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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005
21171	7590	11/12/2009	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHANTANA ANGKOOL, DAVID	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			11/12/2009	PAPER

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 Abandonment	Application No.	Applicant(s)	
	10/396,439	HEO, JAE-CHEOL	
	Examiner	Art Unit	
	David Phantana-angkool	2175	

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

This application is abandoned in view of:

1. Applicant's failure to timely file a proper reply to the Office letter mailed on 13 April 2009.
 - (a) A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) No reply has been received.

2. Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) The issue fee and publication fee, if applicable, has not been received.

3. Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) No corrected drawings have been received.

4. The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. The reason(s) below:

Applicants did not file a reply under 37 CFR 1.113 within the 6 months statutory time period.

/William L. Bashore/
Supervisory Patent Examiner, Art Unit 2175

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



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Office Action Summary	Application No.	Applicant(s)	
	10/396,439	HEO, JAE-CHEOL	
	Examiner	Art Unit	
	David Phantana-angkool	2175	

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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 15 December 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1,3-6,8,10-13,15-19,24-26 and 28-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 30 is/are allowed.
- 6) Claim(s) 1,3-6,8,10-13,15-19 and 24-26 is/are rejected.
- 7) Claim(s) 28 and 29 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) 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).
- 11) 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

- 12) 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) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

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DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed on December 15th, 2008.
2. Applicant amended claims 1 and 18.
3. Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, 24 – 26, 28, 29, and 30 are still pending.

Claim Rejections - 35 USC § 103

4. **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.

5. **Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price, US# 5,463,726.**

In regard to **independent claim 1**, Price shows a method of setting a highlight window in an image reproducing system, the method comprising:

- *receiving remote control signals for setting a highlight windows from a remote controller having a highlight selection function (3:11-22, Fig. 3#60 shows highlight windows, see "remote controller" in 3:18-21);*
- *decoding the remote control signals received from the remote controller; generating a highlight window having a predetermined size and location on a screen according to highlight window setting values, wherein a gain of video data within the highlight window is adjusted to emphasize an image included within the highlight window (4:27-38);*

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- *calculating a new location of the highlight window when the highlight window setting values are changed by a user; compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating (4:47-54, Price shows the graphical adapter changes the video signal).*

Price shows *calculating a new location of the highlight window when the highlight window setting values are changed by a user* in column 4, lines 47-54. Price further shows the graphical adapter changes the video signal in column 4, lines 47-54. While Price shows calculating a new location of the highlight...to changed by the user, Price does not specifically show wherein a gain of video data within the highlight window is adjusted to emphasize an image included within the highlight window and *calculating a new size of the highlight window when the highlight window setting values are changed by a user.*

It would have been an obvious for the method of Price to incorporate calculating a new size of the highlight window when the highlight window setting values are changed by a user and the gain of video data within the highlight window is adjusted to emphasize an image included within the highlight window. . This limitation involves the mere application of a known technique necessary for the method of Price to be usable by an end user (i.e. change location). Where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007). Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396.

As for dependent claim 3, Price shows a method wherein the highlight window setting values comprises: *size and location values (4:47-54).*

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As for dependent claim 4, Price shows a method wherein the controlling of the video parameter comprises: *controlling an offset and a gain of video signals* (3:10-24).

As for dependent claim 5, Price shows a method wherein the generating of the highlight window comprises: *generating more than one window* (3:12-22).

6. **Claims 6, 8, 10 – 13, 15 – 19, and 24 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price, US# 5,463,726 in view of Fujita, US# 5,598,523 A1.**

As for independent claim 6:

Price shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (4:27-38);
- *an image process unit generating a highlight window having a predetermined size and location on a screen corresponding to the highlight window setting values that include size and location data of the highlight window; and a highlight signal change unit compensating the video data included in the window with predetermined video parameters* (4:47-54, Price shows the graphical adapter changes the video signal).

Price does not specifically show *a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller*, but teaches a method for moving interacting with a computer through a pointing device. In the same field of endeavor Fujita teaches a wireless pointing device in column 2, lines 22-30. Fujita also teaches a plurality of buttons that allow the user to select and execute a command remotely in 2: 40-45. Both Price and Fujita teach a pointing device that moves a cursor on a display screen of a computer. It would have been obvious to a skilled artisan at the time of the invention was made to modify the pointing device and highlight function and window size change as taught by Price (Price 4:47-54) to incorporate the wireless pointing device of Fujita, thus allowing the user to move the cursor on a computer display screen without having a wire

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connecting from pointing device to a computer and execute a highlight function and window size change (Fujita, 1: 17-20 and 2: 40-45). The combination of Price and Fujita renders the limitations:

a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller; wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data, and a window size and location is changeable by a user.

as obvious to a skilled artisan at the time of the invention was made.

As for independent claim 8, Claim 8 contains similar substantial subject matter as claimed in claim 6 and is respectfully rejected along the same rationale.

As for dependent claim 10, Price suggests an *apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen* (3: 12-22).

As for dependent claim 11, Price suggests an *apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window* (4:51-60).

As for dependent claim 12, Price- Fujita suggests an apparatus wherein the main body unit comprises: *a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller; a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image process unit generating the highlight window according to the highlight setting value* (Fujita, 1: 17-20 and 2: 40-45 and Price, 3:12-22). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 13, Price-Fujita suggests an apparatus of claim 12, wherein the main body unit further comprises: *a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window; wherein the parameter of the video data comprises; at least one of an offset and a gain of the video data to emphasize the image included in the highlight window* (Fujita, 1: 17-20 and Price, 3:12-22). It would have been obvious to one of ordinary skill in the art at the time of the

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invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 15, Price- Fujita suggests an *apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data* (Price, 4:51-60). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 16, Price suggests an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: *a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel* (4:47-54, Price shows the graphical adapter changes the video signal).

As for dependent claim 17, Price suggests an *apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen* (3: 12-22).

As for dependent claim 18, Price suggests an *apparatus of claim 13, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window with respect another image displayed on an outside of the highlight window* (4:47-54, Price shows the graphical adapter changes the video signal).

In regard to independent claim 19, Claim 8 contains similar substantial subject matter as claimed in claim 6 and is respectfully rejected along the same rationale.

As for independent claim 24:

Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

- *generating a highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code, which includes size and location data of the highlight window;*

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- *calculating a new size and location of the highlight window when the highlight window when the highlight window setting values are changed by a user. (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal):*

Price does not specifically show *receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller*, but teaches a method for moving interacting with a computer through a pointing device. In the same field of endeavor Fujita teaches a wireless pointing device in column 2, lines 22-30. Fujita also teaches a plurality of buttons that allow the user to select and execute a command remotely in 2: 40-45. Both Price and Fujita teach a pointing device that moves a cursor on a display screen of a computer. It would have been obvious to a skilled artisan at the time of the invention was made to modify the pointing device and highlight function and window size change as taught by Price (Price 4:47-54) to incorporate the wireless pointing device of Fujita, thus allowing the user to move the cursor on a computer display screen without having a wire connecting from pointing device to a computer and execute a highlight function and window size change (Fujita, 1: 17-20 and 2: 40-45). The combination of Price and Fujita renders the limitations:

receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller,

as obvious to a skilled artisan at the time of the invention was made.

As for dependent claim 25, Price suggests a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal* (3:12-22 and 4:47-54, Price shows the graphical adapter changes the video signal).

As for dependent claim 26, Price suggests a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen* (3:12-22 and 4:47-54, Price shows the graphical adapter changes the video signal).

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any

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way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re *Heck*, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re *Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

The Examiner notes MPEP § 2144.01, that quotes *In re Preda*, 401 F.2d 825,159 USPQ 342, 344 (CCPA 1968) as stating “in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” Further MPEP 2123, states that “a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

Allowable Subject Matter

7. As stated in the previous Office action, mailing date: 09/17/2008, claims 28 and 29 still 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.

8. Claim 30 is allowed.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 6, 13, 18, 19 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

/David Phantana-angkool/
Examiner, Art Unit 2179

/WILLIAM L. BASHORE/
Supervisory Patent Examiner, Art Unit 2175

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S76	1	("20040095317").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48
S75	1	("5563650").PN.	USPAT; USOCR	OR	OFF	2009/04/08 16:48
S74	1	("20060092268").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48
S73	1	("6915490").PN.	USPAT; USOCR	OR	OFF	2009/04/08 16:48
S72	149	S71 and S70	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S71	6769	highlight with (selection window area)	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S70	2917	S69 and (user with interface)	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S69	9861	S65 S66 S67 S68	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S68	3117	348/734	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S67	5956	345/169	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S66	747	725/38	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S65	778	(725/37).OCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48
S64	1	("6704024").PN.	USPAT; USOCR	OR	OFF	2009/04/08 16:48
S63	1	("6704204").PN.	USPAT; USOCR	OR	OFF	2009/04/08 16:48
S62	20	("20040095317" "5138154" "5252951" "5440326" "5554980" "5594169" "5698784" "5809204" "5825350" "5898421" "6130664" "6175357" "6346891" "6392664" "6601238" "6765557" "6772433"). PN. OR ("7233316"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48

S61	30	("1035870" "20020145610" "20030189581" "20030223731" "5402513" "5583536" "5586200" "5587742" "5598523" "5621428" "5696527" "5798799" "5838336" "5847771" "5877741" "5912711" "5912713" "6226050" "6317164" "6347153" "6356945" "6359653" "6396473" "6411333" "6424749" "6473088" "6611260" "6859236" "6873341").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48
S60	29	("5463726" "5564002"). PN. OR ("5742285"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48
S59	8	(US-7398541-\$ or US- 7358956-\$ or US-6756997- \$ or US-6753928-\$ or US- 6557016-\$ or US-6418556- \$ or US-6177931-\$ or US- 5621456-\$).did.	USPAT	OR	OFF	2009/04/08 16:48
S58	157	("4203130" "4264925" "4381522" "4602279" "4641205" "4691351" "4706121" "4751578" "4807052" "4862268" "4890321" "4896347" "4930158" "4963994" "4977455" "4991011" "5003384" "5027400" "5038211" "5047867" "5093718" "5144663" "5151782" "5151789" "5168353" "5172413" "5182640" "5200823" "5220420" "5223924" "5245420" "5247364" "5253066" "5293357" "5301028" "5307173" "5317391" "5323240" "5335079" "5335277" "5353121" "5357276" "5359601" "5361173" "5371795" "5382983" "5400401" "5404393" "5410343" "5410344" "5412416" "5412720" "5416508" "5418782" "5425101" "5434626" "5436676" "5440336" "5444499" "5446488"	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:48

		"5448568" "5459506" "5459522" "5459789" "5465113" "5465385" "5469206" "5473609" "5477262" "5479266" "5479268" "5481542" "5483278" "5485221" "5491748" "5493339" "5495295" "5497187" "5499046" "5499103" "5502504" "5508815" "5515106" "5515173" "5517257" "5528304" "5532732" "5532754" "5534911" "5539391" "5539822" "5539920" "5541738" "5543852" "5543929" "5544354" "5548345" "5548532" "5550576" "5550579" "5552837" "5555441" "5555549" "5559548" "5559550" "5563648" "5576755" "5579055" "5579057" "5581614" "5583560" "5585838" "5585865" "5585866" "5589872" "5589892" "5592551" "5594509" "5596361" "5600378" "5619247" "5619274" "5621579" "5623613" "5625406").PN. OR ("5629733" "5630119" "5633683" "5635978" "5635989" "5640484" "5642153" "5648824" "5654748" "5657072" "5657414" "5659367" "5671276" "5671411" "5673089" "5677708" "5684525" "5734597" "5809204" "5880768" "5969748").PN. OR ("6772433").URPN.				
S57	12	("20030103088" "20040107439" "5598523" "5742285" "6122011" "6300951" "6753928" "6756997" "6772433" "6898765" "6915489" "7051354"). PN.	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48


S56	10	("20030103088" "20040107439" "5598523" "5742285" "6122011" "6300951" "6753928" "6756997" "6772433" "6898765" "6915489" "7051354"). PN.	USPAT	OR	OFF	2009/04/08 16:48
S55	6	(US-5742285-\$ or US-6915489-\$ or US-6756997-\$ or US-6753928-\$ or US-6300951-\$).did. or (WO-9930491-\$).did.	USPAT; EPO	OR	OFF	2009/04/08 16:48
S54	72	S53 and S52	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S53	9880	S48 S49 S50 S51	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S52	3469	highlight same window	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S51	3117	348/734	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S50	5956	345/169	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S49	747	725/38	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S48	880	725/37	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:48
S47	161	S45 and S46	USPAT	OR	ON	2009/04/08 16:48
S46	262363	"715" "345"	USPAT	OR	ON	2009/04/08 16:48
S45	379	select\$3 with window with highlight	USPAT	OR	ON	2009/04/08 16:48
S44	12	("2004/0107439").URPN.	USPAT	OR	ON	2009/04/08 16:48
S43	26	("4862389" "5046001" "5050105" "5252951" "5377317" "5412776" "5430839" "5519827" "5621880" "5668962" "5721849" "5742285" "5752246" "5812132" "5835088" "5893063" "5900877" "6034689"). PN. OR ("6300951"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/04/08 16:48

S42	82	S41 same window	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/08 16:48
S41	860	remote with highlight with control	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/08 16:48
S40	325	715/767	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/08 16:48
S39	1	("6,122,011,") .PN.	USPAT; USOCR	OR	OFF	2009/04/08 16:48
S77	8	(US-20040095317-\$).did. or (US-7233316-\$ or US-6772433-\$ or US-7047500-\$ or US-7281259-\$ or US-6765557-\$ or US-6601238-\$ or US-5463726-\$).did.	US-PGPUB; USPAT	OR	OFF	2009/04/08 16:49
S78	1	("20040095317").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/08 16:58
S79	18	("2004/0095317").URPN.	USPAT	OR	OFF	2009/04/08 17:05
S81	19	("20030103088" "20040095317" "20040107439" "5463726" "5598523" "5742285" "6122011" "6300951" "6601238" "6753928" "6756997" "6765557" "6772433" "6898765" "6915489" "7047500" "7051354" "7233316" "7281259"). PN.	US-PGPUB; USPAT	OR	OFF	2009/04/08 19:36

S80	16	("20030103088" "20040095317" "20040107439" "5463726" "5598523" "5742285" "6122011" "6300951" "6601238" "6753928" "6756997" "6765557" "6772433" "6898765" "6915489" "7047500" "7051354" "7233316" "7281259"). PN.	USPAT	OR	OFF	2009/04/08 19:36
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4/ 8/ 2009 11:02:46 PM

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final (highlight window remote EPG).wsp**

Index of Claims 	Application/Control No. 10396439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2179

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	02/15/2008	09/09/2008	04/07/2009					
	1	✓	✓	✓					
	2	-	-	-					
	3	✓	✓	✓					
	4	✓	✓	✓					
	5	✓	✓	✓					
	6	✓	✓	✓					
	7	-	-	-					
	8	✓	✓	✓					
	9	-	-	-					
	10	✓	✓	✓					
	11	✓	✓	✓					
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	28	✓	O	O					
	29	✓	O	O					
	30		=	=					

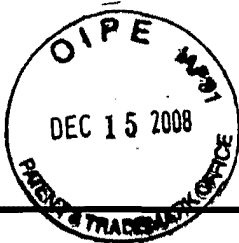
Search Notes 	Application/Control No. 10396439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2175

SEARCHED			
Class	Subclass	Date	Examiner
715	767	9/9/2008	DP
725	37,38	9/9/2008	DP
345	169	9/9/2008	DP
348	734	9/9/2008	DP

SEARCH NOTES		
Search Notes	Date	Examiner
EAST-(see attached)	9/9/2008	DP
UPDATE EAST-(see attached)	4/7/2009	DP

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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IPW

S&H Form: (09/07)

REPLY/AMENDMENT FEE TRANSMITTAL	Attorney Docket No.	1293.1675
	Application Number	10/396,439
	Filing Date	March 26, 2003
	First Named Inventor	Jae-cheol HEO
	Group Art Unit	2175
AMOUNT ENCLOSED	0.00	Examiner Name David Phantana ANGKOOL

FEE CALCULATION (fees effective 09/30/07)

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS	21	- 27 =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS	6	- 7 =	0	X \$ 210.00 =	0.00

Since an Official Action set an original due date of December 17, 2008, petition is hereby made for an extension to cover the date this reply is filed for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$460)); (3 months (\$1,050)); (4 months (\$1,640)); (5 months (\$2,230):

If Notice of Appeal is enclosed, add (\$510.00)

If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)

Information Disclosure Statement (Rule 1.17(p)) (\$180.00)

Total of above Calculations = \$ 0.00

Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)

TOTAL FEES DUE = \$ 0.00

- (1) If entry (1) is less than entry (2), entry (3) is "0".
- (2) If entry (2) is less than 20, change entry (2) to "20".
- (4) If entry (4) is less than entry (5), entry (6) is "0".
- (5) If entry (5) is less than 3, change entry (5) to "3".

METHOD OF PAYMENT

- Check enclosed as payment.
- Charge "TOTAL FEES DUE" to the Deposit Account No. below.
- No payment is enclosed.

GENERAL AUTHORIZATION

- If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:
 Deposit Account No.
 Deposit Account Name
- The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC § 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	David J. Cutitta	Reg. No.	52,790
Signature		Date	December 15, 2008

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Confirmation No. 8005

Filed: March 26, 2003



Group Art Unit: 2175

Examiner: David Phantana ANGKOOL

For: **METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER**

AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action mailed September 17, 2008, and having a period for response set to expire on December 17, 2008.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 18, as set forth below:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:

receiving remote control signals for setting highlight windows from a remote controller having a highlight selection function;

decoding the remote control signals received from the remote controller;

generating a highlight window having a predetermined size and location on a screen according to highlight window setting values ~~that include size and location data of the highlight window, wherein a gain of video data within the highlight window is adjusted to emphasize an image included within the highlight window;~~

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user; and

compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating.

2. (CANCELED)

3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:

size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:

controlling an offset and a gain of video signals.

5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight

window comprises:

generating more than one window.

6. (PREVIOUSLY PRESENTED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller;
- a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;
- an image process unit generating a highlight window having a predetermined size and location on a screen corresponding to the highlight window setting values that include size and location data of the highlight window; and
- a highlight signal change unit compensating the video data included in the window with predetermined video parameters,

wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data, and a window size and location is changeable by a user.

7. (CANCELED)

8. (PREVIOUSLY PRESENTED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight window functional code;

wherein the wirelessly transferred highlight window functional code generated from the remote controller comprises:

- size data of the highlight window, location data of the highlight window and highlight degree data.

9. (CANCELED)

10. (PREVIOUSLY PRESENTED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen.

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (PREVIOUSLY PRESENTED) The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;
wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

14. (CANCELED)

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:

a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (CURRENTLY AMENDED) The apparatus of claim ~~47~~13, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window ~~more than~~with respect to another image displayed ~~on an~~ outside of the highlight window ~~in the screen~~.

19. (PREVIOUSLY PRESENTED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving wirelessly transferred highlight functional codes for setting highlight windows generated from the remote controller, and generating a highlight window having a predetermined size and location for display on the screen according to the wirelessly transferred highlight functional codes, which include size, location and highlight degree data of the highlight window,

wherein the receiving a wirelessly transferred highlight functional codes comprises receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20-23. (CANCELED)

24. (PREVIOUSLY PRESENTED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller;

generating a highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code, which includes size and location data of the highlight window; and

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user.

25. (PREVIOUSLY PRESENTED) The method of claim 24, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CANCELED)

28. (PREVIOUSLY AMENDED) The method of claim 1, wherein when the user changes the highlighted window size using the remote control, a start location and an end location of the highlight window are recognized so that a center point of the highlight window is calculated and a changed highlight window is generated with reference to the calculated center point.

29. (PREVIOUSLY AMENDED) The apparatus of claim 6, wherein when the user changes the highlighted window size using the remote control, the control unit recognizes a start location and an end location of the highlight window so that the control unit calculates a center point of the highlight window and generates a changed highlight window with reference to the calculated center point.

30. (PREVIOUSLY PRESENTED) A method of setting a highlight window in an image reproducing system, the method comprising:

receiving remote control signals for setting highlight windows from a remote controller;
generating a highlight window on a screen such that a size and a location of the window on the screen may vary according to highlight window setting values that include size and location data of the highlight window and are received from the remote control, the size and the location of the window on the screen being independent of any image displayed on the screen;

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calculating a new size and location of the highlight window when the highlight window setting values are changed by a user using the remote controller; and

compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating.

REMARKS

INTRODUCTION:

As set forth in the preceding section, claims 1 and 18 have been amended. Support for the amendments may be found at least at paragraphs [0015] to [0019] and therefore no new matter has been added.

Claims 1, 3-6, 8, 10-13, 15-19, 24-26, 28, 29 and 30 are pending and under consideration. Claims 1, 6, 8, 19, 24 and 30 are independent claims. Reconsideration of the claims in view of the present amendments and the following remarks is respectfully requested.

ALLOWABLE SUBJECT MATTER:

Claims 28 and 29 are objected to but are indicated as allowable if rewritten in independent form. Applicant will hold the rewriting of these claims in abeyance until the arguments presented herein have been considered. Claim 30 is allowed.

REJECTIONS UNDER 35 USC §102:

Claims 1 and 3-5 stand rejected under 35 U. S. C. 102(b) as being unpatentable over U.S. Patent No. 5,463,726 to Price ("Price"). The rejections are respectfully traversed for at least the following reasons.

Independent claim 1 recites at least the following:

generating a highlight window having a predetermined size and location on a screen according to highlight window setting values, wherein a gain of video data within the highlight window is adjusted to emphasize an image included within the highlight window;

Price fails to suggest or disclose at least all of the above-recited features.

By way of review, Price is directed to a method and system providing for simplified access to multiple software applications from a computer desktop. The Office Action, at page 2, asserts that Price describes all of the above-claimed features at column 4, lines 27-38. Applicant respectfully disagrees and requests reconsideration for at least the following reasons.

The cited portion of Price, in describing FIG. 3, sets forth that various desktop applications and movable viewport frame icon 60 are depicted within locator window 50 using

corresponding application icons. The cited portion of Price, however, fails to describe adjusting "a gain of video data within the highlight window," as recited in claim 1.

Independent claim 1 further recites at least the following:

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user;

Price fails to suggest or disclose at least all of the above-recited features.

The Office Action, at page 2, asserts that Price describes all of the above-claimed features at column 4, lines 47-54. Applicant respectfully disagrees and requests reconsideration for at least the following reasons.

The cited portion of Price, in describing FIGS. 3 and 4, states in full:

Firstly, a mouse pointer 62 associated with graphic pointing device 20 may be utilized to graphically indicate an iconic representation of a software application within electronic work space 30, in the manner depicted in FIG. 3. By "clicking" graphic pointing device 20, while mouse pointer 62 is located on chart application icon 52, the location of movable viewport frame 40 will be automatically altered to encompass chart application 32 within electronic work space 30. This result is depicted within FIG. 4, which illustrates a pictorial representation of the video display screen of FIG. 3 after movable viewport frame 40 has been relocated in the manner described above.

It can thus be seen from the text above that the cited portion of Price describes enlarging a particular desk top application (e.g., chart application 32 in FIG. 4) by using a mouse to select the corresponding application icon (chart application icon 52). However, neither in the cited text nor elsewhere in Price is it described that a new size of movable viewport frame 40 is calculated or that the size of movable viewport frame 40 is adjusted. Applicant accordingly asserts that the cited portion of Price fails to describe all of the above-recited features.

Based on each of the above arguments, Applicant respectfully submits that independent claim 1 patentably distinguishes over Price, and should be allowable for at least the above-mentioned reasons. Further, claims 3-5, which depend from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

REJECTIONS UNDER 35 USC §103:

Claims 6, 8, 10-13, 15-19, and 24-26 stand rejected under 35 U. S. C. 103(a) as being unpatentable over Price in view of U.S. Patent Publication No. 2004/0095317 by Zhang et al. ("Zhang"). The rejections are respectfully traversed for at least the following reasons.

Zhang is not prior art with respect to the above-identified application. In order to qualify as prior art under 35 U.S.C. §102(e)(1) or 35 U.S.C. §102(a), a patent publication must have a filing date or a publication date, respectively, that is prior to the effective filing date of the application at issue. Consequently, with respect to the rejection of claims 6, 8, 10-13, 15-19, and 24-26, Applicant asserts that Zhang is not prior art with respect to the above-identified application, which obtains priority from Korean Patent Application No. 2002-29958, filed May 29, 2002. Applicant has provided an English language translation of the Application with this response, along with a statement that the translation of the document is accurate. Accordingly, priority is perfected and the effective filing date of the above-identified application is May 29, 2002. Zhang was filed on November 20, 2002, and published on May 20, 2004, each of which occurred after May 29, 2002. Zhang, consequently, may not be used as prior art with respect to the above-identified application.

Accordingly, Applicant respectfully submits that independent claim 6, 8, 19, and 24, patentably distinguish over Price and Zhang, and should be allowable for at least the above-mentioned reasons.

Further, Applicant respectfully submits that claims 10-13, 15-18, 25, and 26, which variously depend from independent claims 6, 8, 19 and 24, should be allowable for at least the same reasons as claims 6, 8, 19 and 24, as well as for the additional features recited therein.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

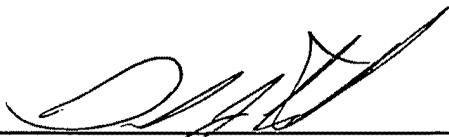
Serial No. 10/396,439

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: December 15, 2008

By: 

David J. Cutitta
Registration No. 52,790

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501



CERTIFICATION OF TRANSLATION

I, Joo-hyun Hong, an employee of Y.P. LEE, MOCK & PARTNERS of The Goryo Bldg., 1575-1 Seocho-dong, Seocho-gu, Seoul, Republic of Korea, hereby declare under penalty of perjury that I understand the Korean language and the English language; that I am fully capable of translating from Korean to English and vice versa; and that, to the best of my knowledge and belief, the statement in the English language in the attached translation of Korean Patent Application No. 10-2002-0029958 consisting of 12 pages, have the same meanings as the statements in the Korean language in the original document, a copy of which I have examined.

Signed this 21st day of November 2008

Hong Joo-Hyun

ABSTRACT

[Abstract of the Disclosure]

5 Provided are a method for setting a highlight window using a remote controller and an apparatus therefor. The provided method includes receiving remote control signals from a remote controller having a highlight selection function, decoding the remote control signals received from the remote controller, generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes, and controlling a video parameter for the generated
10 highlight window.

[Representative Drawing]

FIG. 2



SPECIFICATION

[Title of the Invention]

5 Method for setting highlight window using remote controller and apparatus thereof

[Brief Description of the Drawings]

10 FIG. 1 is a block diagram illustrating an apparatus for setting a highlight window according to the present invention;

 FIG. 2 is a flowchart illustrating a method for setting a highlight window according to the present invention;

 FIG. 3 illustrates an example of an initially set window when a user selects a highlight function according to the present invention; and

15 FIG. 4 illustrates an example of a previously set window and a newly set window when a user selects a highlight function more than twice, according to the present invention.

[Detailed Description of the Invention]

20 [Object of the Invention]

[Technical Field of the Invention and Related Art prior to the Invention]

 The present invention relates to an image reproducing system, and more particularly, to a method and an apparatus for setting a highlight window using a remote controller.

25 Recently, an image reproducing apparatus can display data on one or more regions on a screen. Here, the rectangular regions on the screen are referred to as windows. In addition, the windows on the monitor screen may or may not be overlapped. A user is required to set a highlight window on the screen in order to attract people's interest on a specific data.

In an existing image reproducing apparatus, highlight windows are set using a user control panel. In another existing image reproducing apparatus, highlight windows are set using a setting device, such as a mouse, via a universal serial bus (USB) when operating a personal computer.

5 However, since the user control panel is installed in the image reproducing apparatus, it is difficult to manipulate the user control panel. In addition, since the USB cannot be used in a stand-alone type apparatus, it is uncomfortable to use the setting device.

10 [Technical Goal of the Invention]

The present invention provides a method for setting a highlight window using a remote controller in an image reproducing system.

The present invention also provides an apparatus for setting a highlight window according to the method for setting a highlight window.

15

[Structure and Operation of the Invention]

According to an aspect of the present invention, there is provided a method for setting a highlight window in an image reproducing system, comprising receiving remote control signals from a remote controller having a highlight selection function, decoding
20 the remote control signals received from the remote controller, generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes, and controlling a video parameter for the generated highlight window.

According to another aspect of the present invention, there is provided an
25 apparatus for setting a highlight window in an image reproducing system, comprising a remote control sensor for detecting wirelessly transferred functional button codes, which are generated in a remote controller, a control unit for checking for changes in highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight function selection data, an image

process unit for generating a window corresponding to the highlight setting values on the screen and decoding the input video data, and a highlight signal change unit for controlling the parameter of the video data included in the window, which is generated by the image process unit.

5 The present invention will now be described more fully with reference to the accompanying drawings, in which preferred embodiments of the invention are shown.

FIG. 1 is a block diagram illustrating an apparatus for setting a highlight window according to the present invention.

10 The apparatus of FIG. 1 includes a remote control unit 110, a remote control sensor 120, a control unit 130, an image process unit 140, a highlight signal change unit 150, and a panel driving unit 160.

15 Referring to FIG. 1, the remote control unit 110 has buttons related to a highlight function and transfers highlight function codes to a main body in a radio frequency (RF) corresponding to the inputs of the buttons. For example, the remote control unit 110 has a highlight on/off button, highlight window size control buttons, and highlight window location control buttons in order to remote control the start and end of the highlight function and set a display screen or the highlight window.

20 The remote control sensor 120 detects signals related to the highlight function, which are input from the remote control unit 110, and processes the input signals into electric pulse signals.

25 The control unit 130 decodes the highlight function codes processed in the remote control sensor 120 and generates highlight setting values corresponding to the decoded codes. For example, the control unit 130 receives a highlight signal and outputs the size and location (x, y) of the highlight window. If a user changes the size or the location of the highlight window while the highlight function is in an on state, the control unit 130 outputs the changed size and location (x, y) of the highlight window.

 The image process unit 140 decodes video signals and generates an on screen display (OSD) of a box shape corresponding to the size and location (x, y) of the highlight window, which are generated in the control unit 130.

The highlight signal change unit 150 adjusts the parameter of the video signals in the OSD, which is formed in the image process unit 140, by using the size and location (x, y) of the highlight window, which are generated in the control unit 130. In other words, the highlight signal change unit 150 adjusts the offset or gain of the video signals in the highlight window to emphasize the video signals included in the highlight window.

The panel driving unit 160 converts RGB signals, which are generated in the highlight signal change unit 150 into low voltage differential signals in order to optimally transfer the signals to a panel.

FIG. 2 is a flowchart illustrating a method for setting a highlight window according to the present invention.

First, electric power is applied to the image reproducing apparatus to display image signals on the screen in step 210.

When reproducing images on the screen, the image reproducing apparatus wirelessly receives button signals from the remote control unit 210 having the buttons related to the highlight function in step 220.

Thereafter, the codes of the wirelessly received button signals are decoded in step 230. For example, the control unit 130 receives the highlight function on/off signal, the highlight window size change signal, and the highlight window location change signal and decodes the codes of the received signals.

It is checked whether the decoded code values are highlight function data in step 240. Here, if the decoded code values are not the highlight function data, an operation other than the highlight function is performed in step 256.

If the decoded code values are the highlight function data, it is checked whether the highlight function is in the on state in step 250. If the highlight function is in an off state, a box-shaped initial window is displayed at the center of the screen using a predetermined initial highlight value as shown in FIG. 3, in step 250. Here, the video signals of the image in the box-shaped window are compensated using parameter values of predetermined initial signals. Here, the initially set highlight values include

the size data of the highlight window, the location data of the highlight window, and highlight degree data, for example, the offset or gain of the video signals.

When the highlight window function is in the on state, the codes of the wirelessly received button signals are decoded to check whether the highlight setting values, for example, the size and location of the highlight window, are changed in step 260. If the highlight setting values are changed, the changed size and location of the highlight window are calculated and the video signals included in the highlight window are compensated using a predetermined signal parameter in step 262. For example, in order to change the size and location of the highlight window, the user inputs the size change buttons and the location change buttons of the remote control unit 120. When the user changes the size and location of the highlight window using the buttons of the remote control unit 120, the control unit 130 recognizes a start location (x_1, y_1) and an end location (x_2, y_2) of the highlight window so that the control unit 130 calculates the center point (x_0, y_0) of the highlight window. Thereafter, the control unit 130 generates a changed highlight window with reference to the center point (x_0, y_0) of the highlight window. The control unit 130 compensates the video signals included in the changed highlight window using the predetermined parameter.

When the highlight setting values are not changed, the video parameters of the changed highlight window are renewed until the highlight function is ended in step 270.

Thereafter, when the user selects a highlight function end button or the button signal is not received from the remote control unit 120 for a predetermined amount of time, the final highlight window is stored and the processes are ended.

If the user inputs more than one highlight function button, a new highlight window is generated in addition to the existing highlight window as shown in FIG. 4.

[Effect of the Invention]

According to the present invention, since the highlight window is set using a remote controller, the user can easily highlight specific regions on the screen from a remote location.

While this invention has been particularly shown and described with reference to

preferred embodiment thereof, the preferred embodiment described above is merely illustrative and are not intended to limit the scope of the invention. Accordingly, the scope of the present invention will be defined by the appended claims.

What is claimed is:

1. A method for setting a highlight window in an image reproducing system, the method comprising:

5 receiving remote control signals from a remote controller having a highlight selection function;

decoding the remote control signals received from the remote controller;

generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes; and

controlling a video parameter for the generated highlight window.

10

2. The method of claim 1, further comprising:

checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and

15 displaying an initially set highlight window when the highlight function is in an off state.

3. The method of claim 1, wherein the highlight window setting values are size and location values.

20 4. The method of claim 1, wherein controlling the video parameter includes controlling an offset and a gain of video signals.

5. The method of claim 1, wherein setting the highlight window includes generating more than one window.

25

6. An apparatus for setting a highlight window in an image reproducing system, the apparatus comprising:

a remote control sensor for detecting wirelessly transferred functional codes, which are generated in a remote controller;

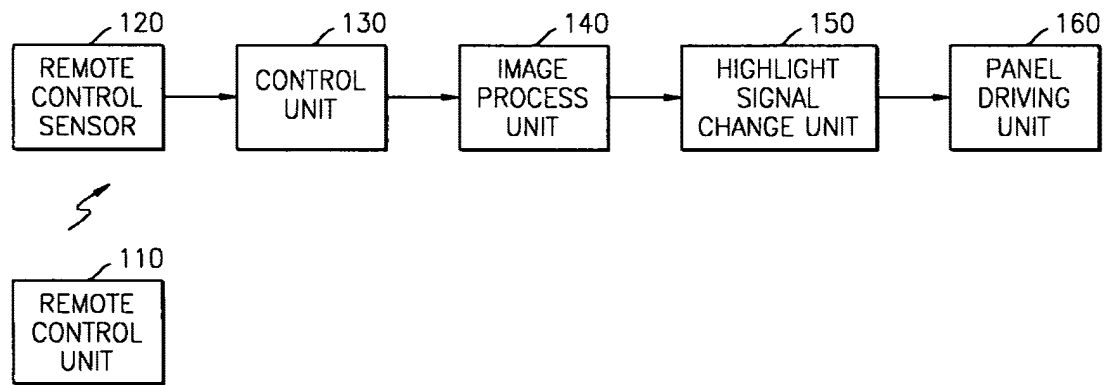
a control unit for checking for highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;

5 an image process unit for generating a window corresponding to the highlight setting values and decoding the input video data; and

a highlight signal change unit for controlling the parameter of the video data included in the window, which is generated by the image process unit.

7. The apparatus of claim 6, wherein the remote controller comprises a
10 highlight function on/off button, highlight window size change buttons, and highlight window location change buttons.

FIG. 1



10

FIG. 2

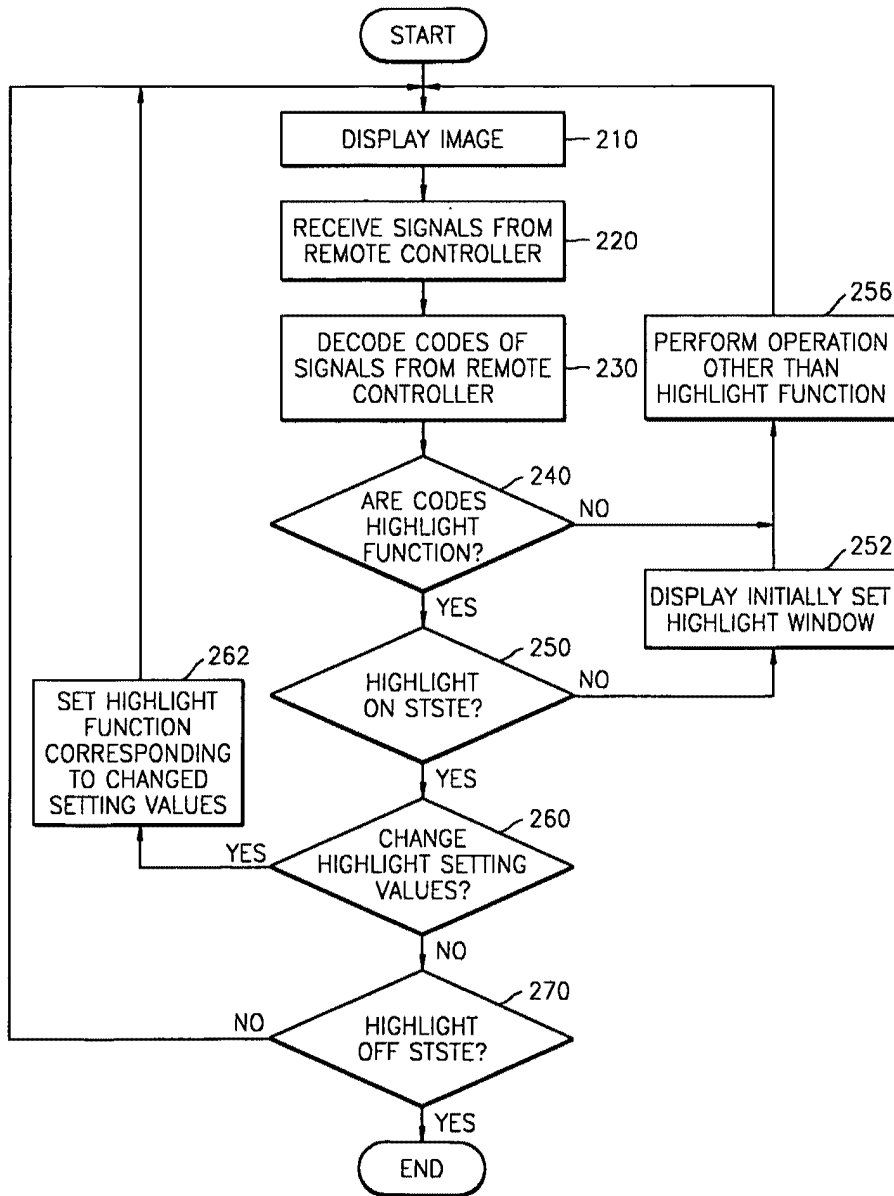


FIG. 3

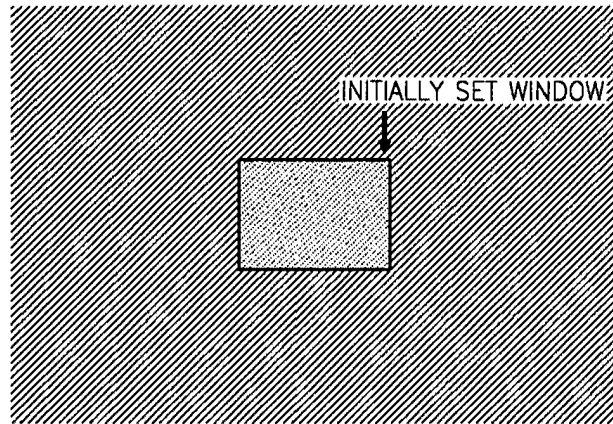
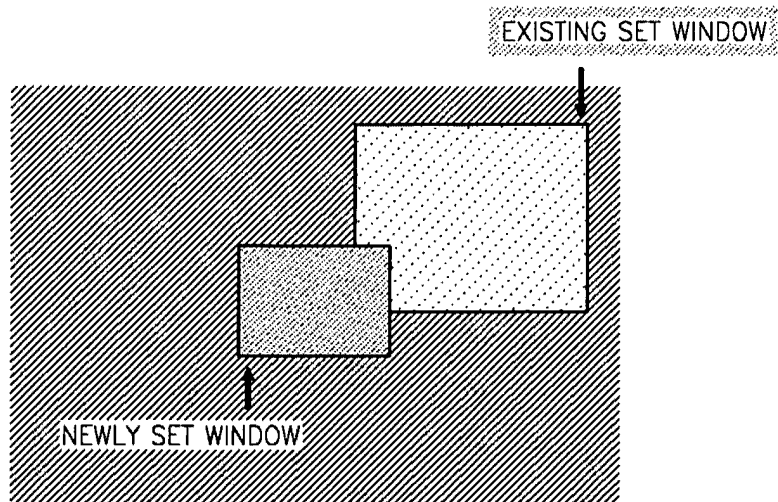


FIG. 4



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/396,439	Filing Date 03/26/2003	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT	12/15/2008	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 21	Minus	** 23	=	0	OR	X \$52=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 6	Minus	*** 7	=	0	OR	X \$220=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=		OR	X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

Legal Instrument Examiner:
 /eugenia v. hardy/

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005
21171	7590	09/17/2008	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHANTANA ANGKOOL, DAVID	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			09/17/2008	PAPER

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.

Office Action Summary	Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2175	

-- 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 20 June 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1, 3 - 6, 8, 10 - 13, 15 - 19, 24 - 26, 28, 29, 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 30 is/are allowed.
- 6) Claim(s) 1, 3 - 6, 8, 10 - 13, 15 - 19, 24 - 26 is/are rejected.
- 7) Claim(s) 28 and 29 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) 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).
- 11) 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

- 12) 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) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to the following communications: RCE filed on June 20th, 2008
2. Applicant amended claims 1, 6, 8, 19, and 25.
3. Applicant added claim 30.
4. Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, 24 – 26, 28, 29, and 30 are still pending.

Claim Rejections - 35 USC § 102

5. **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.

6. **Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated over Price, US# 5,463,726.**

In regard to **independent claim 1**, Price shows a method of setting a highlight window in an image reproducing system, the method comprising:

- *receiving remote control signals for setting a highlight windows from a remote controller having a highlight selection function (3:11-22, Fig. 3#60 shows highlight windows, see “remote controller” in 3:18-21);*
- *decoding the remote control signals received from the remote controller; generating a highlight window having a predetermined size and location on a screen according to highlight window setting values that include size and location data of the highlight window (4:27-38);*
- *calculating a new size and location of the highlight window when the highlight window setting values are changed by a user; compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating (4:47-54, Price shows the graphical adapter changes the video signal).*

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As for dependent claim 3, Price shows a method wherein the highlight window setting values comprises: *size and location values* (4:47-54).

As for dependent claim 4, Price shows a method wherein the controlling of the video parameter comprises: *controlling an offset and a gain of video signals* (3:10-24).

As for dependent claim 5, Price shows a method wherein the generating of the highlight window comprises: *generating more than one window* (3:12-22).

Claim Rejections - 35 USC § 103

7. **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.

8. **Claims 6, 8, 10 – 13, 15 – 19, and 24 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price, US# 5,463,726 in view of Zhang et al., US PG PUB# 2004/0095317 A1 (hereinafter Zhang).**

As for independent claim 6:

Price shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (4:27-38);
- *an image process unit generating a highlight window having a predetermined size and location on a screen corresponding to the highlight window setting values that include size and location data of the highlight window; and a highlight signal change unit compensating the video data included*

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in the window with predetermined video parameters (4:47-54, Price shows the graphical adapter changes the video signal).

Price does not specifically show *a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller*, but teaches a method for moving interacting with a computer through a pointing device. In the same field of endeavor Zhang teaches a wireless pointing device that interacts with a computer in Para. 0008. Zhang also teaches a plurality of buttons that allow the user to select and execute a command remotely. Both Price and Zhang teach a pointing device that moves a cursor on a display screen of a computer. It would have been obvious to a skilled artisan at the time of the invention was made to modify the pointing device and highlight function and window size change as taught by Price (Price 4:47-54) to incorporate the wireless pointing device of Zhang, thus allowing the user to move the cursor on a computer display screen without having a wire connecting from pointing device to a computer and execute a highlight function and window size change (Zhang, 0009). The combination of Price and Zhang renders the limitations:

a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller; wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data, and a window size and location is changeable by a user.

as obvious to a skilled artisan at the time of the invention was made.

As for independent claim 8, Claim 8 contains similar substantial subject matter as claimed in claim 6 and is respectfully rejected along the same rationale.

As for dependent claim 10, Price suggests an *apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen (3: 12-22).*

As for dependent claim 11, Price suggests an *apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window (4:51-60).*

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As for dependent claim 12, Price-Zhang suggests an apparatus wherein the main body unit comprises: *a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller; a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image process unit generating the highlight window according to the highlight setting value* (Zhang, 0009 and Price, 3:12-22). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 13, Price-Zhang suggests an apparatus of claim 12, wherein the main body unit further comprises: *a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window; wherein the parameter of the video data comprises; at least one of an offset and a gain of the video data to emphasize the image included in the highlight window* (Zhang, 0009 and Price, 3:12-22). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 15, Price-Zhang suggests an *apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data* (Price, 4:51-60). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apparatus of Price for the same reason stated previously above (see claim 6 *supra*).

As for dependent claim 16, Price suggests an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: *a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel* (4:47-54, Price shows the graphical adapter changes the video signal).

As for dependent claim 17, Price suggests an *apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen* (3: 12-22).

As for dependent claim 18, Price suggests an *apparatus of claim 17, wherein the highlight signal*

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change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (4:47-54, Price shows the graphical adapter changes the video signal).

In regard to independent claim 19, Claim 8 contains similar substantial subject matter as claimed in claim 6 and is respectfully rejected along the same rationale.

As for independent claim 24:

Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

- *generating a highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code, which includes size and location data of the highlight window;*
- *calculating a new size and location of the highlight window when the highlight window when the highlight window setting values are changed by a user.* (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal):

Price does not specifically show *receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller*, but teaches a method for moving interacting with a computer through a pointing device. In the same field of endeavor Zhang teaches a wireless pointing device that interacts with a computer in Para. 0008. Zhang also teaches a plurality of buttons that allow the user to select and execute a command remotely. Both Price and Zhang teach a pointing device that moves a cursor on a display screen of a computer. It would have been obvious to a skilled artisan at the time of the invention was made to modify the pointing device and highlight function and window size change as taught by Price (Price 4:47-54) to incorporate the wireless pointing device of Zhang, thus allowing the user to move the cursor on a computer display screen without having a wire connecting from pointing device to a computer and execute a highlight function and window size change (Zhang, 0009).

The combination of Price and Zhang renders the limitation:

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receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller,

as obvious to a skilled artisan at the time of the invention was made.

As for dependent claim 25, Price suggests a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal* (3:12-22 and 4:47-54, Price shows the graphical adapter changes the video signal).

As for dependent claim 26, Price suggests a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen* (3:12-22 and 4:47-54, Price shows the graphical adapter changes the video signal).

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

The Examiner notes MPEP § 2144.01, that quotes *In re Preda*, 401 F.2d 825,159 USPQ 342, 344 (CCPA 1968) as stating “in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” Further MPEP 2123, states that “a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

Allowable Subject Matter

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9. Claims 28 and 29 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.

10. Claim 30 is allowed.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 6, 13, 18, 19 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

Application/Control Number: 10/396,439

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Art Unit: 2175

/David Phantana-angkool/
Examiner, Art Unit 2179

/Kieu D Vu/
Primary Examiner, Art Unit 2175

Notice of References Cited	Application/Control No. 10/396,439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2175	Page 1 of 1

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*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
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	M US-			

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	N				
	O				
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	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S19	12	("20030103088" "20040107439" "5598523" "5742285" "6122011" "6300951" "6753928" "6756997" "6772433" "6898765" "6915489" "7051354"). PN.	US-PGPUB; USPAT	OR	OFF	2008/09/05 17:30
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S34	132	S33 and S32	US-PGPUB; USPAT	OR	OFF	2008/09/08 13:48
S33	6230	highlight with (selection window area)	US-PGPUB; USPAT	OR	OFF	2008/09/08 13:48

S32	2639	S31 and (user with interface)	US-PGPUB; USPAT	OR	OFF	2008/09/08 13:48
S31	8882	S27 S28 S29 S30	US-PGPUB; USPAT	OR	OFF	2008/09/08 13:48
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S36	1	("20060092268").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/09/08 16:02
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9/ 9/ 2008 9:02:33 PM

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Index of Claims 	Application/Control No. 10396439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2179

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	02/15/2008	09/09/2008						
	1	✓	✓						
	2	-	-						
	3	✓	✓						
	4	✓	✓						
	5	✓	✓						
	6	✓	✓						
	7	-	-						
	8	✓	✓						
	9	-	-						
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	24	✓	✓						
	25	✓	✓						
	26	✓	✓						
	27	-	-						
	28	✓	O						
	29	✓	O						
	30		=						

Search Notes 	Application/Control No. 10396439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2175

SEARCHED			
Class	Subclass	Date	Examiner
715	767	9/9/2008	DP
725	37,38	9/9/2008	DP
345	169	9/9/2008	DP
348	734	9/9/2008	DP

SEARCH NOTES		
Search Notes	Date	Examiner
EAST-(see attached)	9/9/2008	DP

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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11W RCE



REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

(INCLUDING FILING FEE AND/OR PETITION FOR
EXTENSION OF TIME FEE)

Subsection (b) of 35 U.S.C. §132, effective May 29, 2000
provides for continued examination of a utility or plant application
filed on or after June 8, 1995.
See The American Inventors Protection Act of 1999 (AIPA)

To: Commissioner for Patents Box RCE PO Box 1450 Alexandria, VA 22313-1450		Attorney Docket No.: 1293.1675	
First Named Inventor	Jae-cheol HEO		
Application No.	10/396,439	Group Art Unit	2179
Filing Date	March 26, 2003	Examiner	David Phantana ANGKOOL
CPA Filing Date		Confirmation No	8005
Title of Invention	METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING REMOTE CONTROLLER		

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application.

