

EXHIBIT 1015

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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
WESTERN DIVISION

LG Electronics Inc.,
Plaintiff,
vs.

Hisense Electronics Manufacturing
Company of America Corporation;
HISENSE USA CORPORATION;
HISENSE INTERNATIONAL (HONG
KONG) AMERICA INVESTMENT
CO., LIMITED (f/k/a HISENSE
INTERNATIONAL AMERICA
HOLDINGS CO., LIMITED); HISENSE
INTERNATIONAL (HK) CO.,
LIMITED; Hisense International Co.
Ltd.; Qingdao Hisense Electronics Co.
Ltd. (f/k/a Hisense Electric Co., Ltd.);
and Hisense Co., Ltd.,
Defendants.

Case No. 2:19-cv-09474 JAK (Ex)

**PLAINTIFF'S PRELIMINARY
CLAIM CONSTRUCTIONS AND
EXTRINSIC EVIDENCE [N.D. CAL.
PATENT L.R. 4-2]**

PLAINTIFF'S PRELIMINARY CLAIM CONSTRUCTIONS AND EXTRINSIC
EVIDENCE [N.D. CAL. PATENT L.R. 4-2]
No. 2:19-cv-09474-JAK-E

1 Plaintiff LG Electronics Inc. (“LGE” or “Plaintiff”) hereby discloses these
2 Preliminary Claim Constructions and Extrinsic Evidence, pursuant to Rule 4-2(a) and
3 (b) of the Northern District of California Patent Local Rules, which the parties have
4 agreed will govern this case, see ECF No. 36 at 11:5–:7; ECF No. 57 at 3:22–:25.
5 LGE reserves the right to supplement, amend, or otherwise modify these disclosures,
6 consistent with the Patent Local Rules that govern this case and any other applicable
7 rules, including pursuant to the Rule 4-2(c) meet and confer for the purposes of
8 narrowing the issues and finalizing preparation of a Joint Claim Construction and
9 Prehearing Statement.

10 LGE discloses its preliminary constructions and supporting citations to intrinsic
11 and extrinsic evidence in **Exhibit A**, attached. In addition, LGE may support its
12 proposed constructions with evidence cited by Defendants in their corresponding
13 disclosure.

1 Date: June 18, 2020

/s/ Peter H. Kang

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1 **PROOF OF SERVICE**

2 I hereby certify that on the date and in the place shown below, I served a true
3 and correct copy of **PLAINTIFF'S PRELIMINARY CLAIM CONSTRUCTIONS**
4 **AND EXTRINSIC EVIDENCE [N.D. CAL. PATENT L.R. 4-2]** with **Exhibit A** by
5 electronic mail through Sidley Austin LLP's email system to the email addresses set
6 forth below:

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23 *KONG) AMERICA INVESTMENT CO., LIMITED (f/k/a HISENSE*
24 *INTERNATIONAL AMERICA HOLDINGS CO., LIMITED); HISENSE*
25 *INTERNATIONAL (HK) CO., LIMITED; Hisense International Co. Ltd.;*
26 *Qingdao Hisense Electronics Co. Ltd. (f/k/a Hisense Electric Co., Ltd.); and*
27 *Hisense Co., Ltd.*

28 I declare under penalty of perjury under the laws of the United States of
America that the foregoing is true and correct.

Executed on June 18, 2020, in Los Angeles, California.

/s/ Brooke S. Böll

EXHIBIT A

I. U.S. PATENT NO. RE46,795: CLAIMS 20–35

Claim Language	Plaintiff’s Proposed Terms	Defendants’ Proposed Terms	LGE’s Proposed Construction and Supporting Evidence
20.[a] A backlight unit, comprising:			
[20.b] a light guiding plate;			
[20.c] a light source assembly including at least one light source facing a side surface of the light guiding plate;			
[20.d] a reflector disposed below the light guiding plate to reflect light towards the light guiding plate;			
[20.e] a bottom cover, comprising:			
[20.f] a plate disposed below the reflector;			
[20.g] a first protrusion protruding at a predetermined length from an upper surface of the plate, the first protrusion configured to be in close contact with the side surface of the light guiding plate; and			
[20.h] a second protrusion protruding at a predetermined length from the upper surface of the plate, the second			

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protrusion configured to be coupled to the light source assembly by being inserted in a portion of the light source assembly,			
[20.i] wherein the length of the first protrusion is configured to be different from the length of the second protrusion, and			
[20.j] wherein the first protrusion and the second protrusion are positioned on the bottom cover such that <i>a first distance from the first protrusion to a nearest light source is shorter than a second distance from the second protrusion to a nearest light source.</i>	[1] Claims 20, 35: “a first distance from the first protrusion to a nearest light source . . . a second distance from the second protrusion to a nearest light source” / “a first distance from the first protrusion to the nearest light source . . . a second distance from the second protrusion to the nearest light source”		<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning), and not indefinite <u>Intrinsic Evidence:</u> • '795 Patent at Fig. 2, 4:3-13. • '795 Patent at Figs. 4, 6, 5:11-25. • '795 Patent at 4:52-5:2 • '795 Patent at Figs. 12-14. • '795 File History, Reply to Office Action of July 2, 2016 (October 31, 2016) at 19-20, 22-23 [LG-HISENSE00027552-53, LG-HISENSE00027555-56]; Notice of Allowance (November 7, 2017) [LG-HISENSE00027805-10]. <u>Extrinsic Evidence:</u> • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
21. The backlight unit of claim 20, wherein the length of the first protrusion is greater than the length of the second protrusion.			
22. The backlight unit of claim 20, wherein the first protrusion is configured to be a predetermined distance away from the second protrusion.			
23. The backlight unit of claim 20, wherein <i>the light guiding plate includes at least one opening or recess defined at a predetermined position of the side surface thereof</i> , and wherein the first protrusion is inserted in the at least one opening or recess of the light guiding plate, thereby supporting the light guiding plate.		Claim 23: “the light guiding plate includes at least one opening or recess defined at a predetermined position of the side surface thereof”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning) <u>Intrinsic Evidence:</u> • '795 Patent at Figs. 12, 14, 6:54–7:3. <u>Extrinsic Evidence:</u> • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art • Webster's College Dictionary (2005) “opening,” “recess,” “side,” and “surface” - o opening <i>n.</i> 3. a hole or void in solid matter. - o recess <i>n.</i> 4. an indentation, as in a coastline or a hill. - o side <i>n.</i> 1. one of the surfaces forming the outside of something, or one of the lines bounding a geometric figure. 3. one of the lateral surfaces of an object, as opposed to the front, back, top, and bottom. - o surface <i>n.</i> 1. the outer face, outside, or exterior boundary of a thing: outermost or uppermost layer or area.

