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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 12/336,990	Applicant(s) FERGUSON, BRUCE R.	
	Examiner KEVIN M. NGUYEN	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/17/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 21-40 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 21-29 and 32-40 is/are rejected.
- 8) ☒ Claim(s) 30 and 31 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) ☐ Other: ____. |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claim(s) 21-40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim(s) 1-20 of U.S. Patent No. 7,468,722.

Application claim 21	Patent claims 1 and 2
21. A brightness control circuit with selective ambient light correction comprising:	1. A visual information display system with ambient light correction comprising:
a light sensor configured to sense ambient light and to output a sensing signal indicative of the ambient light level;	a visible light sensor configured to output a sensor current signal in proportion to the level of ambient light;
a first input configured to receive a user signal indicative of a user selectable brightness setting;	a dimming control input signal determined by a user to indicate a desired brightness level for one or more light sources, wherein the dimming control input signal is represented by a user adjustable pulse-width-modulation logic signal
a multiplier configured to selectively generate a combined signal based on a mathematical product of both the user	a multiplier circuit configured to generate a brightness control signal based on a mathematical product of the sensor current

signal and the sensing signal;	signal and the dimming control input signal, wherein the multiplier circuit comprises: a pair of current steering diodes configured to multiply the sensor current signal by the user adjustable pulse-width-modulation logic signal to generate the brightness control signal, wherein anodes of the current steering diodes are coupled to an output of the visible light sensor to receive the sensor current signal; a network of resistors coupled to cathodes of the current steering diodes and configured to scale the brightness control signal; and at least one capacitor coupled to the network of resistors and configured as a low pass filter for the brightness control signal;
	a display driver configured to adjust brightness levels of the light sources in response to the brightness control signal.
a dark level bias configured to adjust the combined signal to generate a brightness	2. The visual information display system of claim 1, further comprising a

control signal that is used to control a brightness level of a visible display.	dark level bias circuit configured to maintain the brightness control signal above a predetermined level when the ambient light level decreases to approximately zero.
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Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of claim 21 of the instant application are not patentably distinct from claim(s) 1 and 2 of the US- Patent, and the scope of the protection of claim 21 of the instant application encompasses the scope of protection of claim(s) 1 and 2 of the US-7,468,722 Patent.

Thus, it would have been obvious to a person of ordinary skill at the time the invention was made to modify the application claim 21 to become broader than the patent claims 1 and 2. As one of ordinary skill in the art would recognize, the suggestion/motivation for doing so would have been to protect the application claim 21 as broad as possible in order to have more products in the industrial applicability.

In regards to dependent claim(s) 22-40, these limitations are not patentably distinct from dependent claim(s) 3-20 of the US 7,468,722 Patent.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 40 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 40, the feature recited “means for selectively operating in a manual mode and in an auto mode, wherein the means for sensing ambient light is enabled in the auto mode and disabled in the manual mode” as being undefined. The specification discloses “the brightness control circuit selectively operates in a manual mode or an auto mode”. Thus, the feature is not consistently between claim and specification disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-26, 32, 33 and 35-39 are rejected under 35 U.S.C. 102(b) as being anticipated by **Narveson** et al. (US 4,386,345).

As to **claim 21** associated with **claims 35 and 39**, **Narveson** discloses a brightness control circuit with selective ambient light correction comprising:

a first input configured to receive a user signal indicative of a user selectable brightness setting (brightness control 30, fig. 4);

a light sensor configured to sense ambient light and to output a sensing signal indicative of the ambient light level (light sensor 31, Fig. 4);

a multiplier (56) configured to selectively generate a combined signal based on a both the user signal and the sensing signal (col. 11, lines 37-42); and

a dark level bias (32) configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display (see col. 6, lines 13-24 and column 11).

As to claim 22, Narveson discloses the brightness control circuit of Claim 21, wherein the dark level bias (32) is provided to the multiplier (56) such that the amount of adjustment to the combined signal is dependent on the user selectable brightness setting (col. 8, lines 10-49).

As to claim 23, Narveson discloses the brightness control circuit of Claim 22, wherein the multiplier multiplies a sum of the user signal and the dark level bias to generate an output signal corresponding to the brightness control signal (col. 11, lines 40-42).

As to claim 24, Narveson discloses the brightness control circuit of Claim 21, wherein the dark level bias is added to the combined signal such that the amount of adjustment to the combined signal is independent of the user selectable brightness setting (col. 9, lines 7-15).

As to claim 25, Narveson discloses the brightness control circuit of Claim 24, wherein the dark level bias is added to an output of the multiplier (col. 9, lines 7-15).

As to claim 26, Narveson discloses the brightness control circuit of Claim 21, further comprising an overdrive clamp circuit coupled to the brightness control signal to limit its amplitude to a predefined range (col. 5, line 65 thru col. 6, line 9).