1. **Submission required under 37 C.F.R. §1.114 (Box a or b must be completed)**

- a. Previously submitted
 - i. Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on ____
(Any unentered amendment(s) referred to above will be entered).
 - ii. Consider the arguments in the Appeal Brief or Reply Brief previously filed on ____
 - iii. Other
- b. Enclosed
 - i. Amendment/Reply
 - ii. Affidavit(s)/Declaration(s)
 - iii. Information Disclosure Statement (IDS)
 - iv. Other


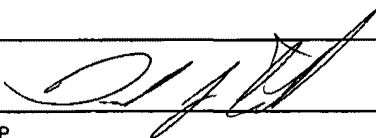
2. **Miscellaneous**

- a. Suspension of action on the above-identified application is requested under 37 C.F.R. §103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. §1.17(i) required).
- b. Other

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01 FC:1801
02 FC:1251

010.00 OP
120.00 OP

	BASIC FEE	\$ 810.00
Since an Official Action set an <u>original</u> due date of <u>May 25, 2008</u> , petition is hereby made for an extension of time to cover the date this RCE is filed, for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$460)); (3 months (\$1,050)); (4 months (\$1,640)); (5 months (\$2,230):		120.00
Suspension Fee (\$130.00)		
Total of above Calculations =		\$ 930.00
Reduction by 50% for filing by small entity (Note 37 C.F.R. 1.9, 1.27, 1.28).		
TOTAL FEES DUE =		\$ 930.00
4. <input type="checkbox"/> Small entity status: a. <input type="checkbox"/> Verified Statement Claiming Small Entity Status. b. <input type="checkbox"/> A Verified Statement Claiming Small Entity Status was previously filed and such status is still proper and desired. c. <input type="checkbox"/> is no longer claimed. 5. <input type="checkbox"/> Other:		
6. METHOD OF PAYMENT		
<input checked="" type="checkbox"/> A check in the amount of <u>\$930.00</u> is enclosed. <input type="checkbox"/> Charge "TOTAL FEES DUE" to Deposit Account No. 19-3935. (A duplicate copy of this form is enclosed.)		
7. GENERAL AUTHORIZATION		
<input checked="" type="checkbox"/> The Commissioner is hereby authorized to credit any overpayment or charge any additional fees under 37 C.F.R. 1.16 (filing fees) or 37 C.F.R. 1.17 (processing fees) during the prosecution of this application and of any related application(s) claiming benefit hereof pursuant to 35 U.S.C. §120 to maintain pendency hereof and of any such related application to: Deposit Account No. 19-3935.		
8. CORRESPONDENCE ADDRESS		
STAAS & HALSEY LLP  21171 PATENT TRADEMARK OFFICE		
9. SIGNATURE OF ATTORNEY OR AGENT REQUIRED		
NAME	David J. Cutitta	REGISTRATION NO. 52,790
SIGNATURE		DATE June 20, 2008



Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana ANGKOOL

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action mailed February 25, 2008, and having a period for response set to expire on May 25, 2008. A Petition for a one (1) month extension of time, together with the requisite fee for same, is submitted herewith, thereby extending the period for response to June 25, 2008.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND 1, 6, 8, 19 and 24 and ADD new claim 30 in accordance with the following:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:
 - receiving remote control signals for setting highlight windows from a remote controller having a highlight selection function;
 - decoding the remote control signals received from the remote controller;
 - generating a ~~predetermined form of highlight window~~ having a predetermined size and location on a screen according to highlight window setting values that include size and location data of the highlight window when the decoded remote control signals are highlight function codes;
 - calculating a new size and location of the highlight window when the highlight window setting values are changed by a user; and
 - compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating;
 - ~~checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and~~
 - ~~displaying an initially set highlight window when the highlight function is in an off state; wherein a highlighted window size is variable by highlight window setting values input by a user.~~
2. (CANCELED)
3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:
 - size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:

controlling an offset and a gain of video signals.

5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight window comprises:

generating more than one window.

6. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller;

a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;

an image process unit generating a ~~predetermined form of~~ highlight window having a predetermined size and location on a screen corresponding to the highlight window setting values that include size and location data of the highlight window, ~~receiving video data from an external source, and decoding the video data;~~ and

a highlight signal change unit compensating the video data included in the window with predetermined video parameters;

wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data, and ~~wherein~~ a window size and location is changeable by a user.

7. (CANCELED)

8. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a ~~predetermined form of~~ a highlight window having a predetermined size and location on a screen and video data

representing an image to be displayed in the highlight window according to the wirelessly transferred highlight window functional code;

wherein the wirelessly transferred highlight window functional code generated from the remote controller comprises:

~~one of a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal~~ size data of the highlight window, location data of the highlight window and highlight degree data.

9. (CANCELED)

10. (PREVIOUSLY PRESENTED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen.

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (PREVIOUSLY PRESENTED) The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;
wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

14. (CANCELED)

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:

a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (ORIGINAL) The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

19. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional codes for setting highlight windows generated from the remote controller, and generating a ~~predetermined form of~~ highlight window having a predetermined size and location for boundary line included in the screen and displayed on the screen according to the wirelessly transferred highlight functional codes, which include size, location and highlight degree data of the highlight window;

wherein the receiving a wirelessly transferred highlight functional codes comprises: receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20-23. (CANCELED)

24. (CURRENTLY AMENDED) A method of setting a highlight window in an image

reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller; ~~and~~

generating a ~~predetermined form of~~ highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code, which includes size and location data of the highlight window; and

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user.

~~wherein the receiving a wirelessly transferred highlight functional code comprises:~~

~~receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal;~~

~~wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:~~

~~adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.~~

25. (PREVIOUSLY PRESENTED) The method of claim 24, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CANCELED)

28. (PREVIOUSLY AMENDED) The method of claim 1, wherein when the user changes the highlighted window size using the remote control, a start location and an end location of the highlight window are recognized so that a center point of the highlight window is calculated and a changed highlight window is generated with reference to the calculated center

point.

29. (PREVIOUSLY AMENDED) The apparatus of claim 6, wherein when the user changes the highlighted window size using the remote control, the control unit recognizes a start location and an end location of the highlight window so that the control unit calculates a center point of the highlight window and generates a changed highlight window with reference to the calculated center point.

30. (NEW) A method of setting a highlight window in an image reproducing system, the method comprising:

- receiving remote control signals for setting highlight windows from a remote controller;
- generating a highlight window on a screen such that a size and a location of the window on the screen may vary according to highlight window setting values that include size and location data of the highlight window and are received from the remote control, the size and the location of the window on the screen being independent of any image displayed on the screen;
- calculating a new size and location of the highlight window when the highlight window setting values are changed by a user using the remote controller; and
- compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating.

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 6, 8, 19 and 24 have been amended and new claim 30 has been added. Support for the amendments and the new claim may be found at least at paragraphs [0015], [0026] and [0027] and therefore no new matter has been added.

Claims 1, 3-6, 8, 10-13, 15-19, 24-26, 28, 29 and 30 are pending and under consideration. Claims 1, 6, 8, 19 and 24 are independent claims. Reconsideration of the claims in view of the present amendments and the following remarks is respectfully requested.

REJECTIONS UNDER 35 USC 103:

Claims 1, 3-6, 8, 10-13, 15-19, and 24-28 stand rejected under 35 U. S. C. 103(a) as being unpatentable over U.S. Patent No. 6,122,011 to Dias et al. ("Dias") in view of U.S. Patent No. 6,577,679 to Matthews et al. ("Matthews"). The rejections are respectfully traversed for at least the following reasons.

Amended independent claim 1 recites at least the following:

generating a highlight window having a predetermined size and location on a screen according to highlight window setting values that include size and location data of the highlight window;

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least all of the above-recited features.

By way of review, Dias is directed to a program for facilitating the creation of a channel map using a picture-in-picture display. The program may be implemented using the up/down and right/left arrow keys of a conventional television remote control to highlight one of the horizontally extending channel panels 20 or one of the bars of the horizontal menu bar 24, using a cursor 28 (FIG. 1 and col. 2, lines 23-29). However, the Office Action fails to indicate any portion of Dias that suggests "generating a highlight window having a predetermined size and location on a screen." To the contrary, Applicants assert that the cursor 28 of Dias highlights a size and a location that is determined by the particular channel panel 20 or menu bar 24 upon which the cursor happens to fall, and not according to "highlight window setting values that include size and location data of the highlight window" as recited above.

By way of review, Matthews is directed to an operating environment for controlling a computer using a standard remote control typically used with televisions (col. 7, lines 57-59 and FIG. 4). The Office Action asserts that "Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41." Even assuming for the sake of argument that this is true, Matthews still fails to suggest or disclose all of the above-recited features because Matthews is silent regarding a predetermined size and location of the menus on the screen. Consequently, Matthews fails to compensate for the noted deficiencies of Dias.

Amended independent claim 1 recites at least the following:

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user;

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least all of the above-recited features.

The Office Action notes at page 3 that Dias fails to describe all of the above-recited features but proposes to modify Dias with Matthews asserting that Matthews "shows a user changing the size of the menu by using the remote controller in col. 11, lines 28-41." Applicants respectfully disagree that Matthews compensates for the deficiencies of Dias. The cited portion of Matthews states in part:

"In summary, the user can decide how big on the screen **the menus** should be, wherein the size is determined by a ratio of screen size to menu size. In one embodiment, all content is offered at 640×480 pixel resolution as the largest resolution. Two variables can be provided to the user to permit control over menu size" (emphasis added).

Applicants disagree because the menus described directly above are simply not a generated "highlight window," as claimed. For example, referring to the paragraph immediately preceding the text above, it can be seen that the menus referred to in the above-cited text are start menus 1302, 1402 and 1502 as illustrated respectively in FIGS. 13, 14 and 15 (see Matthews at col. 11 lines 16-27). Because each of start menus 1302, 1402 and 1502 are merely task bars displayed on the screen, Applicants assert they cannot be used to suggest a generated "highlight window," as claimed.

Furthermore, in contrast to the above-recited claim language, the size of start menus 1302, 1402 and 1502 remains constant throughout FIGS. 13, 14 and 15. For example, Matthews states at col. 11, lines 17-19:

In accordance with the present invention, the start menu maintains

a relatively consistent size between resolution changes so as to maintain the ability of a user to read the start menu at a distance.

Consequently, the cited portion of Matthews does *not* "show a user changing the size of the menu by using the remote controller," as asserted in the Office Action.

However, even assuming for the sake of argument that the Office Action assertion is correct regarding "calculating a new size" of the highlight window, Matthews still fails to describe calculating a new *location* of the highlight window, as claimed above.

Accordingly, Applicants respectfully submit that amended independent claim 1 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Since similar features recited by each of the independent claims 6, 8, 19, and 24, with potentially differing scope and breadth, are not taught or disclosed by Dias and Matthews, the rejection should be withdrawn and claims 6, 8, 19 and 24 also allowed.

Further, Applicants respectfully submit that claims 3-5, 10-13, 15-18, 25, 26, 27 and 28, which variously depend from independent claims 1, 6, 8, 19 and 24, should be allowable for at least the same reasons as claims 1, 6, 8, 19 and 24, as well as for the additional features recited therein.

Amended independent claim 6 recites at least the following:

"wherein the remote controller includes a highlight function on/off button..."

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

The Current Office Action is Not Responsive to Applicants' Arguments

As noted in at least MPEP 707.07(f), the Examiner is required to answer and address all traversals. This requirement is in addition to any repetition of a previously held position and is required to allow the applicant a chance to review the Examiner's position as to these arguments and to clarify the record for appeal.

In response to Applicants' arguments presented in the amendment filed November 15, 2007, the current Office Action states the following at page 11, item 13:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller. Dias further shows wherein the remote controller includes a highlight function on/off button (2:23-32), and a highlight

window location change button to generate the functional codes have the highlight data (2:23-32, 3:45-52).

Thus, with respect to a remote controller that includes a highlight function on/off button, the current rejection language is virtually identical to the rejection language from the previously mailed Office Action and merely states that Dias shows the remote controller includes a highlight function on/off button at (2:23-32). As such, the Examiner has not addressed the applicant's traversals presented in the Amendment filed on November 15, 2007, which specifically stated the following:

"The current Office Action asserts that Dias describes the above-identified features at col. 2, lines 23-32 and col. 3, lines 45-52. Applicants respectfully disagree with this assertion.

Dias illustrates at FIG. 2 a program displaying on a screen a menu bar area 24 that provides several selectable commands including SORT, SCHEDULE, MESSAGES and EDITOR. The commands are selected using the up/down and right/left arrow keys of a conventional television remote. None of the described commands correspond to those specific functions recited in the claim language above, nor are the commands generated using dedicated remote control function buttons. Consequently, the first cited portion of Dias fails to illustrate a remote control having dedicated function buttons at all, let alone those buttons included in the above-recited claim language."

Thus, as argued in the prior amendment filed November 17, 2007, Applicants still maintain that the cited portion of Dias fails to describe "wherein the remote controller includes a highlight function on/off button." Applicants note that merely stating that a function can be performed using a remote control is insufficient to demonstrate that the remote control includes a specific button to perform that function. Accordingly, Applicants respectfully request the next Office Action specifically respond to the arguments above to clarify the record for appeal.

Amended independent claim 6 further recites at least the following:

"wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data and wherein a window size and location is changeable by a user."

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

Accordingly, Applicants respectfully submit that amended independent claim 6 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Claim 29, which depends from and includes all of the features of independent claim 6, should be allowable for at least the same reasons as claim 6, as well as for the additional features recited therein.

Dependent claim 13 recites at least the following:

“a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;

wherein the parameter of the video data comprises:

at least one of an offset and a gain of the video data to emphasize the image included in the highlight window. .”

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

The Office Action asserts at page 6 that Dias describes all of the above-recited features, at col. 2, lines 23-32 and 44-68 and col. 3, lines 45-52, because Dias shows the user can change the video area (Fig. 1 #12) displayed in the generated highlight window).

Even assuming for the sake of argument that Dias shows the user can change the video area displayed in the generated highlight window, Applicants respectfully assert Dias does not describe all of the above-recited features because changing a video area is not the same as adjusting “at least one of an offset and a gain of the video data.” In fact, neither offset nor gain have anything to do with “changing a video area because, in a non-limiting embodiment, offset and gain of the video signals are adjusted in the highlight window to emphasize the video signals included in the highlight window.”

Accordingly, Applicants respectfully submit that dependent claim 13 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Since similar features are recited by dependent claim 4, with potentially differing scope and breadth, the rejection of claim 4 should be also be withdrawn.

No Reason to Combine

Applicants respectfully submit that the rejection fails to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, there must be: 1) some suggestion or motivation to combine the references; 2) there must be a reasonable expectation of success; and 3) the references must either teach or suggest all the claim limitations or evidence must be provided as to why the difference between the references and the claim limitations would have been obvious. MPEP 2141.

Here, no citation to the prior art has been offered as providing a suggestion or reason to modify Dias and Matthews, nor does the Office Action provide evidence demonstrating an implicit motivation to modify Dias and Matthews. In *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 127 S Ct 1727, 167 LE2d 705 (U.S. 2007), the U.S. Supreme Court held that in determining obviousness, it is necessary "to determine whether there was an apparent reason to combine the known elements in the fashion claimed" *KSR*, slip op. 14, 82 USPQ2d at 1396. Further, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR* at 1396, quoting *In re Kahn*. The reasoning provided in the Office Action for combining Dias and Matthews states:

"Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of selecting highlight windows as shown by Dias to incorporate the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects."

Applicant asserts that the cited rationale for combining Dias and Matthews is merely a conclusion and therefore fails to meet the standard articulated by the Supreme Court in *KSR International Co. v. Teleflex Inc.* Applicants submit that this amounts to an improper hindsight reconstruction of the invention because the Office relies on a problem recognized only in the present application as the motivation for the suggested combination.

Moreover, Applicant respectfully asserts that the Office Action fails to establish that Dias and Matthews is analogous art. For art to be analogous, it must be in the field of Applicant's endeavor or reasonably pertinent to the problem to be solved. MPEP 2141.01(a)(I) The rejection relies on the conclusory statement that Matthews is "In the same field of endeavor," but fails to establish a proper rationale for this statement. To the contrary, Applicants assert that Matthews is not in the same field of endeavor because Matthews is not directed to setting a highlight window using a remote controller.

Accordingly, one skilled in the art would not have had a reason to combine the teachings of Dias with those of Matthews, and the rejection under 103(a) is improper.

NEW CLAIM:

New independent claim 30, having additional patentable features, has been added. Consideration of the new claim is respectfully requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: June 20, 2008

By: 

David J. Cutilta
Registration No. 52,790

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005

21171 7590 06/02/2008
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

PHANTANA ANGKOOL, DAVID

ART UNIT	PAPER NUMBER
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2175

MAIL DATE	DELIVERY MODE
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06/02/2008

PAPER

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.

Interview Summary	Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2175	

All participants (applicant, applicant's representative, PTO personnel):

(1) David Phantana-angkool. (3)_____.

(2) David Cutitta. (4)_____.

Date of Interview: 06 May 2008.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: 1 and 6.

Identification of prior art discussed: Dias et al, US# 6,122,011 and Matthews et al., US#6,898,765 B2.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed claims 1 and 6 in view of Dias and Matthews. Based on the discussion, the new proposed claim amendments filed on 04/22/2008 appears to overcome the prior art. The applicant's representative also proposed ideas and more claim amendments which will move the case forward even more than the 04/22/08 filed claim amendments. The Examiner will review the cited references and perform a new search.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/David Phantana-angkool/
Examiner, Art Unit 2175

Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



RESPONSE UNDER 37 CFR 1.116
BOX AF
EXPEDITED PROCEDURE
EXAMINING GROUP 2179

Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana ANGKOOL

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT UNDER 37 C.F.R. §1.116

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

DO NOT ENTER

05/27/08

DP

Mail Box: AF

Sir:

This is in response to the Office Action mailed February 25, 2008, and having a period for response set to expire on May 25, 2008.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
Examiner David Phantana-angkool	Art Unit 2175	

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

THE REPLY FILED 22 April 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) The period for reply expires _____ months from the mailing date of the final rejection.
b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) They raise new issues that would require further consideration and/or search (see NOTE below);
(b) They raise the issue of new matter (see NOTE below);
(c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. Applicant's reply has overcome the following rejection(s): _____.
6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1,3-6,8,10-13,15-19,24-26,28 and 29.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. Other: _____.

/Kieu D Vu/
Primary Examiner, Art Unit 2175

Continuation of 11. does NOT place the application in condition for allowance because: The proposed amendment has been carefully reviewed and are considered to raise new issues with respect to some of the claims, such as claims 1, 6, 8 and etc. Amended claim 1 further recites "calculating a new size and location...changed by the user". The proposed amendment requires further searching and reconsideration by the Examiner, therefore the amendment will not be entered..



AF
 jfw

S&H Form: (09/07)

REPLY/AMENDMENT FEE TRANSMITTAL	Attorney Docket No.	1293.1675
	Application Number	10/396,439
	Filing Date	March 26, 2003
	First Named Inventor	Jae-cheol HEO
	Group Art Unit	2179
AMOUNT ENCLOSED	0.00	Examiner Name David Phantana ANGKOOL

FEE CALCULATION (fees effective 09/30/07)

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS	20	- 27 =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS	5	- 7 =	0	X \$ 210.00 =	0.00

Since an Official Action set an original due date of May 25, 2008, petition is hereby made for an extension to cover the date this reply is filed for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$460)); (3 months (\$1,050)); (4 months (\$1,640)); (5 months (\$2,230):

If Notice of Appeal is enclosed, add (\$510.00)

If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)

Information Disclosure Statement (Rule 1.17(p)) (\$180.00)

Total of above Calculations = \$ 0.00

Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)

TOTAL FEES DUE = \$ 0.00

- (1) If entry (1) is less than entry (2), entry (3) is "0".
- (2) If entry (2) is less than 20, change entry (2) to "20".
- (4) If entry (4) is less than entry (5), entry (6) is "0".
- (5) If entry (5) is less than 3, change entry (5) to "3".

METHOD OF PAYMENT

- Check enclosed as payment.
- Charge "TOTAL FEES DUE" to the Deposit Account No. below.
- No payment is enclosed.

GENERAL AUTHORIZATION

- If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:
 Deposit Account No.
 Deposit Account Name
- The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC § 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	David J. Cutitta	Reg. No.	52,790
Signature		Date	April 22, 2008



RESPONSE UNDER 37 CFR 1.116
BOX AF
EXPEDITED PROCEDURE
EXAMINING GROUP 2179

Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana ANGKOOL

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT UNDER 37 C.F.R. §1.116

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Mail Box: AF

Sir:

This is in response to the Office Action mailed February 25, 2008, and having a period for response set to expire on May 25, 2008.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND 1, 6, 8, 19 and 24 in accordance with the following:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:
 - receiving remote control signals for setting highlight windows from a remote controller having a highlight selection function;
 - decoding the remote control signals received from the remote controller;
 - generating a ~~predetermined form of~~ highlight window having a predetermined size and location on a screen according to highlight window setting values that include size and location data of the highlight window ~~when the decoded remote control signals are highlight function codes;~~
 - calculating a new size and location of the highlight window when the highlight window setting values are changed by a user; and
 - compensating video signals displayed in the generated highlight window with predetermined video parameters according to the calculating;
 - ~~checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes;~~ and
 - ~~displaying an initially set highlight window when the highlight function is in an off state;~~
 - ~~wherein a highlighted window size is variable by highlight window setting values input by a user.~~
2. (CANCELED)
3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:
 - size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:
controlling an offset and a gain of video signals.
5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight window comprises:
generating more than one window.
6. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:
a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller;
a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;
an image process unit generating a ~~predetermined form of~~ highlight window having a predetermined size and location on a screen corresponding to the highlight window setting values that include size and location data of the highlight window, ~~receiving video data from an external source, and decoding the video data~~; and
a highlight signal change unit compensating the video data included in the window with predetermined video parameters;
wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data, and ~~wherein~~ a window size and location is changeable by a user.
7. (CANCELED)
8. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:
a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating ~~a predetermined form of~~ a highlight window having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly

transferred highlight window functional code;

wherein the wirelessly transferred highlight window functional code generated from the remote controller comprises:

~~one of a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal~~
size data of the highlight window, location data of the highlight window and highlight degree data.

9. (CANCELED)

10. (PREVIOUSLY PRESENTED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen.

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (PREVIOUSLY PRESENTED) The apparatus of claim 12, wherein the main body unit further comprises:

a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;

wherein the parameter of the video data comprises:

at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

14. (CANCELED)

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:

a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (ORIGINAL) The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

19. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional codes for setting highlight windows generated from the remote controller, and generating a ~~predetermined form of~~ highlight window having a predetermined size and location for boundary line included in the screen and displayed on the screen according to the wirelessly transferred highlight functional codes, which include size, location and highlight degree data of the highlight window;

wherein the receiving a wirelessly transferred highlight functional codes comprises: receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20-23. (CANCELED)

24. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller; ~~and~~

~~generating a predetermined form of highlight window~~ having a predetermined size and location on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code, which includes size and location data of the highlight window; and

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user.

~~wherein the receiving a wirelessly transferred highlight functional code comprises:~~

~~receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal,~~

~~wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:~~

~~adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.~~

25. (PREVIOUSLY PRESENTED) The method of claim 24, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CANCELED)

28. (PREVIOUSLY AMENDED) The method of claim 1, wherein when the user changes the highlighted window size using the remote control, a start location and an end location of the highlight window are recognized so that a center point of the highlight window is calculated and a changed highlight window is generated with reference to the calculated center point.

29. (PREVIOUSLY AMENDED) The apparatus of claim 6, wherein when the user changes the highlighted window size using the remote control, the control unit recognizes a start location and an end location of the highlight window so that the control unit calculates a center point of the highlight window and generates a changed highlight window with reference to the calculated center point.

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 6, 8, 19 and 24 have been amended. Support for the amendments may be found at least at paragraphs [0015], [0026] and [0027] and therefore no new matter has been added.

Claims 1, 3-6, 8, 10-13, 15-19, 24-26, 28 and 29 are pending and under consideration. Claims 1, 6, 8, 19 and 24 are independent claims. Reconsideration of the claims in view of the present amendments and the following remarks is respectfully requested.

REJECTIONS UNDER 35 USC 103:

Claims 1, 3-6, 8, 10-13, 15-19, and 24-28 stand rejected under 35 U. S. C. 103(a) as being unpatentable over U.S. Patent No. 6,122,011 to Dias et al. ("Dias") in view of U.S. Patent No. 6,577,679 to Matthews et al. ("Matthews"). The rejections are respectfully traversed for at least the following reasons.

Amended independent claim 1 recites at least the following:

generating a highlight window having a predetermined size and location on a screen according to highlight window setting values that include size and location data of the highlight window;

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least all of the above-recited features.

By way of review, Dias is directed to a program for facilitating the creation of a channel map using a picture-in-picture display. The program may be implemented using the up/down and right/left arrow keys of a conventional television remote control to highlight one of the horizontally extending channel panels 20 or one of the bars of the horizontal menu bar 24, using a cursor 28 (FIG. 1 and col. 2, lines 23-29). However, the Office Action fails to indicate any portion of Dias that suggests "generating a highlight window having a predetermined size and location on a screen." To the contrary, Applicants assert that the cursor 28 of Dias highlights a size and a location that is determined by the particular channel panel 20 or menu bar 24 upon which the cursor happens to fall, and not according to "highlight window setting values that include size and location data of the highlight window" as recited above.

By way of review, Matthews is directed to an operating environment for controlling a computer using a standard remote control typically used with televisions (col. 7, lines 57-59 and FIG. 4). The Office Action asserts that "Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41." Even assuming for the sake of argument that this is true, Matthews still fails to suggest or disclose all of the above-recited features because Matthews is silent regarding a predetermined size and location of the menus on the screen. Consequently, Matthews fails to compensate for the noted deficiencies of Dias.

Amended independent claim 1 recites at least the following:

calculating a new size and location of the highlight window when the highlight window setting values are changed by a user;

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least all of the above-recited features.

The Office Action notes at page 3 that Dias fails to describe all of the above-recited features but proposes to modify Dias with Matthews asserting that Matthews "shows a user changing the size of the menu by using the remote controller in col. 11, lines 28-41." Applicants respectfully disagree that Matthews compensates for the deficiencies of Dias. The cited portion of Matthews states in part:

"In summary, the user can decide how big on the screen **the menus** should be, wherein the size is determined by a ratio of screen size to menu size. In one embodiment, all content is offered at 640×480 pixel resolution as the largest resolution. Two variables can be provided to the user to permit control over menu size" (emphasis added).

Applicants disagree because the menus described directly above are simply not a generated "highlight window," as claimed. For example, referring to the paragraph immediately preceding the text above, it can be seen that the menus referred to in the above-cited text are start menus 1302, 1402 and 1502 as illustrated respectively in FIGS. 13, 14 and 15 (see Matthews at col. 11 lines 16-27). Because each of start menus 1302, 1402 and 1502 are merely task bars displayed on the screen, Applicants assert they cannot be used to suggest a generated "highlight window," as claimed.

Furthermore, in contrast to the above-recited claim language, the size of start menus 1302, 1402 and 1502 remains constant throughout FIGS. 13, 14 and 15. For example, Matthews states at col. 11, lines 17-19:

In accordance with the present invention, the start menu maintains

a relatively consistent size between resolution changes so as to maintain the ability of a user to read the start menu at a distance.

Consequently, the cited portion of Matthews does *not* “show a user changing the size of the menu by using the remote controller,” as asserted in the Office Action.

However, even assuming for the sake of argument that the Office Action assertion is correct regarding “calculating a new size” of the highlight window, Matthews still fails to describe calculating a new *location* of the highlight window, as claimed above.

Accordingly, Applicants respectfully submit that amended independent claim 1 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Since similar features recited by each of the independent claims 6, 8, 19, and 24, with potentially differing scope and breadth, are not taught or disclosed by Dias and Matthews, the rejection should be withdrawn and claims 6, 8, 19 and 24 also allowed.

Further, Applicants respectfully submit that claims 3-5, 10-13, 15-18, 25, 26, 27 and 28, which variously depend from independent claims 1, 6, 8, 19 and 24, should be allowable for at least the same reasons as claims 1, 6, 8, 19 and 24, as well as for the additional features recited therein.

Amended independent claim 6 recites at least the following:

“wherein the remote controller includes a highlight function on/off button...”

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

The Current Office Action is Not Responsive to Applicants' Arguments

As noted in at least MPEP 707.07(f), the Examiner is required to answer and address all traversals. This requirement is in addition to any repetition of a previously held position and is required to allow the applicant a chance to review the Examiner's position as to these arguments and to clarify the record for appeal.

Additionally and as further noted in MPEP 707.07(f), a failure of the Examiner to address the applicant's traversals can be deemed a failure to rebut these arguments so as to admit that the arguments have overcome the rejection. At the very least, the failure to address the applicant's traversals would render the Examiner's decision to again reject the claims arbitrary and capricious and invalid under the Administrative Procedures Act, 5 U.S.C. § 706, the

standard under which such rejections are reviewed in view of *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999).

In response to Applicants' arguments presented in the amendment filed November 15, 2007, the current Office Action states the following at page 11, item 13:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller. Dias further shows wherein the remote controller includes a highlight function on/off button (2:23-32), and a highlight window location change button to generate the functional codes have the highlight data (2:23-32, 3:45-52).

Thus, with respect to a remote controller that includes a highlight function on/off button, the current rejection language is virtually identical to the rejection language from the previously mailed Office Action and merely states that Dias shows the remote controller includes a highlight function on/off button at (2:23-32). As such, the Examiner has not addressed the applicant's traversals presented in the Amendment filed on November 15, 2007, which specifically stated the following:

"The current Office Action asserts that Dias describes the above-identified features at col. 2, lines 23-32 and col. 3, lines 45-52. Applicants respectfully disagree with this assertion.

Dias illustrates at FIG. 2 a program displaying on a screen a menu bar area 24 that provides several selectable commands including SORT, SCHEDULE, MESSAGES and EDITOR. The commands are selected using the up/down and right/left arrow keys of a conventional television remote. None of the described commands correspond to those specific functions recited in the claim language above, nor are the commands generated using dedicated remote control function buttons. Consequently, the first cited portion of Dias fails to illustrate a remote control having dedicated function buttons at all, let alone those buttons included in the above-recited claim language."

Thus, as argued in the prior amendment filed November 17, 2007, Applicants still maintain that the cited portion of Dias fails to describe "wherein the remote controller includes a highlight function on/off button." Applicants note that merely stating that a function can be performed using a remote control is insufficient to demonstrate that the remote control includes a specific button to perform that function. Accordingly, Applicants respectfully request the next Office Action specifically respond to the arguments above to clarify the record for appeal.

Amended independent claim 6 further recites at least the following:

“wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data and wherein a window size and location is changeable by a user.”

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

Accordingly, Applicants respectfully submit that amended independent claim 6 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Claim 29, which depends from and includes all of the features of independent claim 6, should be allowable for at least the same reasons as claim 6, as well as for the additional features recited therein.

Dependent claim 13 recites at least the following:

“a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;

wherein the parameter of the video data comprises:

at least one of an offset and a gain of the video data to emphasize the image included in the highlight window. .”

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

The Office Action asserts at page 6 that Dias describes all of the above-recited features, at col. 2, lines 23-32 and 44-68 and col. 3, lines 45-52, because Dias shows the user can change the video area (Fig. 1 #12) displayed in the generated highlight window).

Even assuming for the sake of argument that Dias shows the user can change the video area displayed in the generated highlight window, Applicants respectfully assert Dias does not describe all of the above-recited features because changing a video area is not the same as adjusting “at least one of an offset and a gain of the video data.” In fact, neither offset nor gain have anything to do with “changing a video area because, in a non-limiting embodiment, offset and gain of the video signals are adjusted in the highlight window to emphasize the video signals included in the highlight window.”

Accordingly, Applicants respectfully submit that dependent claim 13 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned

reasons. Since similar features are recited by dependent claim 4, with potentially differing scope and breadth, the rejection of claim 4 should be also be withdrawn.

No Reason to Combine

Applicants respectfully submit that the rejection fails to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, there must be: 1) some suggestion or motivation to combine the references; 2) there must be a reasonable expectation of success; and 3) the references must either teach or suggest all the claim limitations or evidence must be provided as to why the difference between the references and the claim limitations would have been obvious. MPEP 2141.

Here, no citation to the prior art has been offered as providing a suggestion or reason to modify Dias and Matthews, nor does the Office Action provide evidence demonstrating an implicit motivation to modify Dias and Matthews. In *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 127 S Ct 1727, 167 L Ed2d 705 (U.S. 2007), the U.S. Supreme Court held that in determining obviousness, it is necessary “to determine whether there was an apparent reason to combine the known elements in the fashion claimed” *KSR*, slip op. 14, 82 USPQ2d at 1396. Further, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR* at 1396, quoting *In re Kahn*. The reasoning provided in the Office Action for combining Dias and Matthews states:

“Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of selecting highlight windows as shown by Dias to incorporate the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.”

Applicant asserts that the cited rationale for combining Dias and Matthews is merely a conclusion and therefore fails to meet the standard articulated by the Supreme Court in *KSR International Co. v. Teleflex Inc.* Applicants submit that this amounts to an improper hindsight reconstruction of the invention because the Office relies on a problem recognized only in the present application as the motivation for the suggested combination.

Moreover, Applicant respectfully asserts that the Office Action fails to establish that Dias and Matthews is analogous art. For art to be analogous, it must be in the field of Applicant's endeavor or reasonably pertinent to the problem to be solved. *MPEP 2141.01(a)(I)* The rejection relies on the conclusory statement that Matthews is “In the same field of endeavor,” but fails to

establish a proper rationale for this statement. To the contrary, Applicants assert that Matthews is not in the same field of endeavor because Matthews is not directed to setting a highlight window using a remote controller.

Accordingly, one skilled in the art would not have had a reason to combine the teachings of Dias with those of Matthews, and the rejection under 103(a) is improper.

REQUEST FOR INTERVIEW BEFORE NEXT OFFICE ACTION:

Applicants respectfully request the Examiner contact the undersigned attorney to discuss the pending claims before issuance of the next Office Action. Applicants believe that a thorough review of the pending claims will be helpful in furthering prosecution.

REQUEST FOR ENTRY IN ACCORDANCE WITH 37 CFR 1.116:

Entry of this Amendment in accordance with 37 CFR 1.116 is respectfully requested. Applicant submits that this Amendment After Final Rejection places the subject application in condition for allowance. This Amendment was not presented earlier because Applicant believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of the instant Amendment as an earnest attempt to advance prosecution and reduce the number of issues under appeal is requested under 37 C.F.R. § 1.116.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

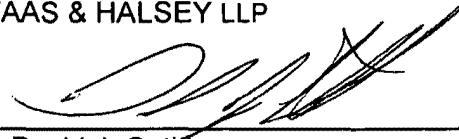
Serial No. 10/396,439

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: April 22, 2008

By: 
David J. Cutitta
Registration No. 52,790

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/396,439	Filing Date 03/26/2003	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT	04/22/2008	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 20	Minus	** 23 = 0	X \$ =		OR	X \$50=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 5	Minus	***7 = 0	X \$ =		OR	X \$210=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	** =	X \$ =		OR	X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	*** =	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

Legal Instrument Examiner:
 /SUSAN K. FORD/

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005
21171	7590	02/25/2008	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHANTANA ANGKOOL, DAVID	
			ART UNIT	PAPER NUMBER
			2179	
			MAIL DATE	DELIVERY MODE
			02/25/2008	PAPER

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.

Office Action Summary	Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2179

-- 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 15 November 2007.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1, 3 - 6, 8, 10 - 13, 15 - 19, 24 - 26, 28, and 29 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1, 3 - 6, 8, 10 - 13, 15 - 19, 24 - 26, 28, and 29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) 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).
- 11) 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

- 12) 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) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed on 11/15/2007.
2. Applicant amended claims 1, 6, 8, 19, 24, and 25.
3. Applicant added claims 28 and 29.
4. Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, 24 – 26, 28, and 29 are still pending.

Claim Rejections - 35 USC § 103

5. 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.

6. **Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, 24 – 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable by Dias et al., US# 6,122,011 (hereinafter Dias) in view of Matthews et al., US# 6,898,765 B2 (hereinafter Matthews).**

In regard to **independent claim 1**, Dias shows a method of setting a highlight window in an image reproducing system, the method comprising:

- *receiving remote control signals for setting a highlight windows from a remote controller having a highlight selection function (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);*
- *decoding the remote control signals received from the remote controller; generating a predetermined form of highlight window on a screen according to highlight window setting values when the decoded remote control signals are highlight function codes (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);*

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- *compensating video signals displayed in the generated highlight window with predetermined video parameters* (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).
- *checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state* (Column 2, lines 23-26. Dias shows a visual distinction from an ON state to an OFF state. Dias method and apparatus further shows a user interface displaying the status of the highlight window in Figure 1).

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically show wherein a highlighted window size is variable by highlight window setting values input by a user. However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.

As for dependent claim 3, Dias suggests a method wherein the highlight window setting values comprises: *size and location values* (Figure 1).

As for dependent claim 4, Dias suggests a method wherein the controlling of the video parameter comprises: *controlling an offset and a gain of video signals* (Column 2, lines 44-55. Dias further shows the real time telecast television program is displayed in video area 12. This display (video area 12) appears as a PIP window generated by a PIP chip. As the microprocessor changes the television tuner, it also changes the program displayed in the video area 12 to reflect the local channel number to which the tuner is set. These changes are in response to the user input, via the remote control, as the user selects the desired operation (Dias, 2:49-63).

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As for dependent claim 5, Dias suggests a method wherein the generating of the highlight window comprises: *generating more than one window* (Figure 1).

As for independent claim 6:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller* (Column 3, lines 24-26);
- *a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (Column 3, lines 24-41);
- *an image process unit generating a predetermined form of highlight window on a screen corresponding to the highlight window setting values, receiving video data from an external source, and decoding the video data; and a highlight signal change unit compensating the video data included in the window with predetermined video parameters* (Figure 4, Column 3, lines 65 to Column 4, lines 35, Dias shows receiving a video signal from an external source (Fig. 7# 1272) and controlling the parameter of the video through an overlay window, see cited figure).
- *wherein the remote controller includes a highlight function on/off button (2:23-32), and a highlight window location change button to generate the functional codes having the highlight data (2:23-32, 3:45-52).*

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically shows (1) *a highlight window size change button* (2) *wherein a window size is changeable by a user.*

However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), rendering

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the limitations (1) *a highlight window size change button* (2) *wherein a window size is changeable by a user* as obvious at the time of the invention. The motivation to combine is to allow the user to change the size of the display objects.

As for independent claim 8:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a predetermined form of highlight window on a screen and video data (Figure 4) representing an image to be displayed in the highlight window according to the wirelessly transferred highlight window functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- *wherein the wirelessly transferred highlight window functional code generated from the remote controller comprises: one of a highlight window location control signal, and a video data parameter control signal (2:23-32, 3:45-52).*

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically show a *highlight window size control signal*. However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.

As for **dependent claim 10**, Dias shows an *apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the main body unit adjusts one of a location and a size of the highlight window with respect to the screen* (Figure 7# 1280, 4:1-35).

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As for **dependent claim 11**, Dias shows an *apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window (2: 44-68).*

As for **dependent claim 12**, Dias shows an apparatus wherein the main body unit comprises: *a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function, where the cursor highlights the selection); a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image process unit generating the highlight window according to the highlight setting value (Figure 3, Column 3, lines 24-41).*

As for **dependent claim 13**, Dias shows an apparatus of claim 12, wherein the main body unit further comprises: *a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window; wherein the parameter of the video data comprises; at least one of an offset and a gain of the video data to emphasize the image included in the highlight window (Column 2: 23-32 and 44-68, 3:45-52; Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).*

As for **dependent claim 15**, Dias shows an *apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data (Figure 4, 2: 44-68).*

As for **dependent claim 16**, Dias shows an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: *a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel (Figure 7# 1296, converts RGB signal for display unit).*

As for **dependent claim 17**, Dias shows an *apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen (Figure 7# 1280, 4:1-35).*

As for **dependent claim 18**, Dias shows an *apparatus of claim 17, wherein the highlight signal change*

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unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).

In regard to **independent claim 19**, Dias shows an apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a predetermined form of highlight window having a boundary included in the screen and displayed (Figure 4) on the screen according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- *wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight window size control signal (2: 23-32, 3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).*

As for **independent claim 24**:

Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

- *receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);*
- *generating a predetermined form of highlight window on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code comprises (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);*
- *receiving one of a highlight on/off signal, a highlight widow size control signal, a highlight window location control signal, and a video data parameter control signal (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window),*

wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises: adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal (2: 44-55).

As for **dependent claim 25**, Dias suggests a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal (Figure 4).*

As for **dependent claim 26**, Dias suggests a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).*

As for **dependent claim 28**, Dias-Matthews suggests a method of claim 28, *The method of claim 1, wherein when the user changes the highlighted window size using the remote control, a start location and an end location of the highlight window are recognized so that a center point of the highlight window is calculated and a changed highlight window is generated with reference to the calculated center point (Matthews, Col. 11, lines 28-41).*

As for **dependent claim 29**, Dias-Matthews suggests a method of claim 29. *The apparatus of claim 6, wherein when the user changes the highlighted window size using the remote control, the control unit recognizes a start location and an end location of the highlight window so that the control unit calculates a center point of the highlight window and generates a changed highlight window with reference to the calculated center point (Matthews, Col. 11, lines 28-41).*

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

The Examiner notes MPEP § 2144.01, that quotes *In re Preda*, 401 F.2d 825,159 USPQ 342, 344 (CCPA 1968) as stating “in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” Further MPEP 2123, states that “a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

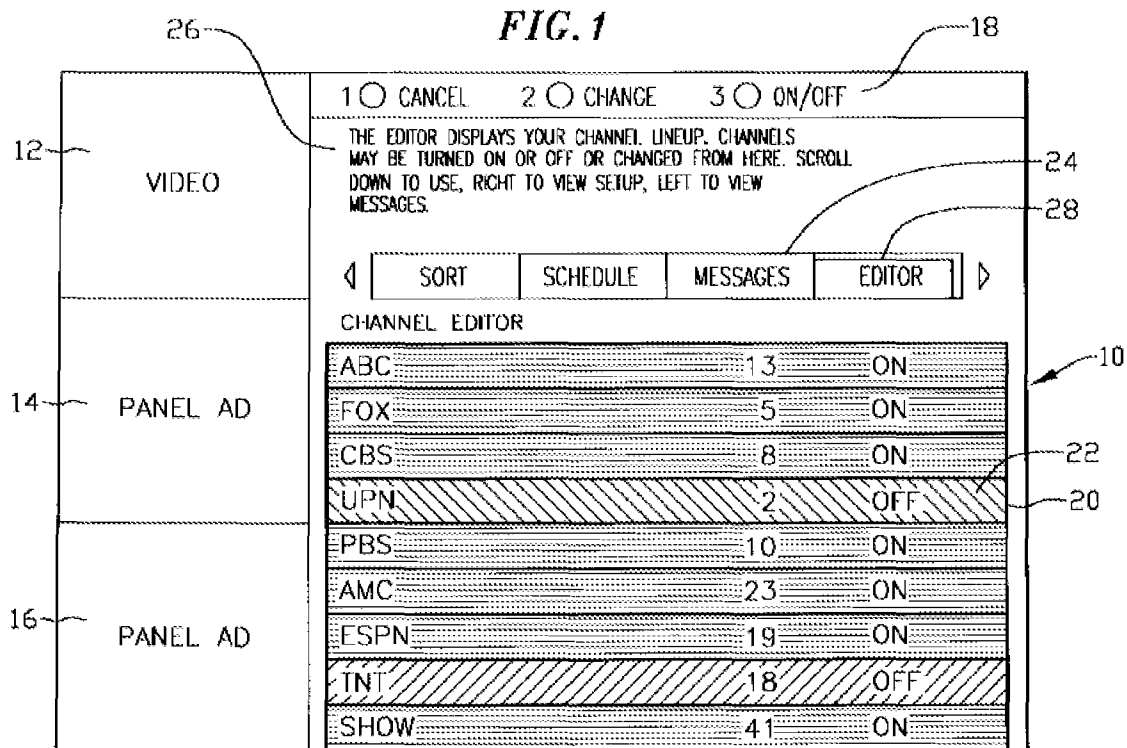
Response to Arguments

7. Applicant's arguments filed 11/15/2007 have been fully considered but they are not persuasive. The Office refers applicants to MPEP 2123 and the last Office Action mailed on 07/16/07 pg 8, where the Office Action states the entire reference is cited and specific cited sections of the reference are not limiting in any way. Any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In *re Heck*, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968).

8. Applicant argues *Dias* fail to even describe “generating a predetermined form of highlight window on a screen.” let along all of the above-recited features of claim 1 as amended (Applicant's Remarks Pg. 7).

The Office respectfully disagrees.

9. *Dias* shows a method of setting a highlight window using a remote controller. In Column 2, lines 23-29, *Dias* shows that one of the functions of menu bar area is highlighted by a cursor The user controls the cursor by using the remote controller. Fig. 1 shows the predetermined form of highlight window on a screen as shown below:



Applicant further argues that the last office action does not teach all the recited features of claim 1. It is noted that Dias in combination of Matthews teaches all the limitations of claim 1 including the amended limitations and also the following limitation *generating a predetermined form of highlight window on a screen according to highlight window setting values when the decoded remote control signals are highlight function codes*. See Pgs. 2 and 3 above.

10. Applicant argues Matthews fails to describe altering the menu size using decoded remote control signals (Applicant's Remarks Pg. 8).

The Office respectfully disagrees.

11. Dias shows a method of setting a highlight window using a remote controller. Matthews teaches a remote controller used for altering the menu size in Column 8, lines 1-15 and Column 11, lines 28-41. Matthews clearly shows that the use change the menu size, Column 11 lines 28-41 discloses: *the use can decide how big on the screen the menu should be....Two variables can by provided to the user to permit control over menu size*. From the evidence set forth above, Dias in combination with Matthews shows and suggests the limitation stated above.

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12. Applicant argues Dias *fails to illustrate a remote control having decided function buttons at all, let alone those buttons included in the above-recited claim language* (Applicant's Remarks, Pg. 8).

The Office respectfully disagrees.

13. Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller. Dias further shows *wherein the remote controller includes a highlight function on/off button (2:23-32), and a highlight window location change button to generate the functional codes having the highlight data (2:23-32, 3:45-52)*. While Dias shows a method of setting a highlight window using a remote controller, Dias does not specifically shows (1) *a highlight window size change button*. However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews show the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), rendering the limitations (1) *a highlight window size change button*. The motivation to combine is to allow the user to change the size of the display objects. From the evidence set forth above Dias in combination with Matthews shows and suggests all the limitations of claim 6 including:

wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data and wherein a window size is changeable by a user

14. The Applicant argues Dias *no where do Fig. 3 or the cited text illustrate or describe all the features recited above such as "a highlight window location change button"*. *Matthews fails to suggest or disclose a remote control having all of the above-recited features* (Applicant's Remarks, Pg. 9).

The Office respectfully disagrees.

Dias in combination with Matthews shows and suggests all the limitations of claim 6. See the rationale stated above and Pg. 4 of this office action.

Conclusion

15. **THIS ACTION IS MADE FINAL.** 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 mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

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A handwritten signature in black ink, appearing to read "David Phantana-angkool". The signature is stylized and somewhat cursive.

/David Phantana-angkool/
Examiner, Art Unit 2179

/Weilun Lo/
Supervisory Patent Examiner, Art Unit 2179

Search Notes



Application/Control No.		Applicant(s)/Patent under Reexamination	
10/396,439		HEO, JAE-CHEOL	
Examiner		Art Unit	
David Phantana-angkool		2179	

SEARCHED			
Class	Subclass	Date	Examiner
715	767	2/15/2008	DP

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
EAST-(see attached)	2/15/2008	DP

Application Number



Application/Control No.

10/396,439

Applicant(s)/Patent under Reexamination


HEO, JAE-CHEOL

Examiner

David Phantana-angkool

Art Unit

2179

Index of Claims 	Application/Control No. 10396439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL
	Examiner David Phantana-angkool	Art Unit 2179

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE								
Final	Original	02/15/2008								
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EAST Search History

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L52	42	L50 and L48	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L53	947	L50 and L44	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L54	4	L53 and L48	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L56	3	((("6772433") or ("6898765") or ("6122011")).PN.	USPAT; USOCR	OR	OFF	2008/02/15 17:01
L57	2935	fujita and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L58	1575	"5598"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L59	251923	L57 an d9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L67	0	L64 and L65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L71	256353	user adj interface	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L80	0	L79 and "22087"	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/15 17:01
L81	1	L79 and "2001"	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/15 17:01
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L87	71	bubal	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L92	2	"20010022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L93	1	"200122087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L94	0	"2001-22087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01

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L96	3	"29958" and korea	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L97	6	"0022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L98	4	"2001097749"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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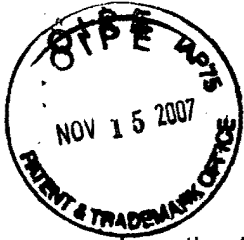
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L109	273581	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L110	273581	L109	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L111	42	L109 and L107	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L112	947	L109 and L103	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L113	4	L112 and L107	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L115	3	((("6772433") or ("6898765") or ("6122011")).PN.	USPAT; USOCR	OR	OFF	2008/02/15 17:01

L116	2935	fujita and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L117	1575	"5598"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L118	251923	L116 an d9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L119	231968	L116 an L117	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L120	1	L116 and L117	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
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L122	2	"09961465"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/02/15 17:01
L123	26	("20020080170" "20020163545" "20030001900" "20030081013" "5794237" "5855015" "5886698" "5930501" "5982369" "6006222" "6012053" "6014665" "6070176" "6078916" "6119114" "6134566" "6160554" "6182068" "6240408" "6271840" "6405192" "6606101" "6683633" "6724406"). PN. OR ("7047502").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/15 17:01
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L126	1	("5307036").PN.	USPAT; USOCR	OR	OFF	2008/02/15 17:01
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L128	61	("4464652" "4587520" "4591840" "4772882" "4896291" "5165012" "Re32633").PN. OR ("5307086").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/15 17:01
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2/ 15/ 2008 5:37:34 PM

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(highlight window remote EPG).wsp



Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana ANGKOOL

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action mailed July 16, 2007, and having a period for response set to expire on October 16, 2007. A Petition for a one (1) month extension of time, together with the requisite fee for same, is submitted herewith, thereby extending the period for response to November 16, 2007.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

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IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 6, 8, 19 and 24 and ADD new claims 28 and 29, in accordance with the following:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:

receiving remote control signals for setting highlight windows from a remote controller having a highlight selection function;

decoding the remote control signals received from the remote controller;

generating a predetermined form of highlight window on a screen according to highlight window setting values when the decoded remote control signals are highlight function codes; ~~and~~

~~controlling a video parameter of compensating~~ video signals displayed in the generated highlight window with predetermined video parameters;

checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and

displaying an initially set highlight window when the highlight function is in an off state;

wherein a highlighted window size is variable by a-highlight window setting values input by a user.

