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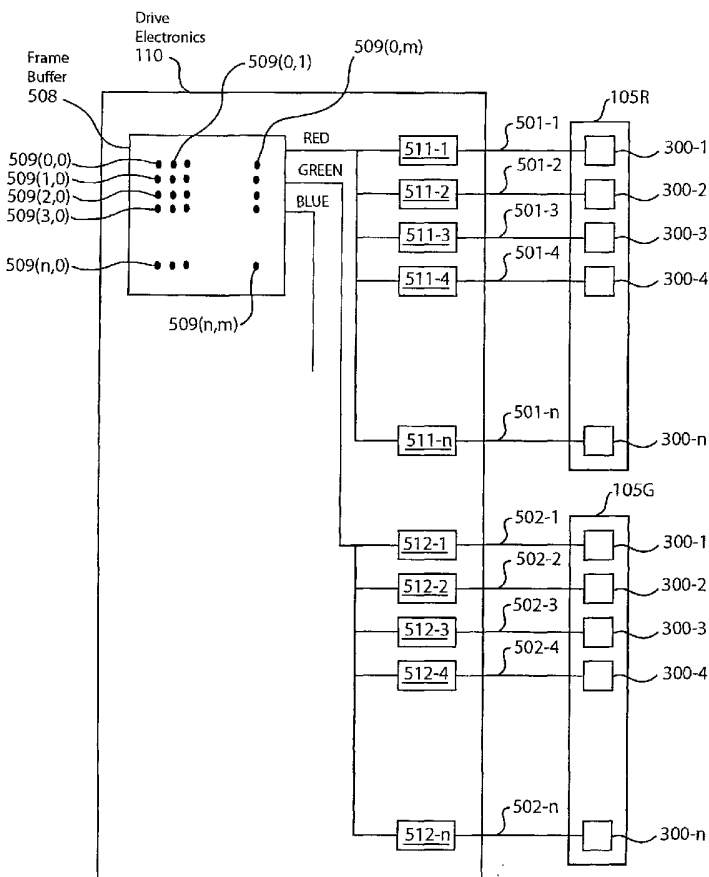
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- (74) Agents: **BENEDICTO, Patrick, D.** et al.; Okamoto & Benedicto LLP, P.O. Box 641330, San Jose, CA 95164-1330 (US).
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10/769,048 30 January 2004 (30.01.2004) US
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR SUB-PIXEL ELECTRONIC ALIGNMENT



(57) Abstract: In one embodiment, a delay circuit (511,512) is configured to delay pixel information from an image source, such as a frame buffer (508). The delay circuit (511,512) may be configured to delay the pixel information by an amount of time that would move a pixel projected on a surface by a distance less than a dimension of the pixel. A light modulator (300) may modulate a light beam onto a surface, such as a display screen, based on the delayed pixel information. This advantageously allows for sub-pixel electronic alignment.

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CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
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Declarations under Rule 4.17:

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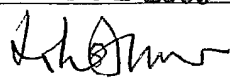
9 September 2005

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/02798

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : G02B 26/00, 26/02; B41J 2/47, 2/435; H01J 29/51 US CL : 359/237, 291, 298, 231; 347/237, 239, 250; 315/368.12; 385/4; 353/31; 382/299 According to International Patent Classification (IPC) or to both national classification and IPC</p>												
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) U.S. : 359/237, 291, 298, 231, 290, 224; 347/237, 239, 250, 235, 248; 315/368.12, 370; 385/4, 31; 353/31, 37; 382/299, 233</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet</p>												
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category *</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>US 6,847,390 A (MAEDA) 25 January 2005 (25.01.2005), column 5, line 60 to column 17, line 9.</td> <td>1-20</td> </tr> <tr> <td>A</td> <td>US 4,992,706 A (TROEMEL et al) 12 February 1991 (12.02.1991), column 1, line 49 to column 6, line 33.</td> <td>1-20</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	US 6,847,390 A (MAEDA) 25 January 2005 (25.01.2005), column 5, line 60 to column 17, line 9.	1-20	A	US 4,992,706 A (TROEMEL et al) 12 February 1991 (12.02.1991), column 1, line 49 to column 6, line 33.	1-20	
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<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
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<p>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-7724</p>		<p>Authorized officer LOHA BEN  Telephone No. (571) 272-2323</p>										

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

WEST: (1) (correct\$3 or adjust\$4 or align\$4) SAME pixel\$5 SAME delay\$3 SAME modulat\$3 and delay\$3 WITH circuit\$4 SAME pixel\$5 SAME modulat\$3 SAME (dimension\$1 or distance\$1 or length\$1)

(2) (MEMS or GLV or pixel\$5) SAME (project\$3 or modulat\$3 or align\$4) SAME (display\$3 or scan\$4) SAME (dimension\$2 or tim\$3) and circuit\$4 WITH delay\$3 SAME (scan\$4 or modulat\$3) and circuit\$4 WITH delay\$3 SAME (scan\$4 or modulat\$3) SAME (compar\$5 or count\$3 or conver\$4) and circuit\$4 WITH delay\$3 SAME (scan\$4 or modulat\$3) SAME (compar\$5 or count\$3 or conver\$4) SAME (register\$3 or trigger\$3) and circuit\$4 WITH delay\$3 SAME (scan\$4 or modulat\$3) SAME (compar\$5 or count\$3 or conver\$4) SAME (distance\$1 or length\$1 or dimension\$2)