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
24. The backlight unit of claim 20, wherein <i>the reflector includes at least one opening or recess defined at a predetermined position of a side surface thereof</i> , and wherein the first protrusion inserted in the at least one opening or recess of the reflector, thereby supporting the reflector.		Claim 24: “the reflector includes at least one opening or recess defined at a predetermined position of a side surface thereof”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning) <u>Intrinsic Evidence:</u> • '795 Patent at Fig. 8, 6:7-19. • '795 Patent at Fig. 10, 6:20-27. • '795 Patent at Fig. 12. • '795 Patent at Fig. 16, 8:3-16. <u>Extrinsic Evidence:</u> • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art • Webster's College Dictionary (2005) “opening,” “recess,” “side,” and “surface” - o opening <i>n.</i> 3. a hole or void in solid matter. - o recess <i>n.</i> 4. an indentation, as in a coastline or a hill. - o side <i>n.</i> 1. one of the surfaces forming the outside of something, or one of the lines bounding a geometric figure. 3. one of the lateral surfaces of an object, as opposed to the front, back, top, and bottom. - o surface <i>n.</i> 1. the outer face, outside, or exterior boundary of a thing: outermost or uppermost layer or area.
25. The backlight unit of claim 20, further comprising a plurality of optical sheets placed above the light guiding plate.			

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26. The backlight unit of claim 20, wherein the light source assembly comprises: a substrate on which the at least one light source is mounted; and a support on which the substrate is mounted, the support including: a vertical part on which the substrate is mounted; and a horizontal part perpendicularly bent at a lower end of the vertical part to be placed on the plate, wherein the at least one light source includes an LED.			
27. The backlight unit of claim 26, wherein the reflector is placed on the horizontal part of the support.			
28. The backlight unit of claim 27, wherein the second protrusion is configured to pass through the horizontal part of the support, wherein the length of the second protrusion is configured to be identical to or less than a thickness of the horizontal part of the support.			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
29. The backlight unit of claim 27, wherein the first protrusion is configured to pass through the horizontal part of the support.			
30. The backlight unit of claim 20, wherein the second protrusion is disposed below the light guiding plate and the reflector.			
31. The backlight unit of claim 20, wherein when the reflector and the light guiding plate are assembled, a height of an upper end of the first protrusion is identical to or less than a height of an upper surface of the light guiding plate.			
32. The backlight unit of claim 20, wherein the light source assembly includes: a first light source; and a second light source adjacent to the first light source, wherein the first protrusion is positioned between the first and second light sources.			
33. The backlight unit of claim 32, wherein the light source assembly further includes a third light source			

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adjacent to the second light source, wherein a gap between the first and second light sources is greater than a gap between the second and third light sources.			
34. The backlight unit of claim 33, wherein the light source assembly further includes a fourth light source adjacent to the first light source, wherein the gap between the second and third light sources is the same as a gap between the first and fourth light source.			
35.[a] A display device, including:			
[35.b] a display panel;			
[35.c] a backlight unit disposed below the display panel,			
[35.d] the backlight unit including: a plurality of optical sheets disposed below the display panel;			
a light guiding plate disposed below the plurality of optical sheets;			
[35.e] a light source assembly including at least one light source facing a side surface of the light guiding plate;			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
[35.f] a reflector disposed below the light guiding plate to reflect light towards the light guiding plate;			
[35.g] a bottom cover, comprising:			
[35.h] a plate disposed below the reflector;			
[35.i] a first protrusion protruding at a predetermined length from an upper surface of the plate, the first protrusion configured to be in close contact with the side surface of the light guiding plate; and			
[35.j] a second protrusion protruding at a predetermined length from the upper surface of the plate, the second protrusion configured to be coupled to the light source assembly by being inserted in a portion of the light source assembly,			
[35.k] wherein <i>the length of the first protrusion is configured to be different from the length of the second protrusion,</i>			
[35.l] wherein the first protrusion and the second protrusion are positioned on	See claim 20		

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
the bottom cover such that <i>a first distance from the first protrusion to the nearest light source is shorter than a second distance from the second protrusion to the nearest light source.</i>			