2. (CANCELED)

3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:

size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:

controlling an offset and a gain of video signals.

5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight window comprises:

generating more than one window.

6. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

a remote control sensor detecting wirelessly transferred functional codes for setting highlight windows, which are generated from the remote controller;

a control unit checking highlight window setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;

an image process unit generating a predetermined form of highlight window on a screen corresponding to the highlight window setting values, receiving video data from an external source, and decoding the video data; and

a highlight signal change unit ~~controlling a parameter of the compensating the video data included in the window and generated by the image process unit~~ with predetermined video parameters;

wherein the remote controller ~~comprises~~ includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data;

and wherein ~~the~~ a window size is changeable by a user.

7. (CANCELED)

8. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a predetermined form of a highlight window on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight window functional code;

wherein the wirelessly transferred highlight window functional code generated from the remote controller comprises:

one of a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

9. (CANCELED)

10. (PREVIOUSLY PRESENTED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen.

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (PREVIOUSLY PRESENTED) The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;
wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

14. (CANCELED)

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:

a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (ORIGINAL) The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

19. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller, and generating a predetermined form of highlight window having a boundary line included in the screen and displayed on the screen according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:
receiving -a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20-23. (CANCELED)

24. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code for setting highlight windows generated from the remote controller; and

generating a predetermined form of highlight window on a screen and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal,

wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:

adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.

25. (PREVIOUSLY PRESENTED) The method of claim 24, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CANCELED)

28. (NEW) The method of claim 1, wherein when the user changes the highlighted window size using the remote control, a start location and an end location of the highlight window are recognized so that a center point of the highlight window is calculated and a changed highlight window is generated with reference to the calculated center point.

29. (NEW) The apparatus of claim 6, wherein when the user changes the highlighted window size using the remote control, the control unit recognizes a start location and an end location of the highlight window so that the control unit calculates a center point of the highlight window and generates a changed highlight window with reference to the calculated center point.

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 6, 8, 19 and 24 have been amended and new claims 28 and 29 have been added. Support for the amendments and new claims may be found at least at paragraphs [0015] and [0027] and therefore no new matter has been added.

Claims 1, 3-6, 8, 10-13, 15-19, 24-26, 28 and 29 are pending and under consideration. Claims 1, 6, 8, 19 and 24 are independent claims. Reconsideration is respectfully requested.

REJECTIONS UNDER 35 USC 103:

Claims 1, 3-6, 8, 10-13, 15-19, and 24-26 stand rejected under 35 U. S. C. 103(a) as being unpatentable over U.S. Patent No. 6,122,011 to Dias et al. ("Dias") in view of U.S. Patent No. 6,577,679 to Matthews et al. ("Matthews"). The rejections are respectfully traversed for at least the following reasons.

Amended independent claim 1 recites at least the following:

generating a predetermined form of highlight window on a screen according to highlight window setting values when the decoded remote control signals are highlight function codes;

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least all of the above-recited features.

Broadly, Dias is directed to a program for facilitating the creation of a channel map using a picture-in-picture display. The program may be implemented using the up/down and right/left arrow keys of a conventional television remote control to select one of the functions of menu bar area 24 using a cursor 28 (FIG. 1 and col. 2, lines 23-29). More specifically, FIG. 2 illustrates that menu bar area 24 provides several selectable functions including SORT, SCHEDULE, MESSAGES and EDITOR. Additional selectable functions may be available off-screen. The outwardly pointing arrows indicate that the off-screen functions may be selected and displayed by moving the arrow keys to the right or left (col. 2, lines 23-29). Consequently, the cited portions of Dias fail to even describe "generating a predetermined form of highlight window on a screen," let alone all of the above-recited features of claim 1 as amended.

Matthews is directed to an operating environment for controlling a computer using a standard remote control typically used with televisions (col. 7, lines 57-59 and FIG. 4). The

Office Action asserts that "Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41." Applicants respectfully disagree with this assertion. In fact, the cited portion of Matthews states that the user can determine how big on the screen the menus can be, but fails to describe altering the menu size using decoded remote control signals. However, even assuming for the sake of argument that the assertion in the Office Action is accurate, Matthews still fails to suggest or disclose all of the above-recited features. Consequently, Matthews fails to compensate for the noted deficiencies of Dias.

Accordingly, Applicants respectfully submit that amended independent claim 1 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons. Since similar features recited by each of the independent claims 6, 8, 19, and 24, with potentially differing scope and breadth, are not taught or disclosed by Dias and Matthews, the rejection should be withdrawn and claims 6, 8, 19 and 24 also allowed.

Further, Applicants respectfully submit that claims 3-5, 10-13, 15-18, 25 and 26, which variously depend from independent claims 1, 6, 8, 19 and 24, should be allowable for at least the same reasons as claims 1, 6, 8, 19 and 24, as well as for the additional features recited therein.

Amended independent claim 6 recites at least the following:

wherein the remote controller includes a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data and wherein a window size is changeable by a user.

Dias and Matthews, taken separately or in combination, fail to suggest or disclose at least the above-recited features.

The current Office Action asserts that Dias describes the above-identified features at col. 2, lines 23-32 and col. 3, lines 45-52. Applicants respectfully disagree with this assertion.

Dias illustrates at FIG. 2 a program displaying on a screen a menu bar area 24 that provides several selectable commands including SORT, SCHEDULE, MESSAGES and EDITOR. The commands are selected using the up/down and right/left arrow keys of a conventional television remote. None of the described commands correspond to those specific functions recited in the claim language above, nor are the commands generated using dedicated remote control function buttons. Consequently, the first cited portion of Dias fails to illustrate a remote control having dedicated function buttons at all, let alone those buttons included in the above-recited claim language.

The second portion of Dias cited in the Office Action describes using a GUIDE/TV button 1312 to switch the program display from the PIP area to the entire television screen. FIG. 3 illustrates a remote control having several additional dedicated buttons including an INFO button and a VCR PLUS™ button. However, nowhere do FIG. 3 or the cited text illustrate or describe all of the features recited above such as “a highlight window location change button.”

As asserted above, the remote control illustrated and described in Matthews is a standard remote control typically used with televisions (col. 7, lines 57-59 and FIG. 4). Thus, the remote control described in Matthews includes buttons having single numerical digits, arrows and START and MENU buttons, but Matthews fails to suggest or disclose a remote control having all of the above-recited features.

Accordingly, Applicants respectfully submit that amended independent claim 6 patentably distinguishes over Dias and Matthews, and should be allowable for at least the above-mentioned reasons.

NEW CLAIMS:

New claims 28 and 29 have been added. New claim 28 is directed to a method wherein ... “a changed highlight window is generated with reference to the calculated center point.” Therefore, it is submitted that claim 28 patentably distinguishes over the prior art. Similar features are recited by new claim 29, with potentially differing scope and breadth, and therefore claim 29 also patentably distinguishes over the prior art.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

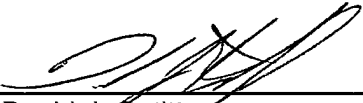
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Nov. 15, 2007

By: 

David J. Cutitta
Registration No. 52,790

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501



[Handwritten initials]

S&H Form: (02/05)

REPLY/AMENDMENT FEE TRANSMITTAL	Attorney Docket No.	1293.1675
	Application Number	10/396,439
	Filing Date	March 26, 2003
	First Named Inventor	Jae-cheol HEO
	Group Art Unit	2179
AMOUNT ENCLOSED	120.00	Examiner Name David Phantana ANGKOOL

FEE CALCULATION (fees effective 12/08/04)

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS	20	- 27 =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS	5	- 7 =	0	X \$ 200.00 =	0.00
Since an Official Action set an <u>original</u> due date of <u>October 16, 2007</u> , petition is hereby made for an extension to cover the date this reply is filed for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$450)); (3 months (\$1,020)); (4 months (\$1,590)); (5 months (\$2,160));					120.00
If Notice of Appeal is enclosed, add (\$500.00)					
If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)					
Information Disclosure Statement (Rule 1.17(p)) (\$180.00)					
Total of above Calculations =					\$ 120.00
Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)					
TOTAL FEES DUE =					\$ 120.00

- (1) If entry (1) is less than entry (2), entry (3) is "0".
- (2) If entry (2) is less than 20, change entry (2) to "20".
- (4) If entry (4) is less than entry (5), entry (6) is "0".
- (5) If entry (5) is less than 3, change entry (5) to "3".

METHOD OF PAYMENT

- Check enclosed as payment.
- Charge "TOTAL FEES DUE" to the Deposit Account No. below.
- No payment is enclosed.

GENERAL AUTHORIZATION

- If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:
 Deposit Account No. 19-3935
 Deposit Account Name STAAS & HALSEY LLP
- The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC § 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	David J. Cutitta	Reg. No.	52,790
Signature		Date	November 15, 2007

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/396,439	Filing Date 03/26/2003	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT	11/15/2007	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 20	Minus	** 23 = 0	X \$ =		OR	X \$50=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 5	Minus	***7 = 0	X \$ =		OR	X \$210=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	** =	X \$ =		OR	X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	*** =	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
 Brenda Hines

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jac-cheol Heo	1293.1675	8005

21171 7590 07/16/2007
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

PHANTANA ANGKOOL, DAVID

ART UNIT	PAPER NUMBER
2179	

MAIL DATE	DELIVERY MODE
07/16/2007	PAPER

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.

Office Action Summary	Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2179	

-- 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 24 April 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1,3-6,8,10-13,15-19 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-6,8, 10-13,15-19 and 24-26 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) 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).
- 11) 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

- 12) 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) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed on 04/24/2007.
2. Applicant amended claims 1, 6, 8, 19, 24, and 25.
3. Applicant canceled claims 2, 7, 9, 23.
4. Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, and 24 – 26 are still pending.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/24/07 has been entered.

Claim Rejections - 35 USC § 103

6. 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.

7. **Claims 1, 3 – 6, 8, 10 – 13, 15 – 19, and 24 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable by Dias et al., US# 6,122,011 (hereinafter Dias) in view of Matthews et al., US# 6,898,765 B2 (hereinafter Matthews).**

In regard to **independent claim 1**, Dias shows a method of setting a highlight window in an image reproducing system, the method comprising:

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- *receiving remote control signals from a remote controller having a highlight selection function* (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);
- *decoding the remote control signals received from the remote controller; generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes* (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);
- *controlling a video parameter of video signals displayed in the generated highlight window* (Column 2: 44-68, Dias shows the user can change the video area (Fig. 1 # 12) displayed in the generated highlight window).
- *checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state* (Column 2, lines 23-26. Dias shows a visual distinction from an ON state to an OFF state. Dias method and apparatus further shows a user interface displaying the status of the highlight window in Figure 1).

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically show wherein a highlighted window size is variable by a highlight setting values input by a user.

However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews shows the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.

As for dependent claim 3, Dias suggests a method wherein the highlight window setting values comprises: *size and location values* (Figure 1).

As for dependent claim 4, Dias suggests a method wherein the controlling of the video parameter

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comprises: *controlling an offset and a gain of video signals* (Column 2, lines 44-55. Dias further shows the real time telecast television program is displayed in video area 12. This display (video area 12) appears as a PIP window generated by a PIP chip. As the microprocessor changes the television tuner, it also changes the program displayed in the video area 12 to reflect the local channel number to which the tuner is set. These changes are in response to the user input, via the remote control, as the user selects the desired operation (Dias, 2:49-63).

As for dependent claim 5, Dias suggests a method wherein the generating of the highlight window comprises: *generating more than one window* (Figure 1).

As for independent claim 6:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller* (Column 3, lines 24-26);
- *a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (Column 3, lines 24-41);
- *an image process unit generating a window corresponding to the highlight setting values, receiving video data from an external source, and decoding the video data; and a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit* (Figure 4, Column 3, lines 65 to Column 4, lines 35, Dias shows receiving a video signal from an external source (Fig. 7# 1272) and controlling the parameter of the video through an overlay window, see cited figure).
- *wherein the remote controller comprises a highlight function on/off button (2:23-32), a highlight window size change button (3:45-52), and a highlight window location change button to generate the functional codes having the highlight data (2:23-32, 3:45-52).*

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically show wherein the window size is changeable by a user. However in the same field of invention

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Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews shows the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.

As for independent claim 8:

Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data (Figure 4) representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- *wherein the wirelessly transferred highlight functional code generated from the remote controller comprises: one of a highlight window location control signal, and a video data parameter control signal (2:23-32, 3:45-52).*

Dias shows a method of setting a highlight window using a remote controller. Dias does not specifically shows a *highlight window size control signal*. However in the same field of invention Matthews shows a user changing the size of the menu by using the remote controller in Col. 11, lines 28-41. The user selects the variable menu size by using the remote controller (11, 28-41). Both Dias and Matthews shows the user highlights the menu using the remote controller. Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of selecting highlight windows as shown by Dias to incorporate changing the size of the menu using the remote controller as taught by Matthews (11, 28-41), thus allowing the user to change the size of the display objects.

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As for **dependent claim 10**, Dias shows an *apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the main body unit adjusts one of a location and a size of the highlight window with respect to the screen* (Figure 7# 1280, 4:1-35).

As for **dependent claim 11**, Dias shows an *apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window* (2: 44-68).

As for **dependent claim 12**, Dias shows an apparatus wherein the main body unit comprises: a *remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller* (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function, where the cursor highlights the selection); a *control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image process unit generating the highlight window according to the highlight setting value* (Figure 3, Column 3, lines 24-41).

As for **dependent claim 13**, Dias shows an apparatus of claim 12, wherein the main body unit further comprises: a *highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window; wherein the parameter of the video data comprises: at least one of an offset and a gain of the video data to emphasize the image included in the highlight window* (Column 2: 23-32 and 44-68, 3:45-52; Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).

As for **dependent claim 15**, Dias shows an *apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data* (Figure 4, 2: 44-68).

As for **dependent claim 16**, Dias shows an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: a *panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel* (Figure 7# 1296, converts RGB signal for display unit).

As for **dependent claim 17**, Dias shows an *apparatus of claim 13, wherein the image reproducing system*

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is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen (Figure 7# 1280, 4:1-35).

As for **dependent claim 18**, Dias shows an apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).

In regard to **independent claim 19**, Dias shows an apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

- a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed (Figure 4) on the screen according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);
- wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight window size control signal (2: 23-32, 3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).

As for **dependent claim 24**:

Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

- receiving a wirelessly transferred highlight functional code generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);
- generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code comprises (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);
- receiving one of a highlight on/off signal, a highlight widow size control signal, a highlight window location control signal, and a video data parameter control signal (Column 2: 44-68, Dias shows

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the user can change the video area (Fig.1 # 12) displayed in the generated highlight window), wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises: adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal (2: 44-55).

As for **dependent claim 25**, Dias suggests a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal* (Figure 4).

As for **dependent claim 26**, Dias suggests a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen* (see highlight window in Figure 4).

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

The Examiner notes MPEP § 2144.01, that quotes *In re Preda*, 401 F.2d 825, 159 USPQ 342, 344 (CCPA 1968) as stating "in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." Further MPEP 2123, states that "a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

Response to Arguments

Art Unit: 2179

8. Applicant's arguments with respect to claims 1, 3, 4, 6, 8, 10, and 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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).

DP



WEILUN LO
SUPERVISORY PATENT EXAMINER

Index of Claims



Application/Control No.

10/396,439

Examiner

David Phantana-angkool

Applicant(s)/Patent under Reexamination

HEO, JAE-CHEOL

Art Unit

2179

✓	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date	
Final	Original		
	1	01/2/04	
	2	12/11/06	
	3	05/11/07	
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Search Notes



Application/Control No.

10/396,439

Applicant(s)/Patent under Reexamination

HEO, JAE-CHEOL

Examiner

David Phantana-angkool

Art Unit

2179

SEARCHED

Class	Subclass	Date	Examiner
715	767	6/29/2007	DP

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
EAST-(see attached)	6/29/2007	DP

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

EAST Search History

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EAST Search History

L31	2	"200122087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L32	0	"2001-22087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L33	1	"22087" and korea	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L34	3	"29958" and korea	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L35	62	"0022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L36	3	"2001097749"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L37	3	"2002022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L38	3	"2001022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L39	191	715/767.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L40	99	L39 and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12

EAST Search History

L41	4727	highlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L42	13	L41 and L39	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L43	6	L42 and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L44	0	345/767.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L45	207	345/767	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L46	1030255	remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L47	258676	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L48	258676	L47	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L49	41	L47 and L45	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L50	858	L47 and L41	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12

EAST Search History

L51	4	L50 and L45	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L52	1	("7027042").PN.	USPAT; USOCR	OR	OFF	2007/06/29 19:12
L53	3	((("6772433") or ("6898765") or ("6122011"))).PN.	USPAT; USOCR	OR	OFF	2007/06/29 19:12
L54	2604	fujita and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L55	1110	"5598"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L56	247555	L54 an d9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L57	227842	L54 an L55	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L58	1	L54 and L55	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/29 19:12
L59	1	("5598523").PN.	USPAT; USOCR	OR	OFF	2007/06/29 19:12

RCE & EPW



REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

(INCLUDING FILING FEE AND/OR PETITION FOR
EXTENSION OF TIME FEE)

*Subsection (b) of 35 U.S.C. §132, effective May 29, 2000
provides for continued examination of a utility or plant application
filed on or after June 8, 1995.
See The American Inventors Protection Act of 1999 (AIPA)*

To: Commissioner for Patents Box RCE PO Box 1450 Alexandria, VA 22313-1450	Attorney Docket No.: 1293.1675
---	---------------------------------------

First Named Inventor	Jae-cheol HEO		
Application No.	10/396,439	Group Art Unit	2179
Filing Date	March 26, 2003	Examiner	David Phantana Angkool
CPA Filing Date		Confirmation No	8005
Title of Invention	METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING REMOTE CONTROLLER		

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application.

1. **Submission required under 37 C.F.R. §1.114 (Box a or b must be completed)**



- a. Previously submitted
 - i. Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on March 19, 2007
(Any unentered amendment(s) referred to above will be entered).
 - ii. Consider the arguments in the Appeal Brief or Reply Brief previously filed on ___
 - iii. Other
- b. Enclosed
 - i. Amendment/Reply
 - ii. Affidavit(s)/Declaration(s)
 - iii. Information Disclosure Statement (IDS)
 - iv. Other

2. **Miscellaneous**

- a. Suspension of action on the above-identified application is requested under 37 C.F.R. §103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. §1.17(i) required).
- b. Other

04/25/2007 SZEWDIE1 00000033 10396439

01 FC:1801	790.00 OP
02 FC:1251	120.00 OP

		BASIC FEE		\$ 790.00
Since an Official Action set an <u>original</u> due date of <u>March 26, 2007</u> , petition is hereby made for an extension of time to cover the date this RCE is filed, for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$450)); (3 months (\$1,020)); (4 months (\$1,590)); (5 months (\$2,160)):			120	
Suspension Fee (\$130.00)				
Total of above Calculations =			\$ 910.00	
Reduction by 50% for filing by small entity (Note 37 C.F.R. 1.9, 1.27, 1.28).				
TOTAL FEES DUE =			\$ 910.00	
4. <input type="checkbox"/> Small entity status: a. <input type="checkbox"/> Verified Statement Claiming Small Entity Status. b. <input type="checkbox"/> A Verified Statement Claiming Small Entity Status was previously filed and such status is still proper and desired. c. <input type="checkbox"/> is no longer claimed. 5. <input type="checkbox"/> Other:				
6. METHOD OF PAYMENT				
<input checked="" type="checkbox"/> A check in the amount of \$ <u>\$910.00</u> is enclosed. <input type="checkbox"/> Charge "TOTAL FEES DUE" to Deposit Account No. 19-3935. (A duplicate copy of this form is enclosed.)				
7. GENERAL AUTHORIZATION				
<input checked="" type="checkbox"/> The Commissioner is hereby authorized to credit any overpayment or charge any additional fees under 37 C.F.R. 1.16 (filing fees) or 37 C.F.R. 1.17 (processing fees) during the prosecution of this application and of any related application(s) claiming benefit hereof pursuant to 35 U.S.C. §120 to maintain pendency hereof and of any such related application to: Deposit Account No. 19-3935.				
8. CORRESPONDENCE ADDRESS				
STAAS & HALSEY LLP  21171 PATENT TRADEMARK OFFICE				
9. SIGNATURE OF ATTORNEY OR AGENT REQUIRED				
NAME	Gene M. Garner, II	REGISTRATION NO.	34,172	
SIGNATURE		DATE	April 24, 2007	



RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2173
Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana Angkool

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT AFTER FINAL REJECTION

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Attention: **BOX AF**

Sir:

This is in response to the Office Action mailed December 26, 2006, and having a period for response set to expire on March 26, 2007.

Reconsideration of the claims is respectfully requested. The following remarks are respectfully submitted.

*SC
entered
with
the
RCE
4-24-07*



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1480
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005
21171	7590	03/30/2007	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHANTANA ANGKOOL, DAVID	
			ART UNIT	PAPER NUMBER
			2179	
			MAIL DATE	DELIVERY MODE
			03/30/2007	PAPER

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

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2179	

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

THE REPLY FILED 19 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) The period for reply expires 3 months from the mailing date of the final rejection.
b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) They raise new issues that would require further consideration and/or search (see NOTE below);
(b) They raise the issue of new matter (see NOTE below);
(c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. Applicant's reply has overcome the following rejection(s): _____.
6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____
Claim(s) objected to: _____
Claim(s) rejected: 1,3-6,8,10-22 and 24-27.
Claim(s) withdrawn from consideration: _____

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____
12. Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. Other: _____



**WEILUN LO
SUPERVISORY PATENT EXAMINER**

Continuation of 3. NOTE: The proposed amendment has been carefully reviewed and are considered to raise new issues. Amended claim 1 further recites "wherein a highlighted window size is variable by a highlight setting values input by a user"

Amended claim 6 further recites "wherein the window size is changeable by a user".

Amended claim 24 further recites "A method setting a highlight window...video data parameter control signal" and considered to raise new issues with respect to some of the dependent claims.

The proposed amendment requires further searching and reconsideration by the Examiner, therefore the amendment will not be entered.



RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2173
Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana Angkool

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT AFTER FINAL REJECTION

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Attention: **BOX AF**

Sir:

This is in response to the Office Action mailed December 26, 2006, and having a period for response set to expire on March 26, 2007.

Reconsideration of the claims is respectfully requested. The following remarks are respectfully submitted.



AE

S&H Form: (02/05)

REPLY/AMENDMENT FEE TRANSMITTAL	Attorney Docket No.	1293.1675
	Application Number	10/396,439
	Filing Date	March 26, 2003
	First Named Inventor	Jae-cheol HEO
	Group Art Unit	2179
AMOUNT ENCLOSED	0.00	Examiner Name David Phantana Angkool

FEE CALCULATION (fees effective 12/08/04)

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS	18	- 27 =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS	5	- 7 =	0	X \$ 200.00 =	0.00
Since an Official Action set an <u>original</u> due date of <u>March 26, 2007</u> , petition is hereby made for an extension to cover the date this reply is filed for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$450)); (3 months (\$1,020)); (4 months					
If Notice of Appeal is enclosed, add (\$500.00)					
If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)					
Information Disclosure Statement (Rule 1.17(p)) (\$180.00)					
Total of above Calculations =					\$ 0.00
Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)					
TOTAL FEES DUE =					\$ 0.00

- (1) If entry (1) is less than entry (2), entry (3) is "0".
- (2) If entry (2) is less than 20, change entry (2) to "20".
- (4) If entry (4) is less than entry (5), entry (6) is "0".
- (5) If entry (5) is less than 3, change entry (5) to "3".

METHOD OF PAYMENT

- Check enclosed as payment.
- Charge "TOTAL FEES DUE" to the Deposit Account No. below.
- No payment is enclosed.

GENERAL AUTHORIZATION

- If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:

Deposit Account No.	19-3935
Deposit Account Name	STAAS & HALSEY LLP
- The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC § 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	Gene M. Garner, II	Reg. No.	34,172
Signature		Date	March 19, 2007

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RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2173
Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2179

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana Angkool

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT AFTER FINAL REJECTION

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Attention: **BOX AF**

Sir:

This is in response to the Office Action mailed December 26, 2006, and having a period for response set to expire on March 26, 2007.

Reconsideration of the claims is respectfully requested. The following remarks are respectfully submitted.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1,6, 8, 13, 19, 24, and 25 and CANCEL claims 14, 20-22, and 27 in accordance with the following:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:
receiving remote control signals from a remote controller having a highlight selection function;
decoding the remote control signals received from the remote controller;
generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes; and
controlling a video parameter of video signals displayed in the generated highlight window;
checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and
displaying an initially set highlight window when the highlight function is in an off state;
wherein a highlighted window size is variable by a highlight setting values input by a user.

2. (CANCELED)

3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:
size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:
controlling an offset and a gain of video signals.

5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight window comprises:

generating more than one window.

6. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller;

a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;

an image process unit generating a window corresponding to the highlight setting values, receiving video data from an external source, and decoding the video data; and

a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit;

wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data;

wherein the window size is changeable by a user.

7. (CANCELED)

8. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code;

wherein the wirelessly transferred highlight functional code generated from the remote controller comprises:

one of a ~~highlight on/off signal~~, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

9. (CANCELED)

10. (PREVIOUSLY PRESENTED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen.

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (CURRENTLY AMENDED) The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window;
wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

14. (CANCELED)

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:
a panel driving unit converting the adjusted video data into a low voltage differential signal

to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (ORIGINAL) The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

19. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary line included in the screen and displayed on the screen according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20-23. (CANCELED)

24. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code generated from the remote controller; and

generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal~~The method of claim 22,~~

wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:

adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.

25. (CURRENTLY AMENDED) The method of claim ~~24~~2, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CANCELED)

REMARKS

In accordance with the foregoing, claims 1, 6, 8, 13, 19, 24, and 25 have been amended. Claim 14, 20-22, and 27 have been canceled. Claims 6-19 are pending and under consideration.

Claims 1, 3-6, 8, 10-22, 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dias et al. (US Patent No. 6,122,011).

Claim 1 has been amended to clarifying of the present application.

The Office Action sets forth that Dias et al. discloses "controlling a video parameter of video signals displayed in the generated highlight window (Column 2: 44-68, Dais shows the user can change the video area (Fig. 1 # 12) displayed in the generated highlight window)

By way of review, Dias et al. discloses "In FIG. 1 a monitor screen 10 is shown in the format of provisional Application No. 60/053,330 with several minor modifications. Screen 10 is divided into a number of different display areas. A real time telecast television program is displayed in a video area 12. This display preferably appears as a PIP window generated by a conventional PIP chip. As the microprocessor (not shown) changes the television tuner (not shown), it also changes the program displayed in video area 12 to reflect the local channel number to which the tuner is set. Panel ad areas 14 and 16, which do not play a direct roll in the practice of the invention, lie below video area 12."(col. 1, line 66 through col. 2, line 23)

As explained above, Dias et al. can change a program displayed in video area by changing a channel number to which a tuner is set but fails to disclose "generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes; and controlling a video parameter of video signals displayed in the generated highlight window; wherein a highlighted window size is variable by a highlight setting values input by a user" as recited in claim 1.

Further, Dias et al. discloses "one of the functions of menu bar area 24 is highlighted by a cursor 28. The up/down and right/left arrow keys of a remote controller (not shown) are operated to move cursor 28 to select one of the functions of menu bar area 24."(col. 2, lines 23-26) However it is unclear how the Examiner alleges that this shows displaying an initially set highlight window when the highlight function is in an off state"(emphasis added) as recited in claim 1. In stead, in Dias et al. merely discloses how to select one of the functions of menu bar moving a cursor by a user.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 1.

In addition, claim 3 is deemed to patentable due at least to their depending from claim 1, as well as for the additional features recited therein.

Regarding claim 4, the Office Action sets forth that Dias et al. discloses "wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals"(col. 2, lines 44-55)

By way of review, Dias et al. discloses "By scrolling through area 20 with cursor 22 other channel lines containing network name-local channel number pairs can be displayed. Prompts for operating the EDITOR function are displayed in detail area 26. The prompts in banner area 18 and detail area 26 appear only after a channel line in area 20 is highlighted. The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number "3" on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor 22, the number "2" on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with the keypad. According to the invention, the tuner is also automatically set to the new local channel number and the program telecast on the new local channel number is displayed in video area 12. Thus, the user can confirm the correspondence between the new local channel number and the network channel name. The user can cancel all the changes made during the current session in the channel editor mode by pressing the number "1" on the keypad, as indicated by banner area 18. Alternatively, instead of number keys, the cancel, change, and on/off commands could be issued by colored keys on the remote controller that correspond to color coded circles in banner area 18."(col. 2, lines 44-55). As mentioned above, a user can change channel number by changing the channel and a program of the new channel number is displayed in video area 12. However, this operation does not mean "controlling an offset and a gain of video signals" as recited in claim 4.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 4.

In addition, claim 5 is deemed to patentable due at least its depending from claim 1, as well as for the additional recitations therein.

Regarding claim 6, the Office Action sets forth that Dias et al. discloses "the user may cursor up and down the program listings in area 1255 to select a particular program. In the program select ion mode, a user select a program by moving a cursor to the corresponding program listing in area 1255. Then the user again presses the GUIDE/TV button 1312 and the program display is switched from the PIP area 1252 to the entire television screen 1250 (4:45-52)."

Claim 6 has been amended to recite "wherein a highlighted window size is variable by a user."

By way of review, Dias et al. discloses "by selecting different program the different program is displayed in 1252 of FIG. 5 or entire television screen 1250 but the window size is a

predetermined size is displayed, for example, either size of 1252 or entire screen size. The sizes of window are not changed.

However, claim 6 recites “wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data; wherein a highlighted window size is variable by a user. (emphasis added)

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 6.

Regarding claim 8, the Office Action sets forth that Dias et al. discloses “one of a highlight on/off signal(2:23-32), a highlight window size control signal(3:45-52), a highlight window location control signal, and a video data parameter control signal. (2:23-32, 3:45-52)

By way of review, Dias et al. discloses “the user may cursor up and down the program listings in area 1255 to select a particular program. In the program selection mode, a user selects a program by moving a cursor to the corresponding program listing in area 1255. Then the user again presses the GUIDE/TV button 1312 and the program display is switched from the PIP area 1252 to the entire television screen 1250.” (col. 3, lines 45-53). As noted above, by selecting a program the program will be displayed in a PIP area or an entire television screen but window size is remained as the same size. As such, Dias et al. fails to disclose a highlight window size control signal.

Further, Dias et al. discloses “one of the functions of menu bar area 24 is highlighted by a cursor 28. The up/down and right/left arrow keys of a remote controller (not shown) are operated to move cursor 28 to select one of the functions of menu bar area 24. The outwardly pointing arrows indicate that more functions can be selected and displayed by moving the arrow keys to the right or left. If, as illustrated in FIG. 1, the EDITOR function is selected by cursor 28 and then an OK key on the remote controller is pressed, a channel map is displayed in area 20 and cursor 22 highlights one of the channel lines in area 20”(col. 2, lines 23-32), however the window location is remained the same. As such, Dias et al. fails to disclose “a highlight window location control signal” (emphasis added) as recited in claim 8.

Further, Dias et al. discloses “the user may cursor up and down the program listings in area 1255 to select a particular program. In the program selection mode, a user selects a program by moving a cursor to the corresponding program listing in area 1255. Then the user again presses the switched from the PIP area 1252 to the entire television screen 1250.”(col. 3, lines 45-53)

However, it is unclear how the Examiner considers this means “video data parameter control signal “ as recited in claim 8.

As such, it is respectfully submitted that Dias et al. does not disclosed the invention recited in claim 8.

In addition, claim 10 is deemed patentable due at least to its depending from claim 8, as well as for the additional features recited therein.

Regarding claim 11, the Office Action sets forth that Dias et al. discloses wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window(2:44-68)

By way of review, Dias et al. discloses “[b]y scrolling through area 20 with cursor 22 other channel lines containing network name-local channel number pairs can be displayed. Prompts for operating the EDITOR function are displayed in detail area 26. The prompts in banner area 18 and detail area 26 appear only after a channel line in area 20 is highlighted. The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number “3” on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor 22, the number “2” on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with the keypad. According to the invention, the tuner is also automatically set to the new local channel number and the program telecast on the new local channel number is displayed in video area 12. Thus, the user can confirm the correspondence between the new local channel number and the network channel name. The user can cancel all the changes made during the current session in the channel editor mode by pressing the number “1” on the keypad, as indicated by banner area 18. Alternatively, instead of number keys, the cancel, change, and on/off commands could be issued by colored keys on the remote controller that correspond to color coded circles in banner area 18.”(col. 2, lines 44-68) As explained above, Dias et al. discloses “a tuner is also automatically set to the new local channel number and the program telecast on the new local channel number is displayed in video area 12” but fails to disclose “wherein the main body unit adjusts the video data according to the adjustment of the one of the location of the location and size of the highlight window” as recited in claim 11.

Further, claim 12 is deemed patentable due at least to its dependency from claim 8, as well as for the additional features recited therein.

Regarding claim 13, the Office Action sets forth that Dias et al. discloses wherein the main body unit further comprises: a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window (col. 2: 44-68, Dias shows the user can change the video area (Fig. 1 # 12) displayed in the generated highlight window) Furthermore, the Office Action sets forth Dias et al. discloses "wherein the parameter of the video data comprises: at least one of an offset and a gain of the video data to emphasize the image included in the highlight window(2:44-55).

Claims 14 has been canceled and the canceled features are incorporated into claim 13.

By way of review, as explained above, Dias et al. discloses "a user can turn a channel highlight by a cursor and change a channel number to be displayed in video area", but fails to disclose "a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window; wherein the parameter of the video data comprises at least one of an offset and a gain of the video data to emphasize the image included in the highlight window" as recited in claim 13.

As such, it is respectfully submitted that Dias et al. does not disclose the invention as recited in claim 13.

Regarding claim 15, the Office Action sets forth that Dias et al. shows "wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data."(Figure 4, 2:44-68)

By way of review, Dias et al. discloses "according to the invention, the tuner is also automatically set to the new local number and the network channel name" (col. 2, lines 55-60). As noted above, Dias et al. merely displays what is set according to a user but does not adjust a image to be displayed in the highlight window.

Accordingly, it is respectfully submitted that Dias et al. fails to disclose "wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data" as recited in claim 15.

Regarding claim 16, the Office Action sets forth that Dias et al. shows "wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:

a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel."(Figure 7#1296, converts RGB signal for display unit)

By way of review, Dias et al. discloses "the user can enter a channel mapping mode by selecting CHOICE 1256 in area 1253 by pressing a corresponding color coded key on remote 1310, such as green button 1324, which will cause video processor 1296 (FIG. 7) to display on

television monitor 1280 (FIG. 7) mode selections (not shown), but fails to disclose "a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel" as recited in claim 16.

As such, it is respectfully submitted that Dias et al. fails to disclose the invention as recited in claim 16.

In addition, claims 17 and 18 are deemed to patentable due at least to their depending from claim 13, as well as for the additional features recited therein.

Regarding claim 19, the Office Action sets forth that Dias et al. discloses "a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed (figure 4) on the screen according to the wirelessly transferred highlight functional code (column 3, lines 24-41 and column 4, lines 1-35)"

Claim 19 has been amended to recite "a highlight window having a boundary line included in the screen" for clarifying the present invention.

By way of review, Figure 4 of Dias et al. does not shows a highlight window having a boundary line included in the screen but FIGS 3 and 4 of the present invention clearly shows a boundary line.

As such, it is respectfully submitted that Dias et al. does not disclosed the invention recited in claim 19.

Regarding claim 20, the Office Action sets forth that Dias et al. discloses "generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code" but fails to discloses "wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal" as recited in claim 20.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 20.

Claims 20 and 21 have been cancelled without prejudice or disclaimer.

Regarding claim 24, the Office Action sets forth that Dias et al. discloses "adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one the highlight window size control signal and the highlight window location control signal (2:44-55)

Claim 24 is amended to incorporate into canceled features of claim 22.

By way of review, Dias et al. discloses "The viewer input device 1288 preferably takes the form of a hand-held remote infrared (IR) transmitter which communicates with an infrared receiver connected to microprocessor 1284. As shown in FIG. 3, the remote 1310 has a housing on which a number of control buttons are mounted. A GUIDE/TV button 1312, an INFO button 1314, and a VCR PLUS+ button 1316 are located above up and down arrow buttons 1318 and 1320. A row of buttons 1322, 1324, 1326 and 1328 which are marked with the colors red (R), green (G), yellow (Y), and blue (B), respectively, underlie down arrow button 1320. Red, green, yellow, and blue prompts are displayed in area 1253 of the electronic guides. To select a prompt on the screen, the button of the IR transmitter having the corresponding color is pressed, i.e., to select the blue prompt on the screen, blue button 1328 is pressed"(col. 2, lines 3, lines 24-41) but fails to disclose "wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal" as recited in claim 24.

Further, Dias et al. discloses "[b]y scrolling through area 20 with cursor 22 other channel lines containing network name-local channel number pairs can be displayed. Prompts for operating the EDITOR function are displayed in detail area 26. The prompts in banner area 18 and detail area 26 appear only after a channel line in area 20 is highlighted. The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number "3" on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor 22, the number "2" on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with keypad." (col. 2, lines 44-55) As noted above, a user can turn a channel on or off and change a local channel number displayed in the channel but cannot adjust one of a location and size of a highlight window as recited in claim 24.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 24.

Regarding claim 25, the Office Action sets forth that figure 4 of Dias et al. discloses adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

By way of review, figure 4 of Dias et al. shows PROGRAM GUIDE/TV program screen but fails to disclose "adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal" as recited in claim 25(emphasis added).

As such, it is respectfully submitted that Dias et al. does not disclose the invention as recited in claim 24.

Claim 26 is deemed patentable due at least to their depending from claim 24, as well as for the additional features recited therein.

Claim 27 has been canceled without prejudice or disclaimer.

CONCLUSION:

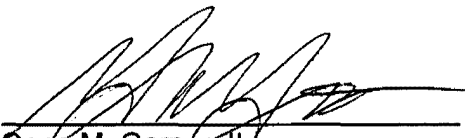
If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: March 19, 2007

By: 
Gene M. Garner, II
Registration No. 34,172

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10396439	Filing Date: 03/26/2003	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED - PART I			SMALL ENTITY <input type="checkbox"/> OR OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A		N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A		N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.18(j))	minus 20 =	-	X \$25 =		OR	X \$50 =
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	-	X \$100 =			X \$200 =
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			+ \$180			+ \$360
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		TOTAL	

APPLICATION AS AMENDED - PART II					SMALL ENTITY OR OTHER THAN SMALL ENTITY				
AMENDMENT A	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	09/28/06	CLAIMS REMAINING AFTER AMENDMENT							
	Total (37 CFR 1.18(i))	• 23	Minus	•• 23	= 0	X \$25 =		OR	X \$50 = 0
	Independent (37 CFR 1.16(o))	• 7	Minus	•• 7	= 0	X \$100 =		OR	X \$200 = 0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s)) <input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
		CLAIMS REMAINING AFTER AMENDMENT							
	Total (37 CFR 1.18(i))	• 18	Minus	•• 23	= 0	X \$25 =		OR	X \$50 =
	Independent (37 CFR 1.16(o))	• 5	Minus	•• 7	= 0	X \$100 =		OR	X \$200 =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s)) <input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

CALCULATE	
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>	

Legal Instrument Examiner:
 Wanda Meredith

This collection of information is required by 37 CFR 1.18. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005

21171 7590 12/26/2006
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
PHANTANA ANGKOOL, DAVID

ART UNIT	PAPER NUMBER
2179	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/26/2006	PAPER

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

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/396,439

Applicant(s)

HEO, JAE-CHEOL

Examiner

David Phantana-angkool

Art Unit

2179

-- 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 28 September 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1, 3- 6, 8, 10 - 22 and 24 - 27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1, 3- 6, 8, 10 - 22 and 24 - 27 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) 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).
- 11) 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

- 12) 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)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed on 09/28/2006.
2. Applicant amended claims 1, 6, 8, 10, 19, 20, 22, 24, 25 and 27.
3. Applicant canceled claims 2, 7, 9, 23.
4. Claims 1 – 6, 8, 10 – 22, and 24 – 27 are still pending.

Claim Rejections - 35 USC § 102

1. 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.

2. **Claims 1, 3-6, 8, 10-22, 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dias et al., US# 6,122,011 date of patent: September 19, 2000 (hereinafter Dias).**

In regard to **independent claim 1**, Dias shows a method of setting a highlight window in an image reproducing system, the method comprising:

- *receiving remote control signals from a remote controller having a highlight selection function* (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);
- *decoding the remote control signals received from the remote controller; generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes* (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);
- *controlling a video parameter of video signals displayed in the generated highlight window* (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).

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- checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state (Column 2, lines 23-26. Dias shows a visual distinction from an ON state to an OFF state. Dias method and apparatus further shows a user interface displaying the status of the highlight window in Figure 1).

As for dependent claim 3, Dias shows a method wherein the highlight window setting values comprises: *size and location values* (Figure 1).

As for dependent claim 4, Dias shows a method wherein the controlling of the video parameter comprises: *controlling an offset and a gain of video signals* (Column 2, lines 44-55. Dias further shows the real time telecast television program is displayed in video area 12. This display (video area 12) appears as a PIP window generated by a PIP chip. As the microprocessor changes the television tuner, it also changes the program displayed in the video area 12 to reflect the local channel number to which the tuner is set. These changes are in response to the user input, via the remote control, as the user selects the desired operation (Dias, 2:49-63).

As for dependent claim 5, Dias shows a method wherein the generating of the highlight window comprises: *generating more than one window* (Figure 1).

In regard to **independent claim 6**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller* (Column 3, lines 24-26);
- *a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (Column 3, lines 24-41);
- *an image process unit generating a window corresponding to the highlight setting values, receiving video data from an external source, and decoding the video data; and a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit* (Figure 4, Column 3, lines 65 to Column 4, lines 35, Dias shows receiving

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a video signal from an external source (Fig. 7# 1272) and controlling the parameter of the video through an overlay window, see cited figure).

- wherein the remote controller comprises a highlight function on/off button (2:23-32), a highlight window size change button (3:45-52), and a highlight window location change button to generate the functional codes having the highlight data (2:23-32, 3:45-52).

In regard to **independent claim 8**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data (Figure 4) representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- wherein the wirelessly transferred highlight functional code generated from the remote controller comprises: one of a highlight on/off signal (2:23-32), a highlight window size control signal (3:45-52), a highlight window location control signal, and a video data parameter control signal (2:23-32, 3:45-52).

As for **dependent claim 10**, Dias shows an apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, ~~and the main body unit adjusts one of a location and a size of the highlight window with respect to the screen~~ (Figure 7# 1280, 4:1-35).

As for **dependent claim 11**, Dias shows an apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window (2: 44-68).

As for **dependent claim 12**, Dias shows an apparatus wherein the main body unit comprises: a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function, where the cursor highlights the selection); a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image

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process unit generating the highlight window according to the highlight setting value (Figure 3, Column 3, lines 24-41).

As for **dependent claim 13**, Dias shows an apparatus of claim 12, wherein the main body unit further comprises: *a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).*

As for **dependent claim 14**, Dias shows an apparatus of claim 13, wherein the parameter of the video data comprises: *at least one of an offset and a gain of the video data to emphasize the image included in the highlight window (2: 44-55).*

As for **dependent claim 15**, Dias shows an apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data (Figure 4, 2: 44-68).

As for **dependent claim 16**, Dias shows an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: *a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel (Figure 7# 1296, converts RGB signal for display unit).*

As for **dependent claim 17**, Dias shows an apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen (Figure 7# 1280, 4:1-35).

As for **dependent claim 18**, Dias shows an apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).

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In regard to **independent claim 19**, Dias shows an apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed (Figure 4) on the screen according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- *wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight window size control signal (2: 23-32, 3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).*

In regard to **independent claim 20**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code (see highlight windows in Figure 4, Column 3, lines 24-41 and Column 4, lines 1-35)*
- *wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal (3:45-52), a highlight window size control signal (3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).*

*As for **dependent claim 21**, Dias shows an apparatus of claim 20, wherein the main body unit generates first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code (2: 1-23, 3: 24-41).*

In regard to **independent claim 22**, Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

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- *receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35);*
- *wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal (3:45-52), a highlight window size control signal (3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).*

As for **dependent claim 24**, Dias shows a method of claim 23, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises: *adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal (2: 44-55).*

As for **dependent claim 25**, Dias shows a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal (Figure 4).*

As for **dependent claim 26**, Dias shows a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).*

In regard to **independent claim 27**, Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *receiving a wirelessly transferred highlight functional code generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);*
- *generating a first highlight window, a second highlight window, first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code (See Figure 4 for video representing highlight window and Column 2: 44-*

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68, Dias further shows the video may be display in PIP window and channel map could be overlaid on the television program);

- wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal (3:45-52), a highlight window size control signal (3:45-52), a highlight window location control signal (2:23-32), and a video data parameter control signal (2:44-55).

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).

The Examiner notes MPEP § 2144.01, that quotes In re Preda, 401 F.2d 825,159 USPQ 342, 344 (CCPA 1968) as stating "in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." Further MPEP 2123, states that "a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

Response to Arguments

3. Applicant's arguments filed 09/28/06 have been fully considered but they are not persuasive. As stated on page 7 of the previous Office Action, mailing date 06/30/2006, Applicant is reminded that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).

4. Applicant argues Dias does not disclose "*checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state*" (Applicant's Argument, page 8).

5. It is noted that Dias shows the limitation "*checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set*

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highlight window when the highlight function is in an off state" in Column 2, lines 23-26. Dias shows a visual distinction from an ON state to an OFF state. Dias method and apparatus further shows a user interface displaying the status of the highlight window in Figure 1, thus Dias teaches all the limitation set forth in independent claim 1.

6. Applicant argues Dias does not disclose "*wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals*" as recited in claim 4 (Applicant's Argument, page 9).

7. It is noted that Dias teaches "*wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals*" in Column 2, lines 44-55. Dias further shows the real time telecast television program is displayed in video area 12. This display (video area 12) appears as a PIP window generated by a PIP chip. As the microprocessor changes the television tuner, it also changes the program displayed in the video area 12 to reflect the local channel number to which the tuner is set. These changes are in response to the user input, via the remote control, as the user selects the desired operation (Dias, 2:49-63).

8. Applicant argues Dias does not disclose "*wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data*" as recited in claim 6 (Applicant's Argument, page 10).

9. It is noted Dias Teaches "*wherein the remote controller comprises a highlight function on/off button (2:23-32), a highlight window size change button (3:45-52), and a highlight window location change button to generate the functional codes having the highlight data (2:23-32, 3:45-52)*" recited in claim 6. The same rationale also applies to independent claim 8.

10. Applicant argues Dias does not disclose "*wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight widow size control signal, a highlight window location controls signal, and a video data parameter control signal*" as recited in claims 19, 20, 22 and 27 (Applicant's Argument, page 10).

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11. It is noted Dias Teaches "wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight widow size control signal (3:45-52), a highlight window location controls signal (2:23-32, 3:45-52), and a video data parameter control signal (2: 44-55)".

Conclusion

12. **THIS ACTION IS MADE FINAL.** 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 mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. 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.

DP


BA HUYNH
PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 10/396,439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2179	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-5,742,285 A	04-1998	Ueda, Suguru	715/778
*	B US-6,300,951 B1	10-2001	Filetto et al.	715/797
*	C US-6,756,997 B1	06-2004	Ward et al.	715/716
*	D US-6,753,928 B1	06-2004	Gospel et al.	348/569
*	E US-6,915,489 B2	07-2005	Gargi, Ullas	715/790
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
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FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
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	S				
	T				

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes



Application/Control No.

10/396,439

Examiner

David Phantana-angkool

Applicant(s)/Patent under Reexamination

HEO, JAE-CHEOL

Art Unit

2179

SEARCHED

Class	Subclass	Date	Examiner
715	767	12/18/2006	DP

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
EAST updates-(see attached)	12/18/2006	DP

Index of Claims



Application/Control No.

