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12/728,699	03/22/2010	Robert Loney	TEK-PT001.US.01	5848
120281	7590	05/20/2014	EXAMINER	
Schott, P.C. 687 West Lancaster Ave. Wayne, PA 19087			LEE, MICHAEL	
			ART UNIT	PAPER NUMBER
			2422	
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**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):

patents@schottpc.com



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1. The present application is being examined under the pre-AIA first to invent provisions.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of pre-AIA 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.

3. Claims 1-4, 9-10, 12-18, and 22-36 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Chou et al. (2007/0252086) in view of May (2009/0090782).

Regarding claim 1, Chou discloses a projector (100), a reflective pattern printed on the back of a screen (30), a sensor (170), and a processor (190), except that the projector is a color laser projector as claimed. May, from the similar field of endeavor, teaches a color laser projector (0018, 0048, 0053, 0065) being used for detecting targets (28) printed on a screen (22). Since the projector 100 in Chou merely serves as an exemplary projector, it can be replaced with any conventional projector. Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the projector 100 of Chou with the color laser projector of May to perform the well known functions as claimed. It should be noted that the screen 20 in Chou can be operated as either a front projection screen or a rear projection screen since these are the only modes of projection. It is a matter of obvious design choice. Hence, it would have been obvious at the time of the invention to modify Chou to function as a front

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projection screen mode or a rear projection screen mode. Finally, May teaches that the reflective pattern is located on the same side of the laser projector (see paragraph 0100).

Regarding claims 2 and 3, Chou does not disclose the shapes of the projector as claimed. The shape of the projector housing is considered strictly a matter of design choice and would have been obvious at the time of the invention. In other words, cosmetic appearance of the projector housing is all up to one's imagination. In addition, since the shape does not alter the functions of the projector, it does not carry any patentable weight.

Regarding claim 4, see reasoning as set forth to claim 1.

Regarding claims 9 and 10, both Chou and May inherently include a mapping memory (see paragraph 0029).

Regarding claims 12-15, see corresponding rejections as set forth above. In addition, the projector 100 in Chou is intended to be used in the multi-screen display area.

Regarding claims 16-18, as described in May, paragraph 0032.

Regarding claims 22 and 23, when Chou functions as a rear projection mode, the back side of the screen is not for viewing.

Regarding claim 24, see paragraph 0032 in May.

Regarding claim 25, as set forth in paragraph 0029 of Chou, the brightness of the displayed image can be adjusted by the detection result of the sensor 50, which is influenced by its ambient conditions.

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Regarding claim 26, in addition of above, the brightness of the laser projector in May is adjusted by the well known pulse width modulation scheme, which meets the duty cycle changing operation as claimed.

Regarding claim 27, both Chou and May control the brightness level by pixel fill levels.

Regarding claim 28, see paragraph 0032 in May.

Regarding claim 29, both Chou and May are capable to provide high resolution image when the user is watching the image on the screen.

Regarding claim 30, the light density and brightness in May can be controlled by the user.

Regarding claim 31, both Chou and May include a processor for controlling the brightness of the image displayed on the screen.

Regarding claims 32-34, see corresponding rejections as set forth above.

Regarding claims 35 and 36, Chou or May does not disclose the hinged connection as claimed. The examiner takes Official Notice that using hinged connection to connect multiple monitors together is well known in the art. Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chou or May to employ the well known hinged connection to connect the multiple monitor together so that the video monitors could be secured together.

***Allowable Subject Matter***

4. Claim 30 is 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

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base claim and any intervening claims, the infrared sensor for detecting the presence of the viewer in front of the screen as set forth in paragraph 0027, and the processor for changing the resolution and illumination functions.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of 35 U.S.C. 112(b):  
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:  
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.

6. Claims 22-23, and 32-33 rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

The negative limitations are considered new matter since they are not disclosed originally.

***Response to Arguments***

7. Applicant's arguments filed 2/20/14 have been fully considered but they are not persuasive.

In considering applicant's argument that Chou does not disclose a sensor that detects light reflected from the reflective pattern on the back side of the screens ", and "wherein the laser projector and the reflective pattern are located on a same side of the

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screen”, the examiner disagrees. As set forth in the rejection above, May clearly teaches that the reflective pattern can be adhered on the back side of the screen.

In considering applicant’s argument that Chou does not disclose “a laser projector that projects light comprising a color image to be viewed onto the back side of a screen”, “a sensor that detects light reflected from the reflective pattern on the back side of the screens”, and “the laser projector and the reflective pattern are located on the same side of the screen”, the examiner disagrees. As set forth in the rejection above, Chou and May clearly teach that the predetermined pattern on the screen reflects light back to the sensor, and the projector and the predetermined reflective pattern are on the same side as illustrated in Figure 2 of Chou and Figure 1 of May.

In considering applicant’s argument that Chou also does not teach or suggest that the laser projector, sensor, and processor are all contained within a single housing, the examiner disagrees. As shown in Figure 2 of Chou and Figure 1 of May, the projector, the sensor, and the processor are housed in the same housing.

In considering applicant's argument that Chou does not teach or suggest the screen has a front side that is visible to a viewer outside of the housing, the examiner disagrees. As set forth in the rejection above, the projector of Chou or May can be configured as a front projector or a rear projector since a projector can be operated in either the front projection mode or the rear projection mode.

In considering applicant’s argument that Chou does not teach or suggest that the reflective pattern include reference points for different screen resolutions, the examiner disagrees. As set forth in the rejection above, May teaches that the system 20 and

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label 22 must be adjusted to adjust the 1"x1" assist image 50a on the screen (paragraph 0033), and the crosshair is intended to move around to accommodate different resolution of images (paragraph 0032).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Lee whose telephone number 571-272-7349. The examiner can normally be reached on Monday through Thursday from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jefferey Harold, can be reached on 571-272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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/M. Lee/  
Primary Examiner  
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