II. U.S. PATENT NO. 10,334,311: CLAIMS 1, 3–5, 7, 9–12, 14–16, 18, 20–21

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
1.[a] An image display device comprising:			
[1.b] a display;			
[1.c] a first external interface configured to receive a first image signal input from a first external device connected to the image display device;			
[1.d] a second external interface configured to receive a second image signal input from a second external device connected to the image display device; and			
[1.e] a controller coupled with the display, the first external interface and the second external interface, the controller configured to:			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
[1.f] display a plurality of external device icons , on the display, wherein the plurality of external device icons include a first external device icon and a second external device icon, wherein a first default image corresponding to the first external interface is displayed on the first external device icon and a second default image corresponding to the second external interface is displayed on the second external device icon, and		[1] Claims 1, 3, 4, 7, 11, 12, 14, 15, 18, and 21: “external device icon”	<u>Proposed Construction:</u> “External device icon” should be construed according to its plain and ordinary meaning, which is an icon corresponding to an external device <u>Intrinsic Evidence</u> See ’311 Patent at FIG. 10 (S700-720); FIG. 11 (820); FIG. 12 (820, 840); FIG. 13(820, 840); FIG. 14 (820, 840); FIG. 15 (820, 841); FIG. 16(841); <i>see also, id.</i> at 20:15-19; 20:35-38; 20:54-59; 20:64-67; 21:1-24. <u>Extrinsic Evidence</u> • LGE PowerPoint, “How to indicate external inputs on TV and how to use the space remote controller” (May 25, 2011) [LG-HISENSE00049279–LG-HISENSE00049287, LG-HISENSE00049289–LG-HISENSE00049297] • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one or ordinary skill in the art
[1.g] change the first default image to a first image based on the first image signal in response to the first external device icon being selected if the first external device is connected to the image display device, and		[2] Claims 1, 3, 4, 7, 11, 12, 14, 15, 18, and 21: “select,” “selected,” “selectable”	<u>Proposed Construction:</u> “select,” “selected” “selectable” should be construed according to its plain and ordinary meaning, which includes selection by placing a cursor on or highlighting an icon. The plain and ordinary meaning is not limited to a two-step process (e.g., placing a cursor on an icon and then pressing OK). <u>Intrinsic Evidence</u> See ’311 Patent at FIG. 10 (S710); 1:43-58; 20:17-19. <u>Extrinsic Evidence</u>

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
			- LGE PowerPoint, "How to indicate external inputs on TV and how to use the space remote controller" (May 25, 2011) [LG-HISENSE00049279–LG-HISENSE00049287, LG-HISENSE00049289–LG-HISENSE00049297] - Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
[1.h] change the first image to the first default image in response to the second external device icon being selected,			
[1.i] wherein the first image is displayed at a position corresponding to an area where the first external device icon is displayed.			
3. The image display device according to claim 1, wherein the first image displayed on the display is simultaneously displayed with the plurality of external device icons while the first external device icon is selected .		See claim 1	
4. The image display device according to claim 1, wherein the first and second external device icons are selectable via a cursor positioned on the first and		See claim 1	

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
second external device icons, respectively.			
5. The image display device according to claim 4, wherein the cursor is controlled by a remote controller interfacing with the image display device.			
7. The image display device according to claim 1, wherein the controller is further configured to: change the second default image to a second image based on the second image signal in response to the second external device icon being selected if the second external device is connected to the image display device.		See claim 1	
9. The image display device according to claim 1, wherein the first default image is an image identifying the first external interface and the second default image is an image identifying the second external interface.			
10. The image display device according to claim 1, wherein the changed first image is an image which is			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
currently displayed on the first external device.			
11. The image display device according to claim 1, wherein the controller is further configured to display the first default image although first external device icon is selected if the first external device is not connected to the image display device.		See claim 1	
12.[a] A method of an image display device, the method comprising:			
[12.b] receiving, by a first external interface, a first image signal input from a first external device connected to the image display device;			
[12.c] receiving, by a second external interface, a second image signal input from a second external device connected to the image display device;			
[12.d] displaying a plurality of external device icons , on a display, wherein the plurality of external device		See claim 1	

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
icons include a first external device icon and a second external device icon, wherein a first default image corresponding to the first external interface is displayed on the first external device icon and a second default image corresponding to the second external interface is displayed on the second external device icon;			
[12.e] changing the first default image to a first image based on the first image signal in response to the first external device icon being selected if the first external device is connected to the image display device; and		See claim 1	
[12.f] changing the first image to the first default image in response to the second external device icon being selected,			
[12.g] wherein the first image is displayed at a position corresponding to an area where the first external device icon is displayed.			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
14. The method according to claim 12, wherein the first image displayed on the display is simultaneously displayed with the plurality of external device icons while the first external device icon is selected .		See claim 1	
15. The method according to claim 12, wherein the first and second external device icons are selectable via a cursor positioned on the first and second external device icons, respectively.		See claim 1	
16. The method according to claim 15, wherein the cursor is controlled by a remote controller interfacing with the image display device.			
18. The method according to claim 12, further comprising: changing the second default image to a second image based on the second image signal in response to the second external device icon being selected if the second external device is connected to the image display device, wherein the second image is displayed at a position corresponding to an area		See claim 1	

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
where the second external device icon is displayed.			
20. The method according to claim 12, wherein the changed first image is an image which is currently displayed on the first external device.			
21. The method according to claim 12, further comprising: displaying the first default image although first <i>external device icon</i> is <i>selected</i> if the first external device is not connected to the image display device.		See claim 1	

III. U.S. PATENT NO. 9,271,191: CLAIMS 1, 4–6, 9–11, 14–16, 19–20

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
1. [a] A method of transmitting a data frame by a station in a wireless local area network (WLAN), the method comprising:			
[1.b] obtaining, by the <i>station</i> , a transmission opportunity (TXOP), wherein the station has a right to exchange frame sequences during the TXOP;		[3] Claims 1, 6, 11, 16: “station”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning). To the extent an express construction is required, a “station” refers to: - either an Access-Point (AP) station (such as a wireless router at home) or a non-AP station (such as a laptop, smartphone, or smart television) that includes Medium Access Control (MAC) and a physical layer interface to the wireless medium.