10/396,439

Examiner

David Phantana-angkool

Applicant(s)/Patent under Reexamination

HEO, JAE-CHEOL

Art Unit

2179

✓	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date	
Final	Original		
	1	✓	12/11/06
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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	("6,122,011,")PN.	USPAT; USOCR	OR	OFF	2006/12/18 15:39
L1	126	715/767	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/18 15:40
L3	47	2 same window	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/18 15:41
L2	555	remote with highlight with control	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/18 15:41
L4	22	("4862389" "5046001" "5050105" "5252951" "5377317" "5412776" "5430839" "5519827" "5621880" "5668962" "5721849" "5742285" "5752246" "5812132" "5835088" "5893063" "5900877" "6034689").PN. OR ("6300951"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/18 15:42
L8	115	6 and 7	USPAT	OR	ON	2006/12/18 15:45
L7	220375	"715" "345"	USPAT	OR	ON	2006/12/18 15:45
L6	279	select\$3 with window with highlight	USPAT	OR	ON	2006/12/18 15:45
L5	1	("2004/0107439").URPN.	USPAT	OR	ON	2006/12/18 15:45



IFW

S&H Form: (02/05)

REPLY/AMENDMENT FEE TRANSMITTAL	Attorney Docket No.	1293.1675
	Application Number	10/396,439
	Filing Date	March 26, 2003
	First Named Inventor	Jae-cheol HEO
	Group Art Unit	2179
AMOUNT ENCLOSED	0.00	Examiner Name David Phantana Angkool

FEE CALCULATION (fees effective 12/08/04)

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS	23	- 27 =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS	7	- 7 =	0	X \$ 200.00 =	0.00
Since an Official Action set an original due date of September 30, 2006, petition is hereby made for an extension to cover the date this reply is filed for which the requisite fee is enclosed (1 month (\$120)); (2 months (\$450)); (3 months (\$1,020)); (4 months (\$1,590)); (5 months (\$2,160)):					
If Notice of Appeal is enclosed, add (\$500.00)					
If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)					
Information Disclosure Statement (Rule 1.17(p)) (\$180.00)					
Total of above Calculations =					\$ 0.00
Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)					
TOTAL FEES DUE =					\$ 0.00

- (1) If entry (1) is less than entry (2), entry (3) is "0".
- (2) If entry (2) is less than 20, change entry (2) to "20".
- (4) If entry (4) is less than entry (5), entry (6) is "0".
- (5) If entry (5) is less than 3, change entry (5) to "3".

METHOD OF PAYMENT

- Check enclosed as payment.
- Charge "TOTAL FEES DUE" to the Deposit Account No. below.
- No payment is enclosed.

GENERAL AUTHORIZATION

- If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:

Deposit Account No.	19-3935
Deposit Account Name	STAAS & HALSEY LLP
- The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC § 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	Gene M. Garner, II	Reg. No.	34,172
Signature		Date	Sept. 18, 2006

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Docket No.: 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jae-cheol HEO

Serial No. 10/396,439

Group Art Unit: 2173

Confirmation No. 8005

Filed: March 26, 2003

Examiner: David Phantana Angkool

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action mailed June 30, 2006, and having a period for response set to expire on September 30, 2006.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 7, 9, 23, 24, and 25 and AMEND claims 1, 6, 8, 10, 19, 20, 22, and 27 in accordance with the following:

1. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system, the method comprising:

receiving remote control signals from a remote controller having a highlight selection function;

decoding the remote control signals received from the remote controller;

generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes; and

controlling a video parameter of video signals displayed in the generated highlight window;

checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and

displaying an initially set highlight window when the highlight function is in an off state.

2. (CANCELED)

3. (ORIGINAL) The method of claim 1, wherein the highlight window setting values comprises:

size and location values.

4. (ORIGINAL) The method of claim 1, wherein the controlling of the video parameter comprises:

controlling an offset and a gain of video signals.

5. (ORIGINAL) The method of claim 1, wherein the generating of the highlight window comprises:

generating more than one window.

6. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller;

a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;

an image process unit generating a window corresponding to the highlight setting values, receiving video data from an external source, and decoding the video data; and

a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit;

wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data.

7. (CANCELED)

8. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code;

wherein the wirelessly transferred highlight functional code generated from the remote controller comprises:

one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

9. (CANCELED)

10. (CURRENTLY AMENDED) The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, ~~and the main body unit adjusts one of a location and a size of the highlight~~

~~window with respect to the screen.~~

11. (ORIGINAL) The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. (ORIGINAL) The apparatus of claim 8, wherein the main body unit comprises:
a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
an image process unit generating the highlight window according to the highlight setting value.

13. (ORIGINAL) The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window.

14. (ORIGINAL) The apparatus of claim 13, wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.

15. (ORIGINAL) The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.

16. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:
a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.

17. (ORIGINAL) The apparatus of claim 13, wherein the image reproducing system is

connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.

18. (ORIGINAL) The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

19. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed on the screen according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:
receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

20. (CURRENTLY AMENDED) An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:
receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

21. (ORIGINAL) The apparatus of claim 20, wherein the main body unit generates first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code.

22. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code generated from the remote controller; and

generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code;-

wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

23. (CANCELED)

24. (CURRENTLY AMENDED) The method of claim 23~~2~~, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:

adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.

25. (CURRENTLY AMENDED) The method of claim 22~~3~~, wherein the generating of the video data comprises:

adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. (ORIGINAL) The method of claim 25, wherein the adjusting of the parameter of the video data comprises:

highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. (CURRENTLY AMENDED) A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

receiving a wirelessly transferred highlight functional code generated from the remote controller; and

generating a first highlight window, a second highlight window, first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly

transferred highlight functional code;

wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

REMARKS

In accordance with the foregoing, claims 7, 9, 23-24, and 25 have been amended. Claims 7, 9, 23, and 24 have been cancelled. Claims 1-6, 8, 10-22, and 25-27 are pending and under consideration.

REJECTION UNDER 35 U.S.C. §102:

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dias et al. (US Patent No. 6,122,011).

Claim 2 is canceled and the canceled features of claim 2 are incorporated into claim 1.

Claim 1 has been amended to clarifying of the present application.

The Office Action sets forth that Dias et al. discloses "checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state (2: 1-21)

By way of review, Dias et al. discloses "Screen 10 is divided into a number of different display areas. A real time telecast television program is displayed in a video area 12. This display preferably appears as a PIP window generated by a conventional PIP chip. As the microprocessor (not shown) changes the television tuner (not shown), it also changes the program displayed in video area 12 to reflect the local channel number to which the tuner is set. Panel ad areas 14 and 16, which do not play a direct roll in the practice of the invention, lie below video area 12. A banner area 18 lies at the top of screen 10 adjacent to area 12. A channel map area 20 occupies the bottom two-thirds of screen 10 to the right of areas 12, 14, and 16. Area 20 comprises a plurality of horizontally extending channel panels or lines that display respectively in separate columns: a network name, e.g. ABC; a local channel number, e.g. "13"; and the status of the channel availability, e.g. ON or OFF. The ON channels have a different background color from the OFF channels. Responsive to up/down arrow keys on the remote controller, one of the channels is highlighted by a cursor 22. Above area 20 lies a horizontally extending menu bar area 24 by which the user can select among a number of different functions. Between menu bar area 24 and banner area 18 lies a detail area 26."(col. 2, lines 1-23) In contrast, amended claim 1 sets forth that "checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state"(emphasis added)

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 1.

In addition, claim 3 is deemed to patentable due at least to their depending from claim 1, as well as for the additional features recited therein.

Regarding claim 4, the Office Action sets forth that Dias et al. discloses "wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals"(col. 2, lines 44-55)

By way of review, Dias et al. discloses "By scrolling through area 20 with cursor 22 other channel lines containing network name-local channel number pairs can be displayed. Prompts for operating the EDITOR function are displayed in detail area 26. The prompts in banner area 18 and detail area 26 appear only after a channel line in area 20 is highlighted. The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number "3" on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor 22, the number "2" on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with the keypad. According to the invention, the tuner is also automatically set to the new local channel number and the program telecast on the new local channel number is displayed in video area 12. Thus, the user can confirm the correspondence between the new local channel number and the network channel name. The user can cancel all the changes made during the current session in the channel editor mode by pressing the number "1" on the keypad, as indicated by banner area 18. Alternatively, instead of number keys, the cancel, change, and on/off commands could be issued by colored keys on the remote controller that correspond to color coded circles in banner area 18."(col. 2, lines 44-55) but fails to disclose "wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals." as recited in claim 4.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 4.

In addition, claim 5 is deemed to patentable due at least its depending from claim 1, as well as for the additional recitations therein.

Regarding claim 6, the Office Action sets forth that Dias et al. discloses "shows an apparatus wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data(4:1-35)"

Clam 6 has been amended to incorporate the canceled features of claim 7.

By way of review, Dias et al. discloses "The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number "3" on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor

22, the number "2" on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with the keypad."(col. 2, lines 49-54) but fail to disclose "wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data" (emphasis added) as recited in claim 6.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 6.

Regarding claim 8, the Office Action sets forth that Dias et al. discloses "one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal. (2:1-23)

Claim 8 is amended to incorporate canceled features of claim 9.

By way of review, Dias et al. discloses "The user can turn the channel highlighted by cursor 22 ON or OFF by pressing the number "3" on the keypad of the remote controller as indicated in banner 18. To change the local channel number displayed in the channel line highlighted by cursor 22, the number "2" on the keypad is pressed as indicated in banner area 18 and then the new local channel number is keyed in with the keypad."(col. 2, lines 49-54) but fail to disclose "wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data" (emphasis added) as recited in claim 8.

As such, it is respectfully submitted that Dias et al. does not disclosed the invention recited in claim 8.

In addition, claims10-18 are deemed patentable due at least to their depending from claim 8, as well as for the additional features recited therein.

Regarding claim 19, the Office Action sets forth that Dias et al. discloses "a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed(Figure 4)on the screen according to the wirelessly transferred highlight functional code(column 3, lines 24-41 and column 4, lines 1-35)."

Claim 19 is amended to recite "wherein the receiving a wirelessly transferred highlight functional code comprises: receiving a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal" which is not disclosed in Dias et al.

As such, it is respectfully submitted that Dias et al. does not disclosed the invention recited in claim 19.

Regarding claim 20, the Office Action sets forth that Dias et al. discloses “generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code” but fails to disclose “wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal” as recited in claim 20.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 20.

In addition, claim 21 is deemed patentable due at least to their depending from claim 20, as well as for the additional features recited therein.

Regarding claim 22, the Office Action sets forth that Dias et al. discloses “generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight function code(column 3, lines 24-41 and column 4, lines 1-35)

Claim 22 is amended to incorporated into canceled features of claim 23.

By way of review, Dias et al. discloses “The viewer input device 1288 preferably takes the form of a hand-held remote infrared (IR) transmitter which communicates with an infrared receiver connected to microprocessor 1284. As shown in FIG. 3, the remote 1310 has a housing on which a number of control buttons are mounted. A GUIDE/TV button 1312, an INFO button 1314, and a VCR PLUS+ button 1316 are located above up and down arrow buttons 1318 and 1320. A row of buttons 1322, 1324, 1326 and 1328 which are marked with the colors red (R), green (G), yellow (Y), and blue (B), respectively, underlie down arrow button 1320. Red, green, yellow, and blue prompts are displayed in area 1253 of the electronic guides. To select a prompt on the screen, the button of the IR transmitter having the corresponding color is pressed, i.e., to select the blue prompt on the screen, blue button 1328 is pressed”(col. 2, lines 3, lines 24-41) but fails to disclose “wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal” as recited in claim 22.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 22.

Claims 24-26 are deemed patentable due at least to their depending from claim 22, as well as for the additional features recited therein.

Claim 27 has been amended to recite “wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window

size control signal, a highlight window location control signal, and a video data parameter control signal" which is not disclosed in Dias et al.

As such, it is respectfully submitted that Dias et al. does not disclose the invention recited in claim 27.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Sept. 28, 2006

By: 
Gene M. Garner, II
Registration No. 34,172

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10396439	Filing Date: 03/26/2003	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			SMALL ENTITY <input type="checkbox"/>		OR		OTHER THAN SMALL ENTITY	
FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A		
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A		
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A		
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 = *	*	X \$25 =		OR	X \$50 =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	*	X \$100 =			X \$200 =		
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			+ \$180			+ \$360		
			TOTAL			TOTAL		

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					SMALL ENTITY				OR				OTHER THAN SMALL ENTITY			
AMENDMENT A	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)						
		09/28/06	CLAIMS REMAINING AFTER AMENDMENT	*	** 23	= 0	X \$25 =		OR	X \$50 =	0					
	Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X \$100 =		OR	X \$200 =	0						
	Independent (37 CFR 1.16(h))	* 7	Minus	** 7	= 0			OR								
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							OR								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR								
					TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE							

AMENDMENT B	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
			CLAIMS REMAINING AFTER AMENDMENT	*	**	=	X \$25 =		OR	X \$50 =
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$100 =		OR	X \$200 =	
	Independent (37 CFR 1.16(h))	*	Minus	**	=			OR		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							OR		
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE	

CALCULATE			
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>			

Legal Instrument Examiner:
Wanda Meredith

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/396,439	03/26/2003	Jae-cheol Heo	1293.1675	8005
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STAAS & HALSEY LLP
JIM LIVINGSTON
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

PHANTANA ANGKOOL, DAVID

ART UNIT	PAPER NUMBER
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2179

DATE MAILED: 06/30/2006

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

Office Action Summary

Application No. 10/396,439	Applicant(s) HEO, JAE-CHEOL	
Examiner David Phantana-angkool	Art Unit 2179	

- 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 _____ 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 _____.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) 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

- 4) Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-27 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 March 2003 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).
- 11) 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

- 12) 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)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. 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.

2. **Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dias et al., US# 6,122,011, date of patent: September 19, 2000 (hereinafter Dias).**

In regard to **independent claim 1**, Dias shows a method of setting a highlight window in an image reproducing system, the method comprising:

- *receiving remote control signals from a remote controller having a highlight selection function* (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);
- *decoding the remote control signals received from the remote controller; generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes* (Column 2, lines 23-29, Dias shows a highlight window in Figure 1 controlled by a remote control signal);
- *controlling a video parameter of video signals displayed in the generated highlight window* (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).

As for dependent claim 2, Dias shows a method further comprising: *checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and displaying an initially set highlight window when the highlight function is in an off state* (2: 1-23).

As for dependent claim 3, Dias shows a method wherein the highlight window setting values

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comprises: *size and location values* (Figure 1).

As for dependent claim 4, Dias shows a method wherein the controlling of the video parameter comprises: *controlling an offset and a gain of video signals* (2: 44-55).

As for dependent claim 5, Dias shows a method wherein the generating of the highlight window comprises: *generating more than one window* (Figure 1).

In regard to **independent claim 6**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:

- *a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller* (Column 3, lines 24-26);
- *a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data* (Column 3, lines 24-41);
- *an image process unit generating a window corresponding to the highlight setting values, receiving video data from an external source, and decoding the video data; and a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit* (Figure 4, Column 3, lines 65 to Column 4, lines 35, Dias shows receiving a video signal from an external source (Fig. 7# 1272) and controlling the parameter of the video through an overlay window, see cited figure).

As for dependent claim 7, Dias shows an apparatus wherein the remote controller comprises a *highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data* (4:1-35).

In regard to **independent claim 8**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data* (Figure 4) *representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code* (Column 3, lines 24-41 and Column 4, lines 1-35).

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As for **dependent claim 9**, Dias shows an apparatus wherein the wirelessly transferred highlight functional code generated from the remote controller comprises: *one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal* (2: 1-23).

As for **dependent claim 10**, Dias shows an apparatus wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the main body unit adjusts one of a location and a size of the highlight window with respect to the screen (Figure 7# 1280, 4:1-35).

As for **dependent claim 11**, Dias shows an apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window (2: 44-68).

As for **dependent claim 12**, Dias shows an apparatus wherein the main body unit comprises: a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function, where the cursor highlights the selection); a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and an image process unit generating the highlight window according to the highlight setting value (Figure 3, Column 3, lines 24-41).

As for **dependent claim 13**, Dias shows an apparatus of claim 12, wherein the main body unit further comprises: a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window (Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).

As for **dependent claim 14**, Dias shows an apparatus of claim 13, wherein the parameter of the video data comprises: *at least one of an offset and a gain of the video data to emphasize the image included in the highlight window* (2: 44-55).

As for **dependent claim 15**, Dias shows an apparatus wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of

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the video data (Figure 4, 2: 44-68).

As for **dependent claim 16**, Dias shows an apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises: a *panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel (Figure 7# 1296, converts RGB signal for display unit).*

As for **dependent claim 17**, Dias shows an *apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen (Figure 7# 1280, 4:1-35).*

As for **dependent claim 18**, Dias shows an *apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).*

In regard to **independent claim 19**, Dias shows an apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:

- *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed (Figure 4) on the screen according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35).*

In regard to **independent claim 20**, Dias shows an apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising: *a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code (see highlight windows in Figure 4, Column 3, lines 24-41 and Column 4, lines 1-35).*

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As for **dependent claim 21**, Dias shows an *apparatus of claim 20, wherein the main body unit generates first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code (2: 1-23, 3: 24-41).*

In regard to **independent claim 22**, Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising: *receiving a wirelessly transferred highlight functional code generated from the remote controller; and generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code (Column 3, lines 24-41 and Column 4, lines 1-35).*

As for **dependent claim 2**, Dias shows a *method of claim 22, wherein the receiving a wirelessly transferred highlight functional code comprises: receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function, Column 2: 44-68, Dias shows the user can change the video area (Fig.1 # 12) displayed in the generated highlight window).*

As for **dependent claim 2**, Dias shows a method of claim 23, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises: *adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal (2: 44-55).*

As for **dependent claim 2**, Dias shows a method of claim 23, wherein the generating of the video data comprises: *adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal (Figure 4).*

As for **dependent claim 2**, Dias shows a method of claim 25, wherein the adjusting of the parameter of the video data comprises: *highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen (see highlight window in Figure 4).*

Art Unit: 2179

In regard to independent claim 27, Dias shows a method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- *receiving a wirelessly transferred highlight functional code generated from the remote controller (Column 2, lines 17-26, Dias shows a remote control with a highlight selection function);*
- *generating a first highlight window, a second highlight window, first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code (See Figure 4 for video representing highlight window and Column 2: 44-68, Dias further shows the video may be display in PIP window and channel map could be overlaid on the television program).*

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

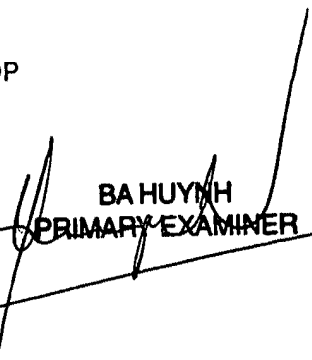
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Phantana-angkool whose telephone number is 571-272-2673. The examiner can normally be reached on M-F, 9:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2179

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.

DP


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PRIMARY EXAMINER



Sheet 1 of 1

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO. 1293.1675	APPLICATION NO. 10/396,439
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)		FIRST NAMED INVENTOR Jae-cheol HEO	
		FILING DATE March 26, 2003	GROUP ART UNIT 2173 2179

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						

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FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO	
DP	AG	2001-22087	03/15/2001	KOREA			Abstract	
	AH							
	AI							
	AJ							
	AK							
	AL							

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	AM	
	AN	

EXAMINER 	DATE CONSIDERED 06/23/06
--------------	-----------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Notice of References Cited	Application/Control No. 10/396,439	Applicant(s)/Patent Under Reexamination HEO, JAE-CHEOL	
	Examiner David Phantana-angkool	Art Unit 2179	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-5,598,523 A	01-1997	Fujita, Yosuke	715/840
*	B	US-6,122,011 A	09-2000	Dias et al.	348/569
*	C	US-2003/0103088 A1	06-2003	Dresti et al.	345/835
*	D	US-2004/0107439 A1	06-2004	Hassell et al.	725/044
*	E	US-6,772,433 B1	08-2004	LaJoie et al.	725/52
*	F	US-6,898,765 B2	05-2005	Matthews et al.	715/815
*	G	US-7,051,354 B2	05-2006	Mears, Mark Gilmore	725/41
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

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	N				
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NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes



Application/Control No. 10/396,439	Applicant(s)/Patent under Reexamination HEO, JAE-CHEOL	
Examiner David Phantana-angkool	Art Unit 2179	

SEARCHED			
Class	Subclass	Date	Examiner
715	767	6/23/2006	DP
345	767	6/23/2006	DP

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
EAST-(see attached)	6/23/2006	DP
Inventor Name Search	6/22/2006	DP

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner



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Bib Data Sheet

CONFIRMATION NO. 8005

Table with 5 columns: SERIAL NUMBER (10/396,439), FILING OR 371(c) DATE (03/26/2003), CLASS (345), GROUP ART UNIT (2179), ATTORNEY DOCKET NO. (1293.1675)

APPLICANTS: Jae-cheol Heo, Suwon-si, KOREA, REPUBLIC OF;
** CONTINUING DATA: No, P.P.
** FOREIGN APPLICATIONS: REPUBLIC OF KOREA 2002-29958 05/29/2002 Yes, P.P.
IF REQUIRED, FOREIGN FILING LICENSE GRANTED: 05/20/2003

Table with 5 columns: Foreign Priority claimed (yes/no), 35 USC 119 (a-d) conditions met (yes/no/Met after Allowance), STATE OR COUNTRY (KOREA, REPUBLIC OF), SHEETS DRAWING (3), TOTAL CLAIMS (27), INDEPENDENT CLAIMS (7)

ADDRESS: 21171

TITLE: Method of and apparatus for setting highlight window using remote controller

Table with 2 columns: FILING FEE RECEIVED (1212) and FEES: Authority has been given in Paper No. to charge/credit DEPOSIT ACCOUNT No. for following: (All Fees, 1.16 Fees, 1.17 Fees, 1.18 Fees, Other, Credit)

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	234615	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 17:29
S5	0	S2 and S3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 17:30
S4	0	S2 same S3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 17:30
S3	3908	highlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 17:30
S2	0	hightlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 17:30
S7	3908	highlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 18:32
S6	234615	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/22 18:32
S13	120	S12 and S9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:23
S12	145	S10 same S11	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:23
S11	3908	highlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:23

EAST Search History

S10	234615	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:23
S9	178601	user adj interface	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:23
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S20	178	"22087"	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/23 15:43
S19	1	S17 and "2001"	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/23 15:43

EAST Search History

S18	0	S17 and "22087"	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/23 15:43
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S22	184	"22087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:44
S26	6	S25 and S24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:45
S24	25496	hyundai with electronic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:45
S25	24	bubal	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:47
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S32	0	"2001-22087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:53
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S34	2	"29958" and korea	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:54
S33	1	"22087" and korea	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 15:54
S17	60	e-guide	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/23 15:55
S16	5	"0022087"	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/23 15:59
S37	3	"2002022087"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 16:00
S36	3	"2001097749"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 16:00
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L1	149	715/767.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:18

EAST Search History

L4	9	L3 and 1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:19
L3	3908	highlight\$3 with (window)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:19
L7	175	345/767	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:24
L6	0	345/767.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:24
L5	3	4 and remote	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:24
L12	668	L9 and L3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:25
L11	36	9 and 7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:25
L10	234615	L9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:25
L9	234615	remote near3 (control\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:25
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EAST Search History

L13	3	12 and 7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/23 19:26
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#3

Attorney Docket No. 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Jae-cheol HEO

Application No.: 10/396,439

Group Art Unit: 2173

Filed: March 26, 2003

Examiner:

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Sir:

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. Form PTO-1449.
- 1b. Copies of IDS citations.
- 1c. An English language copy of search report(s) from a counterpart foreign application or a PCT International Search Report.
- 1d. English language translation (Abstract Only) attached to each non-English language publication.
- 1e. Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of each non-English publication.
- 1f. List of Copending Applications (ATTACHMENT 1(f), hereto).
- 1g. List of Additional Submitted Documents (ATTACHMENT 1(g), hereto).

2. This Information Disclosure Statement is filed under 37 CFR §1.97(b):

(Check either Item 2a or 2b or 2c or 2d)

- 2a. Within three months of the filing date of a national application other than a Continued Prosecution Application under § 1.53(d);
- 2b. Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application.
- 2c. Before the mailing of a first Office Action on the merits; or
- 2d. Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114.

3. This Information Disclosure Statement is filed under 37 CFR §1.97(c) after the period specified in paragraph 2 above but before the mailing date of any of a Final Office Action under § 1.113, a Notice of Allowance under § 1.311 or an action that otherwise closes prosecution in the application, AND
- (Check either Item 3a or 3b; Item 3b to be checked if any reference known for more than 3 months)*
- 3a. The § 1.97(e) Statement in Item 5 below is applicable; OR
- 3b. The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:
 enclosed.
 to be charged to Deposit Account No. 19-3935.
4. This Information Disclosure Statement is filed under 37 CFR §1.97(d) after the period specified in paragraph 3 above, but on or before payment of the Issue Fee, AND
- 4a. The § 1.97(e) Statement in Item 5 below is applicable; AND
- 4b. The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:
 enclosed.
 to be charged to Deposit Account No. 19-3935.
5. Statement under § 1.97(e) (*applicable if Item 3a or Item 4 is checked*)
(Check either Item 5a or 5b)
- 5a. In accordance with 37 CFR §1.97(e)(1), it is stated that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. In accordance with 37 CFR §1.97(e)(2), it is stated that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known by any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
6. This is a continuation/divisional/continuation-in-part application under 37 CFR § 1.53(b).
- (Check appropriate Items 6a and/or 6b)*
- 6a. Copies of the publications listed on the attached Form PTO-1449 which were previously cited in prior application Serial No. ___, filed on ___, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, have been omitted pursuant to 37 CFR § 1.98(d).
- 6b. Copies of the publications listed on the attached Form PTO-1449 which were not previously cited in prior application Serial No. ___, filed on ___, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, are provided herewith.

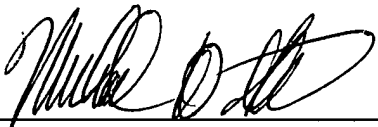
7. This is a continuation/divisional application under 37 CFR § 1.53(d) or Request for Continued Examination under 37 CFR 1.114.
(Check either Item 7a or 7b)
- 7a. The Issue Fee has not been paid.
- 7b. A Petition to Withdraw from issue under 37 CFR §1.313(c) is filed concurrently herewith or has been granted. A continuation application under 37 CFR § 1.53(d) or Request for Continued Examination under 37 CFR 1.114, after payment of the Issue Fee is proper in accordance with 37 CFR § 1.53(d)(1)(ii) or 37 CFR 1.114(a), respectively.
8. This is a Supplemental Information Disclosure Statement.
(Check either Item 8a or 8b)
- 8a. This Supplemental Information Disclosure Statement under 37 CFR § 1.97(f) supplements the Information Disclosure Statement filed on ___. A bona fide attempt was made to comply with 37 CFR § 1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental IDS can be considered as if properly filed on ___.
- 8b. This Supplemental Information Disclosure Statement is timely filed within one (1) month of the Notice under 37 CFR § 1.97 and 1.98, mailed ___. (MPEP 609 C(1), Form & 6.49, Rev. 1, Feb. 2000, pp. 600-107)
9. In accordance with 37 CFR § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
(Check appropriate Items 9a, 9b, 9c and/or 9d)
- 9a. satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office. (See U.S. Patent & Trademark Offices authorization in the Federal Register, Vol. 57, No. 12, January 17, 1992, at page 2031 (Reply to Comment 68).)
- 9b. set forth in the application.
- 9c. satisfied because an English language translation (Abstract Only) is attached to each non-English language publication.
- 9d. enclosed as Attachment 1(e), hereto.
10. No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than search report(s) from a counterpart foreign application or a PCT International Search Report, if submitted herewith). 37 CFR §§ 1.97(g) and (h).

11. The Commissioner is authorized to credit any overpayment or charge any additional fee required under 37 CFR § 1.17 for this Information Disclosure Statement and/or Petition to Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Dated: 7/19/04
1201 New York Avenue, N.W.
Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

By: 
Michael D. Stein
Registration No. 37,240



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FOREIGN PATENT DOCUMENTS

DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO
AG	2001-22087	KOREA			Abstract
AH					
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(71) Applicant:

Hyundai Electronic Industries Co., Ltd.

San 136-1, Bubal-eup, Ichon-City, Kyunggi-do, Korea

(72) Inventor:

E-GUIDE, INC.

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Systems and Methods for Displaying and Recording Control Interfaces

Abstract:

The present invention is an improvement over previous electronic programming guides "EPG" in that it provides, among other things: improved viewer interaction capabilities with the EPG; improved viewer control of video recording (46) of future-scheduled programming; improved features of the EPG display and navigation (10); parental control of the EPG display; improved television program access by the viewer (22); improved product opportunities for the commercial advertiser to reach the viewer's profile (14, 16); improved products information access by the viewer (12); creation of the viewer's profile (36, 52); utilization of the viewer profile information to customize various aspects of the EPG (24); and utilization of viewer profile information to provide the customized presentation of advertising to the viewer (24).

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 아 말디브 말라위 멕시코 노르웨이 뉴질랜드 슬로베니아 슬로바키아
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(71) 출원인

(72) 발명자

한국권
 미합중국 노팅햄 주 03062 나슈마스틸 워터 드라이브 64
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 미합중국 캘리포니아 주 90278 리돈도 비치 피.오. 박스 1159
 김원호, 송만호

(74) 대리인
 심사청구 : 있음

(54) 디스플레이 및 녹화 제어 인터페이스용 시스템 및 방법

요약

본 발명은 그 중에서도 특허 EP6와의 시청자 상호작용 능력 개선; 향후 방송될 예정인 프로그램의 비디오 녹화에 대한 시청자 제어(46) 개선; EP6 디스플레이 및 탐색의 특성(10) 개선; EP6 디스플레이에 대한 부모의 제어; 시청자에 의한 텔레비전 프로그램 액세스(22) 개선; 시청자 프로파일에 이르는 상업 광고자에 대한 제작 기회(14, 16) 개선; 시청자에 의한 제품 정보 액세스(12) 개선; 시청자 프로파일의 생성(36, 53); EP6의 여러 특징을 커스터마이징 하기 위해 시청자 프로파일 정보 사용(24); 및 커스터마이징 광고 프라젠 테이션을 시청자에게 제공하도록 시청자 프로파일 사용(24)을 제공한다. 접에서 종래의 전자 프로그램 가이드(electronic program guides; 'EPG')를 개선한 것이다.

도면

도 1

색인어

전자 프로그램 가이드, 텔레비전, 시청자, 시청, 녹화, 광고, 탐색, 프로파일

명세서

기술분야

본 발명은 일반적으로 텔레비전 시스템과 관련되며, 특히 텔레비전 프로그램 비디오, 광고 정보 및 프로그램 예정 정보의 디스플레이 및 녹화 제어 인터페이스와 관련된다.

배경기술

텔레비전 시청자(television viewer)는 텔레비전 프로그램 예정 가이드(television program schedule guides)에 의해 제공되는 정보를 역사적으로 분석하여 왔다. 역사적으로, 텔레비전 프로그램 스케줄 가이드는 이용 가능한 텔레비전 프로그램을 주중의 요일, 하루의 시간대, 채널 및 프로그램 타이틀로 기재되어 있다. 최근에는, 미국 특허 제4,908,713호인 Levine에게 부여된 특허에 개시된 바와 같이, 텔레비전 프로그램 가이드는 전자적인 포맷(electronic form)으로 이용 가능하게 되었다. 온-스크린 전자 프로그램 가이드('EPG')의 가장 초기 버전은 프로그램 스케줄 정보의 저장을 텔레비전 수상기에 접속된 전자 메모리 내에 제공했으며, 일반적으로 프로그램 예정 정보의 온-스크린 형식 및 디스플레이를 텔레비전 스크린 상에 제공했다. 초기의 EPG는 통상적으로 텔레비전 프로그램과 중첩되었다. 또한, 초기의 EPG의 시청자 상호작용 기능은 극히 제한되었다.

이후의 EPG는 시청자-대-EPG 상호작용(viewer-to-EPG interaction) 향상을 제공하였고, EPG의 디스플레이와 동시에 텔레비전 프로그램의 화상-가이드(Picture-In-Guide)('PIG') 디스플레이를 제공한다. 국제출원 PCT/US95/11173(국제공개번호 W096/07270)-이 명세서에는 본 명세서에 참조되어 본 발명의 일부를 이루는 그러한 향상을 개시하고 있다.

발명의 상세한 설명

본 발명은 종전의 EPG의 개량 발명으로서 다른 것들과 함께

- A. 시청자와 EPG의 상호작용의 향상
- B. 향후 방송될 프로그램의 비디오 녹화에 대한 사용자 제어의 향상
- C. EPG 디스플레이와 탐색 기능의 향상
- D. EPG 디스플레이의 부모 제어(parental control)
- E. 시청자에 의해 액세스되는 개선된 텔레비전 프로그램 정보
- F. 상업 광고자가 시청자에게 접촉할 수 있는 기회
- G. 시청자에 의한 제품 정보의 액세스의 향상
- H. 시청자 프로파일의 생성
- I. EPG의 다양한 기능을 커스터마이징하기 위한 시청자 프로파일 정보의 이용; 및
- J. 시청자에게 커스터마이징된 광고의 제공을 위한 시청자 프로파일 정보의 사용을 제공한다.

도면의 간단한 설명

본 발명의 이것들과 다른 기능들은, 특징 및 장점은 이하의 발명의 상세한 설명, 첨부된 특허청구범위 및 첨부된 도면에 의해 더 잘 이해할 수 있을 것이다.

- 도 1은 EPG의 스크린 디스플레이의 예를 도식적으로 도시하는 도면.
- 도 2는 EPG의 다양한 기능을 작동시키는 키를 도시한 원격 제어 장치의 부분도.
- 도 3은 프로그래밍 스크롤링 모드(programming scrolling mode)에서 EPG의 온-스크린 그리드 가이드를 디스플레이하는 온 스크린 EPG 디스플레이의 예를 도식적으로 도시하는 도면.
- 도 4a 및 4b는 채널-스크롤링(channel-scrolling)에서 EPG의 온-스크린 그리드 가이드를 디스플레이하는 온 스크린 EPG 디스플레이의 예를 도식적으로 도시하는 도면.
- 도 5는 시청 스케줄링 기능에서 EPG의 온-스크린 그리드 가이드를 디스플레이하는 온 스크린 EPG 디스플레이의 예를 도식적으로 도시하는 도면.
- 도 6은 EPG의 시청/녹화 예정 스크린을 디스플레이하는 온 스크린 EPG 디스플레이의 예를 도식적으로 도시하는 도면.
- 도 7은 EPG의 최상위 레벨 테마 스크린 디스플레이(top level theme screen display)를 디스플레이하는 온 스크린 EPG 디스플레이의 예를 도식적으로 도시하는 도면.

8은 EP8의 제 2 레벨 테마 스크린 디스플레이(second-level theme screen display)를 디스플레이하는 온 스크린 EP6 디스플레이의 예를 도식적으로 도시하는 도면.

9는 EP8의 채널 가이드 기능을 디스플레이하는 온 스크린 EP8 디스플레이의 예를 도식적으로 도시하는 도면.

10a 및 10b는 하이라이트된 패널 광고 윈도우의 콘텐츠에 관련된 추가 정보를 제공하는 기능의 실시예를 디스플레이하는 온 스크린 EP8 디스플레이의 예를 도식적으로 도시하는 도면.

상시예

1996년 3월 7일에 발행된 국제 출원 번호 96/07270인 명세서는 참조로 여기에 포함되어 있다. 본 발명은 그것에 개시된 전자 프로그램 가이드(EPG)의 개량 발명이다. 참조 PCT 출원에 개시된 장치는 이하에 개시된 스크린 디스플레이를 생성하기 위해 사용된다.

도 1에는, 광고 윈도우 및 광고 메시지를 포함하는 EP8의 일 실시예가 도시되어 있다. 도 10에는, 텔레비전 스크린 디스플레이(10)가 도시되어 있다. 디스플레이(10)는 비휘 주사선(interlaced scan lines)을 가진 통상의 텔레비전 수상기, VCR, 순차 주사선(progressive scan lines)에 의한 PC 모니터 또는 다른 종류의 비디오 디스플레이 장치에 의해 생성될 수 있다. 스크린의 좌측 위는 PIP 윈도우(12)이다. PIP 윈도우(12) 아래에는 패널 광고 윈도우(14 및 16)가 있다(광고 윈도우). 윈도우(12, 14 및 16) 각각은 통상적으로 전체 스크린 영역의 약 1/9를 차지한다. 스크린 영역의 나머지는(스크린의 위에서 아래로) 작동 키 바(18), 탐색 바(20), 그리드 가이드(22)(그리드 가이드) 및 정보 상자(24)(상세 정보 영역)가 차지하고 있다.

도 2에는, 디스플레이(10)의 기능을 작동시키는 원격 제어기(26)가 도시되어 있다. 원격 제어기(26)는 할랄 수 있다. 원격 제어기(26)는 사용자 비디오 커서(36)의 기능을 작동시키는 다른 키들, 즉, 파워 화살표 키(28, 30, 32 및 34)를 각각 포함하고 있다. 커서(36)는 화살표 키(28) 내지(34)를 눌러 선택할 수 있다. 화살표 키(32 및 34)를 눌러 그리드 가이드(22) 내의 타이틀 및 채널을 선택하거나, 화살표 키(32 및 34)를 눌러 탐색 바(20)를 선택, 즉 하이라이트할 수 있다. 윈도우(12, 14 및 16)는 윈도우 주위에 경계를 추가하거나 경계의 색을 변화시켜 하이라이트된다. 그리드 가이드(22) 내의 타이틀 및 채널과 탐색 바(20)는 색을 변화시켜 하이라이트된다.

스크린 디스플레이 구성 요소 상의 그리드 가이드 및/또는 탐색 및 EP8로부터의 윈도우 및/또는 시청자 선택을 하이라이트하는 것은 다른 방법들에 의해 달성될 수 있다. 예를 들면, 선택된 윈도우의 경계 또는 선택된 그리드 가이드 또는 탐색 구성 요소(navigation component)는 깜빡거리도록 단색될 수 있다. 시청자 선택을 하이라이트하는 다른 방법은 시청자 선택 구성 요소를 제외한 온 스크린 디스플레이의 다른 모든 부분을 흐리게 하는 것이다. 시청자 선택을 하이라이트하는 또 다른 방법은 스크린 디스플레이 구성 요소에 애니메이션을 추가하는 것이다. EP8의 일부가 선택되면, 시스템은 온 스크린 디스플레이(OSD) 제어기에 그래픽 디스플레이 영향을 내려 하나 이상의 바람직한 항상 기쁨을 실행하는 것이

시청자는 가이드 키(35)를 눌러 도 1에 도시된 가이드 모드(Guide Mode)로 들어갈 수 있고, 키(35)를 다시 누를거나 '선택' 키를 눌러 전체 스크린 텔레비전 모드(full screen television mode)로 돌아올 수 있다. 실시간 텔레비전 프로그램이 윈도우(12)에 디스플레이되어 있다. PIP 윈도우(12)의 반투명 오버레이는 텔레비전 프로그램 위에 타이틀, 채널(시각 번호) 및/또는 방송국명 및 윈도우(12)의 상태(광고 또는 잠기지 않음)를 디스플레이할 수 있어 시청자는 여전히 이미지 전체를 볼 수 있다.

PIP 윈도우는 잠긴 상태 또는 풀린 상태일 수 있다. '잠금/풀림' 기능은 사용자가 제어한다. PIP 윈도우를 잠거나 풀려면, 시청자는 원격 제어 상의 PIP 버튼을 선택하거나, 잠금/풀림 EP8 동작 버튼을 하이라이트하고 누를 수 있다. 잠금/풀림 상태는 복호되어 시청자에게 리셋될 때까지 유지된다. 시청자가 가이드를 그만두고 후에 가이드를 다시 불러오는 경우 - 시청자가 텔레비전을 끄는 경우 -도 포함 - EP8 내의 PIP 윈도우의 잠금/풀림 상태가 유지된다. 시청자가 '잠금' 상태를 선택하면, PIP 윈도우 내의 등조기가 세트된 마지막 채널이 시청자에게 계속 디스플레이된다. 풀림 상태에서, 그리드 가이드가 현재 방송되는 프로그램에 관계없이 계속 디스플레이된다. 풀림 커서(35)에 의해 하이라이트된 채널이 디스플레이되고, 그리드 가이드가 향후 방송될 프로그램을 디스플레이하는 경우, 하이라이트된 현재의 마지막 채널이 디스플레이된다.

가이드를 그만두면, 시청자가 가이드를 그만두는 방식에 따라, 일반적으로 세 가지 접근이 있다. 시청자가 EP8 내에 있는 동안, PIP 윈도우 내에 디스플레이되는 프로그램을 전체 스크린 모드로 보고 싶은 경우, 시청자는 원격 제어 상의 가이드 버튼을 누를 수 있다. 시청자가 EP8 내에 있는 동안, 그리드 가이드 내의 특정한 채널을 하이라이트한 후, 선택 버튼을 누르면, 시청자가 가이드에서 하이라이트한 텔레비전 프로그램을 전체 스크린 모드로 시청한다. 시청자가 EP8 내에 있는 동안 시청자가 원격 제어 상의 채널 '클리어' 또는 '취소' 버튼을 누르면, 시청자는 가이드를 그만두고 가이드가 직전에 시청자가 시청하던 텔레비전 프로그램으로 돌아가게 된다.

통상적으로, 향후 방송될 프로그램에 대한 광고가 윈도우(14)에 디스플레이된다. 이 광고는 RAM 내의 프로그램의 시간 및 채널에 링크되어 있어 시청자는 좌측의 파란색 작동 버튼을 눌러 프로그램을 시청하거나, 또는 우측의 녹색 작동 버튼을 눌러 프로그램 복호화하여 자동으로 시청하거나 복호화할 수 있다.

통상적으로, 제품 또는 서비스에 대한 광고가 윈도우(16)에 디스플레이된다. 이 광고는 RAM 내의 제품 또는 서비스에 관한 정보에 링크되어 있다. 시청자는 '정보' 키(40)를 한번 이상 눌러 윈도우(16) 내의 제품 또는 서비스에 관한 페이지를 하나 이상 읽을 수 있다. 선택적으로, 이 광고는 RAM 내의 시간 및 채널에 링크되어 제품 또는 서비스에 대한 광고 방송(intomercial)이 방송되며 시청자는 선택 키(42)를 눌러

러 자동으로 시청하거나 녹화할 수 있다.

바(18)는 스크린 상에 디스플레이되는 정보의 상환에 의존하는 문자를 가진 파란색 버튼(44) 및/또는 녹색 버튼(46)을 디스플레이하고 있다. 원격 제어기(26)는 블록(44 및 46)에 의해 디스플레이되는 기능을 작동시키기 위해 해당 키(480 및(50)를 가지고 있다.

시청자는 화살표 키(32)를 눌러 윈도우(12, 14 또는 16)로부터 그리드 가이드(22)로 이동한다. (시청자는 화살표 키(34)를 눌러 그리드 가이드(22)로부터 윈도우(12, 14 또는 16)로 이동한다.) 그리드 가이드(22) 내에서 시청자는 커서(36)를 이동시켜 화살표 키(28 및 30)를 눌러 채널 및 타이틀이 디스플레이된 9개의 타이틀 중 하나를 하이라이트한다. 시청자는 키(32 또는 34)를 눌러 그리드에서 수평으로 이동하여 향후 방송될 프로그램 목록을 볼 수 있다.

시청자는 화살표 키(28)를 눌러 그리드 가이드(22)로부터 탐색 바(20)로 이동한다. 처음에는, 중앙 버튼이 하이라이트된다. 다른 버튼을 하이라이트하면, 화살표 키(32 또는 34)를 누른다. 하이라이트된 버튼에 의해 디스플레이되는 스크린에 들어가려면, '전환' 키(42)를 누른다.

그리드 가이드(22)내에는 하이라이트된 타이틀에 의해 디스플레이되는 프로그램의 세부 사항이 디스플레이된다. 추가 정보가 이용 가능한 경우, 이 사실은 타이틀에 의해 디스플레이되고, 그러한 정보는 '정보' 키(40)를 누르는 것에 의해 그리드 가이드 대신에 다시 누른다. 동작 버튼이 눌러지거나 탐색 바(20) 상의 타이틀이 작동된 후에는, 정보 상자(24) 내의 프로그램 정보 대신에 교육 프로그램에 대치될 수 있다.

텔레비전 프로그램을 디스플레이하는 타이틀에 추가로, 가상 채널 광고(virtual channel Ad)가 그리드 가이드(22) 내의 타이틀(52) 상에 디스플레이될 수 있다. 가상 채널 광고는, 예를 들면 현재 또는 향후 방송될 텔레비전 프로그램을 광고할 수 있다. 그러한 가상 채널 광고는 RAM의 프로그램의 시간 및 채널에 링크되어 시청자는 참조 출원에 개시된 방식으로 선택 키(42)를 눌러 프로그램을 자동으로 시청하거나 녹화할 수 있다. 하나 이상의 가상 채널 광고가 RAM에 저장될 수 있으나, 한번에 오직 하나의 이러한 광고가 디스플레이되는 것이 바람직하다. 블록 A로 설명된 TV 가이드 플러스 98 사용자 인터페이스 규칙 vi.42st-이것의 개시는 여기에 완전하게 언급된 것처럼 본 명세서 내에 참조되어 본 발명의 일부를 이 문 - 은 본 발명의 개시를 위해 참조하고 있다.

본 명세서에 대한 하드웨어의 실시예는 프로세서(예를 들면 모토롤라 68000)에 의한 액세스를 위한 제어 기 본 엔진, 메모리의 제어(동적 RAM 및 외부 ROM) 및 적외선(IR) 입력 및 출력, 주파수 합성 호출 시스템 호출 시스템으로부터의 데이터 수집과 같은 주변 기기 기능을 제공하는 제어기 어레이를 포함하는 회로 보드를 포함한다. 내부에는 온 스크린 디스플레이를 생성하기 위해 프로그램 가능한 DMA(직접 메모리 액세스) 제어기, 펌드를 위한 컬러 인덱스-이것은 더 복잡한 색(비트맵에 표현될 수 있는 것보다 더 많은 비트)을 선택하는데 이용될 수 있음-라 불리는 색 검색 테이블(color lookup table), 화상을 배열하는 가장 빠른 선인출(first-in first-out) (FIFO) 메모리-이것은 시스템이 화상을 빨리 녹화할 수 있는 한 모듈이 있다. 다양한 주파수-를 복수로부터 긴 지연된 타이밍에 따라 디스플레이로 전송할-을 포함하는 신호를 생성하는 타이밍 서브 시스템이 칩에 포함되고 있다. 텔레비전 모니터를 위한 동기화 신호는 또한 내부 서브시스템에 의해 생성된다. 상기 시스템은 또한 통상적으로 데이터 수신기, 메모리 제어기, 타이밍 생성기를 포함하지만 이것이 한계가 아닌 기능의 회로를 포함한다.

EPG 시스템 하드웨어의 실시예의 다른 기능은 디스플레이 목록 하드웨어는 동일한 DMA 하드웨어 상의 비디오 입력 및 출력 모듈이 가능하다. 디스플레이 포맷서는 ASIC 내에 비디오 및 FIFO부를 포함한다. 상기 시스템은 복수의 블록을 가지고 있다. 디스플레이 메모리는 수평 평면 내에 6개의 스크린 타이틀을 저장할 수 있다.

이하에는 개선된 EPG와 상제하게 개시되어 있다.

A. 개선된 시청자와 EPG의 상호작용은

1. 다양한 동작 모드
2. 조이스틱 및 트랙 볼 시청자 원격 인터페이스
3. 문맥 감지 EPG 온-스크린 제어 메커니즘
4. 시청 스케줄링
5. '모든 채널' 가이드 포맷, 채널 가이드 포맷 및 '다음/이전' 채널 가이드

를 포함하며;

B. 향후 방송될 프로그램의 비디오 녹화에 대한 개선된 사용자 제어는

1. PIP 윈도우에 디스플레이된 프로그램 녹화
2. '정기적' 녹화
3. '정기적'으로 녹화된 프로그램을 위한 녹화 기능 재방송 필터
4. 스크린 녹화 명령
5. 자동 녹화 목록 갱신
6. 녹화 가능 디지털 비디오 디스크 상의 녹화
7. 속도 감지 데이터프 용량

- 8. 녹화 명령 충돌 해결
- 9. 테마 가이드로부터의 녹화

를 포함하며;

C. 개선된 EPG 디스플레이와 탐색 기능은

- 1. 이-메일(E-mail)
- 2. 복수의 가시(viewable) '윈도우'
- 3. 반투명 온-스크린 효과
- 4. 온-스크린 통지
- 5. 테마 탐색 바
- 6. EPG를 통한 향상된 스크롤링 및 원활한 스크롤링(smooth scrolling)
- 7. EPG 내의 '정품'
- 8. 프로그램 예정의 테마 색-코딩
- 9. 제어 가능한 프로그램의 일수

를 포함하며;

D. EPG 디스플레이의 부모 제어(parental control);

E. 시청자에 의해 개선된 텔레비전 프로그램 정보로의 액세스는

- 1. 가상 채널 광고 슬롯 및 광고 윈도우 프로그램 광고
- 2. 인터넷으로의 링크를 포함하는 시청자 액세스를 위한 추가 세부 정보를 포함하며;

F. 상업 광고자가 시청자에게 전달할 수 있는 개선된 기회는

- 1. 광고 윈도우 제품-관련 비디오 클립 및 광고 방송 녹화
- 2. 광고 윈도우 제품-관련 녹화
- 3. 패널 광고
- 4. 가상 채널 광고 슬롯
- 5. 장소 소지자 광고(placeholder Ads)
- 6. 전체 스크린 광고
- 7. 자동 시청 채널
- 8. 광고 기능

를 포함하며;

G. 개선된 시청자에 의한 제품 정보로의 액세스는

- 1. 광고 윈도우 제품 세부 사항
- 2. 광고 윈도우 제품-관련 녹화
- 3. 광고 윈도우 프로그램-관련 녹화

를 포함하며;

H. 시청자 프로파일의 생성은

- 1. 시청자 프로파일 정보의 수집
- 2. 시청자 프로파일 정보의 분석 및 특성화

를 포함하며;

I. 시청자 프로파일 정보를 사용하여 EPG의 다양한 기능의 커스터화 ; 및

J. 시청자 프로파일 정보를 사용하여 커스터화된 광고 프리젠테이션을 시청자에게 제공하는 것을 포함한다.

A. 개선된 시청자와 EPG의 상호작용

1. 다양한 작동 모드

향상된 EPG 시스템 하에서는 시청자가 텔레비전을 작동시킬 수 있는 복수의 모드가 있다.

a. 텔레비전 모드

텔레비전 모드에서, 시청자는 텔레비전 비디오 프로그램의 전체 스크린 디스플레이를 시청한다. 다른 실시예에서, EPG로 들어가기 위해, 시청자는 시청자의 원격 제어 장치 상의 '가이드' 키를 누른다. EPG

그리드 가이드가 디폴트 모드인 경우, 시청자가 텔레비전을 켜면, 시청자가 처음으로 보는 것은 미하에 더 완전히 개시된 그리드 가이드 모드의 EP6이다. 실시예에서, EP6 셋업 과정에서 확인한 바와 같이, 시청자의 옵션에 따라, 시청자는 시청자가 처음으로 텔레비전을 켜는 경우에는 언제나 자동으로 텔레비전 모드를 들어가도록 선택하여 EP6 그리드 가이드 디폴트 모드를 번복(override) 할 수 있다. 셋업 과정 동안, 시청자는 시청자가 최종적으로 텔레비전을 켜는 때 확인된 최종적으로 시청한 채널로 자동으로 맞추도록 EP6에게 추가로 명령할 수 있다. 미하에 개시된 바와 같이 시청자는 EP6가 시청자의 선호 채널-이것은 시청자의 프로파일 정보를 분석하여 추론됨-로 자동으로 맞추도록 추가로 명령할 수 있다. 선택적으로, 시청자는 자동으로 특정 채널, 예를 들면 CNN과 같은 뉴스 채널로 맞추도록 EP6에게 명령할 수 있다.

b. EP6 그리드 가이드 모드

EP6 그리드 가이드 모드에서, EP6는 그리드 가이드를 디스플레이하거나 또는 선택적으로 채널 가이드를 디스플레이한다. 시청자는 그리드 가이드가 스크린 전체를 차지하거나 비디오 텔레비전 프로그래밍의 오버레이로 스크린의 일부에 디스플레이되거나 또는 바람직한 실시예로, 스크린의 PIP 윈도우 내에 비디오 텔레비전 프로그램을 계속 보여주는 동안 스크린의 일부-통상적으로 전체 스크린의 2/3임-만 차지하도록 요청할 수 있다. 바람직한 실시예에서, 미하에 개시된 바와 같이, 적어도 EP6/그리드 가이드 윈도우, PIP 윈도우 및 광고 윈도우를 포함하는 복수의 윈도우가 시청자를 위해 디스플레이된다.