As to claim 32, Narveson discloses the brightness control circuit of Claim 21, wherein the user signal corresponds to a digital word, and the multiplier is implemented with a digital-to-analog converter configured to receive the digital word and a reference signal determined by the sensing signal to generate the brightness control signal (A/D converter 36, Fig. 1).

As to claim 33, Narveson discloses the brightness control circuit of Claim 21, wherein the light sensor comprises a full spectrum PIN diode, an infrared sensitive PIN diode, and an amplifier (12) configured to generate the sensing signal based on a difference between an output of the full spectrum PIN diode and an output of the infrared sensitive PIN diode (col. 2, lines 10-13, and col. 8, lines 50-67).

As to claim 36, Narveson discloses the method of Claim 35, wherein the step of selectively multiplying the input signal with the sense signal is performed by a software algorithm, an analog circuit, or a mixed-signal circuit (col. 7, lines 36-61).

As to claim 37, Narveson discloses the method of Claim 35, wherein the dark level bias is added to the sense signal before selective multiplication such that the amount of adjustment to the combined signal is dependent on the input signal (col. 9, lines 7-15).

As to claim 38, Narveson discloses the method of Claim 35, wherein the dark level bias is added to the combined signal after selective multiplication such that the amount

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of adjustment to the combined signal is independent of the input signal and the sense signal (col. 9, lines 7-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narveson applied to claim 21 above, and further in view of Brave (US 6,144,359).

Narveson does not disclose wherein the brightness control signal is provided to a display driver to control backlight illumination of a liquid crystal display.

Brave discloses the brightness control signal is provided to a display driver to control backlight illumination of a liquid crystal display (Abstract).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to have modified the LCD similar to that taught by Brave to achieve further adjust brightness and contrast in the CRT of Narveson. As one of ordinary skill in the art would appreciate, the suggestion or motivation for doing so would have been to achieve predictable result of controlling a high quality of the image being displayed.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narveson applied to claim 21 above, and further in view of Oyagi et al. (US 4,713,659).

Narveson does not disclose a shut down circuit configured to turn off the display driver when the sensing signal is above a predetermined threshold.

Oyagi discloses a shutdown circuit (end operation S8) configured to turn off the display driver (display cancelled S7) when the sensing luminance (S2) is higher than first reference value (S3) (Fig. 3 and accompanying text).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to have modified the shutdown circuit similar to that taught by Oyagi to achieve further adjust brightness and contrast in the circuit of Narveson. As one of ordinary skill in the art would appreciate, the suggestion or motivation for doing so would have been to achieve predictable result of reducing an electrical power consumed to drive the display apparatus.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narveson applied to claim 21 above, and further in view of Nakano (US 2004/0095402).

Narveson does not disclose wherein the light sensor further comprises a low pass filter to reduce sensitivity to transient variations of ambient light.

Nakano discloses the results of detection by the optical sensor 10 are amplified by the amplifier 16, and after the variations caused by the commercial power supply have been removed by the a low pass filter (LPF) 23 shown in FIG. 10, the resulting signal is sent to the ADC 17, paragraph 88.

At the time the invention was made it would have been obvious to one having ordinary skill in the art to have modified the low pass filter similar to that taught by Nakano to achieve further adjust brightness and contrast in the circuit of Narveson. As

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one of ordinary skill in the art would appreciate, the suggestion or motivation for doing so would have been to achieve predictable result of filtering the noise.

Claims 29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narveson applied to claims 21 and 39 above, and further in view of Ottenstein (US 5,270,818).

As to claim 29, Narveson does not disclose a second input configured to receive a selection signal to selectively operate the brightness control circuit in an auto mode or a manual mode, wherein the selection signal enables the light sensor in the auto mode and disables the light sensor in the manual mode.

Ottenstein discloses a second input configured to receive a selection signal to selectively operate the brightness control circuit in an auto mode or a manual mode (14), wherein the selection signal enables the light sensor (9) in the auto mode and disables the light sensor in the manual mode (see Fig. 1 and accompanying text).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to have modified the auto mode or the manual mode similar to that taught by Ottenstein to achieve further adjust brightness and contrast in the circuit of Narveson. As one of ordinary skill in the art would appreciate, the suggestion or motivation for doing so would have been to achieve predictable result of providing automatic compensation for the effects of ambient light on a display.

As to claim 40, Ottenstein discloses means for selectively operating in a manual mode and in an auto mode (14), wherein the means for sensing ambient light (9) is

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enabled in the auto mode and disabled in the manual mode (see Fig. 1 and accompanying text).

Allowable Subject Matter

Claims 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on Monday-Thursday from 8:00-5:00.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M Nguyen/
Primary Examiner, Art Unit 2629
November 2, 2011