			<u>Intrinsic Evidence:</u> • ‘191 patent at 1:22-26 (“The present invention relates to a Wireless Local Area Network (WLAN) system, and more particularly, to a method of a station (STA) transmitting a data frame in a WLAN system.”), 1:34-56 (referencing relevant 802.11 standards, including 802.11n and the “next-generation WLAN system supporting a Very High Throughput (VHT)”), 3:50-54 (“Referring to FIG. 1, WLAN system includes one or more Basic Service Set (BSSs). The BSS is a set of stations (STAs) which can communicate with each other through successful synchronization. The BSS is not a concept indicating a specific area”), 4:1-56 (“An STA is a certain functional medium, including Medium Access Control (MAC) and wireless-medium physical layer interface satisfying the Institute of Electrical and Electronics Engineers (IEEE) 802.11 standard. Hereinafter, the STA refers to both an AP and a non-AP STA. ...”), 5:10-23 (“In order to transmit the QoS data frame including the priorities, a QoS AP and/or a QoS STA implement 4 Access Categories (ACs). The user priority of a frame reaching the MAC layer is allocated one corresponding AC. Accordingly, if success is achieved in EDCA contention, an EDCA TXOP (transmission opportunity) is obtained. The TXOP is the time interval during which a specific STA has rights to initiate transmission through a radio medium. The TXOP is used to allocate some time during which a specific AP or a specific STA or both can transmit a frame and to guarantee the transmission of the frame. The transmission start time and the maximum transmission time of the TXOP are determined by an AP. In case of the EDCA TXOP, an STA may be informed of the TXOP through a beacon frame.”), 6:31-40 (“A PLCP sublayer constituting the PHY layer adds necessary information to a PHY Service Data Unit (PSDU) received from an MAC (Medium Access Control) layer, converts the PSDU into the data field 280, generates the PPDU 200 by adding the L-STF field 210, the L-LTF field 220, the L-SIG field 230, the VHT-SIG A field 240, the VHT-STF field 250, the VHT-LTF fields 260, and the VHT-SIG B fields 270 to the data field 280, and transmits them to one or more STAs through a Physical Medium Dependent (PMD) sublayer constituting the PHY layer.”), FIG. 1. • Prov. Appl. No. 61/359,796 at pp. 2-5, FIGS. 2-1, 4-1 [LG-HISENSE00029030-33, 56-59]
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			• 802.11-2007 at sections 3.136 [HS-LGE00003633] (“3.136 station (STA): Any device that contains an IEEE 802.11-conformant medium access control (MAC) and physical layer (PHY) interface to the wireless medium (WM).”), 3.3 [HS-LGE00003624] (“3.3 access point (AP): Any entity that has station (STA) functionality and provides access to the distribution services, via the wireless medium (WM) for associated STAs.”), 3.91 [HS-LGE00003630] (“3.91 non-access point (non-AP) quality of service (QoS) station (STA): A STA that supports the QoS facility, but is not an access point (AP). A non-AP STA does not have an hybrid coordinator (HC) and uses the QoS AP for the distribution system services (DSSs).”), 5.2, 5.2.1, 5.2.3 [HS-LGE00003643-45] • 802.11n-2009 at sections 11.14.2 [HS-LGE00008634] (“An HT STA shall not indicate support for 40MHz unless it supports reception and transmission of 40MHz PPDU’s ...”) and 9.9.1.4 [HS-LGE00008533] (“Multiple frames may be transmitted in an ~~acquired~~ EDCA TXOP that was acquired following the rules in 9.9.1.3 if there ~~are~~ is more than one frame pending in the AC for which the channel has been acquired. However, those frames that are pending in other ACs shall not be transmitted in this EDCA TXOP. If a TXOP holder ~~STA~~ has in its transmit queue an additional frame of the same AC as the one just transmitted and the duration of transmission of that frame plus any expected acknowledgment for that frame is less than the remaining TXNAV ~~medium occupancy~~ timer value, then the STA may commence transmission of that frame at a SIFS (or RIFS, under the conditions defined in 9.2.3.0b) after the completion of the immediately preceding frame exchange sequence. An HT STA that is a TXOP holder may transmit multiple MPDUs of the same AC within an A-MPDU as long as the duration of transmission of the A-MPDU plus any expected BlockAck response is less than the remaining TXNAV timer value.”) • 802.11-09/0992r11 (802.11ac VHT) [LG-HISENSE00049034-LGHISENSE00049042] at p. 4-5 <u>Extrinsic Evidence:</u> • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
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[1.c] transmitting, by the station during the TXOP, <i>a preceding data unit of a plurality of data units</i>, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit;		[4] Claims 1, 6, 11, 16: “a preceding data unit of a plurality of data units”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning). To the extent an express construction is required, “a preceding data unit of a plurality of data units” refers to: - there are multiple data units, including (i) a data unit referred to as the preceding data unit, which comes immediately before (ii) another data unit referred to as the non-initial data unit <u>Intrinsic Evidence:</u> ‘191 patent at 2:20-31, 2:46-58, 2:65-67, 9:65-10:14 10:38-11:6, 11:60-12:14, 13:52-14:10, FIGS. 5, 7, 10 <u>Extrinsic Evidence:</u> • Merriam-Webster Online (preceding: “existing, coming or occurring immediately before in time or place”) • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
[1.d] <i>selecting, by the station, a transmit bandwidth parameter of a non-initial data unit of the plurality of data units from available bandwidth parameters, wherein the available bandwidth parameters include a first available bandwidth parameter which is same as a transmit bandwidth parameter of the preceding data unit of</i>	Claims 1, 6: “selecting, by the station, a transmit bandwidth parameter of a non-initial data unit of the plurality of data units from available bandwidth parameters, wherein the available bandwidth parameters include a first available bandwidth parameter which is same as a transmit bandwidth parameter of the preceding data unit of the	[5] Claims 1, 6: “available bandwidth parameters”	<u>Proposed Construction:</u> The term “select[ing] ... a transmit bandwidth parameter of a non-initial data unit of the plurality of data units from available bandwidth parameters, wherein the available bandwidth parameters include a first available bandwidth parameter which is same as a transmit bandwidth parameter of the preceding data unit of the plurality of data units and a second available bandwidth parameter which is narrower than a transmit bandwidth parameter of the preceding data unit” has its plain and ordinary meaning, which requires that the transmit bandwidth parameters that are available to be selected for the non-initial data unit are limited to (i) the transmit bandwidth parameter of the preceding data unit and to (ii) one or more transmit bandwidth parameters which are narrower than the transmit bandwidth parameter of the preceding data unit.