가이드를 스크롤링하는 것이 미하에 개시되어 있다. 시청자는 시청자의 원격 제어 장치 상의 '메뉴' 키를 눌러 가이드의 처음으로 갈 수 있다.

시청자는 여러 가지 방법에 의해 비디오 텔레비전 프로그래밍의 전체 스크린 디스플레이로 돌아올 수 있다. 그중 한 방법은 시청자의 원격 제어 장치 상의 '가이드' 키를 누르는 것이다. 다른 방법은 온-스크린 하이라이팅/커서가 실시간 시청이 가능한 프로그램에 대한 그리드 가이드 상의 특정 프로그램 목록을 하이라이팅하는 경우 시청자의 원격 제어 장치 상의 '선택' 키를 누르는 것이다. 다른 방법은 시청자의 원격 제어 장치 상의 '마지막 채널' 키를 눌러 가이드로 들어가기 전에 시청자가 시청하던 프로그램 또는 PIP 윈도우가 잠긴 마지막 프로그램으로 돌아간다(미하에 개시된 옵션).

1) 테마 가이드 기능

EP6는 다양한 테마 가이드, 예를 들면 스포츠, 영화, 뉴스 등을 제공한다. 각 테마 가이드는 특정 테마, 예를 들면 모든 스포츠 프로그램과 관련된 프로그램 목록을 제공한다. 테마 가이드 디스플레이 포맷은 프로그램 목록만을 디스플레이하고, 따라서 선택된 테마에 적절한 콘텐츠를 가진 하루 중의 특정 시간의 채널을 디스플레이한다. 예를 들면, 스포츠 테마 가이드는, 통상적으로 예정된 순서에 따라, 특정한 시간, 예를 들면 48시간, 8일 등에 예정된 스포츠 프로그램을 방송하는 채널에 대한 목록만을 디스플레이한다.

2) 녹화 선택 기능

녹화 기능이라 또한 불리는 녹화 선택 기능에서, 시청자가 녹화하고자 하는 프로그램에 대해 시청자는 녹화 목록에 어떤 프로그램을 추가하고, 어떤 것이 프로그램의 목록 및 관련 프로그래밍 예정 정보인지 EP6에게 명령한다. 미하에 추가로 개시된 바와 같이, 시청자는 시청자가 녹화 목록에 기재된 각 프로그램을 녹화하고자 하는 빈도/규칙성을 확인할 수 있다.

시청자는 녹화 기능을 복수의 방법에 의해 들어갈 수 있다. 시청자는 시청자의 원격 제어 장치 상에 '녹화' 키가 있는 경우 이것을 누를 수 있다. 선택적으로, 시청자는 EP6 디스플레이 상의 '녹화' 동작 버튼을 누를 수 있다.

3) 시청 스케줄링 기능

시청 기능이라 또한 불리는 시청 스케줄링 기능에서, 시청자가 시청하고자 하는 프로그램에 대해 시청자는 시청 목록에 어떤 프로그램을 추가하고, 어떤 것이 프로그램의 목록 및 관련 프로그래밍 예정 정보인지 EP6에게 명령한다. 미하에 추가로 개시된 바와 같이, 시청자는 시청자가 시청 목록에 기재된 각 프로그램을 시청하고자 하는 빈도/규칙성을 확인할 수 있다.

시청자는 시청 기능을 복수의 방법에 의해 들어갈 수 있다. 시청자는 시청자의 원격 제어 장치 상에 '시청' 키가 있는 경우 이것을 누를 수 있다. 선택적으로, 시청자는 EP6 디스플레이 상의 '시청' 동작 버튼을 누를 수 있다.

4) 데이터 다운로드 기능

실시예에서, EP6 예정에 대한 데이터, 및/또는 프로그램 목록과 관련된 추가 정보, 및/또는 광고 데이터가 시청자의 텔레비전 시스템에 포함되는 메모리로 다운로드될 수 있다. 다운로드 데이터 시스템의 바람직한 실시예에서, 시청자는 특정한 유형의 정보가 사용 가능하도록 EP6에게 요청한다; EP6는 정보를 어디에서 찾아야 하는지에 대한 인덱스를 사용하고 자동으로 적절한 데이터 소스에 접속하여 정보를 다운로드한다. EP6 예정에 대한 데이터, 및/또는 프로그램 목록과 관련된 추가 정보, 및/또는 광고 데이터는 다양한 소스로부터 다운로드될 수 있다. 실시예에서, 데이터는 인터넷에서 다운로드된다. 다운로드 데이터 시스템의 다른 실시예에서, 시청자가 특정한 유형의 정보에 액세스하고 다운로드하는데 관심이 있는 경우, 시청자는 특정한 시각에 특정한 채널로 맞추도록 요청을 받는다.

c. 인터넷 모드

모든 실시예가 EP6 메모리로 데이터를 다운로드받아야 하는 것을 요구하는 것은 아니다. 일 실시예에서, EP6 스케줄링 데이터, 추가 데이터 및/또는 광고 데이터 및 EP6 스케줄링 데이터, 추가 데이터 및/또는 광고 데이터를 포맷하고, 디스플레이하고, 탐색하는 소프트웨어는 시청자의 텔레비전 시스템과 인터넷의 직접 접속을 통해 시청자의 텔레비전 시스템에 의해 액세스된다.

상기 개시된 인터넷으로 직접 접속의 일 실시예에서, 시청자의 텔레비전은 모뎀을 통해 전화선에 의해, 케이블 모뎀에 의해, 무선 모뎀 통신 장치 및 인터넷을 포함하는 다른 양방향 통신 장치 및 인터넷과 통신하는 다른 통상의 방법에 의해 인터넷에 접속된다. 초기 접속 웹사이트 주소(initial connect web site address)는 예를 들면, 수직 블랭킹 간격(vertical blanking interval)(VBI)을 통해 시청자에게 송신된 정보를 통해 공급될 수 있다. 시청자는 또한 복수의 EP6 인터넷 웹사이트의 선택을 공급받을 수 있다. 시청자는 원격 제어 장치를 사용하여 EP6 웹사이트 중의 하나를 선택할 수 있다.

시청자의 텔레비전 시스템은 인터넷으로의 컴퓨터 온-라인 액세스를 모방(emulate)하도록 프로그램된다. 시청자의 텔레비전 시스템과 인터넷과의 접속이 성립하면, 시청자는 EP6 관련 정보의 온-라인 인터넷 서비스 제공자와 양방향 통신을 하게 된다. 또한, 일 실시예에서, 키보드 사용자 인터페이스가 사용 가능한 경우, 사용자는 채트 룸(chat room) 또는 다른 상호작용 서비스를 들어갈 수 있다.

2. 조이스틱 및 트랙볼 시청자 원격 인터페이스

시청하는 사용자의 비디오 인터페이스(viewing user's video interface) ('UI')는 시청자의 원격 제어 장치 및 텔레비전 모니터 스크린 디스플레이를 포함한다. 본 발명의 실시예에서, 본 발명에 의해 제공되는 UI의 향상은 중앙에 트랙 키가 있는 4개의 화살표 키(상, 하, 좌, 우)의 통상의 원격 제어 장치 구성 대신 조이스틱을 사용하는 것이다. 조이스틱 UI는 EP6와 사용자-친화 인터페이스를 제공한다. 조이스틱의 사용은 직관적이다. 시청자의 손이 원격 제어 장치에 조이스틱에 접촉하면 시청자/사용자는 원격 장치를 볼 필요 없이 요구가 없다. 따라서, 시청자는 동시에 온-스크린 디스플레이를 시청하면서 비틀 중단 없이 제어할 수 있다.

본 발명의 다른 실시예에서, 본 발명에 의해 제공되는 UI의 향상은 중앙에 선택 키가 있는 4개의 화살표 키(상, 하, 좌, 우)의 통상의 원격 제어 장치를 사용하는 것이다.

트랙볼 및 조이스틱 실시예에서, 온-스크린 '커서'가 있다. PC 사용자가 PC 단말기 윈도우 상의 커서를 탐색하는 것처럼 시청자는 트랙볼 또는 조이스틱 원격 제어 장치를 사용하여 스크린의 어떤 위치든지 커서를 탐색할 수 있다.

3. 문맥 감지 EP6 온-스크린 제어 메커니즘

'키', '버튼', '메뉴' 바 및 다른 시각 제어 메커니즘 장치(visual control mechanism device)는 EP6의 제어를 위해 스크린 상에 디스플레이된다. 통상적으로 시각 제어 메커니즘 장치는 사용자-상호작용에 반응한다. 통상적으로, 시청자는 UI 원격 제어 장치를 사용하여 특정 온-스크린 제어 장치를 하이라이트된 한다. 통상적으로, 시청자는 그 후 UI 원격 제어 장치를 사용하여 스크린 제어 장치 상에 하이라이트된 것을 선택한다.

본 발명의 일 실시예에서, 위치 고정 온-스크린 제어 장치(positionally constant on-screen control device)는 문맥을 감지한다. 즉, 한 스크린에서 다음 스크린으로, 한 모드에서 다음 모드로 특정 버튼이 EP6의 모든 스크린의 동일한 위치 및 동일한 색으로 일관되게 디스플레이될 수 있다. 문맥 감지 제어 장치 및 위치를 가지고 있다. 버튼은 다른 기능을 가지고, 선택되는 경우, 버튼이 디스플레이되는 스크린에 따라 다른 결과를 제공할 것이다. 일 실시예에서, 온-스크린 제어 장치의 기능은 제어 장치 옆에 문맥으로 표시되거나 또는 제어 장치가 충분히 크면, 제어 장치의 화면에 표시된다.

예를 들면, 일 실시예에서, 도 3, 4a, 5 및 6에 도시된 바와 같이, EP6는 4개의 스크린의 각각의 가장 위에 2개의 버튼을 디스플레이한다. 각각의 4개의 다른 스크린에서, 좌측 위의 버튼은 다른 기능을 가지고 있다. (본 명세서에서 '좌측 및 우측'은 각각 시청자의 좌측 및 시청자의 우측을 지시한다.) 도 3은 프로그램 스크린 모드의 EP6인 온-스크린 가이드 모드를 도시하고 있다. 도 3에서, 시청자의 좌측 버튼은 시청자로 디스플레이된다. 도 4a 및 4b는 채널 스크롤링의 EP6인 온-스크린 가이드가 모드에 표시하고 있다. 도 4a 및 4b에서, 시청자의 좌측 버튼은 선택적으로 '잠금' 및 '홀름'으로 표시된다. 도 5는 시청 스케줄링 기능의 EP6를 도시하고 있다. 도 5에서, 시청자의 좌측 버튼은 '취소'로 표시된다. 도 6은 상기 EP6의 시청/녹화 예정 스크린을 나타낸다. 도 6에서, 시청자의 좌측 버튼은 '제거'로 표시된다.

4. 시청 스케줄링

EP6는 시청할 프로그램 타이틀 - 시청자에게 정렬에 배열되도록 예정된 - 을 선택할 기회를 제공한다. 프로그램 타이틀을 선택함에 의해, 시청자는 '시청 목록'을 작성한다. 시청 목록 옵션 및 가이드는 EP6의 녹화 기능과 동일한 기능을 제공한다. 선택된 프로그램을 자동으로 녹화하는 대신, 텔레비전이 이미 녹화하지 않았다면, 시청 기능은 사용자 선택으로 텔레비전을 켜고, 텔레비전이 이미 지정된 프로그램에 응답하여 예정된 채널로 맞추어져 있지 않은 경우 그 채널로 텔레비전을 자동으로 맞춘다. 이 기능은 시청자가 예정된 프로그램을 동작하더라도 예정된 시간에 특별한 관망이 있는 프로그램을 시청할 수 있는 기회를 시청자에게 제공한다. 이 기능은 아이들이 보는 프로그램에 대한 부모의 선택을 또한 제공한다.

시청자는 복수의 방법에 의해 시청 스케줄링 기능을 들어갈 수 있다. 시청자는 EP6로부터 시청 스케줄링 기능을 선택하여 그 기능으로 들어갈 수 있다. 시청자는 또한 상호 발송될 프로그램을 대한 광고를 디스플레이하는 광고 윈도우 또는 상호 발송될 프로그램을 디스플레이하는 가상 채널 광고 슬롯을 하이라이트하여 시청 스케줄링 기능으로 들어갈 수 있다(물 모두 본 명세서 내에 개시됨).

시청자는 시청 목록의 어떤 프로그램도 시청자가 정기적으로 시청하고 싶은 프로그램으로 지정할 수 있다. 일 실시예에서, 시청자가 광고 윈도우 또는 가상 채널 광고 슬롯을 하이라이트하며 시청 스케줄링 기능을 들어간 후, 시청자가 상기 프로그램을 '정기' 시청으로 지정하는 경우, 광고자가 광고를 발송하는 것을 중단하면 상기 지정은 만료된다. 계획된 만료는 광고자에게 그들의 광고를 갱신하도록 하는 동기를 부여한다.

5. '모든 채널' 가이드 포맷, 채널 가이드 포맷 및 '다음/이전' 채널 가이드

시청자는 그리드 가이드를 모든 채널을 어떤 순서에 의해 디스플레이하고 이미 방송 중 또는 장래의 어떤 시간에 시작하기로 예정된 프로그램 목록을 디스플레이하는 '모든 채널' 포맷으로 시청할 수 있도록 선택할 수 있다. '모든 채널' 포맷에서, 시청자는 각 채널에 대한 목록을 상하로 스크롤하고 하루동안 다른 시간에 예정된 채널에 대한 목록을 좌측에서 우측으로, 우측에서 좌측으로 스크롤할 수 있다. 통상적으로, 가이드의 가장 좌측 부분은 가장 먼저 예정된 프로그램으로 시작하고 하루동안 나중 시간에 예정된 목록으로 우측으로 연속적으로 계속된다.

다른 선택으로서, 시청자는 예정된 프로그램 목록을 한번에 한 채널씩 보는 것을 선택할 수 있다('채널 가이드'). 이 포맷에서, 시청자는 하루의 다른 시간에 예정된 하나의 채널에 대한 목록을 상하로 스크롤한다. 통상적으로, 채널 가이드의 가장 좌측 부분은 가장 먼저 예정된 프로그램으로 시작하고 하루동안 나중 시간에 예정된 목록으로 우측으로 연속적으로 계속된다. 도 9는 EP6의 채널 가이드 기능을 도시한 온 스크린 EP6 디스플레이의 예를 도시적으로 나타내는 도면이다.

'채널 가이드' 형식에서, 시청자는 '다음' 채널 또는 '이전' 채널의 채널 가이드를 보는 것을 선택할 수 있다. 일 실시예에서, '다음' 및 '이전' 채널 가이드는 EP6 메뉴, 동작 버튼 또는 태스키 바 중의 하나에 대한 옵션이다. 다른 실시예에서, 시청자의 원격 제어 장치는 '다음' 및 '이전' 채널 가이드 키를 제공한다. 다른 실시예에서, 시청자는 상하 화살표 키를 사용하여 다음 또는 이전 채널 가이드로 탐색한다.

B. 향후 방송될 프로그램의 비디오 녹화에 대한 개선된 사용자 제어

1. PIP 윈도우에 디스플레이된 프로그램 녹화

이하에 상세히 개시된 바와 같이, EP6는 복수의 '윈도우'를 제공한다. 한 윈도우는 현재 맞추어진 프로그램을 디스플레이한다. 시청자가 텔레비전 모드로부터 EP6로 들어오면, PIP 윈도우는 '하이라이트'된다. 일 실시예에서, PIP 윈도우의 하이라이팅은 PIP 윈도우 주위의 경계의 색 변화에 의해 달성된다. PIP 윈도우가 하이라이트되어 있는 동안, 시청자는 EP6가 디스플레이된 프로그램을 녹화하도록 명령할 수 있다. 일 실시예에서, 시청자는 시청자의 원격 제어 장치 상의 녹화 버튼을 눌러 하이라이트된 PIP 윈도우에서 디스플레이되는 프로그램을 녹화한다.

2. '정기적' 녹화

본 발명의 일 실시예는 시청자에게 특정 프로그램을 '정기적'으로 녹화하는 옵션을 제공한다. '정기적' 옵션은 시청자가 EP6 그리드 가이드 상의 특정 프로그램 타이틀을 하이라이트하면 선택할 수 있다. '정기적' 옵션에 대한 시청자의 선택은 VCR 제어 시스템에게 선택된 채널의 특정 타이틀을 상기 프로그램이 방송되는 요일의 선택된 시간에 녹화하도록 명령한다. 선택된 타이틀의 방송이 다른 프로그램에 의해 바뀌어 있으면, 새 프로그램은 녹화되지 않는다. 방송 스케줄의 변경은 선택된 프로그램의 타이틀과 실제로 방송되는 프로그램의 타이틀을 비교하여 결정된다. 본 발명의 일 실시예에서, 실제로 방송되는 프로그램의 타이틀은 텔레비전 신호의 수직 블랭킹 간격에 반송된다(carried)는 것으로 가정한다. 시청자가 EP6에게 특정 프로그램을 '정기적'으로 녹화하도록 명령한 경우, 바뀌는(preempting) 프로그램은 녹화되지 않고 EP6는 선택된 프로그램이 바뀌어 녹화되지 않았다고 시청자에게 통보하는 메시지를 디스플레이한다.

3. '정기적'으로 녹화된 프로그램을 위한 녹화 기능 재방송 필터

EP6는 재방송을 감지할 수 있다. 프로그램을 재방송으로 인식하는 것은 프로그램 방송의 VBI에서 수행될 수 있다. 다른 실시예에서, 재방송 인식 정보는 프로그램 세부 사항에서 사용 가능하다. 녹화 기능의 실시예에서, 시청자가 '정기적' 녹화 옵션을 선택하면, 시청자에게 또한 재방송을 필터링하는 옵션이 제공된다. 시청자가 재방송 필터 옵션을 선택하면, 프로그램이 정기적으로 예정된 때마다, EP6는 방송될 상기 프로그램 에피소드가 재방송으로 인식되는지를 결정한다. 상기 에피소드가 재방송이고, 시청자가 그 프로그램 타이틀에 대해 재방송 필터 옵션을 선택했다면, EP6는 상기 에피소드를 녹화하지 않는다.

4. 스킵 녹화 명령

EP6의 녹화 기능에서, 시청자는 녹화할 프로그램 타이틀을 선택한다. 프로그램 타이틀이 선택되면, 시청자에게 녹화-스케줄링 옵션을 선택하도록 요청된다. 시청자는 1회(once), 매일(daily), 매주(weekly) 또는 정기적(regularly)을 녹화-스케줄링 옵션으로 선택할 수 있다. 실시예에서, 시청자가 1회(once), 매일(daily), 매주(weekly) 또는 정기적(regularly)의 녹화-스케줄링 옵션을 선택했다면, 시청자가 프로그램의 녹화를 한번 스킵할 수 있다. 1회 스킵 명령은 그 프로그램 타이틀에 대한 녹화 명령이 녹화 목록에 남아 있더라도 EP6가 상기 프로그램 타이틀을 녹화하지 않게 된다.

EP6의 녹화 기능에서, 시청자는 녹화 목록 상의 모든 프로그램 또는 녹화 목록 상의 선택된 프로그램에 대해 스킵 명령을 선택할 수 있다. 이 기능은 시청자가 휴가를 가는 경우에 사용될 수 있다. 상기 프로그램은 녹화 목록에 남아있다. 시청자의 옵션에 따라, 시청자는 녹화 목록 상의 모든 프로그램 또는 녹화 목록 상의 선택된 프로그램에 대해 스킵 명령을 할 수 있다.

5. 자동 녹화 목록 갱신

EP6의 녹화 기능에서, EP6는 녹화하는 것으로 지정된 특정 프로그램 타이틀에 대한 녹화 명령을 비교하여 프로그램 예정의 변화를 감지한다. 일 실시예에서, EP6가 프로그램 예정의 변화를 감지하면, 녹화 목록은 예정 변화 정보로 자동으로 갱신된다. 예를 들면, 스포츠 이벤트가 원래 예정된 시간보다 더 오래 방송되면, 스케줄링 갱신 정보 패킷이 스포츠 이벤트 이후 방송되기로 예정된 프로그램의 시간을 갱신하는 VBI를 통해 전송될 수 있다. EP6는 VBI 스케줄링 갱신을 감지하여, 스포츠 프로그램 후의 프로그램의 녹화가 적절히 녹화되는 것을 허용하도록 녹화 목록을 갱신한다.

6. 녹화 가능 디지털 비디오 디스크 상의 녹화

시청자는 프로그램을 녹화 가능 디지털 비디오 디스크(DVD)에 녹화하도록 EP6에게 명령할 수 있다. DVD의 방대한 저장 용량 때문에, 시청자는 장기간의 프로그램을 녹화하고 인덱스하도록 EP6에게 명령할 수

있다. 예를 들면, 시청자는 예를 들면 4시간의 CNN 뉴스 방송을 녹화하고 인덱스하도록 명령할 수 있다. 시청자가 DVD 녹화를 시청할 준비가 되면 EP6는 DVD 인덱스를 스크린에 디스플레이한다. 시청자는 그 후 DVD 전체를 시청하거나 또는 시청자가 관심 있는 부분만을 시청하는 것을 선택할 수 있다.

일 실시예에서, 녹화된 프로그램의 프로그램-레벨 인덱싱이 생성된다. 다른 실시예에서, 송신된 비디오의 VBI 내에 전송된 정보를 사용하여 인트라-프로그램 인덱싱이 생성된다. 이 실시예에서, CNN을 녹화하는 것은 '국제 뉴스', '국내 뉴스', '스포츠', '연예', '사업 및 금융' 및 '날씨'와 같은 테마를 포함하는 인덱싱 분할을 보여줄 것이다.

또 다른 실시예에서, 일정한 시간 간격을 사용하여 인트라-프로그램 인덱싱이 생성된다. 상기 인덱스는 시작 및 종료 시간 간격, 오디오 콘텐츠 요약물을 보여준다.

또 다른 실시예에서, 인덱싱 소프트웨어는 녹화된 프로그램의 오디오 콘텐츠를 분석한다(콘텐츠 분석 프로그램). 이것은 통상적으로 프로그램의 VBI에 전송된 인덱싱 분할 정보를 모두 사용하는 것에 추가된다. 콘텐츠 분석 프로그램은 음성 인식 기술(speech and voice recognition technology)을 사용하여 다른 것들과 함께, 발표자의 변화, 음색의 변화, 속도의 변화, 주제 단어, 지리적 위치, 명사와 같은 변수를 분석한다. 콘텐츠 분석 프로그램은 그 후 상기 개시된 테마 인덱스에 추가로 주제 인덱스를 생성한다.

7. 속도 감지 테이프 용량

EP6의 녹화 기능은 녹화하도록 시청자가 선택한 프로그램의 타이틀을 식별하는 녹화 리스트를 제공한다. 속도 감지 테이프 용량 기능은 색 코딩을 사용하여 다른 테이프 속도에 한 개의 테이프에 다 녹화할 수 있는 타이틀을 한색으로 식별하고, 느린 테이프 속도에 한 개의 테이프에 다 녹화할 수 있는 타이틀을 다른 색으로 별도로 식별한다.

8. 녹화 명령 충돌 해결

EP6의 녹화 기능은 시청자 녹화 명령의 충돌을 인식한다. 일 실시예에서, EP6의 녹화 기능은 충돌을 해결하도록 시청자에게 촉구한다. 예를 들면, 녹화 기능에서, EP6는 특정 프로그램을 녹화하라는 시청자의 명령을 받아들인다. EP6는 새로 수신된 녹화 명령을 아직 불완전하게 실행되거나 아직 실행되지 않은 녹화 목록 상의 녹화 명령과 비교한다. 새로 수신된 명령과 녹화 목록의 남아있는 하나 이상의 녹화 명령 사이에 날짜, 시간 및 지속 시간(duration)이 겹치는 것을 EP6가 감지하면, EP6는 충돌을 설명하는 메시지를 포맷한다. 상기 메시지는 사용자에게 특정 프로그램을 녹화하라는 새로 수신한 명령과 녹화 목록이 충돌하는 녹화 명령을 설명한다. 녹화 기능에서, EP6는 충돌하는 명령을 녹화 목록에 입력하는 것을 방지한다. EP6는 충돌을 제거하기 위해 시청자가 녹화 명령을 수정하는 것을 요청한다. 일 실시예에서, EP6가 하나의 녹화 명령이 '정기적 녹화' 프로그램을 녹화하는 녹화 명령과 날짜, 시간 및 지속 시간이 충돌하는 '일회' 프로그램과 관련되는 경우, EP6는 시청자가 일회 프로그램을 녹화하도록 선택하도록 시청자에게 조언하는 문 스크린 메시지를 포맷한다. 다른 실시예에서, 시청자는 주중의 모든 프로그램의 알파벳순에 의한 목록을 볼 수 있다. 시청자는 상기 알파벳순에 의한 목록으로부터 시청 또는 녹화할 프로그램을 디스플레이할 수 있다.

9. 테마 가이드로부터의 녹화

EP6는 다양한 테마 가이드, 예를 들면 스포츠, 영화, 뉴스 등을 제공한다. 시청자가 특정 테마 가이드, 예를 들면 스포츠 테마 가이드를 선택하면, 테마 가이드를 나가 프로그램 그리드 가이드로 갈 필요 없이 테마 가이드 내에 있는 동안 시청자는 EP6에게 이벤트를 녹화하도록 명령할 수 있다. 예를 들면, 스포츠 테마 가이드에서, 시청자는 특정한 스포츠 이벤트의 박스 스코어(box score) 및/또는 스포츠 테마 가이드의 스포츠 프로그램 목록을 클릭하여 EP6가 스포츠 이벤트를 녹화 목록에 추가하도록 명령할 수 있다.

C. 개선된 EP6 디스플레이 및 탐색 기능

1. 이-메일(E-mail)

바람직한 실시예에서, EP6는 인터넷/월드 와이드 웹과 인터페이스한다. 바람직한 실시예에서, 시청자는 인터넷에 액세스하여 이-메일을 전송하고 수신할 수 있다.

다른 실시예에서, 텔레비전 단말기는 개별적으로 어드레스할 수 있으며, 헤드 엔드(head end)는 네트워크 상에서 시청자간의 이-메일 트래픽을 제어한다. 2방향 전송이 가능하도록 하기 위해, 백 링크(back link)로 900 또는 요금 무료 번호(toll free number)를 사용한다. 그 후 이-메일이 시청자의 텔레비전을 개별적으로 어드레스할 수 있는 VBI를 통해 적당한 시청자에게 전송될 수 있다.

2. 복수의 가시 '윈도우'

EP6 UI 스크린은 다중 관찰가능 '윈도우'를 제공한다. 하나의 윈도우는 EP6 그리드 가이드를 제공한다. 다른 윈도우는 현재 동조된 프로그램이 디스플레이된 픽처-인-픽처(picture-in-picture; PIP) 윈도우를 제공한다. 다른 윈도우는 광고 정보('광고 윈도우')를 디스플레이한다. 광고는 그래픽 및 문자(textual) 정보 형태가 될 수 있다. 그렇지 않은 경우, 광고는 비디오 디스플레이 형태가 될 수 있다. 제1 실시예에서, 광고 윈도우는 상호동작한다.

시청자가 텔레비전 모드로부터 EP6를 엔터링하면, PIP 윈도우가 하이라이트된다. 시청자는 PIP 윈도우를 로킹(locking)할 수 있다. PIP 윈도우를 로킹하는 경우, 시청자는 EP6 프로그램 그리드 가이드를 통해 스크롤하면서, PIP 윈도우에 디스플레이될 텔레비전 프로그램을 계속하여 볼 수 있다. PIP 윈도우를 로킹하지 않는 경우, 프로그램 타이틀의 비디오가 PIP 윈도우 내에 디스플레이될 그리드 가이드 내에서 하이라이트되도록 한다.

마래에서 서술하는 바와 같이, 시청자는 또한 광고 윈도우를 하이라이트할 수 있다. 이렇게 함으로써, 디테일 박스 내에 디스플레이될 제품을 기술하는 추가 텍스트가 EP6 그리드 가이드의 텍스트가 된다.

광고 윈도우가 특정 제품에 대한 정보를 디스플레이하는 경우, 레코드 버튼을 누름으로써 앞으로의 예정된 시간동안 EP에 광고 방송(Informercial)을 녹화하도록 지시할 수 있다. 그렇지 않으면, 광고 윈도우는 미리 예정된 텔레비전 프로그램 또는 일정 기간의 시간이 지난 후 방송될 프로그램 시리즈에 대한 정보를 디스플레이할 수 있다. 이러한 경우에, 레코드 버튼을 누름으로써 EP에게 미리 예정된 프로그램들을 녹화하도록 지시할 수 있다. 그렇지 않으면, 시청자는 시청 리스트(watch list)를 위한 프로그램들 지정할 수 있다.

제1 실시예에서, 시청자는 커서/하이라이팅이 PIP 윈도우에 도달할 때까지 좌측 화살표를 누름으로써, 그 리드 가이드에서부터 PIP 윈도우로 탐색항해(navigation)할 수 있다. 시청자는 우측 화살표를 사용하여 PIP 윈도우로부터 리드 가이드로 이동할 수 있다. 제1 실시예에서, PIP 윈도우에서 리드 가이드로 이동하게 되면, 커서는 가이드 정렬(lineup)의 최상부로 스크롤링하게 된다. 위 화살표 키를 누르면, 커서가 탐색 bar(bar)로 이동하게 된다. EP는 탐색 바에 대하여 예를 들어 정보 센터, 스포츠, 뉴스, 설치, 도움말 등과 같은 여러 가지 가능한 목적지를 제공한다.

아래 화살표 키를 누르면, 커서가 PIP 윈도우로부터 광고 윈도우로 이동한다.

시청자가 가이드에 처음으로 엔터링하는 경우 탐색 바의 특정 목적지를 하이라이팅하기 위해 시청자는 디폴트(default)를 설정하거나 시스템 디폴트를 허용할 수 있다.

3. 반투명 온-스크린 효과

제1 실시예에서, EP는 특수 반투명 가시 효과를 창출한다. 반투명 효과를 창출하기 위해, 본 발명에 의한 시스템은 디스플레이 포맷을 화소당 화소(pixel by pixel)로 변경하는데, 여기서 하나의 화소는 중첩된 색상이며, 다음 화소는 투명하다.

4. 온-스크린 툴지

EP는 온 스크린 툴지를 시청자에게 포맷하고, 이 툴지를 시청자에게 디스플레이한다. 온 스크린 툴지를 사용하여 시청자에게 가능한 정보 아이템의 임의의 수를 경고하도록 한다. 예를 들어, EP는 예를 들어 2분과 같은 얼마간의 시간 내에 특정 프로그램을 녹화할 시청자에게 통지할 수 있다. 녹화 툴지는 시청자에게 프로그램 녹화하기 위해 케이블 박스를 스위칭하는 지의 여부를 추가할 수 있고, 시청자가 프로그램 녹화하기 위해 케이블 박스를 스위칭하기를 원한다는 것을 표시할 수 있고, EP는 레코드 리스트로부터 프로그램 삭제한다. 다른 실시예에서는 (예를 들어 다른 시청자의 프로그램 삭제하는 것으로부터 결정된) 원상있는 프로그램이 각분과 같은 소정 양의 시간 내에 다른 채널 상에서 방송될 것이라는 것을 시청자에게 통지한다. EP는 시청자가 다른 채널 상의 프로그램들을 보기를 원하는 지를 문의할 수 있다. 시청자가 채널 상의 프로그램을 원하는 경우, EP는 적당한 시점에 다른 채널과 자동적으로 통지된다. 그렇지만 시청자가 다른 채널 상의 프로그램들을 보기를 원하기를 원하는 시청자만을 위한 후, 시청자가 긍정적으로 답변하는 경우 적당한 시간에 그 프로그램을 녹화할 수 있다.

텔레비전이 텔레비전 모드의 경우, 통지가 스크린 상에 디스플레이된다. 통지는 다음과 같은 다수의 방법으로 디스플레이될 수 있다. 1) 전체 스크린 중첩, 2) 부분 스크린 중첩, 3) 실시간 프로그램 비디오가 PIP 포맷으로 자동적으로 변경되고, 통지가 PIP 윈도우의 외부에 디스플레이될, 4) 실시간 프로그램 비디오가 PIP 포맷으로 자동적으로 변경되고, 통지가 PIP 윈도우의 내부에 디스플레이될, 6) 시청자가 시청자의 원격 조정 장치의 탐색 키를 사용하여 누를 수 있는 온 스크린 아이포이 디스플레이될, 7) 프로그램 비디오가 스크린 상부의 예를 들어 90도와 같은 일정 퍼센트에 적합하도록 압축하고, 통지가 스크린 상부에서 수평 롤링 메시지로 디스플레이될, 8) 프로그램 비디오가 스크린 하부의 예를 들어 90도와 같은 일정 퍼센트에 적합하도록 압축하고, 통지가 스크린 상부에서 수평 롤링(horizontally-rolling) 메시지로 디스플레이될.

텔레비전이 텔레비전 이외의 다른 모드의 경우, EP는 진술한 포맷 중의 하나의 포맷을 변경함으로써 시청자에게 통지할 수 있다. 예를 들어 텔레비전은 PIP 포맷의 가이드 모드로, EP는 임의의 포맷 번호 1), 2), 5), 6), 7), 8)를 사용할 수 있거나, 또는 EP는 광고 윈도우 내에 통지를 디스플레이할 수 있도록 상세 정보 윈도우 내 또는 스크린의 상부 또는 하부에서 수평으로 롤링하는 메시기에 가시광 고 채널 슬롯을 시청자에게 통지할 수 있다.

5. 데마 탐색 바

데마 디스플레이는 가이드 가이드의 상부 상에 위치한다. 제1 실시예에서 '페이지 업(page up)' 온 스크린 버튼을 제공한다. 또한 제1 실시예에서 가이드 가이드 디스플레이는 '메뉴' 버튼을 제공한다. 시청자는 페이지 업 스크린 버튼을 연속적으로 누르거나 또는 메뉴 버튼을 누름으로써 가이드 가이드의 상부로 스크롤링할 수 있다.

6. EP를 통한 개선된 스크롤링 및 원할한 스크롤링

EP의 가이드 모드 내의 상부 레벨 스크린에서, 시청자는 프로그램 스케줄 정보의 future day로 즉시 접근할 수 있다.

제1 실시예에서, 가이드 가이드 디스플레이는 '페이지 업' 온 스크린 버튼을 제공한다. 복수의 채널에 대한 프로그램 스케줄 정보는 가이드 가이드 모드로 EP의 스크린 상에 디스플레이된다. 타이틀을 그리드 가이드 내에 디스플레이하기 위해 단축하며, 공간을 보존한다. 시스템 상에서 전체 타이틀을 가늠하며, 시청자가 프로그램 리스팅에 대응하기 위해, 가이드 가이드 내의 타이틀을 하이라이팅하는 경우 그리드 가이드의 상세 기술 영역 내에 디스플레이된다. 그러나 EP는 한 세트의 규칙에 따라 타이틀을 단축하며, 타이틀이 가이드 가이드의 스케줄링 타이틀에 적합하도록 한다.

시청자는 프로그램 리스팅을 통해 스크롤 할하거나 다음할 수 있다. 스크롤링하는 동안, 스크롤링이 중단될 때까지 타이틀은 끌어들여지지 않는다. 타이틀을 끌어들여지는데 있어서 이러한 지연은 프로세서의

속도를 가속화하며, 스크린의 외양은 보다 더 명확해진다. 스크롤링하는 동안, 채널이 정렬의 상부 또는 하부에 위치하지 않는 한, 커서는 스크린 상의 상부 또는 하부 타일을 하이라이트하지 않는다. 하이라이팅이 없는 것은 보다 많은 채널이 스크롤링된 방향으로 남아 있다는 것을 시청자에게 신호한다.

EP6 시청자 인터페이스(user interface; UI)에 대한 추가 개선은 '부드러운 스크롤링'의 개발이다. 커서가 하부로부터 제2 타일에 도달하고 새로운 타일이 하부에 나타나거나, 새로이 나타나는 타일이 전체 타일 높이에 도달할 때까지 전체 타일 밑 예를 들어 프로그램 타이틀과 같은 그 콘텐츠가 수직으로 점차적으로 상승한다. 이와 동시에 타일 모두가 사라질 때까지 스크린의 상부에서부터 사라지는 타이틀 밑 상부 타일의 콘텐츠는 수직으로 수축한다. 따라서 전체 스크린 디스플레이 내에서 부드러운 변동(transition)을 제공하지만, 1/60 초에서 변하기 때문에 실제로는 허용되지 않는다.

사용자는 페이지당 스크린이 변하는 것보다 부드러운 스크롤링이 덜 혼란스러운데, 부드러운 스크롤링은 스크린 가이드 상에 존재하기 위해 필요한 스크롤링 기술이다. 다수의 타일을 신속하게 스크롤링하는 동안, 프로세서가 스크롤링하는 동안 임의의 타일 상에서 타이틀을 다시 끌어당기는 것을 중단하고, 스크롤링이 중단되거나 타이틀을 다시 끌어당기는 속도가 늦어질 때까지 대기한다. 따라서 스크린이 원하는 지점에 도달할 때까지 타이틀이 검색될 필요가 없기 때문에, 신속한 스크롤링이 가능하다. 데이터를 인출하는 것은 아주 프로세서 집약적이다. 펌웨어(firmware) 및 하드웨어간의 특수한 상호작용은 비트 맵의 재인출 및 메모리로부터의 데이터 검색을 최소화하기 위해 필요하다. 이는 수직 및 수평 스크롤링 모두에 적용된다. 사용자는 채널 식별자 및 스케줄 타임이 디스플레이된 상태로 남기 때문에 적용된 상태로 남게 된다.

7. EP6 내의 '점프'

시청자는 다수의 방법으로 EP6 내에서 원하는 행동 또는 위치로 '점프'할 수 있다. 그리드 가이드에서, 시청자는 시청자의 원격 조정 장치의 키 패드 상의 채널 식별 숫자의 디지털을 입력함으로써 특정 채널에 대한 채널 슬롯으로 점프할 수 있다. EP6는 이 숫자를 해석하고 EP6 커서에 대한 적당한 위치를 계산한다. 그후 EP6는 적당한 채널 슬롯으로 커서를 스크린 상에 디스플레이한다.

제1 실시예에서, 시청자가 가장 좋아하거나 또는 가장 빈번하게 보는 채널이 페버리트 채널 선택 바(favorite channel selection bar) 상의 버튼으로 디스플레이된다. 시청자는 적당한 채널 버튼을 '누름'으로써 시청자가 가장 좋아하는 채널 중에서 하나의 채널로 점프할 수 있다.

제2 실시예에서, 시청자의 원격 조정 장치는 키 패드 상의 숫자와 연관된 문자를 디스플레이한다. 시청자는 특별 'Alt' 키를 사용하여 알파벳 및/또는 문자숫자식 키를 누를 수 있다. 이러한 방법으로, 시청자는 'CNN'과 같은 채널 식별자를 입력할 수 있다.

제3 실시예에서, 시청자는 페버리트 채널 식별자 메뉴의 풀 다운을 요구할 수 있으며, 풀 다운 메뉴로부터 채널을 선택할 수 있다.

제4 실시예에서, 시청자는 시청자의 원격 조정 장치 상의 '북마크' 키 또는 EP6 디스플레이 상의 '북마크' 버튼을 사용하여 EP6 내에 '북마크'를 설정할 수 있다. 사용자가 이후의 북극을 위해 현재 위치를 표시하기를 원하는 경우에 시청자는 '북마크' 키를 누를 수 있다. 그 후에 시청자는 EP6 내의 몇몇의 다른 위치로부터 떨어져 스크롤링, 점프하거나 또는 탐색한다. 시청자가 북마크된 위치로 북극하고자 하는 경우, 시청자는 (시청자의 원격 조정 장치 상 또는 다른 경우에는 EP6 디스플레이 상의) 'lastmark' 키를 누를 수 있다. EP6는 북수의 북마크된 위치를 녹화할 수 있다. 제1 실시예에서, EP6는 시청자가 여러 번 텔레비전을 턴오프한 후 텔레비전을 턴온한 후에 북마크된 위치를 기억할 수 있다.

8. 프로그램 스케줄의 테마별 색-코딩

EP6는 복수의 테마에 따라 프로그램을 분류한다. 제1 실시예에서, EP6 색은 프로그램에 할당된 테마별 분류에 따라 그리드 가이드 내의 프로그램 표현을 코딩한다.

9. 제어가 가능한 프로그램의 일수(number of days)

일반적으로 EP6는 2일간의 프로그램 리스팅을 수행한다. 시청자의 선택 시에, EP6는 단지 1일의 프로그램 리스팅을 수행할 수 있다. 1일 선택은 보다 작은 범위의 프로그램 리스팅을 제공하지만, 응답 시간을 증대시킨다. 그렇지 않으면, 시청자는 특정 설치에 의해 제공되는 일수까지 임의의 일수의 프로그램 리스팅을 수행하도록 선택할 수 있는데, 여기서 제공 일수는 사용가능한 메모리 기억 양에 따라 설정된다.

D. EP6 디스플레이의 부모 제어(parental control)

부모 시청자는 초기 EP6 셋업 과정동안에 부모 제어 기능(parental Control Function)을 엔터링한다. EP6 셋업 과정에서, 부모는 텔레비전의 모든 시청자를 식별하고, 개별적인 시청자 식별자를 할당한다. 또한 부모 시청자는 자신의 암호를 설정한다. 미합중국 가출원 번호 제 60/085,401호('V-CHIP Plus+: In-Guide User Interface Apparatus and Method for Programmable Blocking of Television and other viewable programming such as for Parental Control of a Television Receiver')는 개별적인 시청자의 식별 및 패스워드 보호 초기화에 대한 부모 제어 셋업 과정에 대해 기술하고 있는데, 이 출원은 본 명세서에 참조되어 본 명세서의 일부를 이룬다.

부모 제어 기능에서, 부모는 특정 시청자에 대하여 그리드 가이드 내에서 시청할 수 있는 채널 및 프로그램을 선택하고, 시청이 금지되는 채널 및/또는 프로그램을 선택한다. 셋업 과정 동안에 식별되는 아동 시청자는 단순화된 그리드 가이드를 보게되며, 부모에 의해 표시된 프로그램은 볼 수 없다.

E. 시청자에 의해 액세스되는 개선된 텔레비전 프로그램

1. 가상 채널 광고 슬롯 및 광고 윈도우 프로그램 광고

후술하는 바와 같이, EP6는 텔레비전 프로그램에 대한 상세한 정보를 얻을 수 있는 다수의 기회를 시청자에게 제공한다. 아래에서 더 상세하게 기술하는 바와 같이, EP6는 미리 계획된 텔레비전 프로그램을 광

고하거나 텍스트 또는 비디오 클립의 방식으로 추가 정보를 구하는 가상 채널 광고 슬롯 또는 광고 윈도우를 선택할 수 있는 기회를 제공한다.

2. 인터넷 링크를 포함하는 시청자 액세스에 대한 추가 상세 정보

EP6는 그리드 가이드의 상세한 정보 영역 내의 프로그램 리스팅과 연관된 상세 정보를 디스플레이한다. 상세 정보는 프로그램의 상세한 문자 기술, 배우들에 대한 정보, 프로그램 연출에 대한 정보, 연출 관련 정보, 관련 인터넷 웹사이트의 식별 및 온라인 인터넷 채팅 룸 등을 포함할 수 있다. EP6는 시청자에게 다수의 방법으로 이러한 가이드/데이터 서비스로부터 시청자가 가장 흥미 있는 시간, 그리드 가이드 내의 특정 프로그램, 광고 윈도우, 또는 가상 채널 광고 슬롯 등의 상세한 정보를 요구할 수 있는 기능을 부여한다. 제1 실시예에서, 시청자의 원격 제어 장치는 파워 '정보' 키를 가진다. 시청자가 스크린 하이라이팅/커서 상에서 스크린 디스플레이 상의 EP6 상의 특정 타일 또는 윈도우로 탐색하는 경우, 시청자는 원격 제어 장치의 '정보' 키를 눌러 추가 정보를 요구할 수 있다.

제1 실시예에서, 시청자가 그리드 가이드, 광고 윈도우, 가상 채널 광고 슬롯, 또는 프로그램 관련 상세 정보에 대한 다른 액세스 요구 내의 특정 프로그램을 하이라이팅하는 경우, EP6는 인터넷 상의 특정 웹사이트와 같은 외부 정보 데이터베이스를 시청자와 연결한다. 시청자는 EP6에게 사용자를 스포츠와 같이 상세하며 특별화된 정보 가이드/데이터 서버와 연결시키도록 지시할 수 있다. 제1 실시예에서, 광고 윈도우 또는 가상 채널 광고 슬롯 광고를 가지는 웹사이트 어드레스를 사용자 단말기의 RAM 내에 저장함으로써 외부 데이터 소스와 링크할 수 있다.

그리드 가이드 내에 리스팅된 스포츠 프로그램은 시청자가 상세하며 특별화된 정보 가이드/데이터 서비스와 서로 작용하는 방식을 예시하는 예를 제공한다. 시청자가 그리드 가이드 내에 리스팅된 축구 경기를 하이라이팅하는 경우, 프로그램에 대한 일반적인 상세 정보는 그리드 가이드의 상세 정보 영역에 디스플레이된다. 또한 하이라이팅된 프로그램과 연관된 다수의 아이콘은 그리드 가이드 내에 디스플레이될 수 있다. 하나의 아이콘은 사용자에게 게임이 이미 진행 중임을 경고한다. 다른 아이콘은 특별화된 가이드 정보의 사용가능성을 표시한다. 시청자는 그리드 가이드로부터 시청 및/혹화할 프로그램을 선택할 수 있다. 또한 시청자는 특별화된 가이드 아이콘을 선택할 수 있다. 스포츠 프로그램의 경우, 예를 들어 특별화된 가이드 아이콘을 선택함으로써 게임 스코어보드에 경기가 이미 그리드 가이드의 상세 정보 영역 내에서 진행 중임을 디스플레이한다. 경기가 앞으로 예정되어 있는 경우, 특별화된 가이드 아이콘을 선택함으로써 예를 들어 경기자, 팀, 및 가능하다면 게임의 승산에 관한 정보를 디스플레이한다.

스포츠 가이드 스코어보드의 디스플레이에 디스플레이된 다른 아이콘은 시청자에게 인터넷, 예를 들어 경기, 가능하다면 게임에 대한 온라인 채팅을 포함하는 추가 정보를 제공하는 특정 웹사이트와 연결할 수 있는 선택을 부여한다. 제1 실시예에서, EP6는 현재 중조된 텔레비전 프로그램의 실시간 비디오를 PIP 윈도우 내에 계속하여 디스플레이하면서, 인터넷 웹사이트를 그리드 가이드 및/또는 그리드 가이드 및 광고 윈도우에 의해 미리 점유된 스크린 영역 내에 디스플레이한다. 그렇지 않으면, EP6는 인터넷 웹사이트를 PIP 윈도우 내에 디스플레이할 수 있으며, 현재 중조된 텔레비전 프로그램을 그리드 가이드 및/또는 그리드 가이드 및 광고 윈도우에 의해 미리 점유된 스크린 영역 내에 디스플레이된다. 시청자와 다른 흥미있는 사이트간의 소정의 하이퍼링크를 사용하여, 특별화된 디렉토리가 초기에 EP6와 연결되는 인터넷 웹사이트('접속 웹사이트')가 될 수 있다. 접속 웹사이트는 추가로 또는 다른 경우에 사용자에게 흥미있는 정보를 찾을 수 있는 검색 능력을 제공한다.

시청자가 특별화된 정보 가이드/데이터 서비스와 연결되고 난 후, 시청자는 가이드/데이터 서비스를 사용하여 시청자에게 EP6 그리드 가이드 내에 포함된 특정 정보를 지시할 수 있다. 예를 들어, 시청자가 뉴스 프로그램을 시청하기를 원한다고 가정한다. 뉴스 프로그램을 시청하는 동안, 뉴스 방송자는 우주 비행사와 연관된 이벤트를 기술한다. 시청자는 뉴스 가이드/데이터 서비스 아이콘을 선택하고, 무엇보다도 우주 비행사와 연관된 특정 이벤트에 대한 추가 정보를 기술하는 인터넷 상의 웹사이트와 연결한다. 시청자는 접속 웹사이트에 의해 제공되는 검색 엔진을 사용하여, 동일한 우주 비행사에 대한 추가 정보를 찾을 수 있다. 추후의 웹사이트에서, 동일 우주 비행사에 대한 디스커버리 채널 프로그램이 언급된다. 시청자는 EP6에게 발생하는 모든 참조 프로그램을 찾아, 이 프로그램을 녹화하도록 지시한다. 제1 실시예에서, PLUS CODE형의 어드레스를 사용하여 예정된 프로그램을 링크하거나 또는 녹화한다.

