

Appellants argue that the “tilt detector is separate from the display in claim 20.”

We do not find support in the language of claim 20 to support appellants’ argument.

The language of claim 20 states:

20. Apparatus for displaying information on a display, comprising:
 - a. a tilt detector;
 - b. a scroll mode selector;
 - c. a reference store configured to save a value of tilt detected by said tilt detector when the scroll mode selector is activated; and
 - d. a control device connected to separate said tilt detector and said reference store and configured to scroll said information on said display at a rate which is a function of the difference between the output of the tilt detector and the value of tilt stored in said reference store in which said control device is a timepiece controller for a time piece worn on a person and said information is menu information for selecting and activating timepiece functions.

We find that the control device is “connected to separate said tilt detector and said reference store.” As the examiner maintains, the processor 101 of Motosyuku separate the tilt sensor and the reference store. Additionally, the timepiece of Matsuzawa is worn on the person and may have the tilt sensor and display therein.

Appellants argue that the combination does not allow the user to scroll the display on the watch by moving a separate tilt sensor while holding the watch still to look at the display. (See brief at page 16.) We do not find support in the language of claim 20 to support appellants’ argument. Therefore, this argument is not persuasive, and we will sustain the examiner’s rejection of claim 20.

With respect to claim 21, the examiner adds the teachings of Russell as discussed above to the combination of Motosyuku and Matsuzawa. Appellants argue that Russell does not remedy the deficiency of the separate tilt sensor. (See brief at page 17.) While we did not find the combination for independent claim 20 deficient, the limitations of dependent claim 21 further detail an electromagnetic communication link from the tilt sensor to the display. Here, the combination of Motosyuku, Matsuzawa and Russell do not teach or suggest the separation as did Donahue and Russell as discussed above. Therefore, we will not sustain the rejection of dependent claim 21.

CONCLUSION

To summarize, the decision of the examiner to reject claims 3, 5, 8, 14, 16, 20, 24 and 26 under 35 U.S.C. § 103 is affirmed, and the decision of the examiner to reject claims 15, 21, and 25 under 35 U.S.C. § 103 is reversed.

Appeal No. 2000-0971
Application No. 08/642,224

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

AFFIRM-IN-PART

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
ERROL A. KRASS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
JOSEPH L. DIXON)	
Administrative Patent Judge)	

JD/RWK
MCDERMOTT WILL & EMERY

Appeal No. 2000-0971
Application No. 08/642,224

600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096