<i>the plurality of data units and a second available bandwidth parameter which is narrower than a transmit bandwidth parameter of the preceding data unit; and</i>	plurality of data units and a second available bandwidth parameter which is narrower than a transmit bandwidth parameter of the preceding data unit” / “select a transmit bandwidth parameter of a non-initial data unit of the plurality of data units from available bandwidth parameters, wherein the available bandwidth parameters include a first available bandwidth parameter which is same as a transmit bandwidth parameter of the preceding data unit of the plurality of data units and a second available bandwidth parameter which is narrower than a transmit bandwidth parameter of the preceding data unit”		<u>Intrinsic Evidence:</u> ‘191 patent at 2:1-12, 2:20-31, 2:46-58, 2:65-3:2, 9:65-10:14, 10:38-11:6, 11:60-12:14, 13:52-14:10, FIGS. 5, 7, 10 <u>Extrinsic Evidence:</u> Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one or ordinary skill in the art
[1.e] transmitting, by the station during the TXOP, the non-initial data unit, wherein the non-initial data unit comprises a control field indicating a selected bandwidth for the non-initial data unit.			
4. The method of claim 1, wherein the station is a non-Access point (AP) station.			
5. The method of claim 1, wherein the TXOP is obtained,			

by the station, for a bandwidth greater than 20 MHz.			
6.[a] A station configured to transmit a data frame in a wireless local area network (WLAN), the station comprising:		See claim 1	
[6.b] a transceiver; and			
[6.c] a processor operatively connected to the transceiver and configured to:			
[6.d] obtain a transmission opportunity (TXOP), wherein the station has a right to exchange frame sequences during the TXOP;			
[6.e] transmit, during the TXOP, a preceding data unit of a plurality of data units , wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit;		See claim 1	
[6.f] select a transmit bandwidth parameter of a non-initial data unit of the plurality of data units from available bandwidth parameters, wherein the available bandwidth parameters include a first available bandwidth parameter which is same as a	See claim 1	See claim 1	

<i>transmit bandwidth parameter of the preceding data unit of the plurality of data units and a second available bandwidth parameter which is narrower than a transmit bandwidth parameter of the preceding data unit; and</i>			
[6.g] transmit, during the TXOP, the non-initial data unit, wherein the non-initial data unit comprises a control field indicating a selected bandwidth for the non-initial data unit.			
9. The station of claim 6, wherein the station is a non-Access Point (AP) station.			
10. The station of claim 6, wherein the TXOP is obtained, by the station, for a bandwidth greater than 20 MHz.			
11.[a] A method of transmitting a data frame by a station in a wireless local area network (WLAN), the method comprising:		See claim 1	
[11.b] obtaining, by the station, a transmission opportunity (TXOP), wherein the station has a right to exchange frame sequences during the TXOP;			

[11.c] transmitting, by the station during the TXOP, a preceding data unit of a plurality of data units , wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit;		See claim 1 (a preceding data unit...)	See claim 1 above.
selecting, by the station, a transmit bandwidth parameter of a non-initial data unit of the plurality of data units to be same or narrower than a transmit bandwidth parameter of the preceding data unit of the plurality of data units; and			
[11.d] transmitting, by the station during the TXOP, the non-initial data unit, wherein the non-initial data unit comprises a control field indicating a selected bandwidth for the non-initial data unit.			
14. The method of claim 11, wherein the station is a non-Access Point (AP) station.			
15. The method of claim 11, wherein the TXOP is obtained, by the station, for a bandwidth greater than 20 MHz.			
16.[a] A station configured to transmit a data frame in a		See claim 1	

wireless local area network (WLAN), the station comprising:			
[16.b] a transceiver; and			
[16.c] a processor operatively connected to the transceiver and configured to:			
[16.d] obtain a transmission opportunity (TXOP), wherein the station has a right to exchange frame sequences during the TXOP;			
[16.e] <i>transmit, during the TXOP, a preceding data unit of a plurality of data units, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit;</i> [16.f] <i>transmit, during the TXOP, a preceding data unit of a plurality of data units, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit;</i>	[3] “transmit, during the TXOP, a preceding data unit of a plurality of data units, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit; transmit, during the TXOP, a preceding data unit of a plurality of data units, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit”	See claim 1 (a preceding data unit...)	<u>Proposed Construction:</u> - transmit, during the TXOP, a preceding data unit of a plurality of data units, wherein the preceding data unit comprises a control field indicating a selected bandwidth for the preceding data unit - (not indefinite) <u>Intrinsic Evidence:</u> ‘191 patent at 2:20-31, 2:46-58, 2:65-67, 9:65-10:14 10:38-11:6, 11:60-12:14, 13:52-14:10, FIGS. 5, 7, 10 ‘191 patent File History, e.g., Application as filed on Dec. 3, 2014, at p. 23 [LG-HISENSE00029310] (claim 16 repeating the “transmit ... a preceding data unit” limitation); Office Action dated 6/29/2015 at pp. 3-4 [LG-HISENSE000293446-47] (handling the limitation of “transmitting ... a preceding data unit” the same way in claims 1, 6, 11, and 16); Notice of Allowance 10/20/2015 (allowing claims 1-20) [LG-HISENSE00029482-84]. <u>Extrinsic Evidence:</u>

			Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
[16.g] select a transmit bandwidth parameter of a non-initial data unit of the plurality of data units to be same or narrower than a transmit bandwidth parameter of the preceding data unit of the plurality of data units; and			
[16.h] transmit, during the TXOP, the non-initial data unit, wherein the non-initial data unit comprises a control field indicating a selected bandwidth for the non-initial data unit.			
19. The station of claim 16, wherein the station is a non-Access Point (AP) station.			
20. The station of claim 16, wherein the TXOP is obtained, by the station, for a bandwidth greater than 20 MHz.			

IV. U.S. PATENT NO. 7,839,452: CLAIMS 1–3, 5–17, 19–21, 23

Claim Language	Plaintiff’s Proposed Terms	Defendants’ Proposed Terms	LGE’s Proposed Construction and Supporting Evidence
1.[a] A digital television having a display, comprising:			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
[1.b] a receiving part configured to receive at least one of digital image data and analog image data;		<i>Claim 1: "receiving part configured to receive at least one of digital image data and analog image data" is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> Claim element [1.b] has its plain and ordinary meaning and is not subject to 35 U.S.C. §112 ¶ 6. To the extent this claim requires construction, it refers to: - a receiver for digital and/or analog television broadcasts <u>Intrinsic Evidence:</u> '452 patent at 1:14-2:53, 3:40-49, 3:59-4:7, 4:25-46, 5:19-30, 7:7-18, 7:27-30, 9:7-39, FIGS. 1, 2, and 4 <u>Extrinsic Evidence:</u> • ATSC standards A/52, A/53, A/55, A/56, A/65 (Revision A) • ANSI/CEA-608-B • CEA-708-B • 47 CFR Part 73, e.g., §73.682 • Hisense's Invalidity Contentions at Exs. A02, A03, A05 • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
[1.c] a data processing part configured to <i>execute bit map conversion</i> and <i>format-conversion for text data to be displayed on the display</i> ;	[4] Claims 1, 2, 12, 20: "bit map conversion" / "a bit map converter" / "convert[s] the text data into [the] bit map data"	[6] Claim 1: "execute bit map conversion" [7] Claim 1: "format-conversion for text data to be displayed on the display"	<u>Proposed Construction:</u> The terms "[execute] bit map conversion," "a bit map converter," and "convert[s] the text data into [the] bit map data" are not indefinite and, in context, require: - converting text data which is not bit map data into bit map data

Claim Language	Plaintiff’s Proposed Terms	Defendants’ Proposed Terms	LGE’s Proposed Construction and Supporting Evidence
	[5] Claims 1, 3, 12, 20: “format-conversion” / “converted in format” / “a format converter” / “convert the format of the . . . bit map data to correspond with display resolution”	[8] Claim 1: “data processing part configured to execute bit map conversion and format-conversion for text data to be displayed on the display” is governed by 35 U.S.C. § 112(6)	The terms “format-conversion [for text data to be displayed on the display],” “converted in format,” “a format converter,” and “convert the format of the . . . bit map data to correspond to with display resolution”, in context, require: - adjusting the resolution of the bit map data to correspond to the resolution of the display Claim element [1.c] is not subject to 35 U.S.C. §112 ¶ 6, and no further construction is necessary. To the extent an express construction is required, it refers to: - a data processor that includes a bit map converter (as construed above) and a format converter (as construed above) to process the text data to be displayed on the display <u>Intrinsic Evidence:</u> ‘452 patent at 1:63-2:45, 2:54-3:33, 3:40-4:52, 5:19-64, 6:23-40, 7:10-26, 7:41-8:32, 9:24-46, FIGS. 1, 2 US. Pat. No 6,456,340 at 3:26-35 (“Commercially-available digital image processing systems ...include ... input data scaling to match the resolution and aspect ratio to the display device.”) <u>Extrinsic Evidence:</u> • ATSC standards A/52, A/53, A/65 (Revision A) • PixelWorks Note dated August 16, 1999 • Hisense’s Invalidity Contentions at Exs. A02, A03, A05 • Foley et al., <i>Computer Graphics</i> (2d ed. 1997), at 127-131, 145-147, 182-187, 820-828, 855-866, 890-893 • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in