시청자는 인터넷 상에서 사용가능하며 녹화된 텔레비전 뉴스 프로그램 및 리포트의 뉴스 데이터 서비스에 의해 생성된 인덱스를 검색할 수 있다. 시청자는 인덱스를 검색할 수 있다. 시청자가 인덱스된 리포트를 선택하면, 인덱스된 리포트의 비디오 클립은 인터넷 웹사이트 디스플레이, 온스크린 디스플레이의 다른 교대(alternate) 영역 또는 일부에 의해 점유되는 스크린 상의 영역에 나타난다. 시청자는 EP6에게 비디오 클립을 녹화하도록 지시할 수 있다.

EP6는 특별 데이터 서버에 의해 EP6 디스플레이로 제공되는 추가 정보를 통합할 수 있다. 예를 들어, 스포츠 데이터 서비스인 경우, EP6는 게임 단계에 의해 좌우되는 특별 색상 코딩으로 프로그램 리스팅 디스플레이 및/또는 스포츠 스코어를 포맷할 수 있다. EP6는 예를 들어 게임이 진행 중인 경우 프로그램 리스팅 및/또는 스포츠 경기의 스코어를 예를 들어 녹색과 같은 하나의 색으로 포맷하고, 예를 들어 게임이 종료된 경우 프로그램 리스팅 및/또는 최종 점수를 예를 들어 파란색과 같은 다른 색상으로 포맷할 수 있다. 게임이 진행 중인 경우, 시청자는 박스 스코어를 하이라이팅하여 선택하고, 박스 스코어로부터 텔레비전 상에 나타난 게임으로 이동할 수 있다. 제1 실시예에서, 시청자는 스포츠 가이드 내의 스포츠 프로그램과 관련된 스토리(sports program-related story)를 읽을 수 있으며, 선택된 텔레비전 스포츠 프로그램은 PIP 윈도우 또는 광고 윈도우 내에 나타난다.

EP6는 관련 텔레비전 프로그램과 특별 뉴스 가이드 내의 새로운 아이템간의 링크를 허용한다. 시청자는 스포츠 프로그램을 링크하여 뉴스 가이드 내의 뉴스를 하이라이팅하고 선택함으로써 이 프로그램을 시청하고 녹화할 수 있다. 제1 실시예에서, 선택된 텔레비전 뉴스 프로그램은 PIP 윈도우 또는 광고 윈도우 내에 나타난다. 시청자가 이벤트에 대하여 리포트하는 TV 뉴스 프로그램을 시청하면 뉴스 가이드 내의 스토리를 읽는 것을 허용한다.

제1 실시예에서, 선택된 채널에 대한 VBI는 특별 데이터 서비스를 배달하기 위한 것이다. 예를 들어, ESPN VBI는 스포츠 데이터 서비스를 배달할 수 있다. 제1 실시예에서, 이러한 데이터를 배달하는데 적당적인 데이터를 서비스는 ESPN TV 프로그램 PIP 윈도우 내에 디스플레이한다. 이 데이터를 수집하도록 동적일 데이터야 하므로, 텔레비전 신호는 PIP 내에 디스플레이되도록 사용될 수 있다.

F. 상업적 광고주가 시청자에게 전달할 수 있는 개선된 기회

1. 광고 윈도우 제품과 관련된 비디오 클립 및 광고 방송 녹화

EPG는 광고 방송 제작자에게 광고 윈도우를 통해 시청자에게 도달할 수 있는 확대된 기능을 제공한다. 광고 시간을 구매하는데 필요한 경비 때문에, 날로 증가하는 수의 제품 제조업자 및 마케팅 담당자는 제품에 대한 광고 방송을 생성한 후, 광고 시간대를 벗어난 스케줄에 의해 때로는 비합금 시간대의 채널에 의해 그들의 정보에 대하여 비교적 비용이 많이 들지 않는 방송 시간을 구매한다. EPG는 광고 방송 제작자에게 시청자에게 제공할 수 있는 시간에 또는 채널 상에 방송되는 광고 방송을 녹화할 기회를 시청자에게 제공할 수 있는 기회를 제공한다.

광고 윈도우가 특정 제품에 대한 정보를 디스플레이하는 경우, 녹화 버튼을 누름으로써 EPG가 광고 방송 또는 광고를 미래의 시간에 예정된 정도로 녹화하도록 지시한다. 그렇지 않으면, 시청자는 시청 리스트의 광고 방송 또는 광고를 지정할 수 있다. 그렇지 않으면, EPG는 광고 방송 제작자에게 광고 중의 제품에 대한 비디오 클립을 사용자가 볼 수 있도록 하는 기회를 제공한다.

제1 실시예에서, 시청자가 광고 윈도우를 하이라이트하는 경우, 제품 및/또는 광고 윈도우 내에 디스플레이된 프로그램과 연관된 비디오 클립이 나타난다. 실시예 및/또는 시청자의 임의의 선택에 의존하여, 비디오 클립은 PIP 윈도우, 광고 윈도우, 전체 스크린 내에 나타난다. 비디오 클립의 종결에서, 일반적으로 EPG는 비디오 클립의 디스플레이를 개시한 옵션을 선택하기 직전에 시청자가 동작하는 모드로 복귀한다.

2. 광고 윈도우 프로그램 관련 녹화

EPG는 텔레비전 프로그램 제작자에게 시청자에게 도달할 수 있는 추가 기회를 제공한다. 광고 윈도우는 앞으로 예정된 텔레비전 프로그램에 대한 정보를 디스플레이할 수 있다. 시청자가 프로그램의 녹화 옵션에 관심이 있는 경우, 시청자는 다수의 다른 동작을 수행할 수 있다. 예를 들어 제1 실시예에서, 시청자는 EPG에게 미리 예정된 프로그램을 녹화할 것을 지시할 수 있다. 제1 실시예에서 시청자는 원격 제어 장치 상의 녹화 버튼을 눌러 EPG에게 앞으로 예정된 프로그램 녹화를 녹화할 것을 지시한다. 그렇지 않으면, 시청자는 EPG에게 프로그램 포로 클립을 시청 리스트에 추가하도록 지시할 수 있다. 시청자는 EPG에게 프로그램에 대한 비디오 클립을 디스플레이하도록 지시할 수 있다. 시청자는 EPG에게 사용자들 스포츠 뉴스, 또는 다른 가이드/데이터 특별 화면 정보 가이드/데이터 서비스와 슬롯 내의 특정 프로그램 하이라이트하는 경우, EPG는 시청자에게 다수의 방법으로 특별한 광고 슬롯 내의 특정 상세한 정보를 요청할 수 있는 능력을 제공한다. 제1 실시예에서, EPG는 관련 상세 정보를 그리드 가이드 상에 상세 정보 영역 내에 디스플레이한다. 제2 실시예에서, EPG는 사용자들 인터넷 상의 특정 웹사이트와 같은 외부 데이터베이스 정보와 연결시킨다.

3. 채널 광고

제1 실시예에서, 채널 광고는 가이드 내의 고정된 영역을 점유하며, 일반적으로 지불된 광고로 채워진다. 광고 윈도우 내의 PIP 버튼 아래에 위치하는 공간은 개의 채널 광고를 위한 것이며 가이드 내에서 사용 가능하다. 각 채널 광고는 전체 스크린 면적의 약 1/9를 차지한다. 채널 광고의 사용가능한 면적은 채널 132-화소 x 가로 160-화소로 이루어지며, 2-화소의 검은색 테두리가 가로로 제공되며, 좌측과 우측 밑에 2개의 광고 공간 사이에는 2-화소의 회색이 제공된다. 소정의 광고 공간에 포함되지 않는 경우, 이 공간은 ROM 내에 저장된 장소 소지자 광고로 채워지고 사용가능한 공간 내에 삽입되거나 보너스 광고로 채워진다.

광고주는 1/9 스크린 면적을 구매하며, 따라서 160-화소의 폭, 2-화소의 검은색 가로 테두리, 2-화소 폭의 회색 좌측 및 우측 테두리의 사용가능한 면적을 가지는 단일 광고를 생성한다.

제1 실시예에서, 모든 Guide 스크린은 '하드 페이징'로 구성된다. 하드 페이징은 9-채널 슬롯을 포함하는 영역으로 정의된다. 사용자가 9+ 채널 슬롯 이하를 스크롤링할 때마다 새로운 '하드 페이징'가 나타난다. 스크롤링 백업(scrolling back up)은 이전의 하드 페이징을 뒤로 돌려 시청하게 한다. 각 하드 페이징은 이와 연관된 서로 다른 채널 광고를 가질 수 있다.

제1 실시예에서, 하드 페이징은 스토 스크린에서 서로 다른 것으로 정의된다. 각 소트 목록(예를 들어 영화, 스포츠, 아동용)은 리스트 내에 수직으로 리스트된 항목들의 개수에 상관없이 하나의 하드 페이징으로 간주된다. 사용자가 하나의 목록으로부터 다른 목록으로 수평으로 이동함에 따라, 채널 광고가 변한다.

사용가능한 하드 페이징의 수는 사용자의 정력 크기에 의존하며, 다수의 채널은 턴온되거나 턴 오프된다. 판매된 다수의 채널 광고에 필요한 다수의 하드 페이징을 지원하기 위한 충분한 채널이 존재하지 않는 경우 모든 채널 광고가 디스플레이되는 것은 아니다. 예를 들어, 4개의 채널 광고 및 4 채널의 광고가 판매된 내에 저장된다. 추가로 특정 사용자는 그의 채널 정력 내에 20개의 활성 채널을 가진다. 그 후 광고는 다음과 같이 디스플레이된다.

채널 1-8을 가지는 채널 광고 쌍 1 및 제1 채널 광고

채널 9-16을 가지는 채널 광고 쌍 2 및 제2 채널 광고

채널 17-20을 가지는 채널 광고 쌍 3 및 제3 채널 광고

사용자가 제4 하드 페이지의 추가를 요구하는 다른 채널을 탄온하는 경우, 제4 패널 광고 쌍은 가시적이 된다.

제1 실시예에서, 사용자는 이들 광고를 하이лай트할 수 있으며, 연장된 정보 박스를 자동적으로 디스플레이한다. 이렇게 연장된 정보 박스는 그리드의 전체 우측의 2/3를 차지한다. 사용자는 최종 연관 정보 박스 스크린이 나타난 후 패널 광고의 하이лай트를 떠나 이동하거나, 정보 버튼을 누름으로써, 연장된 정보 박스를 종료한다. 도 10a 및 도 10b는 하이лай트된 패널 광고 윈도우의 콘텐츠에 관한 추가 정보를 표현하는 특징을 가지는 제1 실시예를 예시하는 스크린 EP6 상의 샘플을 표현하는 그래픽이다.

제1 실시예에서, 패널 광고는 평평한 검은색 테두리에 의해 둘러싸인다. 패널 광고가 하이лай트되면, 테두리가 노란 색으로 변한다. 프로그램을 녹화하도록 설정되면, 테두리는 적색(패널 광고가 하이лай트되지 않으면 어두운 적색, 패널 광고가 하이라이트되면 밝은 적색)으로 변한다. 시청이 예정된 프로그램은 테두리가 오렌지색(패널 광고가 하이라이트되지 않으면 어두운 오렌지색, 패널 광고가 하이라이트되면 밝은 적색)으로 변한다.

제1 실시예에서, 연장된 정보 박스 내에 순차적으로 디스플레이되는 다중 정보 '스크린'이 존재할 가능성이 있다. 광고가 하이라이트되는 동안 정보(Info.) 버튼을 누름으로써, 이들 추가 스크린에 액세스한다. 추가 스크린의 수에 대한 한정된 제한은 없으며, 다시 말해 메모리 제한 및 판매 요구는 이러한 수를 제한한다.

제1 실시예에서, 하이라이트된 패널 광고가 이와 관련된 쇼 정보를 가지고 있으며 쇼 광고가 현재 방송 중인 경우, 사용자는 Left Action 버튼('시청'라고 이름 붙여진 파란색 버튼)을 누르거나, 원격 Enter/Select 버튼을 누름으로써 연관된 프로그램으로 바로 동조할 수 있다. 또한 파란색 버튼을 누름으로써 쇼를 Record/Watch Schedule 내에 위치시켜 사용자가 시청 빈도수를 매일 또는 매주로 설정할 수 있도록 한다. 쇼가 현재 방송 중이 아닌 경우, Left Action 버튼을 누름으로써 쇼를 Record/Watch Schedule 내에 위치시키거나 또는 Enter/Select 버튼을 누름으로써 광고 내의 쇼와 관련된 채널로 동조할 수 있다. Record/Watch Schedule에 추가된 쇼는 시청되도록 설정될 수 있다. 시청 가능 및 관련된 Action 버튼 라벨은 쇼가 그리드로부터 시청되도록 스케줄링하는 것과 동일한 방식으로 동작한다.

제1 실시예에서, 패널 광고가 이와 관련된 쇼 정보를 가지는 경우, 쇼는 광고를 하이라이트하고 Right Action 버튼('녹화'로 이름 붙여진 녹색 버튼)을 누름으로써 녹화될 수 있다. 쇼가 현재 방송 중인 경우, 즉시 녹화가 시작되며, 쇼를 Record/Watch Schedule 내에 위치시켜 쇼가 방송되는 동안 사용자가 시청 빈도수를 매일 또는 매주로 설정할 수 있도록 한다. 쇼가 앞으로 방송될 예정인 경우, 쇼는 Record/Watch Schedule에 추가되어 자동적으로 녹화된다. Record/Watch 스케줄에 추가된 쇼는 1회, 매일, 또는 매주 녹화되도록 설정될 수 있다. 녹화 가능 및 이와 관련된 Action 버튼 라벨은 쇼가 그리드로부터 녹화되도록 스케줄링하는 방법과 동일한 방법으로 동작한다.

제1 실시예에서 패널 광고는 동적일 수 있다. 1) 패널 광고 공간 및/또는 2) 정보 박스와 같은 동적일 수 있는 2개의 영역이 존재한다.

패널 광고 영역은 시간이 지남에 따라 변할 수 있는데, 예를 들어 패널 광고 공간에서 복수의 서로 다른 그래픽 또는 문자 광고가 실행됨에 따라 x초마다 회전할 수 있다. 패널 광고가 하이라이트되면, 광고 회전은 현재 디스플레이된 광고 비주얼 상에서 중단한다. 패널 광고의 하이라이트가 해제되면 동적 회전이 다시 시작된다.

패널 광고와 연관된 정보 박스 텍스트는 시간이 지남에 따라 변하는데, 예를 들어 y초마다 복수의 서로 다른 텍스트 스크린을 따라 회전한다. 스크린 회전은 사용자가 Info. 버튼을 누르는 경우 중단되며, Info. 텍스트의 제1 페이지를 디스플레이한다. 광고자들은 선택적으로 정보 박스 내의 서로 다른 헤드라인을 회전시킬 수 있다. 사용자는 Info. 버튼을 다시 누름으로써 이후에 이어지는 페이지를 시청할 수 있다. 패널 광고의 하이라이트가 해제되면 동적 회전이 다시 시작된다.

4. 가상 채널 광고 슬롯

EP6는 광고 방송 제작자에게 가상 채널 광고 슬롯을 통해 시청자에게 도달할 수 있는 확대된 능력을 제공하는데, 때로는 이를 채널 광고라 한다. 가상 채널 광고 슬롯은 그리드 가이드의 행으로 나타나며, 일반적으로 특정 채널에 대하여 예정된 프로그램의 타이틀을 나타낸다. EP6 그리드 가이드의 가상 채널 광고 슬롯은 디스플레이될 광고를 프로그램의 그리드 가이드 스케줄 내의 열로 디스플레이한다. 가상 채널 광고 슬롯은 특정 프로그램이 가이드 내에 다수 노출되도록 하기 위해 사용될 수 있다. 시청자가 그리드 가이드의 정보 상세 박스 내의 광고 프로그램을 녹화, 시청, 시청 예약할 수 있으며, 또는 이에 대한 정보를 얻을 수 있다는 점에서, 가상 채널 광고 슬롯은 그리드 가이드 내의 채널 엔트리의 기능을 수행한다.

도면의 도 1에서, 타일(52)은 텔레비전 프로그램의 광고에 대한 가상 채널 광고 슬롯의 예를 예시하는데, 이것은 그리드 가이드(22) 내의 채널 방향 및 타임 방향의 벗어난 프로그램 리스팅이다. 즉 가이드 내의 일반적인 채널 위치 또는 타임 위치 내에 나타나지 않으며, 그렇지 않으면 타임은 프로그램 시간에 상관 없이 타임의 전체 폭을 차지하는 것을 제외하고는 그리드 가이드(22)의 다른 프로그램 리스팅 타일이다. 일반적인 프로그램 리스팅의 타일은 상승 및 하강 화살표 키가 눌러지면 스크린을 스크롤링 오픈한다. 이와 달리 제1 실시예에서는 상승 및 하강 화살표 키가 눌러질 때마다 타일(52) 내에 도시된 가상 채널 광고 슬롯이 스크린 상에 남게 되며, 따라서 항상 광고를 시청할 수 있게 된다.

채널 광고는 고정된 영역을 점유하지 않는다. 채널 광고는 기본적으로 그리드 내의 채널 사이에 삽입된 채널 판매된 채널 광고가 존재하지 않는 경우, 그리드는 단순히 갭(gap)이 없는 채널의 연속적인 리스팅 및 쇼 타이틀이 될 수 있다. 채널 광고가 그리드 내의 채널 슬롯을 차지하기 때문에, 가이드가 TV 프로그램 정보의 유용한 소스임을 보장하도록 하기 위해 임의의 하나의 스크린 상에 나타낼 가능성이 있는 수를 제한하는 것이 바람직하다. 일반적으로 대략 하드 페이지 당 1개의 채널이 존재한다.

일반적으로 채널 광고는 채널 슬롯의 높이며, 그리드의 폭으로 구성되며, 채널 리스팅과 혼합된다. 채

널 광고에 대한 사용가능한 영역은 일반적으로 24개의 화소 높이 x 344 화소 폭으로 이루어지며, 2 화소가 주위를 배럴링(berel)된다.

연관, 부모, 및 고정 위치 채널 광고와 같은 여러 가지 종류의 채널 광고가 존재한다.

연관 채널 광고는 그리드의 상부와 연관에 위치에 있으며, n 채널 슬롯에 간격으로 배치되는데, 여기서 n은 수이다. 예를 광고는 사용자 가이드의 하도 페이징함에 따라 나타나고 사라진다. n이 PIP 버전의 그리드 내의 채널 수이기 때문에, n이 일반적으로(항상 그렇다) 99와 동일할 것으로 예상할 수 있다. 이는 하도 페이징 당 하나의 광고를 제공한다. 제1 광고의 위치는 제1 페이징 상에서 선택될 수 있으며, 추후의 광고는 매 n 채널 슬롯을 따른다. 동일한 광고는 n번씩 슬롯마다 반복된다. n번째 채널 슬롯마다 반복하는 방법은 PIP 버전 및 비 PIP 버전 모두 적용가능하다. 일반적으로 사용자 채널을 턴오프함에 따라, 이들 광고의 공간(때 n 채널 슬롯마다) 일정한 강태로 남는다. 이들 공간은 연속적으로 하기 위한 채널이 충분하지 않은 경우, 광고는 그리드 리스팀의 말단에 나타나게 된다.

부모 채널 광고는 광고의 바로 위에 위치하는 특정 채널과 연관이 있다. 부모 채널 광고는 인접한 '부' 채널에 부착된다(즉 광고는 부모 채널의 뒤를 잇는다). 임의의 하나의 스크린 상에 나타나는 채널 광고의 개수를 제한하는 것이 바람직하기 때문에, 부모 광고의 수는 일반적으로 제한된다. 추가적으로 부모 채널이 턴오프되면, 광고는 일반적으로 그리드의 하부에 디스플레이된다.

고정 위치 채널 광고는 하나의 특정 위치인 그리드의 상부로부터 아래에 위치하는 y(여기서 y는 숫자임) 채널에 위치한다. y가 그리드 내의 채널의 수보다 큰 경우, 광고는 그리드의 말단에 위치하게 된다.

부모 및 고정된 위치 채널 광고에 대하여 전송한 바를 제외하고, 채널 광고는 일반적으로 하나 이상의 채널 광고가 한번에 디스플레이되도록 공간적으로 배치된다.

제1 실시예에서, 채널 광고는 채널 리스팀 정보를 따라 수직으로 페이징한다. 그리드가 수평으로 스크롤링하면 이들 광고는 고정된 위치에 남는다. 사용자는 임의의 소 타이틀이 하이라이트되는 것과 동일하게 이들 채널 광고를 하이라이트할 수 있다. 하이라이트된 이들 채널 광고는 임의의 채널이 하이라이트되는 경우와 마찬가지로 info, 박스 내의 추가 정보를 디스플레이한다.

채널 광고는 일반적으로 임의의 소 타이틀과 동일하게 배럴링되어 둘러싸인다. 일반적으로 채널 광고 하도 하이라이트된 채널 광고 하이라이트와 유사하다. 제1 실시예에서, 사용자가 채널 광고를 하이라이트하면, 배럴은 평평한(배럴링되지 않은) 노란색 테두리로 변한다. 채널 광고가 기록되도록 설정되면, 테두리 노란색(하이라이트되지 않은) 경우에는 어두운 적색, 하이라이트된 경우에는 밝은 적색으로 변한다. 채널 광고 소의 시점이 예정되어 있는 경우, 테두리는 오렌지색(하이라이트되지 않은 경우에는 어두운 오렌지색, 하이라이트된 경우에는 밝은 오렌지색)으로 변한다.

제1 실시예에서, 채널 광고는 정보의 다수의 순차적 info, 박스 '스크린'을 가질 수 있다. 이러한 추가 정보의 사용가능성은 'i' 아이콘에 의해 표시된다. 사용자는 info 버튼을 누름으로써 추가 정보에 액세스할 수 있다.

제1 실시예에서, 하이라이트된 채널 광고가 이와 연관된 소 정보를 가지고 있으며 소 광고가 현재 방송 중인 경우, 사용자는 Left Action 버튼(시청 '광고' 이를 붙여진 파란색 버튼)을 누르거나, 소를 눌러서 소가 방송되는 동안 소를 Record/Watch Schedule 내에 위치시킨다. 소가 현재 방송 중이 아닌 경우, Left Action 버튼을 누름으로써 소를 Record/Watch Schedule 내에 위치시켜 나중에 자동적으로 볼 수 있도록 하거나 또는 Enter/Select 버튼을 누름으로써 채널 광고 내의 소와 관련된 채널로 동조할 수 있도록 한다. Record/Watch Schedule에 추가된 소는 회, 매일, 매주 녹화되도록 설정될 수 있다. 시청 기능 및 이와 관련된 Action 버튼 라벨은 소가 그리드로부터 시청되도록 스케줄링하는 것과 동일한 방식으로 동작한다.

제1 실시예에서, 채널 광고가 이와 연관된 소 정보를 가지는 경우, 소는 광고를 하이라이트하고 Right Action 버튼(녹화)를 눌러진 녹색 버튼)을 누름으로써 녹화될 수 있다. 소가 이미 텔레비전 신호로 배럴 중인 경우, 즉시 녹화가 시작되며, 소가 방송되는 동안 소를 Record/Watch Schedule 내에 위치시킨다. 소가 앞으로 방송될 예정인 경우, 소는 Record/Watch Schedule에 추가되어 녹화된다. Record/Watch 스케줄에 추가된 소는 회, 매일, 또는 매주 녹화되도록 설정될 수 있다. 녹화 기능 및 이와 관련된 Action 버튼 라벨은 소가 그리드로부터 녹화되는 방법과 동일한 방법으로 동작한다.

채널 광고는 동적일 수 있다.

5. 장소 소지자 광고

제1 실시예에서, 가이드가 먼저 셋업되면, 초기 정보 다운로드는 수신되지 않는다. 채널 광고 공간은 ROM 내에 저장된 장소 소지자 광고로 채워져야 한다. 이를 광고는 처음에 또는 전력이 나간 후에 TV가 셋업될 때마다 나타나는 것처럼 '영원'해야 한다.

하나의 채널 광고 공간 사용은 도용할 텍스트를 위한 것이다. 사용자는 광고 공간을 선택하도록 유도하는 도용할 텍스트는 채널 광고, info, 스크린 상의 추가 정보를 액세스하는 방법 및 광고로부터 시청과 녹화하는 방법에 대한 개별 지도 의 역할을 수행한다.

6. 전체 스크린 광고

시청자가 EP6에 처음 엔터링하면, EP6는 광고 윈도우 내에 디스플레이되는 광고와 같은 전체 스크린 광고를 디스플레이할 수 있다. 시청자는 광고 윈도우와 상호작용하는 방법과 동일한 방법으로 전체 스크린과 상호작용한다. 즉 시청자는 광고와 연관된 광고 방송 또는 프로그램이 존재하는 경우 EP6에게 광고 방송 또는 프로그램이 녹화되었거나 시청 리스트에 추가하도록 지시할 수 있다.

7. 자동 시청 채널

시청자가 텔레비전을 턴온하는 다음 번에 제1 채널로 시청된 최종 채널을 동조하는 대신에, 시청자에 의해 선택된 채널은 자동적으로 동조될 수 있다. 제1 실시예에서, 시청자는 EP의 시청 리스트 기능 내에 자동 시청 채널을 표시한다. 다른 실시예에서, 방송사는 온스크린 질의를 각 시청자에게 전송하며, 시청자가 텔레비전을 턴온하는 첫 순간에 먼저 시청된 채널이 방송자의 채널이기를 원하는 경우에 커맨드를 엔터링한다.

8. 광고 기능

광고는 무엇보다도 그래픽 필드, 텍스트 필드 또는 그래픽 및 텍스트 필드의 조합이다.

일반적으로 그래픽은 8 비트/화소('320 모드'를 사용하며), 4비트/화소('640 모드') 및 1 비트/화소 이하로 표현된다. 몇몇의 실시예에서는, 메모리 제한이 있을 수 있다. 이러한 메모리 제한이 있는 실시예에서는, 4 또는 8비트/화소 그래픽이 사용되는 경우, 패널 광고가 광고 면적의 25% 미만의 그래픽을 포함하게 된다. 1 비트/화소 그래픽에 대하여 100%의 면적이 사용될 수 있다. 반드시 필요한 것은 아니지만, 채널 광고 그래픽은 일반적으로 광고의 채널 로고 부분으로 제한된다. (본 명세서에서 사용되는 용어 '일반적으로'는 '통상적'이라는 의미를 가지며 반드시 그러하다는 것은 아니다). 채널 광고의 나머지 부분은 일반적으로 단지 텍스트만으로 이루어진다.

디스플레이 텍스트는 일반적으로 다음과 같은 특징을 가진다.

정상적이며 압축된 18 및 24 포인트 폰트

사선 버전의 폰트

밀출

볼드

중앙 정렬

좌측 및 우측 정렬

라인마다 색상이 선택될 수 있음

패널 광고 영역에서만 텍스트가 1 비트/화소 비트맵으로 디스플레이될 수 있음

배경 색상은 가이드의 전체 외양 및 사용가능성에 영향을 미친다. 아래에서 일반적인 실시예에 대하여 기술한다.

패널 광고 배경 색상은 광고주에 의해 선택될 수 있으며, 일반적으로 아래에 명시되어 있는 휘도 제한의 영향을 받는다.

채널 광고 배경 색상은 제한될 수 있다. 쇼 타이틀 배경 색상은 쇼 목록(영화, 스포츠 등) 및 쇼 상에서 이루어지는 활동(녹화 또는 시청)의 키 역할을 한다. 대부분의 배경 색상이 디스플레이되는 것에 비해, 쇼 타이틀 색상 방식의 순수함을 유지하는 것이 바람직하다. 따라서 채널 광고 크리에이티브를 개발하는 경우, 광고 대행사는 리스트된 세트의 배경 색상 또는 사용될 수 없는 색상 세트를 지정하여 사용한다. 채널 광고 배경은 일반적으로 아래에 명시되어 있는 바와 같이 휘도 제한의 영향을 받는다.

일반적으로 정보(Info.) 박스 배경은 회색이 될 수 있으며, 광고주에 의해 변경될 수 없다.

광고의 색상의 휘도는 일반적으로 제한된다. 휘도가 너무 높게 설정되면, 스크린 영상이 좋지 않게 된다. 실시예에 따라 이를 휘도가 설정되며, 광고주와 연락하여 추후의 개발을 고려하게 된다. 특정 실시예에 있어서 휘도 제한에 부합하지 않는 광고는 이들 제한을 무시하는 디폴트가 되기 쉽다.

제1 실시예에서, 시청자는 광고 및 텔레비전과 상호작용할 수 있다. 예를 들어 톤-인(tune-in) 광고는 광고 블록이 이와 관련된 프로그램 정보를 가지고 있다고 가정하면, 시청자가 하이라이트된 광고 블록으로부터 진행 중인 쇼로 즉시 동조하는 것을 허용한다. 광고와 연관된 진행 중인 쇼는 Enter/Select 버튼 또는 Left Action 버튼('시청'으로 이를 붙여진 파란색 버튼) 중의 하나를 누름으로써 즉시 동조된다.

즉시 녹화 광고는 사용자가 진행 중인 쇼를 녹화하거나 하이라이트된 광고 블록으로부터 앞으로 방송될 예정인 쇼를 녹화하는 것을 허용한다. 앞으로 즉시 녹화될 관련 쇼와 방송 예정 사이의 간격은 실제적으로 제한되어 있지 않다. 광고와 관련된 쇼는 광고가 하이라이트되는 동안 Right Action 버튼을 누름으로써 기록된다. 광고로부터 사용자는 Right Action 버튼('녹화'라고 이를 붙여진 녹색 버튼)을 눌러, 쇼를 녹화 스케줄 내에 위치시킨다. 쇼가 현재 진행 중인 경우, 광고를 하이라이트하면 Right Action 버튼을 누름으로써, 진행 중인 쇼가 녹화되도록 한다. 또한 쇼 타이틀은 사용자가 녹화 빈도 수를 매일 또는 매주 변경하고자 하는 경우 쇼가 종료될 때까지 녹화 스케줄 내에 위치한다.

시청 광고는 임의의 광고 공간 내에서 광고되는 프로그램으로 구성된다. 광고되는 프로그램은 블록이 이와 관련된 프로그램 정보를 가지는 한 시청 스케줄로 삽입될 수 있다. 관련된 쇼가 앞으로 방송 예정인 시간 사이에는 실제적인 제한이 없다. 시청 기능은 텔레비전('TV')을 동조시켜 녹화하기보다는 보여주는 것을 제외하고는 기록 기능과 동일한 방법으로 동작한다. 사용자가 TV를 시청하는 경우, 쇼가 시작되면 쇼가 시청 스케줄 내에 삽입되도록 채널이 자동적으로 변경된다. TV가 턴 오프된 경우, 시청 스케줄 내의 쇼가 시작될 예정이면, TV는 턴온되어 원하는 채널로 동조된다(VCR을 제외한 TV 구현). 사용자는 시청 빈도수를 1회, 매일, 또는 매주 선택한다. 광고로부터 사용자는 Left Action 버튼('시청'이라고 이를 붙여진 파란색 버튼)을 눌러 쇼를 시청 스케줄 내에 위치시킨다. 쇼가 현재 방송 중인 경우, 광고가 하이라이트되는 동안 Left Action 버튼을 누름으로써, 쇼로 바로 동조된다. 또한 쇼 타이틀은 사용자가 시청 빈도수를 매일 또는 매주 변경하고자 하는 경우 쇼가 종료될 때까지 시청 스케줄 내에 위치한다.

광고는 다수 레벨의 정보를 가질 수 있다. 일반적으로 제1 레벨의 정보는 광고의 복사이거나, 또는 사용자의 활동이 없이 스크린 상에 나타나는 그래픽이다. 이는 패널 및 채널 광고 영역이다.

일반적으로 (광고주에 의해 제공되는 경우) 제2 레벨의 정보는 사용자가 제2 레벨의 정보로 스크롤링함으로써 광고 블록을 하이라이트하는 경우 자동적으로 가시적으로 된다. 이러한 부차적인 정보는 채널 광고가 선택되는 경우 Info. 박스 내에 표시되며, 패널 광고가 하이라이트되는 경우 전체 채널 그리드를 덮는 연장된 버전의 정보(Info.) 박스 내에 자동적으로 표시된다. 광고 상의 'i' 아이콘은 광고주의 재량으로 이러한 광고에 있어서 보다 많은 정보가 사용가능함을 표시한다. 제2 레벨의 정보는 사용가능한 메모리에 따라 텍스트 및/또는 그래픽이 될 수 있다.

일반적으로 (광고주에 의해 제공되는) 제3 레벨 정보의 사용가능성은 제2 레벨 정보 스크린 상에서 정보(Info.) 버튼 'i'에 의해 표시된다. 정보(Info.) 버튼을 누름으로써, 이러한 정보에 액세스하며, 이는 채널 광고에 있어서 정보 박스가 전체 그리드 영역을 덮도록 한다. 이러한 정보는 다수 페이지 길이가 될 수 있다. 정보(Info.) 버튼을 누름으로써, 사용자는 연속적인 시간으로 다수 페이지를 순환한다. 사용가능한 최종 스크린으로부터 정보(Info.) 버튼을 누름으로써, 모든 광고에 있어서 정보 박스는 원래 크기로 수축된다. 제3 레벨의 정보는 메모리 용량에 따라 텍스트 및/또는 그래픽이 될 수 있다.

광고 블록은 동적일 수 있다. 패널 광고 그래픽 및/또는 텍스트 및 정보 박스 텍스트를 허용하는 메모리는 N번(여기서 N은 숫자임)의 서로 다른 그래픽 또는 텍스트 실행 제한을 통해 X(여기서 X는 숫자임)초마다 회전할 수 있다. 한번에 디스플레이된 동적 광고의 수를 제한할 수 있는 기능이 존재한다.

광고 시간 및 시작 시간/종료 시간은 스케줄화되거나 다이나믹하게 될 수 있다. 제1 실시예에서 광고는 소정의 시작 시간과 관련된 종료 시간에 디스플레이될 것이다. 시작과 종료 사이의 시간은 광고 시간이다. 최소 시간 증분(increment)은 일반적으로 60초이다. 일 실시예로, 광고 종료시간이 도달되는 경우 자동으로 대체되지 않는다. 광고는 사용자의 동작이 신규 '하드 페이지(hard page)', 즉 출현할 가이드의 신규 선택(예를 들면, 상기 그리드(Grid)로부터 소트(Sort)까지 진행함)이 발생하는 경우에만 변경된다.

광고는 순환할 수 있다. 예를 들면, 상이한 광고는 사용자가 상기 가이드의 동일 페이지/선택을 입력할 때마다 출현할 수 있다. 순환 시에 배치되는 광고 수는 엄격한 제한은 없다. 광고는 처음으로 액세스되는 하드 페이지 또는 섹션이 디스플레이되는 최우선 순위의 광고로 우선 순위가 할당될 수 있다. 이후 제2 우선 순위 광고는 바로 다음에 사용자가 이 페이지를 시청할 때 디스플레이되며 다음 순위 광고도 마찬가지로이다. 상기 우선 순위 카운터는 페이지에 따라 좌우되며, 사용자가 세 번째로 상기 제1 페이지를 시청하는 경우 해당 페이지 상의 제3 우선 순위 광고를 시청하게 되고, 이후 첫 번째로 상기 2 페이지를 스크롤(scroll)하는 경우 상기 제2 페이지 상의 제1 우선 순위 광고를 시청하는 것을 의미한다.

광고는 시청되는 가이드의 섹션에 의해 다를 수 있다. 예를 들면, 사용자가 스포츠 제목 영역을 시청하면, ESPN 스포츠 센터에 대한 광고가 나타날 수 있지만, 상기 사용자가 메인 그리드 상에 있는 경우 상이한 광고가 나타난다.

상기 EP6는 상기 시청자가 상기 EP6를 입력하기 바로 직전에 시청되고 있던 텔레비전 채널 상에 디스플레이되는 광고에 따라 어느 광고가 디스플레이되는지를 확인할 수 있다. 즉, EP6 입력 시 시청자가 시청하고 있던 채널 상에 도요다(Toyota) 광고가 시청되는 경우, 이후 상기 EP6는 상기 EP6의 동일 부분(예를 들면, 광고 윈도우, 텔레비전 프로그램)에 상관적인 도요다 광고를 디스플레이하도록 타이밍이 조절될 수 있다.

일 실시예로, 상기 EP6는 시청자 프로파일(Viewer Profile)을 테스트하여 EP6를 구비한 시청자의 작동 중 여러 시점에 어느 광고가 디스플레이되는지를 확인할 수 있다. 상기 EP6는 광고 및 페이지 우선 순위를 할당하여 광고주의 투자 및 관련된 시청자 프로파일을 나타낼 수 있다.

그래픽적으로 동적인 광고는 n(여기서 n은 임의의 숫자)의 그래픽 또는 텍스트 실행을 통해 순환하는 x초(여기서 x는 1초 이하의 임의의 작은 숫자임)마다 상이한 그래픽을 통상적으로 표현한다. 통상적으로, 분주한 스크린이 상기 광고의 효율성 및 상기 가이드의 유용성을 감소시키기 때문에 이들 광고의 제한된 수만이 임의의 한 번에(스크린당 거의 10이 최대임) 디스플레이된다.

광고는 광고주가 '고객을 끌거나(pull)', 광고를 경신하거나, 또는 전송시의 오류를 보정할 수 있도록 메모리 내에 배치되는 '구별 가능(identifiable)' 및 '액세스 가능(accessible)'한 광고이어야 한다.

6. 시청자에 의한 향상된 제품 정보 액세스

1. 광고 윈도우 제품 세부 사항

상기 시청자는 광고된 제품에 대한 추가 정보를 배치하도록 상기 광고 윈도우(Ad Window)를 하이라이트할 수 있다. 일 실시예로, 상기 시청자는 상기 온-스크린 텔레비전 모니터 디스플레이 상의 광고 윈도우 위치에서 상기 원격 제어 장치 포인터를 탐색하기 위해 상기 원격 제어 장치의 화살표/방향 탐색 키를 누름으로써 상기 광고 윈도우를 하이라이트한다. 상기 원격 제어 장치 포인터가 상기 온-스크린 텔레비전 모니터 디스플레이 상의 광고 윈도우에 배치되는 경우, 상기 광고 윈도우의 온-스크린 디스플레이가 하이라이트된다. 일 실시예로, 상기 광고 윈도우 자신의 색깔은 보다 밝아지거나 또는 빛을 받는 효과를 보여준다. 다른 실시예로, 상기 광고 윈도우를 둘러싸는 경계선의 색깔이 보다 밝아지거나 또는 빛을 받는 효과를 보여준다. 상기 광고 윈도우의 하이라이트는 상기 EP6 그리드 가이드의 세부사항 박스에 디스플레이되는 제품을 설명하는 추가 텍스트를 발생시킨다. 대안적으로, 상기 EP6는 광고되는 제품에 대한 비디오 클립(video clip)을 시청할 수 있는 기회를 상기 시청자에게 제공하도록 정보 광고(informercial)의 제작자에게 기회를 제공한다.

상기 광고 윈도우는 선택적으로 상호작용될 수 있다. 상기 광고 윈도우 내에 디스플레이되는 광고와 관련된 정보를 보유하는 웹사이트의 인터넷 어드레스가 상기 광고 윈도우 내에 웹사이트 어드레스로서, 아이콘으로서, 또는 추가 상호작용 정보를 나타내는 양식화된 'i'와 같은 기타의 그래픽 프리젠테이션으로

디스플레이될 수 있다. 또한, 상기 광고 윈도우와의 상기 시청자의 상호작용은 상기 시청자 프로파일의 일부로서 녹화되도록 상기 EP6에 의해 모니터링된다.

2. 광고 윈도우 제품-관련 녹화

상기 EP6는 시청자가 관심을 갖는 확장된 제품 정보에 액세스할 기회를 상기 시청자에게 제공한다. 분주한 광고 시간의 비용 때문에, 자신의 제품에 대한 광고 정보를 제작하는 제품 제작자 및 마케팅 담당자의 수가 증가하고 있다. 방송-시간 비용 때문에, 많은 제품 제작자 및 마케팅 담당자는 주요 시간대를 벗어난 시간대의 예정, 흔히 중요하지 않은 채널에 따라 자신의 광고 정보에 대해 비교적 값싼 방송 시간을 구입한다. 상기 EP6는 상기 시청자에게 한번에 또는 하나의 채널 상으로 방송되는 광고 정보를 녹화할 수 있는 기회를 제공하는데, 이것은 시청자가 실시간으로 시청하는 것을 불편하게 한다. 상기 광고 윈도우가 특정 제품에 대한 정보를 디스플레이하는 경우, 녹화 버튼을 눌러서 상기 EP6가 광고 정보를 향후 방송될 광고 정보까지 녹화하도록 지시한다. 대안적으로, 상기 시청자는 시청 목록(Watch List)에 대한 광고 정보를 지정할 수 있다.

3. 광고 윈도우 프로그램-관련 녹화

상기 EP6는 향후 방송될 텔레비전 프로그램을 녹화하거나 시청하도록 상기 EP6에게 지시하는 추가 기회를 시청자에게 제공한다. 상기 광고 윈도우는 향후 방송될 텔레비전 프로그램에 대한 정보를 디스플레이할 수 있다. 상기 시청자가 상기 프로그램을 녹화하는데 관심이 있는 경우, 상기 시청자는 상기 향후 방송될 텔레비전 프로그램을 녹화하도록 상기 EP6에게 지시할 수 있다. 일 실시예로, 상기 시청자는 원격 제어 장치 상의 녹화 버튼을 눌러서 상기 향후 방송될 프로그램을 녹화하도록 상기 EP6에게 지시한다. 대안적으로, 상기 시청자는 프로그램에 상기 시청 목록을 추가하도록 상기 EP6에게 지시할 수 있다. 대안적으로, 상기 시청자는 상기 프로그램에 대한 비디오 클립을 시청할 수 있다.

H. 시청자 프로파일의 생성

1. 시청자 프로파일 정보의 수집

상기 EP6는 시청자가 일정한 프로파일 정보를 제공하도록 요구하는데, 상기 프로파일 정보는 시청자의 우편번호(zip code); 시청자가 신청한 텔레비전, 케이블, 및 위성 서비스; 상기 신청의 시간 길이; 텔레비전 종류; 텔레비전의 생산 년도; 텔레비전 구입처; 시청자의 선호 채널; 시청자가 선호하는 프로그램 종류; 및 시청자가 텔레비전을 가장 시청하기 용이한 시간대를 포함하지만 이에 국한되는 것은 아니다. 시청자가 이러한 정보를 제공하는 것을 거절하는 경우, 상기 EP6는 이하 기술되는 바와 같은 정보의 '학습(learn)'을 시도하게 된다.

일 실시예로, 상기 EP6는 개별 시청자를 구별할 수 있고 개별화된 프로파일을 개발한다. 예를 들면, 일 실시예로, 각각의 시청자는 개별 비밀번호(PIN) 또는 기타 식별 번호를 구비한다. 다른 실시예로, 각각의 시청자는 개별화된 스튜디오 밖에서의 방송 프로그램을 사용한다. 또 다른 실시예로, 한 시청자와 다른 시청자를 구별하는 방법이 없다. 이 경우에 상기 프로파일이 '가족(family)'에 대해 개발된다.

시청자가 상기 EP6 또는 상기 텔레비전과 상호작용할 때마다, 상기 EP6는 시청자의 동작 및 이 동작의 주변 배경을 녹화한다. 예를 들면, 시청자가 채널을 변경하는 경우, 상기 EP6는 그 중에서도 특히 채널에 대한 정보, 변경된 채널, 변경이 이루어진 시각, 상기 제1 채널 상에 디스플레이된 프로그램의 식별, 상기 변경된 채널 상에 디스플레이된 프로그램의 식별, 변경 시각, 상기 변경 시각에서 상기 제1 채널 상에 디스플레이된 임의의 광고의 식별, 상기 변경된 채널 상에 디스플레이된 임의의 광고의 식별, 및 텔레비전 모드에 있는 것과는 반대로 상기 EP6 모드 중 하나인 동안에 시청자가 채널을 변경했는지 여부에 대한 정보를 녹화한다. 상기 EP6는 프로그램을 녹화 또는 시청하도록 상기 시청자에 의한 모든 지시를 또한 녹화하는데, 상기 지시는 한번, 일간, 주간, 또는 정기적일 수 있다. 상기 EP6는 시청자가 텔레비전 오디오 음량을 변경하는지, 만일 그렇다면 어떤 배경이 음량 변경을 둘러싸는지의 여부를 또한 녹화한다. 상기 시청자가 상기 EP6 모드 중 하나인 동안에 채널을 변경하는 경우, 이후 상기 EP6는 변경 직후에 EP6 UI의 윈도우 각각에 무엇이 디스플레이되는지에 관한 정보를 녹화한다.

상기 EP6는 상기 시청자 및 상기 텔레비전이나 EP6 사이의 상호작용이 부재인 경우의 정보를 또한 녹화한다. 예를 들면, 상기 EP6는 채널의 변경이라기 보다는 시청자가 광고를 계속 시청하는지의 여부를 녹화한다. 상기 EP6는 임의의 특정일에 상기 텔레비전이 온(on)인 시간의 전체 구간을 계산 및 녹화한다.

상기 EP6는 인터넷과 같은 정보의 외부 소스와 시청자 상호작용을 둘러싸는 정보를 또한 녹화한다. 예를 들면, 상기 EP6는 시청자에 의해 시작된 각각의 탐색 질의 기준, 상기 탐색을 위해 사용되는 탐색 엔진, 탐색에 대응하여 시청자에 의해 선택되는 항목, 인터넷 사이트와의 사용자 상호작용, 및 시청자가 인터넷과 상호작용하는 동일한 시간-프레임 동안에 상기 EP6와의 시청자 상호작용을 녹화한다.

전술한 개별 시청자 프로파일 정보 수집의 대안책은 온-스크린 조사(on-screen survey)를 제공하는 것이다. 즉, 상기 EP6가 제품권(gift certificate)과 교환되는 상기 조사의 온-스크린 암호화 번호를 판독하기 위해 시청자에게 무료 장거리 전화(toll-free)를 걸도록 하는 온-스크린 요구를 디스플레이할 수 있다. 상기 요구는 오로지 특정 시간에 특정 프로그램 또는 특정 광고를 시청하는 시청자에게 이루어질 수 있다. 조사 응답(survey response)은 조사 커스텀화, 가이드 커스텀화, 및 광고 목표 설정을 촉진시키는 유용한 정보를 제공한다.

2. 시청자 프로파일 정보의 분석 및 특성화

시청자 프로파일 정보(데이터 수집 관계, 및 환경, 텔레비전과의 시청자 상호작용, 상기 EP6(녹화 및 시청 기능을 포함함), 인터넷, 월드 와이드 웹, 및 시청자 상호작용을 거치는 상기 EP6 외부의 임의의 다른 정보 소스)는 분석을 위해 텔레비전 배달물의 헤드 엔드로 컴퓨터에 전송될 수 있거나, 또는 대안으로 상기 EP6에 의해 분석될 수 있다.

시청자에 대한 정보는 점진적으로 캡처된다. 마찬가지로, 시청자 프로파일 데이터는 점진적으로 갱신된다. 따라서, 시청자 프로파일 분석 프로그램('프로파일 프로그램')은 마지막 분석 이후에 캡처된 사용자

에 대한 추가 정보를 통합하기 위해 일정 시간 간격으로 반복될 수 있다. 대안으로, 상기 프로파일 프로그램은 데이터가 캡처된 시청자에 대한 정보의 개별 항목 각각을 처리하는 실시간 프로그램이다.

시청자 프로파일 분석 프로그램(‘프로파일 프로그램’)은 인터넷에서 헤드 엔드에 상주할 수 있으며, 상기 EP6의 일부로서 포함될 수 있거나, 또는 이를 여러 가능한 위치 중에 배달될 수 있다. 상기 프로파일 프로그램은 시청자 프로파일 데이터에 대해 여러 상이한 종류의 분석을 수행한다. 예를 들면, 상기 프로파일 프로그램은 수집된 데이터의 간단한 통계 분석을 수행한다. 상기 프로파일 프로그램은 그 중에서도, 특히 시청자가 특정한 시청 세션 동안 상기 EP6와 상호작용한 횟수; 상기 EP6와 특정 종류의 상호작용을 수행한 횟수; 특정 채널을 시청한 횟수; 특정 웹사이트와 상호작용하는 특정한 시청 세션 동안 상기 인터넷과의 상호작용 횟수; 특정 종류의 테마(예를 들면, 코미디, 스포츠, 드라마, 영화, 시트콤, 과학 픽션, 모험물, 미스터리, 다큐멘터리, 요리, 여행 등)를 갖는 프로그램을 시청하기 위해 시청 및/또는 녹화 및/또는 계획한 횟수; 및 특정 종류의 주제(예를 들면, 골프, 테니스, 축구, 농구, 야구, 동물, 식물, 등) 또는 특정 남녀 배우를 갖는 프로그램을 시청하기 위해 시청 및/또는 녹화 및/또는 계획한 횟수를 누계한다. 상기 프로파일 프로그램은 또한 시청 기간을 계산하며, 그 중에서도 특히 시청자가 텔레비전을 시청하거나, 상기 EP6와 상호작용하거나, 또는 인터넷이나 월드 와이드 웹과 상호작용하는 동안의 하루 시간 및 주중 일수에 대한 통계를 종합한다.

기본 시청자 프로파일, 및 특정 시청자에 대해 수집된 간단한 통계를 사용하여, 상기 프로파일 프로그램은 수집된 여러 종류의 데이터에 대한 상세 분류를 인식하도록 ‘학습’하며, 이후 상기 학습된 정보를 사용하여 ‘시청자 선호사항(Viewer Preference)’을 기술한다. 예를 들면, 시청자가 스포츠 프로그램을 시청한 것, 및 스포츠 프로그램의 번호가 농구인 것을 상기 프로파일 프로그램이 검출하는 경우, 상기 프로파일 프로그램은 시청된 프로그램에 포함되는 팀들을 분석한다. 상기 프로파일 프로그램은 이러한 방식으로 시청자가 특정 팀의 팬인지 여부를 확인할 수 있다. 만일 시청자가 특정 팀의 팬인 경우, 상기 프로파일 프로그램은 시청자 선호사항으로서 상기 시청자의 팀 제휴(affiliation)를 녹화한다.

상기 프로파일 프로그램은 상기 기본 시청자 프로파일 및 특정 시청자에 대해 수집된 간단한 통계의 다수의 비교를 포함하는 다중 레벨의 정교한 분석 및 학습을 수행하며 시청자 특성(Viewer Characteristics)을 개발한다. 이러한 방식으로, 상기 프로파일 프로그램은 상기 시청자의 다중 차원(multi-dimensional) 프로파일을 개발한다. 예를 들면, 상기 프로파일 프로그램이 시청자 선호사항을 검출하면, 상기 프로파일 프로그램은, 예를 들어, 상기 사용자 선호사항(예를 들면, 시청자의 좋아하는 팀을 포함하는 농구 경기)과 관련된 프로그램의 텔레비전 방송 중 시청자가 상기 EP6, 또는 인터넷/월드 와이드 웹과 같은 외부 정보 소스와 상호작용한 횟수와, 예를 들어, 상기 사용자 선호사항과 관련이 없는 프로그램의 텔레비전 방송 중 시청자가 상기 EP6, 또는 인터넷/월드 와이드 웹과 같은 외부 정보 소스와 상호작용한 횟수를 비교한다.

또한, 상기 두 가지 환경에서 상호작용 종류가 분석된다. 이러한 방식으로, 상기 프로파일 프로그램은 그 중에서도 특히 주의 기간(attention span); 제품 광고에 대한 일반적인 관심; 특정 종류의 제품 광고에 대한 관심; 총동 구입에 대한 성향; 총동 구매 습관과 가격 범위, 제품 종류 및 광고 형식과의 상관관계; 향후 방송될 프로그램의 녹화 및/또는 시청에 대한 관심; 텔레비전 프로그램과 관련된 추가 레벨의 정보에 액세스하는데 대한 관심; 및 사용자 선호사항에 대한 관심의 상관관계를 포함하는 제품 광고와 관련된 추가 레벨의 정보에 액세스하는데 대한 관심과 관련된 상기 시청자 특성을 결정한다. 시간이 흘러 충분한 데이터를 구비하면, 상기 EP6는 시청자의 유머 감각, 실제 연령, 활동 연령, 시청자의 결혼 여부, 시청자가 자녀를 두었는지 여부, 시청자가 애완 동물을 가지고 있고 어떤 종류의 애완 동물을 좋아하는지 여부, 시청자가 특정 종류의 가정 기구 구입에 관심이 있는지 여부, 시청자가 차량 구입을 고려하고 있는지 여부, 시청자가 좋아하는 정치 단체, 및 광범위한 여러 다른 시청자 특성을 특성화한다.

또한, 상기 프로파일 프로그램은 다른 사람의 시청자 프로파일과 비교되는 개별 시청자 프로파일을 분석한다. 이러한 교차-비교 분석을 사용하여, 상기 프로파일 프로그램은 유사한 시청자 프로파일과의 비교를 토대로 주요 시청자가 특정 주제, 제품, 테마, 영화, 에피소드, 등을 선호하거나 관심을 가질 가능성을 결정한다.

1. 시청자 프로파일 정보를 사용하여 EP6의 다양한 기능의 커스터마이징

상기 EP6 및 프로파일 프로그램은 기본 시청자 프로파일 데이터, 특정 시청자에 대해 수집된 간단한 통계, 시청자 선호사항 및 시청자 특성(이하, 집합적으로 ‘시청자 프로파일’로 불림)을 사용하여 상기 EP6의 다양한 특징을 커스터마이징한다. 상기 시청자는 EP6 설정 모드에서 임의의 이들 자동화된 커스터마이징을 차단할 수 있는 선택권을 갖는다. 커스터마이징된 상기 EP6의 특징 중 하나는 상기 그리드 가이드(Grid Guide) 내에 디스플레이되는 채널 슬롯의 순서이다. 상기 채널 슬롯이 디스플레이되는 순서는 상기 시청자 프로파일에 따라 하향 순서로 상기 그리드 가이드의 상부/시작 위치에 시청자가 좋아하는 채널을 표시하도록 커스터마이징될 수 있다.

일 실시예로, 상기 채널 슬롯의 순서는 상기 사용자 프로파일에 부합하는 주중 일수 및 하루 시간에 따라 커스터마이징된다. 예를 들면, 특정 시청자가 주중 저녁 7시부터 10시까지 Nick at Nite를 자주 시청했다면, 이후 상기 EP6는 저녁 7시 및 10시 사이에 켜지는 텔레비전을 적합한 Nick at Nite 채널에 자동으로 동조시키며, 상기 그리드 가이드 내의 제1 채널로서 상기 Nick at Nite 채널을 보여주도록 상기 그리드 가이드를 형성한다. 동일 시청자가 토요일 및 일요일 낮 시간동안 ESPN을 통상적으로 시청했다면, 이후 상기 EP6는 예를 들어, 토요일 및 일요일 오전 7시부터 오후 7시 사이에 켜지는 텔레비전을 상기 ESPN 채널 중 하나에 동조시키며 시청자가 예를 들어, 토요일 및 일요일 오전 7시부터 오후 7시 사이에 상기 그리드 가이드에 들어갈 때마다 상기 그리드 가이드 내의 제1 채널로서 상기 ESPN 채널을 보여주도록 상기 그리드 가이드를 형성한다.

시청자의 선택 사항으로, 상기 EP6 및 프로파일 프로그램은 기본 시청자 프로파일 데이터, 특정 시청자에 대해 수집된 간단한 통계, 시청자 선호사항 및 시청자 특성을 사용하여 자동 서핑(surfing)을 수행한다. 시청자의 선택 사항으로, 자동 서핑은 실시간 광고 텔레비전 방송 중에 수행될 수 있다. 시청자의 다른 선택 사항으로, 자동 서핑은 시청자가 현재의 메인 픽처 윈도우 내에 동조된 프로그램을 시청하게 해주면

서 상기 PIP 윈도우 내에 자동 서평을 제공하는 PIP 시청 기능으로 수행될 수 있다. 대안으로, 시청자의 선택 사항으로, 자동 서평은 시청자의 현재 PIP 윈도우 내에 동조된 프로그램 시청하게 하거나 시청자가 메뉴 픽처 윈도우 내에 자동 서평을 제공하는 PIP 시청 기능을 수행할 수 있다. 또한, 상기 시청자는 시청할 상이한 광고를 선택하는 권택권을 가지거나 상기 시청자 선택 채널 수도으로 서평하는 권택권을 가질 수 있다.

상기 시청자의 선택 사항으로, 상기 EP6 및 프로파일 프로그램은 기본 시청자 프로파일, 특정 시청자에 대해 수검된 간단한 통계, 시청자 선호사항 및 시청자 특성을 사용하여 시청자의 관심에 어울릴 것 같은 프로그램 기반의 기록 목록(Record List) 및/또는 시청 목록(Watch List)을 마련한다. 일 실시예로, 이러한 종류의 정보 탐색은 헤드 앤드에서 중앙 컴퓨터로 안내된다. 다른 실시예로, 절리가 인터랙 탐색 엔진으로 안내 및 전송된다.

상기 시청자의 선택 사항으로, 상기 EP6 및 프로파일 프로그램은 기본 시청자 프로파일, 특정 시청자에 대해 수검된 간단한 통계, 시청자 선호사항 및 시청자 특성을 사용하여 시청자의 관심에 어울릴 것 같은 프로그램 기반의 기록 목록(Record List) 및/또는 시청 목록(Watch List)을 마련한다. 일 실시예로, 이러한 종류의 정보 탐색은 헤드 앤드에서 중앙 컴퓨터로 안내된다. 다른 실시예로, 절리가 인터랙 탐색 엔진으로 안내 및 전송된다.

상기 시청자 프로파일, 및 일부 실시예에서 시청자로부터의 구체적 입력은 이후 데이터 탐색 절의를 지시하는데 사용되며 시청자의 프로파일된 관심 사항 및/또는 시청자의 특정된 정보 요구에 부합하는 콘텐츠를 배치 및 교부한다. 이후 상기 뉴스는 (본 명세서의 다른 부분에 기술되는 바와 같이) 색인이 붙는다. 이러한 방식으로, 시청자는 자신이 시청 또는 녹화를 원하는 텔레비전 프로그램의 선택하는 방식과 동일하게 시청을 위한 뉴스를 선택한다. 또한, 색인이 붙은 뉴스와 관련된 추가 정보를 포함하는 웹사이트가 게시될 수 있는데, 예를 들어, 세부 기술 영역의 일부로서 시청자가 시청을 위한 특정 뉴스를 하이퍼링크할 때 텍스트 표시될 수 있다.

일 실시예로, 테마 가이드(Theme Guide)는 시청자 프로파일(본 명세서의 다른 부분에 보다 충분히 설명될)을 토대로, 하는 스마트 소팅(Smart Sorting)을 제공한다. 즉, 하나의 프로그램이 2개의 채널 상에 있는 경우, 시스템은 2개의 채널 중 시청자가 보다 자주 시청하는 채널을 토대로 최선의 채널을 선택한다. 일 실시예로, 상기 테마 가이드는 상기 시청자 프로파일과 일치하는 스포츠 가이드 내의 정수를 정수를 구비하여 전송되는 정보 방송 패킷이 시청자 프로파일과 일치하는 스포츠 가이드 내의 정수를 정하는 데 사용된다. 예를 들면, Boston Red Sox를 포함하는 경기에 대한 정수가 Boston 내의 시청자를 위해 먼저 상기 Boston Red Sox에 대한 정수를 디스플레이한다.

설정 순서 중에서, 상기 EP6는 자동 채널 맵(automatic channel map) 선택을 제공한다. 시청자의 우편번호 내의 모든 채널 맵이 자동으로 된다. 우편번호 관련 선택사항이 디스플레이된다. 일 실시예로, 적한 한 채널 맵 선택사항을 선택하기 위해 상기 텔레비전에 요구되는 정보를 식별하도록 시청자에게 요구되지만, 상기 텔레비전은 상기 적합한 채널 맵을 자동으로 선택한다. 예를 들면, 시청자는 자신이 가입된 채널 맵 서비스(예를 들어, Colonial Cable), 및 특정 채널 맵(예를 들어, 시청자가 채널 43 스의 HBO를 수신)을 식별하도록 요구된다. 이러한 방식으로, 시청자가 상기 적합한 채널 맵을 선택하도록 텔레비전에 대해 요구되는 정보를 식별한다. 대안으로, 시청자가 상기 채널 맵(예를 들어, Colonial Cable)을 구비하고 채널 43 스의 HBO를 얻을려면, 이 채널 맵을 선택하시오)을 실제로 선택하도록 요구된다.

J. 시청자 프로파일 정보를 사용하여 커스텀화된 광고 프리젠테이션을 시청자에게 제공

상기 EP6 및 상기 프로파일 프로그램은 시청자 프로파일 정보를 사용하여 시청자에게 광고의 프리젠테이션 및 스케줄링을 맞추어 주고 사용자를 위한 상기 EP6의 프리젠테이션을 커스텀화한다. 예를 들면, 상기 EP6는 시청자 프로파일 정보를 사용하여 시청자가 좋아하는 채널을 포함하는 프로그램, 해당 팀의 스타 플레이어 등을 포함하는 토크쇼 등을 위한 스케줄링에 대해 상기 시청자에게 통지 여부를 결정한다. 상기 EP6는 예를 들어, 상기 광고 윈도우 내의 광고를 통해, 또는 가상 광고 채널 슬롯(Virtual Ad Channel Slot) 내의 광고를 통해 커스텀화된 통지/광고를 할 수 있다.

추가적으로, 상기 EP6 및 상기 프로파일 프로그램은 시청자 프로파일 정보를 사용하여 시청자가 시청하는 텔레비전 프로그램의 실시간 방송 중에 시청 가능한 방송 광고의 상기 프리젠테이션 및/또는 스케줄링을 커스텀화한다. 일례로 지리적 위치를 토대로 하여 광고에 중첩 메시지를 커스텀화한다. 예를 들면, 상기 EP6는 개별 시청자의 지리적 위치를 알고 있다. 방송국(broadcaster)은 우편번호에 패킷을 부합시켜 각 각의 우편번호가 상이한 메시지(예를 들어, 시청자의 지역 내에 3 Burger Kings가 포함된 메시지)를 커스텀화한다. 일 실시예로, 커스텀화된 메시지는 오프 시간 중에 EP6의 메모리 내로 우편번호에 의해 미리 로드될 수 있다. 상기 미리 로드된 메시지는 오프 시간 중에 헤드 엔드에 의해 전송되고, 광고가 머리를 들며, 텔레비전 프로그램 또는 상기 광고 윈도우 내의 비디오를 내부 실행 중인 경우 시청자의 단말기 내에 저장될 수 있다. 상기 메시지를 실행시키는 전자적인 개시 신호(trigger)가 실시간으로 텔레비전 신호와 함께 전송될 수 있고, 적용될 필요가 있는 사용자 단말기 내에 저장된 메시지를 식별할 수 있다.

다른 실시예로, 상기 커스텀화된 메시지는 텔레비전 방송된 광고와 함께 한정된 지역에 방송된다. 상기 커스텀화된 메시지를 한정된 지역에 방송하는 한 방법으로는 광고 비디오 스트림 내에 상기 커스텀화된 정보를 내장시키는 것이 있다. 다른 방법은 상기 광고의 비디오 스트림 내에 디지털 워터마크(watermark)를 전송하는 것이다.

일 실시예로, 광고에 대한 실시간 시청의 커스텀화는 광고의 다중 채널을 제공함으로써, 광고가 방송되도록 계획된 텔레비전 프로그램의 방송 시간 중에 특정 텔레비전 채널에 상기 텔레비전을 자동으로 동조시킴으로써, 및 이후 상기 광고의 종료 시 시청자가 선택한 텔레비전 프로그램으로 다시 텔레비전을 동조시킴으로써 이루어진다. 다른 실시예로, 광고가 특정 채널 상에 텔레비전 방송되는 경우 광고용 방송을 감시하고, 광고가 방송되는 경우 수직 블랭킹 간격(Vertical Blanking Interval: VBI) 내에 변경 채널 커맨드 -

여기서 변경 채널 커맨드는 시청자 선호 사항에 적합한 광고의 텔레비전 방송에 대해 특정 채널로 텔레비전을 동조시킴 - 을 삽입하는 서비스가 있다.

시청자 프로파일 정보는 예를 들어 많은 시청자에 대한 시청자 프로파일 정보의 통계 기록을 구비하는 경우 기록될 수 있다. 이들 기록은 그 중에서도 특히 마케팅 커스터마이징 기회, 한정된 지역 방송의 기회, 프로그램 세부 정보 요구 사항, 및 프로그램 배달 스케줄링 요구 사항을 결정하도록 광고주, 헤드 엔드 운영자, 가이드 제작자, 또는 기타의 사람에게 의해 분석을 위해 제공될 수 있다.

상기 EP6는 임의의 텔레비전/오락 시스템 컴포넌트의 개략적인 최초 구입일(예를 들어 최초 가동일)을 캡처하도록 시도한다. 상기 EP6는 제조자로부터 확대 보증서 구입과 같은 최초 구입 기회 이후 적당한 때 사용자에게 통지할 수 있다. 일 실시예로, 단말기 장비는 상기 통지 메시지가 상기 적합한 시청자에게 VBI 내에 전송될 수 있으면 개별적으로 어드레스로 불러낼 수 있다. 시청자 프로파일을 토대로, 상기 확대 보증서 요구는 시청자의 경제적 상황에 맞추어질 수 있다.

상기 EP6가 시청자 프로파일 정보를 사용하는 다른 방법은 상기 EP6에 의해 디스플레이된 광고 메시지의 '액세스-콘텐츠' 커스터마이징을 참조하는 것이다. 사용자 프로파일 정보는 시청자가 상기 EP6에 들어가기 전에 시청하고 있던 텔레비전 프로그램을 포함한다. 상기 EP6는 사용자가 상기 EP6에 들어가기 전에 시청하고 있던 텔레비전 프로그램의 콘텐츠 내의 상기 EP6를 통해 액세스 가능한 특정 데이터 서비스 중 하나를 토대로 상기 가이드 또는 서비스 내에 상이한 광고를 디스플레이할 수 있다. 상기 '액세스-콘텐츠' 광고 전략은 소비자를 대상으로 보다 제한된 방식을 제공한다. 예를 들면, 2명의 시청자가 목요일 밤 오후 8시에 텔레비전을 모두 시청하고 있다고 가정한다. 'Nova'를 시청하고 있던 한 시청자가 상기 EP6에 들어가는 경우, 상기 EP6는 교육 컴퓨터에 대한 광고를 디스플레이하지만, 메이저리그 야구 경기를 시청하고 있던 다른 시청자가 상기 EP6에 들어가는 경우 상기 EP6는 Goodyear Tires에 대한 광고를 디스플레이할 것이다.

본 발명의 일 실시예에서, 광고 메시지 및 가상 채널 광고의 데이터베이스는 시청자 단말기에서 램(RAM) 내에 저장되거나 또는 시청자 단말기가 인터넷에 접속되는 경우 웹사이트에 액세스 가능하다. 어느 한 경우에, 상기 데이터베이스 내의 광고 항목은 방송 텔레비전 프로그램에 할당되는 부호화된 카테고리 라벨에 대응하는 부호화된 카테고리로 분류된다(바람직하게는, 이들은 온 스크린 카테고리 또는 테마 가이드 내의 프로그램을 분류하는데 사용되는 동일한 카테고리임). 상기 텔레비전 프로그램의 카테고리 라벨은 상기 EP6의 일부로서 램에 저장되며, 실시간 클록 및 동조기 설정으로부터의 정보를 토대로 적용 가능한 쇼 정보 패키지(Show Information Package; 'SIP')로부터 검색될 수 있다. 이 정보는 상기 적용 가능한 SIP에 지시되는 시간 및 채널을 식별한다. 시청자가 텔레비전 모드에서 시청하는 마지막 프로그램의 카테고리 라벨이 상기 EP6 데이터베이스로부터 검색된 이후, 이 라벨은 램 내에 저장된 광고 메시지 및 가상 채널 광고의 데이터베이스에서 대응 라벨에 부합된다. 도 1에서, 상기 라벨이 부합되는 광고 항목은 광고 윈도우(14, 16) 내에 디스플레이되고 전술한 바와 같이 가상 채널은 광고 타일(tile; 52) 상에 디스플레이된다.

상기 EP6가 시청자 프로파일 정보를 사용하는 또 다른 방식은 상기 EP6에 의해 디스플레이되는 광고 메시지의 '인접-콘텐츠(adjacent-content)'를 참조한다. 시청자 프로파일 정보는 시청자가 상기 EP6 또는 관련 데이터베이스 내에 현재 하이라이트하는 콘텐츠의 식별을 포함한다. 이 방식을 사용하여, 상기 EP6는 예를 들어 시청자가 상기 그리드 가이드 내에 현재 하이라이트되는지, 스포츠 데이터 서비스 내에서 어느 스포츠가 하이라이트되는지, 또는 어느 종류의 뉴스가 뉴스 서비스(국제, 지역 등) 내에서 하이라이트되는지에 따라 상이한 광고를 디스플레이한다.

상기 EP6는 상기 VBI를 통해 다운로드된 램 내의 시청자 단말기에 저장되거나, 헤드-엔드에 저장되거나, 또는 상기 인터넷/월드 와이드 웹에 EP6 링크를 통해 액세스 가능한 광고 라이브러리를 포함하지만 이에 국한되지 않는 여러 가능한 위치로부터 광고를 선택할 수 있다. 상기 광고는 그래픽, 텍스트, 비디오 클립, 오디오 클립, 및 이들의 조합의 형식일 수 있다. 각각의 광고는 테마 코드, 프로파일 코드, 및 기타의 선택 보도자료(selection intelligence)가 할당될 수 있다. 일 실시예로, 상기 광고 디스플레이를 커스터마이징하기 위해서, 상기 EP6는 '액세스 콘텐츠', '인접 콘텐츠', 및/또는 시청자 프로파일 정보에 대해 광고주에 의해 설정된 기준에 부합하는 광고를 배치시키도록 미묘 가능한 광고의 라이브러리를 탐색한다. 다른 실시예로, 상기 EP6는 기설정된 선택 기준에 따라 디스플레이시키기 위한 광고를 선택한다.

다음과 같이 개시된 특허 출원은 본 명세서에 참조되어 본 명세서의 일부를 이룬다: 국제출원 #096/07270; 1997년 7월 21일에 출원된 출원번호 제60/053,330호; 1997년 10월 6일에 출원된 출원번호 제60/061,119호; 및 1997년 8월 12일에 출원된 출원번호 제60/053,237호.

일 실시예로, 상기 라이브러리 내의 광고가 채널 및 시간에 대해 특정 텔레비전 프로그램 또는 텔레비전 프로그램 부류(class)에 또한 할당된다: 상기 동조기가 감시된다; 상기 채널 및 시간이 텔레비전 프로그램에 상환되며, 그 결과가 어떤 광고가 디스플레이되는지 결정하기 위해 분석된다. 예를 들면, 특정 야구 스타 브랜드를 갖는 운동화에 대한 광고는 야구 프로그램에 할당될 수 있다. 상기 운동화 광고는 특정 EP6의 시청자가 상기 EP6에 들어가서 야구 경기를 시청하는 경우 디스플레이를 위해 선택된다.

다른 실시예로, 상기 라이브러리 내의 광고는 특정 텔레비전 프로그램 또는 텔레비전 프로그램 부류에 또한 할당된다: 도 6에 도시된 바와 같이 '녹화-시청 목록'에 들어간 텔레비전 프로그램의 이력이 기록된다; 및 그 결과가 어떤 광고가 디스플레이되는지 결정하기 위해 분석된다.

감시된 이벤트의 시간이 동일 EP6 또는 관련 텔레비전 수상기의 여러 사용자 사이의 구별을 위해 또한 고려될 수 있다. 서로 다른 시간대에 상기 EP6를 사용하고 텔레비전을 시청하는 사람들이 상이한 관심을 갖는 것으로 가정한다--가정주부는 아침 시간대에 상기 EP6를 사용할 수 있고, 아이들은 초저녁에 상기 EP6를 사용할 수 있으며, 집 밖에서 일을 하는 성인 남성들은 일요일 오후에 상기 EP6를 사용할 수 있다.

전술한 사용 이력이 사용자의 관심에 보다 정확히 광고를 맞추기 위해 출원번호 제60/055,237호 내에 개시된 '액세스-콘텐츠' 모델과 결합될 수 있다. 따라서, 특정 EP6의 사용자가 규정된 시간동안 임의의 다른 테마보다 매우 빈번하게 코미디 테마를 선택한 경우, 3개의 광고가 될 수 있고, 이로부터 최종 선택이

상기 온-스크린 EPG로 전환하기 전에 시청자가 어떤 종류의 텔레비전 프로그램을 시청하고 있는지에 따라 이루어진다.

예시적인 실시예

본 명세서 내에 기술되는 본 발명의 실시예는 단지 본 발명의 바람직한 것 및/또는 예시적인 것으로 간주된다; 본 발명의 범위는 이러한 실시예에 국한되지 않는다. 다양한 여러 기타 구성이 본 발명의 정신 및 범위를 벗어남이 없이 당업자에 의해 이루어질 수 있다. 예를 들면, 대안적인 디스플레이 형식이 가능하다.

상호상이동가능성

본 발명에 따르면 텔레비전 프로그램 비디오, 광고 정보 및 프로그램 예정 정보의 디스플레이 및 녹화 제어 인터페이스를 제공할 수 있다.

(5) 청구의 범위

청구항 1. 온 스크린 텔레비전 상호작용식 프로그램 가이드(on screen television interactive program guide)에 대한 탐색 방법에 있어서,

- a) 디스플레이 모니터 스크린의 제1 영역에 텔레비전 프로그램 목록을 수직으로 디스플레이하는 단계;
- b) 상기 제1 영역에 인접하게 수평으로 배치되는 스크린의 제2 영역에 광고를 디스플레이하는 단계;
- c) 상기 제1 영역 내의 하나의 텔레비전 프로그램을 하이라이트(highlight)시키기 위해 온 스크린 커서(on screen cursor)를 이동시키는 단계; 및
- d) 상기 광고를 하이라이트시키기 위해 상기 제1 영역으로부터 상기 제2 영역으로 상기 커서를 수평으로 이동시키는 단계

를 포함하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 2. 제1항에 있어서,

상기 하이라이트된 광고에 대해 기능을 활성화시키는 단계를 추가로 포함하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 3. 제2항에 있어서,

상기 기능이 상기 하이라이트된 광고에 대해서 스크린의 상세부 상에 디스플레이시키는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 4. 제3항에 있어서,

상기 상세부가 상기 광고 대신에 상기 제2 영역에 디스플레이되는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 5. 제3항에 있어서,

상기 상세부가 상기 제1 및 제2 영역과는 상이한 스크린의 제3 영역에 디스플레이되는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 6. 제2항에 있어서,

상기 광고는 향후 방송될 텔레비전 프로그램을 촉진시키며, 상기 기능은 나중의 녹화 및 시청을 위해 향후 방송될 텔레비전 프로그램의 시각 및 채널을 저장하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 7. 제2항에 있어서,

상기 기능이 상기 광고 대신에 상기 제2 영역에 스크린 상의 정지화상이나 비디오의 디스플레이를 위해 인터넷 웹사이트(internet website)에 링크를 설정하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 8. 제2항에 있어서,

상기 기능이 상기 제1 및 제2 영역과 상이한 스크린의 제3 영역에 정지화상이나 비디오의 디스플레이를 위해 인터넷 웹사이트에 링크를 설정하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 9. 제1항에 있어서,

상기 d) 이동 단계가 상기 제2 영역 주변에서 경계(border)를 디스플레이시킴으로써 상기 광고를 하이라이트하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 10. 제9항에 있어서,

상기 d) 이동 단계가 다른 프로그램과 대조되는 색으로 디스플레이시킴으로써 상기 하나의 프로그램을 하이라이트하는 상호작용식 프로그램 가이드에 대한 탐색 방법.

청구항 11. 스크린 및 램(RAM)을 구비하는 디스플레이 모니터와 함께 동작함으로써, 상기 스크린의 제1 영역에서 상기 램 내에 저장되는 텔레비전 프로그램 목록을 디스플레이시키고 상기 제1 영역에 수평으로 인접하는 스크린의 제2 영역-여기서 제2 영역은 제3, 제4, 및 제5의 수직으로 배치되는 영역으로 분할되며, 상기 제3, 제4, 및 제5 영역 각각은 전체 스크린의 1/9 영역에 해당하는 동일한 높이-대-폭의 종횡비(aspect ratio)를 가짐-에서 상기 램 내에 저장되는 기타 텍스트 및 화상을 디스플레이시키는 신

호를 발생하도록 프로그램되는
마이크로프로세서.

청구항 12. 제11항에 있어서,

상기 제1 영역에 상기 하나의 프로그램 목록을 하이라이트하는 신호를 발생하도록 추가로 프로그램되는 마이크로프로세서.

청구항 13. 제12항에 있어서,

상기 하이라이트된 프로그램 목록으로 표시되는 현재의 텔레비전 프로그램을 상기 제3 영역에 디스플레이시키는 신호를 발생하기 위해 텔레비전 동조기(tuner)를 설정하도록 추가로 프로그램되는 마이크로프로세서.

청구항 14. 제13항에 있어서,

상기 제4 영역에 향후 방송될 텔레비전 프로그램을 위한 광고를 디스플레이시키는 신호를 발생하도록 추가로 프로그램되는 마이크로프로세서.

청구항 15. 제14항에 있어서,

상기 제5 영역에 제품 또는 서비스를 위한 광고를 디스플레이시키는 신호를 발생하도록 추가로 프로그램되는 마이크로프로세서.

청구항 16. 제14항에 있어서,

인터넷 웹사이트에 링크시키고 상기 제5 영역에 상기 웹사이트로부터 화상을 디스플레이시키는 신호를 발생하도록 추가로 프로그램되는 마이크로프로세서.

청구항 17. a) 스크린을 구비하는 디스플레이 모니터;

b) 동조기;

c) 상기 스크린의 제1 영역에 텔레비전 프로그램 목록을 디스플레이시키고 상기 스크린의 제2 영역에 광고를 디스플레이시키도록 구성되는 마이크로프로세서; 및

d) 상기 스크린의 제2 영역에 하나 이상의 정지화상이나 비디오를 디스플레이시키도록 상기 마이크로프로세서에 인터넷 웹사이트를 링크시키는 수단

을 포함하는 텔레비전 시스템.

청구항 18. 제17항에 있어서,

상기 마이크로프로세서에 상기 스크린의 제2 영역에 디스플레이시키기 위한 상기 프로그램 목록을 전송하도록 상기 마이크로프로세서에 인터넷 웹사이트를 링크시키는 수단을 추가로 포함하는 텔레비전 시스템.

청구항 19. 상호작용식 텔레비전 시스템(interactive television system)에 있어서,

a) 복수의 비디오 프로그램 채널을 전송하는 텔레비전 신호를 수신하는 수단;

b) 상기 비디오 프로그램, 그래픽 및 기타 가시 정보(viewable information)를 디스플레이시키기 위한 디스플레이 모니터;

c) 상기 디스플레이 모니터 상에 비디오 프로그램을 디스플레이시키기 위한 상기 텔레비전 신호로 전송되는 상기 채널 중 하나를 선택하는 수단;

d) 텔레비전 스케줄링 데이터의 데이터베이스 및 광고 정보의 데이터베이스를 포함하는 다중 형식의 데이터가 저장되는 메모리;

e) 상기 텔레비전 스케줄링 데이터의 데이터베이스 및 상기 광고 정보의 데이터베이스를 상기 메모리 내에 저장하는 수단;

f) 상기 텔레비전 비디오 프로그램, 온 스크린 전자 텔레비전 프로그램 가이드로서의 상기 텔레비전 스케줄링 데이터, 및 상기 디스플레이 모니터 상의 광고 정보를 동시에 포맷 및 디스플레이시키는 수단; 및

g) 상기 디스플레이 모니터 상에 디스플레이시키기 위해 상기 온 스크린 전자 텔레비전 프로그램 가이드의 디스플레이로부터 상기 디스플레이된 프로그램 타이틀 중 하나를 선택하는 수단

을 포함하는 상호작용식 텔레비전 시스템.

청구항 20. 제19항에 있어서,

광고 정보의 상기 데이터베이스가

광고될 상기 제품과 관련되며, 그래픽 데이터, 및/또는 문자 데이터, 및/또는 비디오 데이터, 및/또는 오디오 데이터를 포함하는 데이터 패킷; 및

프리젠테이션 및 포맷 관계, 처리순서, 및 상기 그래픽, 텍스트, 문자, 비디오, 및 오디오의 데이터의 타이밍을 정의하는 타이밍 및 상관 관계 데이터

를 추가로 포함하는 상호작용식 텔레비전 시스템.

청구항 21. 제20항에 있어서,

상기 동시에 포맷 및 디스플레이시키는 수단이

상기 선택된 채널로 전송되는 비디오 신호를 상기 디스플레이 모니터 상의 제1 고정위치 윈도우에 디스플레이시키는 수단; 및

상기 광고 데이터를 가시 형태(viewable form)로 상기 디스플레이 모니터 상의 제2 고정위치 윈도우에 디스플레이시키는 수단

을 추가로 포함하는 상호작용식 텔레비전 시스템.

청구항 22. 제21항에 있어서,

인터넷 또는 월드 와이드 웹(World Wide Web)과 같은 컴퓨터 네트워크 상에 데이터 소스 어드레스(data source addresses)를 포함하는 복수의 데이터 소스용 어드레스를 상기 광고 데이터와 관련된 데이터와 동일시하는 수단;

상기 광고 데이터와 관련된 데이터와 동일시되는 하나 이상의 상기 식별된 복수의 데이터 소스용 어드레스를 선택하는 수단;

상기 인터넷 또는 월드 와이드 웹과 같은 컴퓨터 네트워크 상의 데이터 소스 어드레스를 포함하는 상기 대응 데이터 소스로의 링크를 설정하기 위해 상기 데이터 소스 어드레스 선택에 응답하는 수단; 및

가시 형태로 상기 디스플레이 모니터 상의 상기 복수의 선택된 데이터 소스 어드레스로부터 데이터를 디스플레이시키는 수단

을 추가로 포함하는 상호작용식 텔레비전 시스템.

청구항 23. 제21항에 있어서,

시청자(viewer) 텔레비전 시청 특성, EPG(electronic programming guide)로부터 시청자 선택, 상기 인터넷과의 시청자 상호작용, 및/또는 상기 텔레비전 원격 제어 장치와의 시청자 상호작용을 포함하되 이에 국한되지 않는 상기 텔레비전 및 상기 EPG와의 시청자 상호작용에 적합한 데이터를 수집하는 수단; 및

상기 수집된 시청자 상호작용 데이터를 저장하는 수단

을 추가로 포함하는 상호작용식 텔레비전 시스템.

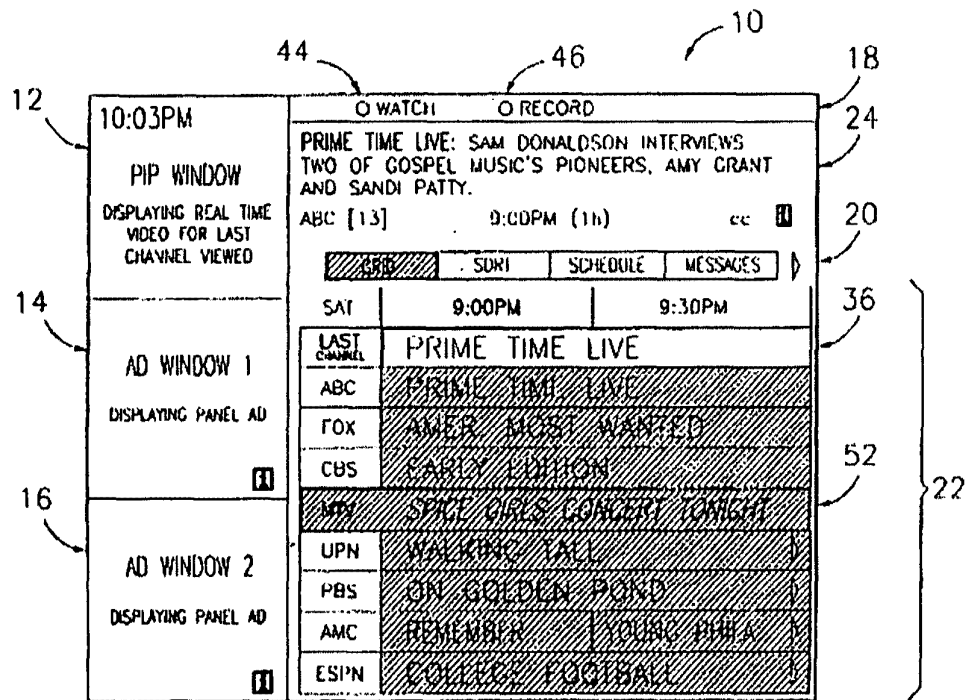
청구항 24. 제23항에 있어서,

상기 수집된 시청자 상호작용 데이터에 따라 광고 데이터의 온 스크린 EPG 디스플레이 내에 광고 콘텐츠를 커스터마이징하는 수단을 추가로 포함하는 상호작용식 텔레비전 시스템.

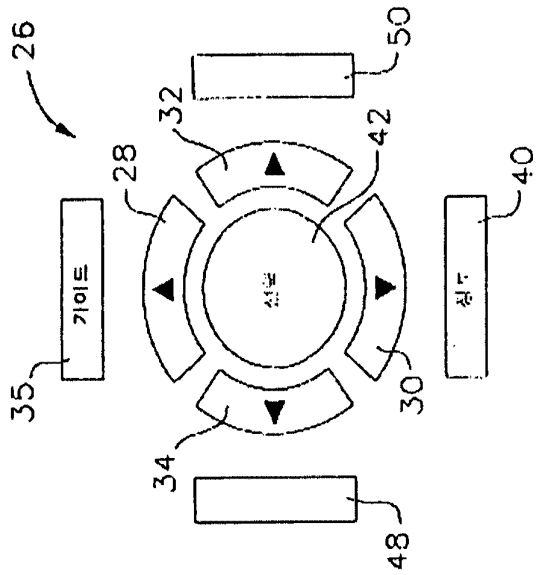
청구항 25. 제23항에 있어서,

광고가 상기 수집된 시청자 상호작용 데이터에 따라 광고 데이터의 온 스크린 EPG 디스플레이 내에 표시되는 상기 타이밍 및 스케줄링을 커스터마이징하는 수단을 추가로 포함하는 상호작용식 텔레비전 시스템.

도면



도 2



도 3

10:03PM

PIP WINDOW
DISPLAYING PANEL AD VIDEO FOR LAST CHANNEL VIEWED

AD WINDOW 1
DISPLAYING PANEL AD

AD WINDOW 2
DISPLAYING PANEL AD

10:03PM

WATCH RECORD

REMEMBER WENN: WENN SUPPLIES PROGRAMMING TO A RIVAL STATION.

AMC [23] 9:00PM (30m) cc

ON SORT SCHEDULE MESSAGES

SAT	9:00PM	9:30PM
LAST CHANNEL	EARLY EDITION	
ABC	MISS AMERICA PAGEANT	
FOX	AMERICAN MOST WANTED	
CBS	EARLY EDITION	
UPN	SPICE GIRLS CONCERT TONIGHT	
UPN	WALKING TALL	
PBS	ON GOLDEN BOND	
AMC	REMEMBER...	YOUNG PHILA
ESPN	COLLEGE FOOTBALL	

584

(A)

10:03PM
PIP WINDOW
DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED

AD WINDOW 1
DISPLAYING PANEL NO [1]

AD WINDOW 2
DISPLAYING PANEL NO [1]

Block 0
THE PICTURE IS UNLOCKED

SORT
 SCHEDULE
 MESSAGES

SAT	9:00PM	9:30PM
ABC	EARLY EDITION	MISS AMERICA PAGEANT
NON	ALTER MOST NEWS	
DIS	EARLY EDITION	
MON	SPORTS CENTER ZOOM	
TUE	NEWSING TALK	
WED	ON COLLEGE TALK	
THU	NEWSING TALK	
FRI	NEWSING TALK	
SAT	NEWSING TALK	

575

10:03PM A

PIP WINDOW
DISPLAYING REAL TIME
VIDEO FOR LAST
CHANNEL VIEWED

O B UNLOCK 0

THE PICTURE IS LOCKED
ON ABC, CHANNEL 13.

AUDIO SORN SCHEDULE MESSAGES

SAT	9:00PM	9:30PM
SUN	FAMILY EDITH	MIDNIGHT
MON	ABC	MIDNIGHT A PAGEANT
TUE	ABC	MIDNIGHT MANAGER
WED	ABC	FAMILY EDITH
THU	ABC	MIDNIGHT MANAGER
FRI	ABC	MIDNIGHT MANAGER
SAT	ABC	MIDNIGHT MANAGER
SUN	ABC	MIDNIGHT MANAGER

AD WINDOW 1
DISPLAYING PANEL AD

AD WINDOW 2
DISPLAYING PANEL AD

II

II

II

(R)

10:03PM
○ CANCEL ○ SCHEDULE

PIP WINDOW
DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED

"STAR TREK: VOYAGER" IS SET TO BE WATCHED ONCE.

GRID	SORT	SCHEDULE	MESSAGES
------	------	----------	----------

SAT	10:30PM	11:00PM
LAST CHANNEL	WALKER TEX. NEWS	NEWS
AHC	PRIME TIME L. NEWS	NEWS
FOX	NEWS	MAD TV
CBS	WALKER TEX. NEWS	NEWS
MTV	SPACE GIRLS CONCERT TONIGHT	
UPN	NEWS	STAR TREK: V...
PBS	LAST UP ROAD BY HOA	
AMC	YOUNG PHILADELPHIANS	
ESPN	COLLEGE FOOTBALL	

AD WINDOW 1
DISPLAYING PANEL AD

AD WINDOW 2
DISPLAYING PANEL AD

36-30

5.2/5

10:03PM
○ REMOVE ○ CHANGE

PIP WINDOW
DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED

WALKER, TEXAS RANGER: STEROIDS KILL HIGH-SCHOOL ATHLETES.

CBS [8] 10:00PM (1h) cc [1]

GRID
SGRI
SCHEDULE
MESSAGS

WATCH/RECORD SCHEDULE FREQ

9/13	10:00PM	WALKER, TEXAS RANGER	WEEKLY
9/14	10:00PM	STAR TREK: VOYAGER	WEEKLY
9/14	1:00PM	THE CAPT	ONCE
9/15	8:00PM	GROUNDHOG DAY	ONCE

AD WINDOW 1
DISPLAYING PANEL AD

AD WINDOW 2
DISPLAYING PANEL AD

36-31

08/25

507

10:03PM 0

PIP WINDOW
DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED

AD WINDOW 1
DISPLAYING PANEL AD

AD WINDOW 2
DISPLAYING PANEL AD

0 0

PRESS THE SELECT BUTTON ON YOUR REMOTE TO SEE A LIST OF ALL MOVIES

GRID

MOVIES

SCHEDULE

MESSAGES

SPORTS

ALL

ACTION

ADVENTURE

ANIMATED

BIOPIC

COMEDY

DOCUMENTARY

DRAMA

FAMILY

WESTERN

10:03PM
WATCH RECORD

PIP WINDOW
DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED

ON GOLDEN POND: COMEDY-DRAMA 1981***
KATHARINE HEPBURN, PG

PBS [10] 8:00PM (2h 30m)

GRID
SORT
SCHEDULE
MESSAGES

MOVIES: ALL TUES, SEPT 23

PBS	ON GOLDEN POND	8:00PM
TNT	THE SEVENTH SIGN	8:00PM
USA	THE ACCUSED	8:00PM
AMC	YOUNG PHILADELPHIA	8:30PM
TNT	ALIEN 5	10:00PM
USA	CLOVER	10:00PM
AMC	EXTREME	11:00PM
ABC	AND THEN THERE	4:00PM
ABC	FALLING FROM SKY	8:00PM

AD WINDOW 1
DISPLAYING PANEL AD



AD WINDOW 2
DISPLAYING PANEL AD

<p>10:03PM</p> <p>PIP WINDOW</p> <p>DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED</p>	<p><input type="radio"/> WATCH <input type="radio"/> RECORD</p> <p>MISS AMERICA PAGEANT: WOMEN FROM 50 STATES VIE FOR THE CROWN IN ATLANTIC CITY. SPECIAL</p> <p>ABC [13] 9:00PM (1h) cc</p> <p>PlusCode: 9990</p>
<p>AD WINDOW 1</p> <p>DISPLAYING PANEL AD</p>	<p>NEXT ON ABC [13]</p> <p>10:00PM PRIME TIME LIVE</p> <p>11:00PM NEWS</p> <p>11:30PM NIGHTLINE</p> <p>12:05AM PAID PROGRAMMING</p> <p>12:35AM PATRIOTS PREVIEW</p>
<p>AD WINDOW 2</p> <p>DISPLAYING PANEL AD</p>	<p>1:05AM KWIK WITZ</p> <p>1:35AM THE CAPE</p> <p>2:35AM FLIPPER</p> <p>3:35AM HEADLINE NEWS</p> <p>6:00AM PREVENTION BODYSENSE</p> <p>6:30AM REBECCA'S GARDEN</p> <p>7:00AM HOUR OF POWER</p> <p>8:00AM GMA SUNDAY</p>

0875

36-34





(A)

<p>11:51</p> <p>PIP WINDOW</p> <p>DISPLAYING REAL TIME VIDEO OF PROGRAM HIGHLIGHTED BY GRID GUIDE</p>	<p>O WATCH O RECORD</p> <p> SEASON PREMIER! TUESDAY AT 9 PM</p>
<p>AD WINDOW 1</p> <p>WITH ADVERTISEMENT FOR THE TELEVISION PROGRAM</p> <p>NO ADVERTISEMENT</p>	<p>TIM ALLEN CONTINUES TO BRING HIS UNIQUE SLANT ON MASCULINITY TO HIS ROLE AS FATHER, HUSBAND, AND HOST OF "TOOL TIME." ALTHOUGH HE IS BEGINNING TO FEEL THAT PANGS OF A MID-LIFE CRISIS COMING ON, HE IS STILL CONVINCED THAT "MORE POWER" IS THE IDEAL SOLUTION TO MOST OF LIFE'S CHALLENGES. NOWHERE IS THIS CHALLENGE MORE EVIDENT THAN IN THE TAYLOR HOUSEHOLD, WHERE ADOLESCENCE IS IN FULL THROTTLE.</p>
<p>AD WINDOW 2</p> <p>DISPLAYING PANEL AD</p>	<p></p>

36-35

5.2.10a

(b)

<p>11:51</p> <p>PIP WINDOW</p> <p>DISPLAYING REAL TIME VIDEO OF PROGRAM HIGHLIGHTED IN GRID GUIDE</p>	<p>O WATCH O RECORD</p> <p> <i>SEASON PREMIER!</i> <i>SUNDAY AT 7:00</i></p>
<p>AD WINDOW 1</p> <p>DISPLAYING PANEL AD</p> <p></p>	<p>LAST SEASON, 60MINUTES ACHIEVED AN UNPRECEDENTED 20TH YEAR AS A TOP 10 RATINGS PERFORMER. ITS 63 EMMYS ARE THE MOST EVER WON BY A NEWS PROGRAM. THIS YEAR, THE BROADCAST, IN ITS 30TH SEASON ON THE CBS TELEVISION NETWORK, CONTINUES WITH ITS TRADEMARK BLEND OF INVESTIGATIVE REPORTS, INTERVIEWS</p>
<p>AD WINDOW 2</p> <p>WITH ANTI-COMMERCIALISM FOR THE TELEVISION PROGRAM</p> <p>NO ADVERTISING</p> <p></p>	<p>TAYLOR HOUSEHOLD, WHERE ADOLESCENCE AND PROFILES.</p> <p></p>

36-36

5/21/06

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03/26/03



JC887 U.S. PTO

S&H Form: PTO/SB/05 (2/02)

JC887 U.S. PTO
10396439
03/26/03

UTILITY PATENT APPLICATION

Attorney Docket No. 1293.1675

TRANSMITTAL

First Named Inventor or Application Identifier:
Jae-cheol HEO

(Only for original applications)

Express Mail Label No.

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:
Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

- 1. Fee Transmittal Form
- 2. Specification, Claims & Abstract[Total Pages: 12]
- 3. Drawing(s) (35 USC 113) [Total Sheets: 3] [FIGS. 1, 2, and 3-4]
- 4. Oath or Declaration[Total Pages: 1]
 - a. Newly executed (original or copy)
 - b. Copy from a prior application (37 CFR 1.63(d))
 - i. **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- 5. Verified Statement Claiming Small Entity Status
- 6. Application Data Sheet. See 37 C.F.R. 1.76
- 7. Applicant claims foreign priority benefit to: Korean Application No. 2002-29958 filed May 29, 2002
- 8. CD-Rom or CD-R in duplicate, large table or Computer Program (Appendix)
- 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. CD-ROM or CD-R (2 copies); or
 - ii. paper
 - c. Statement verifying identity of above copies
- 10. For publication of assignee information under 37 CFR 1.215(b), list the assignee as SAMSUNG Electronics Co., Ltd. of Republic of Korea. The Assignment papers will be filed later.

ACCOMPANYING APPLICATION PARTS

- 11. Assignment (cover sheet & document(s)) to SAMSUNG Electronics Co., Ltd. of Republic of Korea
 - for publication of assignee information under 37 CFR 1.215(b)
- 12. 37 CFR 3.73(b) Statement (when there is an assignee) Power of Attorney
- 13. English Translation Document (if applicable)
- 14. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations
- 15. Preliminary Amendment
- 16. Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
- 17. Certified Copy of Priority Document(s) (if foreign priority is claimed)
- 18. Request and Certification for Nonpublication under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent
- 19. Other:

20. CORRESPONDENCE ADDRESS



21171

PATENT TRADEMARK OFFICE

03/26/03
 fce806 U.S. PTO

10396439 032603

S&H Form (2/02)

NEW APPLICATION FEE TRANSMITTAL		Attorney Docket No.	1293.1675
		Application Number	TO BE ASSIGNED
		Filing Date	March 26, 2003
AMOUNT ENCLOSED	\$ 1252.00	First Named Inventor	Jae-cheol HEO

FEE CALCULATION (fees effective 10/01/01)					
CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS	27 - 20 =	7	X \$ 18.00 =	\$ 126.00
	INDEPENDENT CLAIMS	7 - 3 =	4	X \$ 84.00 =	336.00
	MULTIPLE DEPENDENT CLAIMS (any number; if applicable)			+ \$280.00 =	
				BASIC FILING FEE	750.00
				Total of above Calculations =	\$ 1212.00
	Surcharge for late filing fee, Oath or Declaration (37 CFR 1.53(f)) (\$130.00)				
	Reduction by 50% for filing by small entity (37 CFR 1.27).				
				TOTAL FILING FEE =	\$ 1212.00
	Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d))				
	Recordation of Assignment (\$40.00; 37 CFR 1.21(h))				40.00
				TOTAL FEES DUE =	\$ 1252.00

METHOD OF PAYMENT

Check enclosed as payment.

Charge "TOTAL FEES DUE" to the Deposit Account No. below.

No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date).

GENERAL AUTHORIZATION

If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:

Deposit Account No.	19-3935
Deposit Account Name	STAAS & HALSEY LLP

The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	Michael D. Stein	Reg. No.	37,240
Signature		Date	March 26, 2003

03/26/03
JC887 U.S. PTO

JC887 U.S. PTO
10396439
03/26/03

S&H Form: PTO/SB/05 (2/02)

**UTILITY
PATENT APPLICATION**

Attorney Docket No. 1293.1675

TRANSMITTAL

First Named Inventor or Application Identifier:
Jae-cheol HEO

(Only for original applications)

Express Mail Label No.

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent
application contents.