Claim Language	Plaintiff’s Proposed Terms	Defendants’ Proposed Terms	LGE’s Proposed Construction and Supporting Evidence
			the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one or ordinary skill in the art
[1.d] a memory configured to store the bit map data obtained according to the bit map conversion in the data processing part and image data inputted from <i>an arbitrary receiving part</i> ;	[6] “an arbitrary receiving part”		<u>Proposed Construction:</u> The term “an arbitrary receiving part” is not indefinite and has its plain and ordinary meaning which, in context, refers to: - a receiver of a digital or analog broadcast from any source <u>Intrinsic Evidence:</u> ‘452 patent at 1:14-2:53, 3:40-49, 3:59-4:7, 4:25-46, 5:19-30, 7:7-18, 7:27-30, 9:7-39, FIGS. 1, 2, and 4 <u>Extrinsic Evidence:</u> • ATSC standards A/52, A/53, A/65 (Revision A) • Hisense’s Invalidity Contentions at Exs. A02, A03, A05 • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one or ordinary skill in the art
[1.e] an image outputting part configured to read image data from the memory; and		<i>Claim 1: “image outputting part configured to read image data from the memory” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> Claim element [1.e] has its plain and ordinary meaning and is not subject to 35 U.S.C. §112 ¶ 6. <u>Intrinsic Evidence:</u> ‘452 patent at Abstract, 2:12-19, 2:32-33, 3:59-4:7, 5:22-24, 6:55-57, 8:33-34, FIGS. 1 and 2

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
			<u>Extrinsic Evidence:</u> - PixelWorks Note dated August 16, 1999 - Hisense's Invalidity Contentions at Exs. A02, A03, A05 - Foley et al., <i>Computer Graphics</i> (2d ed. 1997), at 145-147, 855-866, 890-893 - Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
[1.f] a <i>display processing part configured to mix image data read from the image outputting part and the bit map data converted in format by the data processing part.</i>	See claim 1.c	Claim 1: “display processing part configured to mix image data read from the image outputting part and the bit map data converted in format by the data processing part” <i>Claim 1: “display processing part configured to mix image data read from the image outputting part and the bit map data converted in format by the data processing part” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of “converted in format,” see claim element [1.c]. Claim element [1.f] requires no further construction and is not subject to 35 U.S.C. § 112 ¶ 6. <u>Intrinsic Evidence:</u> ‘452 patent at Abstract, 2:12-19, 2:34-45, 3:59-4:7, 5:22-24, 6:60-7:6 (“...A method of mixing the image data and the bit map data in the display processing part 206 is well known, and an explanation of it will be excluded in this detailed description for the sake of brevity.”), 8:35-37, FIGS. 1 and 2 <u>Extrinsic Evidence:</u> - PixelWorks Note dated August 16, 1999 - Hisense's Invalidity Contentions at Exs. A02, A03, A05 - Foley et al., <i>Computer Graphics</i> (2d ed. 1997), at 145-147, 184, 835-843, 855-866, 890-893

Claim Language	Plaintiff’s Proposed Terms	Defendants’ Proposed Terms	LGE’s Proposed Construction and Supporting Evidence
			Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
2. The digital television as defined in claim 1, wherein the data processing part comprises a bit map converter configured to determine whether the text data is the bit map data and that converts the text data into the bit map data , based upon the determined result, and a bit map compressor configured to compress the bit map data by using compression coding.	See claim 1.c	<i>Claim 2: “data processing part comprises a bit map converter configured to determine whether the text data is the bit map data and that converts the text data into the bit map data, based upon the determined result, and a bit map compressor configured to compress the bit map data by using compression coding” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of “bit map converter . . .,” see claim element [1.c]. Claim element “data processing part comprises ... a bit map compressor...” has its plain and ordinary meaning and is not subject to 35 U.S.C. §112 ¶ 6. <u>Intrinsic Evidence (for bit map compressor/decompressor):</u> ‘452 patent at Abstract, FIG. 2, 3:34-36, 3:44-46, 3:39-4:53, 5:37-41, 5:65-6:18, 7:10-40, 9:33-35 <u>Extrinsic Evidence:</u> - Hisense’s Invalidity Contentions at Exs. A02, A03, A05 - Foley et al., <i>Computer Graphics</i> (2d ed. 1997), at 843-851 - Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
3. The digital television as defined in claim 2, wherein the data processing part further comprises a bit map decompressor configured to read the compressed bit map	See claim 1.c	Claims 3, 12: “format converter configured to convert the format of the decompressed bit map data to correspond with display resolution”	<u>Proposed Construction:</u> For the construction of “format converter . . .,” see claim element [1.c]. Claim element “data processing part further comprises a bit map decompressor ...” has its plain and ordinary meaning and is not subject to 35 U.S.C. §112 ¶ 6.

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
data from the memory to thereby restore the read data to its original bit map data, and a format converter configured to convert the format of the decompressed bit map data to correspond with display resolution.		<i>Claim 3: "data processing part further comprises a bit map decompressor configured to read the compressed bit map data from the memory to thereby restore the read data to its original bit map data, and a format converter configured to convert the format of the decompressed bit map data to correspond with display resolution" is governed by 35 U.S.C. § 112(6)</i>	<u>Intrinsic Evidence:</u> See above. <u>Extrinsic Evidence:</u> • See above, and: • Hisense's Invalidity Contentions at Exs. A02, A03, A05 • Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
5. The digital television as defined in claim 2, wherein the bit map converter converts the text data into the bit map data, if it is determined that the text data is not the bit map data.			
6. The digital television as defined in claim 2, wherein the bit map converter bypasses the text data, if it is determined that the text data is the bit map data.			
7. The digital television as defined in claim 2, wherein the predetermined compression coding is a run-length compression coding.			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
8. The digital television as defined in claim 1, wherein the text data is at least one among HTML data, DHTML data, XML data, SGML data and bit map data.			
9. The digital television as defined in claim 1, wherein the memory stores <i>first bit map data or second bit map data</i> .		[9] Claims 9, 17, 21: “first bit map data or second bit map data”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning), and not indefinite <u>Intrinsic Evidence:</u> '452 patent at 7:49-8:32 <u>Extrinsic Evidence:</u> Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
10. The digital television as defined in claim 1, wherein the conversion of the text data is carried out by using either first bit map data or second bit map data.			
11. The digital television as defined in claim 1, wherein <i>the display displays different resolution images</i> .		[10] Claims 11, 19, 23: “the display displays different resolution images”	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning) To the extent an express construction is required, “the display displays different resolution images” refers to: - displaying images, received in different resolutions, on the display