ADDRESS TO:
Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

- 1. Fee Transmittal Form
- 2. Specification, Claims & Abstract[Total Pages: 12]
- 3. Drawing(s) (35 USC 113) [Total Sheets: 3] [FIGS. 1, 2, and 3-4]
- 4. Oath or Declaration[Total Pages: 1]
 - a. Newly executed (original or copy)
 - b. Copy from a prior application (37 CFR 1.63(d))
 - i. **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application,
see 37 CFR 1.63(d)(2) and 1.33(b).
- 5. Verified Statement Claiming Small Entity Status
- 6. Application Data Sheet. See 37 C.F.R. 1.76
- 7. Applicant claims foreign priority benefit to: Korean Application No. 2002-29958 filed May 29, 2002
- 8. CD-Rom or CD-R in duplicate, large table or Computer Program (Appendix)
- 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. CD-ROM or CD-R (2 copies); or
 - ii. paper
 - c. Statement verifying identity of above copies
- 10. For publication of assignee information under 37 CFR 1.215(b), list the assignee as SAMSUNG Electronics Co., Ltd. of Republic of Korea. The Assignment papers will be filed later.

ACCOMPANYING APPLICATION PARTS

- 11. Assignment (cover sheet & document(s)) to SAMSUNG Electronics Co., Ltd. of Republic of Korea
 - for publication of assignee information under 37 CFR 1.215(b)
- 12. 37 CFR 3.73(b) Statement (when there is an assignee) Power of Attorney
- 13. English Translation Document (if applicable)
- 14. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations
- 15. Preliminary Amendment
- 16. Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
- 17. Certified Copy of Priority Document(s) (if foreign priority is claimed)
- 18. Request and Certification for Nonpublication under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent
- 19. Other:

20. CORRESPONDENCE ADDRESS



21171

PATENT TRADEMARK OFFICE

03/26/03
 fce06 U.S. PTO

10396439 032603

S&H Form (2/02)

NEW APPLICATION FEE TRANSMITTAL		Attorney Docket No.	1293.1675
		Application Number	TO BE ASSIGNED
		Filing Date	March 26, 2003
AMOUNT ENCLOSED	\$ 1252.00	First Named Inventor	Jae-cheol HEO

FEE CALCULATION (fees effective 10/01/01)					
CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS	27 - 20 =	7	X \$ 18.00 =	\$ 126.00
	INDEPENDENT CLAIMS	7 - 3 =	4	X \$ 84.00 =	336.00
	MULTIPLE DEPENDENT CLAIMS (any number; if applicable)			+ \$280.00 =	
				BASIC FILING FEE	750.00
				Total of above Calculations =	\$ 1212.00
	Surcharge for late filing fee, Oath or Declaration (37 CFR 1.53(f)) (\$130.00)				
	Reduction by 50% for filing by small entity (37 CFR 1.27).				
				TOTAL FILING FEE =	\$ 1212.00
	Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d))				
	Recordation of Assignment (\$40.00; 37 CFR 1.21(h))				
				TOTAL FEES DUE =	\$ 1252.00

METHOD OF PAYMENT

Check enclosed as payment.

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GENERAL AUTHORIZATION

If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to:

Deposit Account No.	19-3935
Deposit Account Name	STAAS & HALSEY LLP

The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application.

SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	Michael D. Stein	Reg. No.	37,240
Signature		Date	March 26, 2003

TITLE OF THE INVENTION

METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of Korean Application No. 2002-29958, filed May 29, 2002, in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates to an image reproducing system, and more particularly, to a method of and an apparatus for setting a highlight window using a remote controller.

2. Description of the Related Art

[0003] Recently, an image reproducing apparatus can display data on one or more regions on a monitor screen. Here, rectangular regions on the monitor screen are referred to as windows. In addition, the windows on the monitor screen may or may not overlap. A user is required to set a highlight window, e.g., one of the windows, on the screen in order to attract people's interest (attention) on specific data.

[0004] In an existing image reproducing apparatus, highlight windows are set using a user control panel. In another existing image reproducing apparatus, the highlight windows are set using a setting device, such as a mouse, via a universal serial bus (USB) when operating a personal computer.

[0005] However, since the user control panel is installed in the image reproducing apparatus, it is difficult to manipulate the user control panel. In addition, since the USB cannot be used in a stand-alone type apparatus, it is uncomfortable and inconvenient to use the setting device.

SUMMARY OF THE INVENTION

[0006] The present invention provides a method of setting a highlight window using a remote controller in an image reproducing system.

[0007] The present invention also provides an apparatus for setting a highlight window according to a method of setting the highlight window using a remote controller.

[0008] Additional aspects and advantages of the invention will be set forth in part in the description which follows and, in part, will be obvious from the description, or may be learned by practice of the invention.

[0009] According to an aspect of the present invention, a method of setting a highlight window in an image reproducing system includes receiving remote control signals from a remote controller having a highlight selection function, decoding the remote control signals received from the remote controller, generating the highlight window according to highlight setting values when the decoded remote control signals are highlight function codes, and controlling a video parameter to adjust a video signal displayed in the generated highlight window.

[0010] According to another aspect of the present invention, an apparatus for setting a highlight window in an image reproducing system includes a remote control sensor detecting wirelessly transferred functional button codes, which are generated in a remote controller, a control unit checking changes in highlight setting values in an on state of a highlight function when the functional button codes, which are detected in the remote control sensor, are highlight function selection data, an image process unit generating a window corresponding to the highlight setting values on a screen and decoding input video data, and a highlight signal change unit controlling a parameter of the decoded input video data included in the window, which is generated by the image process unit.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] These and other aspects and advantages of the invention will become apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

FIG. 1 is a block diagram illustrating an apparatus for setting a highlight window according to an embodiment of the present invention;

FIG. 2 is a flowchart illustrating a method performed in the apparatus shown in FIG. 1 to set the highlight window;

FIG. 3 illustrates an example of an initially set window when a user selects a highlight function in the apparatus shown in FIG. 1; and

FIG. 4 illustrates an example of a previously set window and a newly set window when a user selects a highlight function more than twice in the apparatus shown in FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] Reference will now be made in detail to the present preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to the like elements throughout. The embodiments are described below in order to explain the present invention by referring to the figures.

[0013] The present invention will now be described more fully with reference to the 30 accompanying drawings, in which preferred embodiments of the invention are shown.

[0014] FIG. 1 is a block diagram illustrating an apparatus (image reproducing apparatus) for setting a highlight window according to an embodiment of the present invention. The apparatus of FIG. 1 includes a remote control unit 110, a remote control sensor 120, a control unit 130, an image process unit 140, a highlight signal change unit 150, and a panel driving unit 160.

[0015] Referring to FIG. 1, the remote control unit 110 has buttons relating to a highlight function and transfers highlight function codes to a main body of the apparatus using a radio frequency (RF) corresponding to inputs of the buttons. For example, the remote control unit 110 has a highlight on/off button, highlight window size control buttons, and highlight window location control buttons in order to remote control the start and end of the highlight function and set a display screen or the highlight window.

[0016] The remote control sensor 120 detects signals relating to the highlight function, which are input from the remote control unit 110, and processes the input signals into electric pulse signals.

[0017] The control unit 130 decodes the highlight function codes from the electric pulse signals processed in the remote control sensor 120 and generates highlight setting values corresponding to the decoded highlight function codes. For example, the control unit 130 receives a highlight signal and outputs a size and a location (x, y) of the highlight window. If a user changes the size or the location (x, y) of the highlight window while the highlight function is in an on state, the control unit 130 outputs the changed size and location (x, y) of the highlight window.

[0018] The image process unit 140 decodes video signals and generates an on screen display (OSD) of a box shape corresponding to the size and the location (x, y) of the highlight window, which are generated in the control unit 130.

[0019] The highlight signal change unit 150 adjusts a parameter of the video signals through the OSD, which is formed in the image process unit 140, by using the size and the location (x, y) of the highlight window, which are generated in the control unit 130. In other words, the highlight signal change unit 150 adjusts an offset or a gain of the video signals in the highlight window to emphasize the video signals included in the highlight window.

[0020] The panel driving unit 160 converts RGB signals, which are generated in the highlight signal change unit 150, into low voltage differential signals in order to optimally transfer the RGB signals to a panel.

[0021] FIG. 2 is a flowchart illustrating a method performed in the apparatus shown in FIG. 1 to set the highlight window.

[0022] First, electric power is applied to the image reproducing apparatus to display image signals on a screen in operation 210.

[0023] When reproducing images on the screen, the image reproducing apparatus wirelessly receives button signals from the remote control unit (remote controller) 110 having the buttons relating to the highlight function in operation 220.

[0024] Thereafter, codes of the wirelessly received button signals are decoded in operation 230. For example, the control unit 130 receives a highlight function on/off signal, a highlight window size change signal, and a highlight window location change signal and decodes the codes of the received signals.

[0025] It is checked whether decoded code values are highlight function data in operation 240. Here, if the decoded code values are not the highlight function data, an operation other than the highlight function is performed in operation 256.

[0026] If the decoded code values are the highlight function data, it is checked whether the highlight function is in the on state in operation 250. If the highlight function is in an off state, a box-shaped initial window is displayed at a center of the screen using a predetermined initial highlight value as shown in FIG. 3 in operation 250. Here, the video signals of the image in the

box-shaped initial window are compensated using parameter values of predetermined initial signals. Here, the initially set highlight values include size data of the highlight window, location data of the highlight window, and highlight degree data, for example, the offset or gain of the video signals.

[0027] When the highlight window function is in the on state, the codes of the wirelessly received button signals are decoded to check whether the highlight setting values, for example, the size and the location of the highlight window, are changed in operation 260. If the highlight setting values are changed, the changed size and location of the highlight window are calculated and the video signals included in the highlight window are compensated using a predetermined signal parameter in operation 262. For example, in order to change the size and the location of the highlight window, the user inputs the size change buttons and the location change buttons of the remote control unit 110. When the user changes the size and the location of the highlight window using the buttons of the remote control unit 110, the control unit 130 recognizes a start location (x1, y1) and an end location (x2, y2) of the highlight window so that the control unit 130 calculates a center point (xo, yo) of the highlight window. Thereafter, the control unit 130 generates a changed highlight window with reference to the center point (xo, yo) of the highlight window. The control unit 130 compensates for the video signals included in the changed highlight window using the predetermined parameter.

[0028] When the highlight setting values are not changed, the video parameters of the changed highlight window are renewed until the highlight function is ended in operation 270.

[0029] Thereafter, when the user selects a highlight function end button or the button signal is not received from the remote control unit 120 for a predetermined period of time, the finally changed highlight window is stored and the processes are ended.

[0030] If the user inputs more than one highlight function button, a new highlight window is generated in addition to the existing highlight window as shown in FIG. 4.

[0031] According to the present invention, since the highlight window is set using the remote controller, the user can easily highlight specific regions on the screen from a remote location of the image reproducing apparatus.

[0032] While this invention has been particularly shown and described with reference to preferred embodiment thereof, the preferred embodiment described above is merely illustrative

What is claimed is:

1. A method of setting a highlight window in an image reproducing system, the method comprising:
 - receiving remote control signals from a remote controller having a highlight selection function;
 - decoding the remote control signals received from the remote controller;
 - generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes; and
 - controlling a video parameter of video signals displayed in the generated highlight window.
2. The method of claim 1, further comprising:
 - checking whether a highlight function is in an on state when the decoded remote control signals are the highlight function codes; and
 - displaying an initially set highlight window when the highlight function is in an off state.
3. The method of claim 1, wherein the highlight window setting values comprises: size and location values.
4. The method of claim 1, wherein the controlling of the video parameter comprises: controlling an offset and a gain of video signals.
5. The method of claim 1, wherein the generating of the highlight window comprises:
 - generating more than one window.
6. An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, the apparatus comprising:
 - a remote control sensor detecting wirelessly transferred functional codes, which are generated from the remote controller;
 - a control unit checking highlight setting values in an on state of a highlight function when the functional codes, which are detected in the remote control sensor, are highlight data;
 - an image process unit generating a window corresponding to the highlight setting

values, receiving video data from an external source, and decoding the video data; and
 a highlight signal change unit controlling a parameter of the video data included in the window and generated by the image process unit.

7. The apparatus of claim 6, wherein the remote controller comprises a highlight function on/off button, a highlight window size change button, and a highlight window location change button to generate the functional codes having the highlight data.

8. An apparatus for setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:
 a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code.

9. The apparatus of claim 8, wherein the wirelessly transferred highlight functional code generated from the remote controller comprises:
 one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

10. The apparatus of claim 8, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the main body unit adjusts one of a location and a size of the highlight window with respect to the screen.

11. The apparatus of claim 10, wherein the main body unit adjusts the video data according to the adjustment of the one of the location and the size of the highlight window.

12. The apparatus of claim 8, wherein the main body unit comprises:
 a remote control sensor detecting the wirelessly transferred highlight functional codes, which are generated from the remote controller;
 a control unit decoding the wirelessly transferred highlight functional code to generate a highlight setting value; and
 an image process unit generating the highlight window according to the highlight setting value.

13. The apparatus of claim 12, wherein the main body unit further comprises:
a highlight signal change unit adjusting a parameter of the video data to display the image in the highlight window.
14. The apparatus of claim 13, wherein the parameter of the video data comprises:
at least one of an offset and a gain of the video data to emphasize the image included in the highlight window.
15. The apparatus of claim 13, wherein the highlight signal change unit adjusts the image to be displayed in the highlight window according to the adjusted parameter of the video data.
16. The apparatus of claim 13, wherein the image reproducing system is connected to a display panel, and the main body unit further comprises:
a panel driving unit converting the adjusted video data into a low voltage differential signal to optimally transfer the video data to the display panel.
17. The apparatus of claim 13, wherein the image reproducing system is connected to one of an external display panel and an internal panel each having a screen, and the highlight window is displayed on a portion of the screen.
18. The apparatus of claim 17, wherein the highlight signal change unit adjusts the video data to highlight the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.
19. An apparatus for setting a highlight window in an image reproducing system having a display panel with a screen and receiving a signal from a remote controller, comprising:
a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a highlight window having a boundary included in the screen and displayed on the screen according to the wirelessly transferred highlight functional code.
20. An apparatus for setting a highlight window in an image reproducing system

receiving a signal from a remote controller, comprising:

a main body unit receiving a wirelessly transferred highlight functional code generated from the remote controller, and generating a first highlight window and a second highlight window according to the wirelessly transferred highlight functional code.

21. The apparatus of claim 20, wherein the main body unit generates first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code.

22. A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, the method comprising:

receiving a wirelessly transferred highlight functional code generated from the remote controller; and

generating a highlight window and video data representing an image to be displayed in the highlight window according to the wirelessly transferred highlight functional code.

23. The method of claim 22, wherein the receiving a wirelessly transferred highlight functional code comprises:

receiving one of a highlight on/off signal, a highlight window size control signal, a highlight window location control signal, and a video data parameter control signal.

24. The method of claim 23, wherein the image reproducing system is connected to one of an external monitor and an internal monitor each having a screen, and the generating a highlight window comprises:

adjusting one of a location and a size of the highlight window with respect to the screen according to a corresponding one of the highlight window size control signal and the highlight window location control signal.

25. The method of claim 23, wherein the generating of the video data comprises:
adjusting a parameter of the video data to emphasize the image included in the highlight window according to the video data parameter control signal.

26. The method of claim 25, wherein the adjusting of the parameter of the video data

comprises:

- highlighting the image displayed in the highlight window more than another image displayed on an outside of the highlight window in the screen.

27. A method of setting a highlight window in an image reproducing system receiving a signal from a remote controller, comprising:

- receiving a wirelessly transferred highlight functional code generated from the remote controller; and

- generating a first highlight window, a second highlight window, first video data representing a first image to be displayed in the first highlight window, and second video data representing a second image to be displayed in the second highlight window according to the wirelessly transferred highlight functional code.



ABSTRACT OF DISCLOSURE

A method of setting a highlight window using a remote controller and an apparatus therefor includes receiving remote control signals from the remote controller having a highlight selection function, decoding the remote control signals received from the remote controller, generating a highlight window according to highlight setting values when the decoded remote control signals are highlight function codes, and controlling a video parameter for the generated highlight window.

FIG. 1

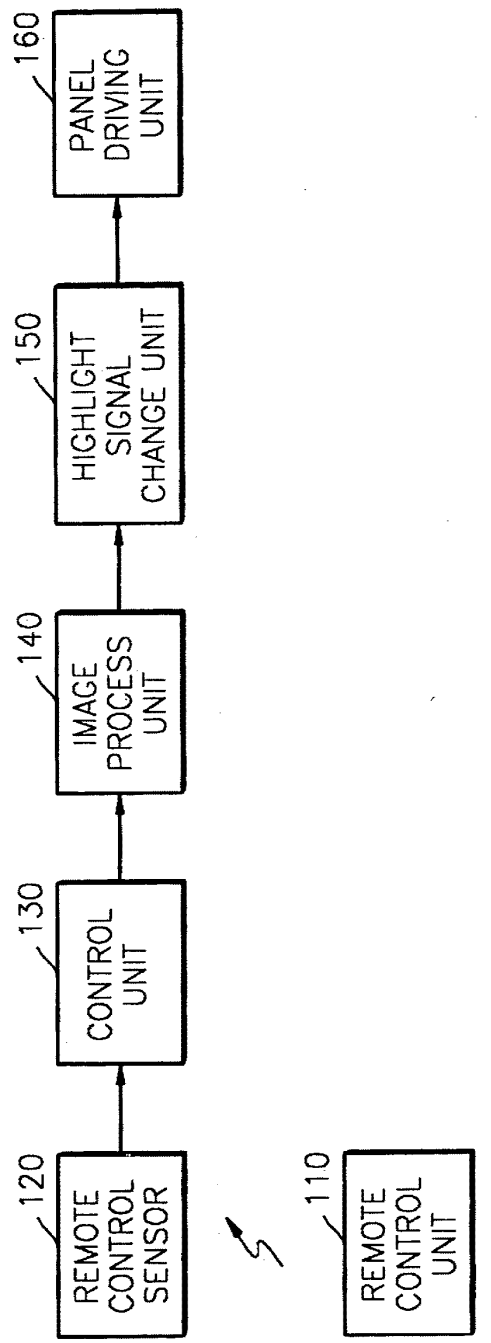


FIG. 2

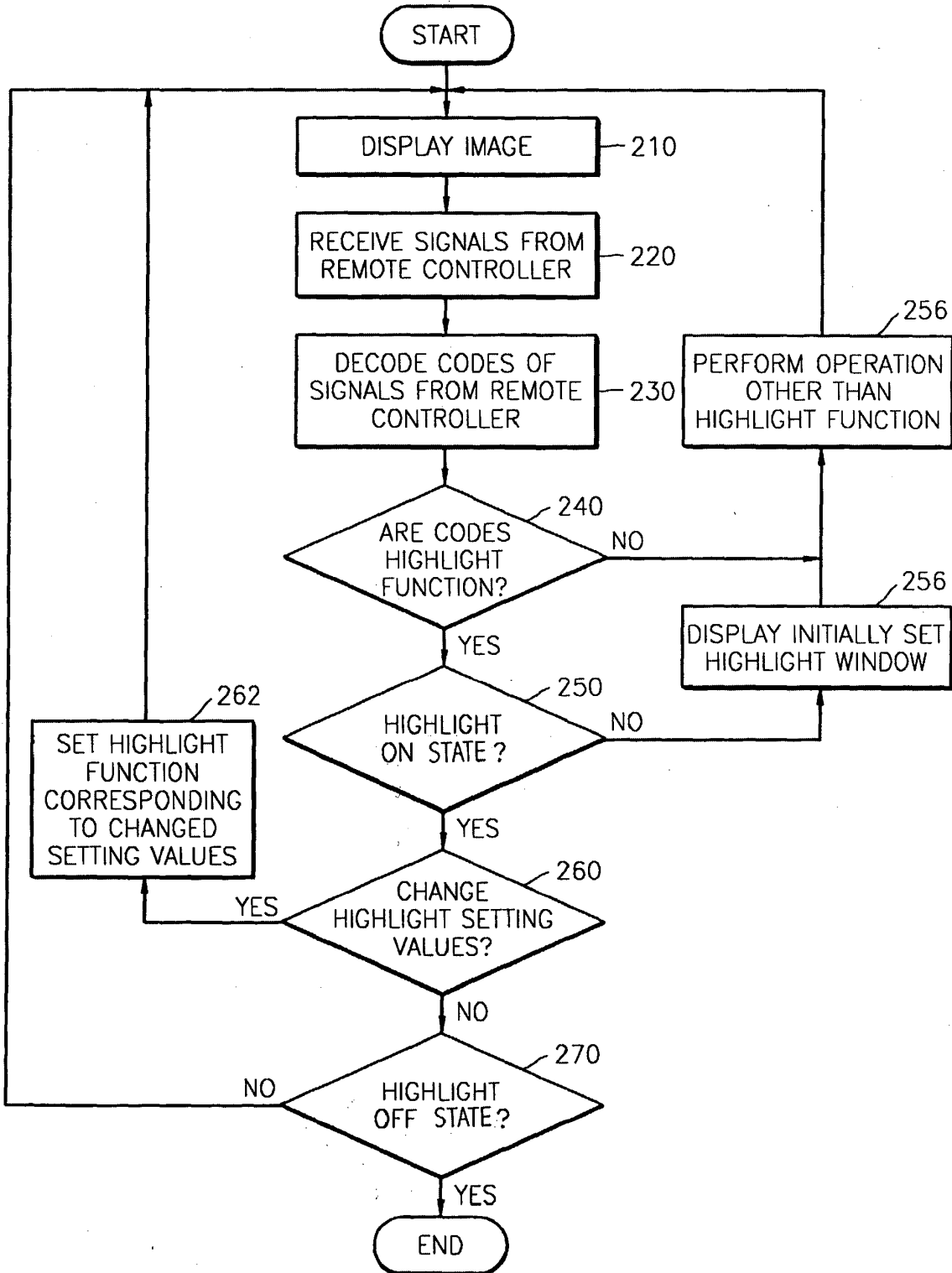


FIG. 3

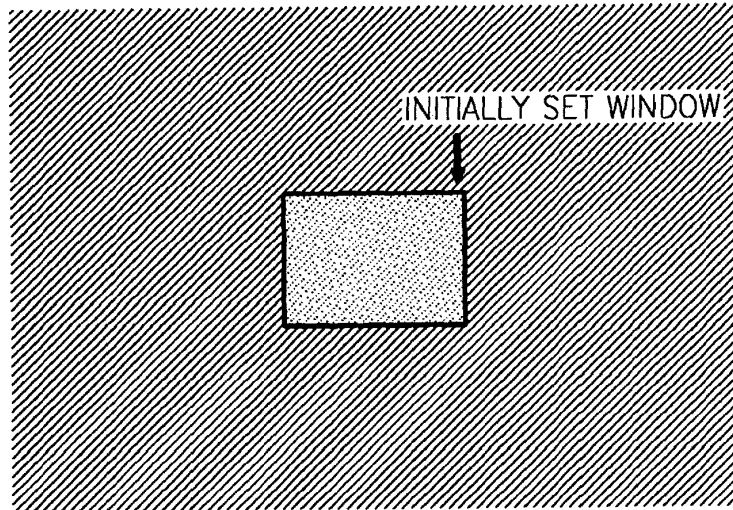
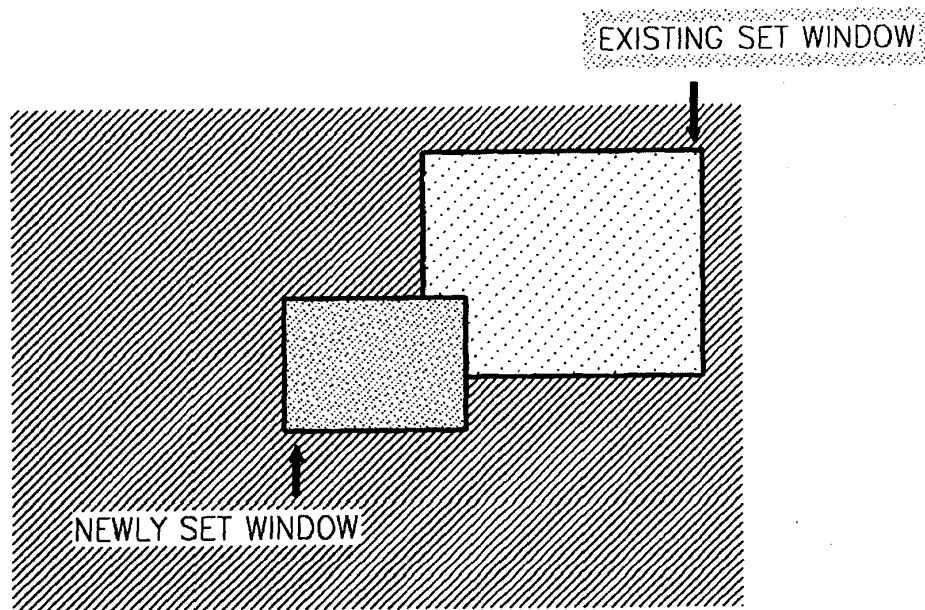


FIG. 4



Form (Rev. 2/01)

UNITED STATES

Docket No.: 1293.1675

COMBINED DECLARATION/POWER OF ATTORNEY FOR UTILITY/DESIGN PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING REMOTE CONTROLLER the specification of which is attached hereto, unless the following box is checked:

was filed on _____ as United States Application Number or PCT International Application Number _____ and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefit(s) under 35 U.S.C. § 119(a)-(d) or § 365(a)-(c) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority NOT Claimed

2002-29958
(Number)

Rep. of Korea
(Country)

29/May/2002
Day/Month/Year Filed

I hereby claim the benefit under 35 U.S.C. § 120 or § 119(e) of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Serial No.)	(Filing Date)	(Status -- patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status -- patented, pending, abandoned)

I hereby appoint the attorneys and agents of Staas & Halsey LLP under USPTO Customer No. 21,171 to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:



21171

PATENT TRADEMARK OFFICE

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Jae-cheol Heo

Inventor's Signature Jae cheol Heo Date 20 March 2003

Residence 204-1504 Wooman Jugong Apt., Wooman 2-dong, Paldal-gu, Suwon-si, Gyeonggi-do, Republic of Korea Citizenship Republic of Korea

Mailing Address Same as residence

Additional inventors are being named on separately numbered sheets attached hereto.

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number

1293.1675

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS	<i>27</i>	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	<i>27</i> minus 20 = *	<i>7</i>
INDEPENDENT CLAIMS	<i>7</i> minus 3 = *	<i>4</i>
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	375.00
X\$ 9=	
X42=	
+140=	
TOTAL	

RATE	FEE
BASIC FEE	750.00
X\$18=	<i>126</i>
X84=	<i>336</i>
+280=	<i>0</i>
TOTAL	<i>1212</i>

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

SMALL ENTITY

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

03/31/2003 STEUMEL:1 0000C067 10396439

01 FC:1001	750.00 OP
02 FC:1202	126.00 OP
03 FC:1201	336.00 OP

PTO-1556
(5/87)

#2

JC887 U.S. PTO
10/396439
03/26/03

Attorney Docket No. 1293.1675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Jae-cheol HEO

Application No.: TO BE ASSIGNED

Group Art Unit: TO BE ASSIGNED

Filed: March 26, 2003

Examiner:

For: METHOD OF AND APPARATUS FOR SETTING HIGHLIGHT WINDOW USING
REMOTE CONTROLLER

**SUBMISSION OF CERTIFIED COPY OF PRIOR FOREIGN
APPLICATION IN ACCORDANCE
WITH THE REQUIREMENTS OF 37 C.F.R. § 1.55**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 C.F.R. § 1.55, the applicant(s) submit(s) herewith
a certified copy of the following foreign application:

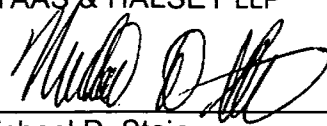
Korean Patent Application No(s). 2002-29958

Filed: May 29, 2002

It is respectfully requested that the applicant(s) be given the benefit of the foreign filing
date(s) as evidenced by the certified papers attached hereto, in accordance with the
requirements of 35 U.S.C. § 119.

Respectfully submitted,

STAAS & HALSEY LLP

By: 

Michael D. Stein
Registration No. 37,240

Date: March 26, 2003

700 11th Street, N.W., Ste. 500
Washington, D.C. 20001
(202) 434-1500

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03/26/03



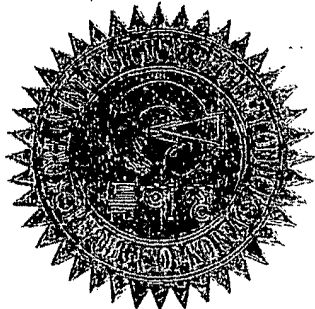
별첨 사본은 아래 출원의 원본과 동일함을 증명함.

This is to certify that the following application annexed hereto is a true copy from the records of the Korean Intellectual Property Office.

출원 번호 : 특허출원 2002년 제 29958 호
Application Number : PATENT-2002-0029958

출원 년 월 일 : 2002년 05월 29일
Date of Application : MAY 29, 2002

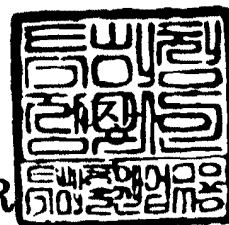
출원인 : 삼성전자 주식회사
Applicant(s) : SAMSUNG ELECTRONICS CO., LTD.



2002 년 06 월 29 일

특 허 청

COMMISSIONER



SM

【서지사항】

【서류명】 특허출원서
【권리구분】 특허
【수신처】 특허청장
【참조번호】 0003
【제출일자】 2002.05.29
【국제특허분류】 G06F
【발명의 명칭】 리모트 콘트롤러를 이용한 하이라이트 영역 설정 방법 및 그 장치
【발명의 영문명칭】 Method for setting highlight window using remote controller and apparatus thereof
【출원인】
【명칭】 삼성전자 주식회사
【출원인코드】 1-1998-104271-3
【대리인】
【성명】 이영필
【대리인코드】 9-1998-000334-6
【포괄위임등록번호】 1999-009556-9
【대리인】
【성명】 이해영
【대리인코드】 9-1999-000227-4
【포괄위임등록번호】 2000-002816-9
【발명자】
【성명의 국문표기】 허재철
【성명의 영문표기】 HE0, Jae Cheol
【주민등록번호】 700228-1683718
【우편번호】 442-753
【주소】 경기도 수원시 팔달구 우만2동 우만주공아파트 204-1504
【국적】 KR
【심사청구】 청구
【취지】 특허법 제42조의 규정에 의한 출원, 특허법 제60조의 규정에 의한 출원심사를 청구합니다. 대리인
 이영필 (인) 대리인
 이해영 (인)

【수수료】

【기본출원료】	13	면	29,000	원
【가산출원료】	0	면	0	원
【우선권주장료】	0	건	0	원
【심사청구료】	7	항	333,000	원
【합계】	362,000 원			
【첨부서류】	1. 요약서·명세서(도면)_1통			

【요약서】**【요약】**

리모트 콘트롤러를 이용한 하이라이트 영역 설정 방법 및 그 장치가 개시되어 있다. 본 발명은 하이라이트 선택 기능이 장착된 리모트 콘트롤러로부터 원격 제어 신호를 수신하는 과정, 수신되는 리모트 콘트롤러의 원격 제어 신호를 해독하는 과정, 상기 과정에서 해독된 원격제어 신호가 하이라이트 기능 코드로 확인되면 하이라이트 설정값에 따라 하이라이트 영역을 생성하는 과정, 생성된 하이라이트 영역에 대해 데이터 파라미터를 조정하는 과정을 포함한다.

【대표도】

도 2

【명세서】

【발명의 명칭】

리모트 콘트롤러를 이용한 하이라이트 영역 설정 방법 및 그 장치{Method for setting highlight window using remote controller and apparatus thereof}

【도면의 간단한 설명】

도 1은 본 발명에 따른 하이라이트 영역 설정 장치의 블록도이다.

도 2는 본 발명에 따른 하이라이트 영역 설정 방법을 보이는 흐름도이다.

도 3은 사용자가 하이라이트 기능을 선택하였을 때 초기 설정 영역의 예를 보이는 화면이다.

도 4는 사용자가 두 번 이상 하이라이트 기능을 선택하였을 때 기존 설정 영역과 신규 설정 영역의 예를 보이는 화면이다.

【발명의 상세한 설명】

【발명의 목적】

【발명이 속하는 기술분야 및 그 분야의 종래기술】

- <5> 본 발명은 영상 재생 시스템에 관한 것이며, 특히 리모트 콘트롤러(remote controller)를 이용한 하이라이트(highlight) 영역 설정 방법 및 그 장치에 관한 것이다.
- <6> 근래들어 영상 재생 장치는 화면의 하나 또는 그 이상의 부분들에 데이터를 디스플레이 시킬 수 있다. 보통은 직사각형 모양인 이들 화면의 부분들을 창(window)라고 칭한다. 모니터 화면상에 있는 한 개 또는 그 이상의 창들은 오버랩될 수도 있고 오버랩되지

않을 수도 있다. 사용자는 재생중인 화면상에서 특정 정보에 관심을 집중시키기 위해 하이라이트 영역을 설정할 필요가 있다.

- <7> 기존의 영상 재생 장치에는 장착된 사용자 조정판을 사용하여 하이라이트 영역을 설정하고 있다. 또한 더 진보적인 영상 재생 장치는 퍼스널 컴퓨터가 동작중인 상태에서 USB를 통해 마우스와 같은 설정 장치를 사용하여 하이라이트 영역을 설정하였다.
- <8> 그러나 기존의 영상 재생 장치는 사용자 조정판이 ??트에 장착되어 사용자가 조작하기 어려우며, 또한 스탠드-올론(stand-alone) 타입인 경우 USB 사용이 불가능한 상태이기 때문에 사용자에게 불편을 주게된다.

【발명이 이루고자 하는 기술적 과제】

- <9> 본 발명이 이루고자하는 기술적과제는 영상 재생 시스템에서 리모트 컨트롤러를 이용하여 하이라이트 영역을 설정하는 하이라이트 영역 설정 방법을 제공하는 데 있다.
- <10> 본 발명이 이루고자하는 기술적과제는 상기 하이라이트 영역 설정 방법이 적용된 하이라이트 영역 설정 장치를 제공하는 데 있다.
- <11> 상기의 기술적 과제를 해결하기 위하여, 본 발명의 영상 재생 시스템의 하이라이트 영역 설정 방법은,
- <12> 하이라이트 선택 기능이 장착된 리모트 컨트롤러로부터 원격 제어 신호를 수신하는 과정;
- <13> 상기 과정에서 수신되는 리모트 컨트롤러의 원격 제어 신호를 해독하는 과정;
- <14> 상기 과정에서 해독된 원격제어 신호가 하이라이트 기능 코드로 확인되면 하이라이트 설정값에 따라 하이라이트 영역을 생성하는 과정;

- <15> 상기 과정에서 생성된 하이라이트 영역에 대해 데이터 파라미터를 조정하는 과정을 포함하는 것을 특징으로 한다.
- <16> 상기의 기술적 과제를 해결하기 위하여, 영상 재생 시스템에 있어서,
- <17> 리모트콘트롤러로부터 무선으로 발생하는 기능 버튼 코드를 감지하는 원격제어센서부;
- <18> 상기 원격제어센서에서 감지된 코드가 하이라이트 기능 선택 정보로 판별되면 상기 하이라이트 설정값의 변경을 체크하는 제어부;
- <19> 상기 제어부에서 체크된 하일 라이트 설정값에 따른 윈도우를 화면상에 생성하고 비디오 신호를 디코딩하는 영상 처리부;
- <20> 상기 영상 처리부에서 생성된 윈도우 영역 비디오 데이터의 파라미터를 조정하는 하이라이트 신호 변환부를 포함하는 것을 특징으로한다.

【발명의 구성 및 작용】

- <21> 이하 첨부된 도면을 참조하여 본 발명의 바람직한 실시예를 설명하기로 한다.
- <22> 도 1은 본 발명에 따른 하이라이트 영역 설정 장치의 블록도이다.
- <23> 도 1의 장치는 원격제어부(110), 원격제어센서(120), 제어부(130), 영상 처리부(140), 하이라이트신호변환부(150), 판넬구동부(160)로 구성된다.
- <24> 도 1을 참조하면, 원격제어부(110)는 하이라이트 기능과 관련된 버튼이 구비하며, 사용자의 눌림에 해당되는 하이라이트 기능의 코드를 RF 형태로 본체에 송신한다. 예를 들면, 원격제어부(110)는 하이라이트 기능의 온/오프 버튼, 하이라이트 영역의 크기/위

치 변경 버튼등을 구비하여 하이라이트 시작 및 종료를 원격적으로 제어하고, 현재 디스플레이되고 있는 화면의 특정 또는 전체 영역을 원격적으로 설정한다.

- <25> 원격제어센서(120)는 원격제어부(110)로부터 무선을 통해 수신되는 하이라이트 기능 관련 신호를 감지하여 전기적 펄스 신호로 가공한다.
- <26> 제어부(130)는 원격제어센서(120)에서 가공된 하이라이트 기능 관련 코드를 해독하여 그에 해당하는 하이라이트 설정값을 발생한다. 예를 들면, 제어부(130)가 하이라이트 온 신호를 수신하면 하이라이트 영역의 초기 크기/위치값(x,y)을 출력한다. 또한 제어부(130)는 하이라이트 기능의 온 상태에서 사용자에게 의해 하이라이트 크기 또는 위치에 대한 변경이 있으면 그에 해당하는 하이라이트 영역의 크기/위치값(x,y)을 출력한다.
- <27> 영상처리부(140)는 인코딩된 비디오 신호를 디코딩하며, 특히 제어부(130)에서 발생하는 하이라이트 영역의 크기/위치값(x,y)에 해당하는 하이라이트 영역에 네모 박스 형태의 OSD를 생성한다.
- <28> 하이라이트신호변환부(150)는 제어부(130)에서 발생하는 하이라이트 영역의 크기/위치값(x,y)을 이용하여 영상처리부(140)에서 형성된 OSD내 비디오 신호의 파라미터를 조정한다. 즉, 하이라이트신호변환부(150)는 하이라이트 영역내의 비디오 신호의 옅어짐이나 계인을 조정하여 그 영역에 포함된 비디오 신호를 주변의 비디오 신호보다 강조한다.
- <29> 판넬구동부(160)는 판넬에 최적으로 신호를 전송하기 위해 하이라이트신호변환부(150)에서 발생하는 RGB 신호를 저전압 차신호(Low Voltage Differential Signal)로 변환한다.

- <30> 도 2는 본 발명에 따른 하이라이트 영역 설정 방법을 보이는 흐름도이다.
- <31> 먼저, 영상 재생 장치에 전원을 인가하여 화면에 영상 신호를 표시한다(210과정).
- <32> 이어서, 화면에 영상이 재생되고 있는 상태에서 하이라이트 관련 버튼이 구비된 원격제어부(210)로부터 버튼 신호를 무선으로 수신한다(220 과정).
- <33> 이어서, 무선으로 수신된 버튼 신호의 코드를 해독한다(230 과정). 예컨대, 제어부(130)는 원격제어부(120)로부터 하이라이트 기능의 온/오프 버튼, 하이라이트 영역의 크기/위치 변경 버튼 신호를 수신하면 이 버튼 신호들에 대한 코드를 해독한다.
- <34> 이어서, 해독된 코드값이 하이라이트 기능 관련 정보인가를 체크한다(240 과정). 이때 해독된 코드값이 하이라이트 기능 관련 정보가 아니면 하이라이트 기능 이외의 동작 기능을 수행한다(256 과정).
- <35> 이어서, 해독된 코드값이 하이라이트 기능 관련 정보이면 하이라이트 기능이 온 상태인가를 체크한다(250 과정). 이때 하이라이트 기능이 온 상태가 아니면 도 3에 도시된 바와 같이 미리 저장된 초기 하이라이트 설정값을 이용하여 화면 중앙에 네모 박스 형태의 초기 설정 영역을 표시한다(250 과정). 이때 박스내 화면의 비디오 신호는 초기치로 설정된 신호의 파라미터 값으로 보정된다. 이 초기 하이라이트 설정값에는 창의 위치 및 크기, 하이라이트 정도(비디오 옵션 및 개인)의 정보를 포함한다.
- <36> 이어서, 하이라이트 기능이 온 상태이면 무선으로 수신되는 버튼 신호의 코드를 해독하여 하이라이트 설정값, 예컨대 하이라이트 크기 및 위치값에 변경이 있는가를 체크한다(260 과정). 이때 하이라이트 설정값이 변경되면 그 하이라이트 영역의 크기 및 위치를 계산한 후 하이라이트 영역내 비디오 신호를 미리 설정된 신호 파라미터로 보정시

킨다(262 과정). 예컨대, 사용자가 하이라이트 영역의 크기 및 위치를 변화시키려면 원격제어부(120)의 크기/위치 변경 버튼을 누른다. 이어서, 사용자가 원격제어부(120)에 구비된 이동 버튼을 통해 하이라이트 크기 및 위치를 변경하면 제어부(130)는 시작점(x_1, y_1) 및 끝점(x_2, y_2)을 알수 있기 때문에 창의 중심점(x_0, y_0)을 계산할 수 있으며, 이어서, 창의 중심점(x_0, y_0)을 참조하여 그 변화된 새로운 창을 생성한다. 이어서, 새로운 창내 비디오 신호를 이리 설정된 파라미터로 보정한다.

<37> 이어서, 하이라이트 설정값에 변경이 없으면 사용자에게 의해 하이라이트 기능이 종료될 때 까지 변경된 하이라이트 영역내의 비디오 파라미터를 갱신한다(270 과정).

<38> 이어서, 사용자가 하이라이트 기능의 종료 버튼을 선택하거나 일정한 시간동안 원격제어부(120)로부터 버튼 신호가 수신되지 않을 경우 최종적으로 선택된 하이라이트 영역을 저장하고 종료한다.

<39> 다른 실시예로 사용자가 하이라이트 기능 버튼을 하나 이상 눌렀을 경우 도 4에 도시된 바와 같이 하이라이트 영역이 기존 설정 영역에 더하여 신규 설정 영역을 생성할 수 있다.

<40> 본 발명은 상술한 실시예에 한정되지 않으며, 본 발명의 사상내에서 당업자에 의한 변형이 가능함은 물론이다.

【발명의 효과】

<41> 상술한 바와 같이 본 발명에 의하면, 리모트 컨트롤러를 이용하여 하이라이트 영역을 설정하므로써 사용자가 멀리 떨어져 있는 상태에서도 화면상의 특정 영역을 원격적으로 용이하게 하이라이트시킬 수 있다.

【특허청구범위】**【청구항 1】**

영상 재생 시스템의 하이라이트 영역 설정 방법에 있어서,

하이라이트 선택 기능이 장착된 리모트 컨트롤러로부터 원격 제어 신호를 수신하는 과정;

상기 과정에서 수신되는 리모트 컨트롤러의 원격 제어 신호를 해독하는 과정;

상기 과정에서 해독된 원격제어 신호가 하이라이트 기능 코드로 확인되면 하이라이트 설정값에 따라 하이라이트 영역을 생성하는 과정;

상기 과정에서 생성된 하이라이트 영역에 대해 데이터 파라미터를 조정하는 과정을 포함하는 하이라이트 영역 설정 방법.

【청구항 2】

제1항에 있어서, 상기 해독된 원격제어 신호가 하이라이트 기능 코드로 확인되면 하이라이트 온 상태인가를 체크하는 과정;

상기 과정에서 하이라이트 온 상태가 아니면 초기하일 라이트 설정창을 표시하는 과정을 더 포함하는 하이라이트 영역 설정 방법.

【청구항 3】

제1항에 있어서, 상기 하이라이트 영역 설정값은 크기 및 위치값임을 특징으로 하는 하이라이트 영역 설정 방법.

장치.

이트 영역의 크기/위치 변경 버튼을 구비하는 것을 특징으로 하는 하이라이트 영역 설정 제6항에 있어서, 상기 리포트콘트롤러는 하이라이트 기음의 음/오프 버튼, 하이라

【청구항 7】

하이라이트 신호 변환부를 포함하는 하이라이트 영역 설정 장치.

상기 영상 처리부에서 생성된 원도우 영역 비디오 데이터의 파라미터를 조정하는

비디오 신호를 디코딩하는 영상 처리부;

상기 제어부에서 체크된 하일라이트 설정값에 따른 원도우를 화면상에 생성하고

라이트 온 상태에서 상기 하이라이트 설정값의 변경을 체크하는 제어부;

상기 원격제어센서에서 감지된 코드인 하이라이트 기음 선택 정보로 판별되면 하이라

서부;

리포트콘트롤러로부터 무선으로 판생되는 기음 버튼을 감지하는 원격제어센

영상 재생 시스템에 있어서,

【청구항 6】

는 것을 특징으로 하는 하이라이트 영역 설정 방법.

제1항에 있어서, 상기 하이라이트 영역 설정은 적어도 하나 이상의 원도우를 생성하

【청구항 5】

조정하는 것임은 특징으로 하는 하이라이트 영역 설정 방법.

제1항에 있어서, 상기 데이터 파라미터 조정 과정은 비디오 신호의 음셋과 개인음

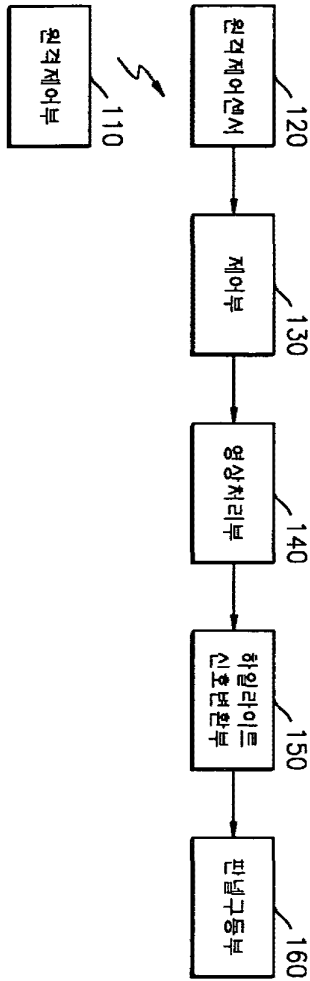
【청구항 4】

출력 일자: 2002/7/3

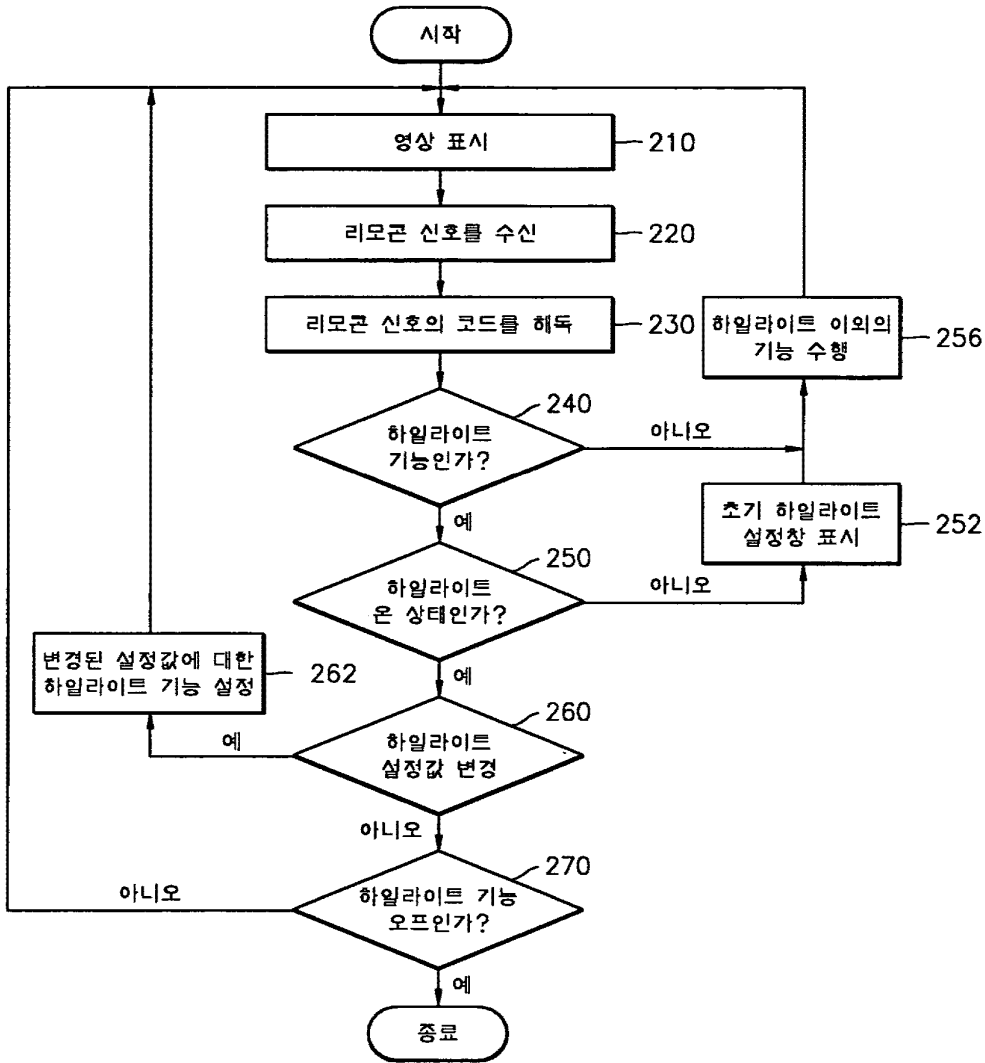
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【도면】

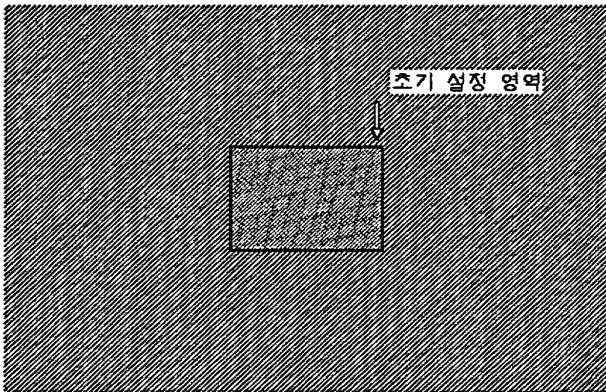
【도 1】



【도 2】



【도 3】



【도 4】