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
			<u>Intrinsic Evidence:</u> '452 patent at 2:54-3:3 <u>Extrinsic Evidence:</u> Defendants may rely upon an expert declaration (1) to show the skill level of a person of ordinary skill in the art; and (2) to show how a person of ordinary skill in the art would have understood the claim term in light of the specification, prosecution history, and knowledge of one of ordinary skill in the art
12.[a] A digital television having a data processing device and a display, comprising:			
[12.b] <i>a bit map converter</i> configured to determine whether text data to be displayed on the display is bit map data and to <i>convert the text data into bit map data</i> ;	See claim 1.c	<i>Claim 12: "bit map converter configured to determine whether text data to be displayed on the display is bit map data and to convert the text data into bit map data" is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of "bit map converter . . .," see claim element [1.c]. Claim element [12.b] requires no further construction and is not subject to 35 U.S.C. §112 ¶ 6. <u>Intrinsic Evidence:</u> See above at claim element [1.c] <u>Extrinsic Evidence:</u> See above at claim element [1.c]
[12.c] a bit map compressor configured to compress the bit map data by using compression coding;			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
[12.d] a bit map decompressor configured to read the compressed bit map data from a memory for restoring read data to its original bit map data; and			
[12.e] <i>a format converter configured to convert the format of the decompressed bit map data to correspond with display resolution.</i>	See claim 1.c	See claim 3 <i>Claims 12, 20: “format converter configured to convert the format of the decompressed bit map data to correspond with display resolution” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of “format converter . . . ,” see claim element [1.c]. Claim element [12.e] requires no further construction and is not subject to 35 U.S.C. §112 ¶ 6. <u>Intrinsic Evidence:</u> See above at claim element [1.c] <u>Extrinsic Evidence:</u> See above at claim element [1.c]
13. The digital television as defined in claim 12, wherein the text data is at least one among HTML data, DHTML data, XML data, SGML data and bit map data.			
14. The digital television as defined in claim 12, wherein the bit map converter <i>converts the text data into bit map data</i> if it is determined that the text data is not bit map data.	See claim 1.c	<i>Claim 14: “bit map converter converts the text data into bit map data if it is determined that the text data is not bit map data” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of “bit map converter. . . ,” see claim element [1.c]. Claim element [14] requires no further construction and is not subject to 35 U.S.C. §112 ¶ 6.

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
			<u>Intrinsic Evidence:</u> See above at claim element [1.c] <u>Extrinsic Evidence:</u> See above at claim element [1.c]
15. The digital television as defined in claim 12, wherein the bit map converter bypasses the text data if it is determined that the text data is bit map data.		<i>Claim 15: "bit map converter bypasses the text data if it is determined that the text data is bit map data" is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of "bit map converter. . .," see claim element [1.c]. Claim element [15] requires no further construction and is not subject to 35 U.S.C. § 112 ¶ 6. <u>Intrinsic Evidence:</u> See above at claim element [1.c] <u>Extrinsic Evidence:</u> See above at claim element [1.c]
16. The digital television as defined in claim 12, wherein the predetermined compression coding is a run-length compression coding.			
17. The digital television as defined in claim 12, wherein the conversion of the text data is carried out by using either <i>first bit map data or second bit map data previously stored in the memory.</i>		See claim 9 (first bit map data or second bit map data) Claims 17, 21: "first bit map data or second bit map data previously stored in the memory"	<u>Proposed Construction:</u> No construction necessary (i.e., plain and ordinary meaning), and not indefinite <u>Intrinsic Evidence:</u> See above at claim element [9] <u>Extrinsic Evidence:</u> See above at claim element [9]

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
19. The digital television as defined in claim 12, wherein <i>the display displays different resolution images.</i>		See claim 11	
20.[a] A digital television having a data processing device and a display, comprising:			
[20.b] <i>a bit map converter</i> configured to determine whether text data to be displayed on the display is bit map data and configured to <i>convert the text data into bit map data;</i>	See claim 1.c	<i>Claim 20: “bit map converter configured to determine whether text data to be displayed on the display is bit map data” is governed by 35 U.S.C. § 112(6)</i>	<u>Proposed Construction:</u> For the construction of “bit map converter . . .,” see claim element [1.c]. Claim element [20.b] requires no further construction and is not subject to 35 U.S.C. §112 ¶ 6. <u>Intrinsic Evidence:</u> See above at claim element [1.c] <u>Extrinsic Evidence:</u> See above at claim element [1.c]
[20.c] <i>a format converter</i> configured to <i>convert the format of the decompressed bit map data to correspond with display resolution;</i>	See claim 1.c	<i>See claim 12 re § 112(6)</i>	
[20.d] a bit map compressor configured to compress the bit map data by using compression coding; and			
[20.e] a bit map decompressor configured to read the compressed bit map data from			

Claim Language	Plaintiff's Proposed Terms	Defendants' Proposed Terms	LGE's Proposed Construction and Supporting Evidence
a memory for restoring the read data back to its original bit map data.			
21. The digital television as defined in claim 20, wherein the conversion of the text data is carried out by using either <i>first bit map data or second bit map data previously stored in the memory.</i>		See claims 9, 17	
23. The digital television as defined in claim 20, wherein <i>the display displays different resolution images.</i>		See claim 11	