

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC., and  
LG ELECTRONICS MOBILECOMM U.S.A., INC.,  
Petitioner,

v.

CYPRESS SEMICONDUCTOR CORP.,  
Patent Owner.

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Case IPR2014-01302  
Patent 8,059,015 B2

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Before SALLY C. MEDLEY, PATRICK M. BOUCHER, and  
KEVIN W. CHERRY, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
*37 C.F.R. § 42.108*

I. INTRODUCTION

Petitioner, LG Electronics, Inc., LG Electronics U.S.A., Inc., and LG  
Electronics Mobilecomm U.S.A., Inc., filed a Petition requesting an *inter*

*partes* review of claims 1, 2, 4–7, 13, 15, 17–19, 21, and 22 of U.S. Patent No. 8,059,015 B2 (Ex. 1001, “the ’015 patent”) under 35 U.S.C. §§ 311–319. Paper 1 (“Petition” or “Pet.”). Patent Owner, Cypress Semiconductor Corporation, filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314. Section 314 provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons that follow, we institute an *inter partes* review of claims 1, 2, 4–7, 13, 15, 17–19, 21, and 22 of the ’015 patent.

#### *A. Related Proceedings*

According to Petitioner, the ’015 patent is involved in the following lawsuit: *Cypress Semiconductor Corp. v. LG Electronics, Inc.*, No. 4:13-cv-04034-SBA (N.D. Cal.). Pet. 3.

#### *B. The ’015 Patent*

The ’015 patent relates to a sensing device that has a capacitance sensor matrix including sensor elements configured in rows and columns. Ex. 1001, 3:58–60, Fig. 6C. Multiple keyboard keys can be assigned to pre-determined areas on a single sensor element. *Id.* at 3:64–65, 4:15–16. Figure 6C is reproduced below.

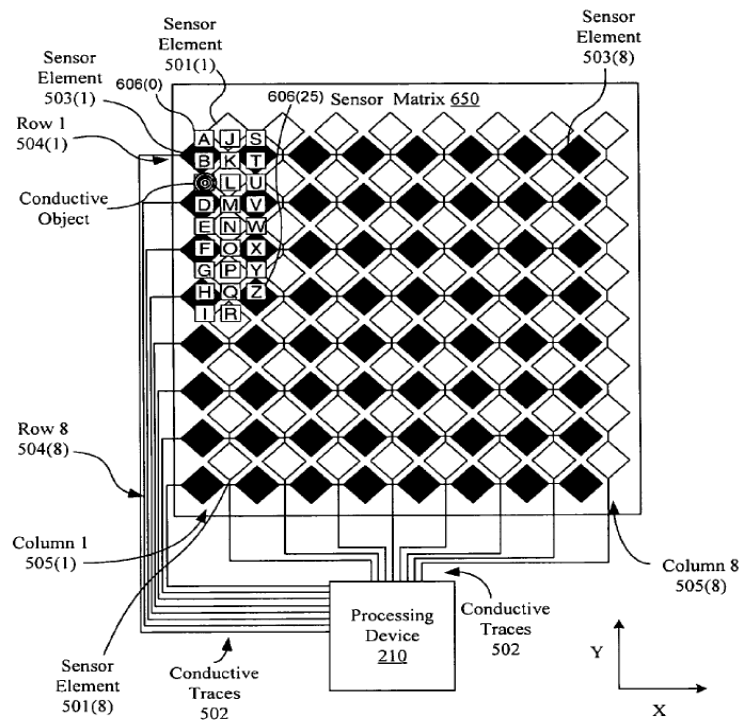


FIG. 6C

Figure 6C depicts a plurality of keyboard keys on a matrix of sensing electrodes.

Processing device 210 is coupled to a sensing device that has capacitance sensor matrix 650 and keyboard keys 606 assigned to pre-defined areas of the sensing device. *Id.* at 19:63–66. Sensor matrix 650 includes eight rows 504 and eight columns 505 and includes sensor elements 501 and 503. Columns 505 are coupled to processing device 210 using capacitance sensing pins, conductive traces 502. *Id.* at 20:1–6.

The sensor matrix detects the presence of a conductive object, such as a finger or a stylus through the capacitance sensing pins used to couple the sensing device to the processing device. *Id.* at 3:62–4:2. The capacitance variation measured on the capacitance sensing pins is used to determine which keyboard key has been pressed. *Id.* 4:16–18.

*C. Illustrative Claim*

Claims 1 and 7 are independent claims. Claims 2, 4–6, 21, and 22 depend, either directly or indirectly, from claim 1. Claims 13, 15, and 17–19 depend, either directly or indirectly, from claim 7. Claim 1 is reproduced below.

1. A method comprising:
  - assigning a plurality of keyboard keys to correspond to pre-defined areas of a sensing surface of a sensing device having a plurality of sensor elements and a plurality of capacitance sensing pins to couple the plurality of sensor elements to a processing device, wherein the pre-defined areas are disposed adjacent to one another and wherein at least one of the plurality of sensor elements corresponds to multiple pre-defined areas;
  - determining a position of a presence of the conductive object on the sensing device by measuring capacitance on the plurality of capacitance sensing pins; and
  - selecting a keyboard key of the plurality of keyboard keys when the position of the presence of the conductive object is determined to be within the pre-defined area of the sensing device corresponding to the keyboard key.

*Id.* at 24:5–20.

*D. Asserted Grounds of Unpatentability*

Petitioner asserts that claims 1, 2, 4–7, 13, 15, 17–19, 21 and 22 are unpatentable based on the following grounds:

<b>References</b>	<b>Basis</b>	<b>Challenged Claim(s)</b>
Hristov <sup>1</sup>	§ 102(e)	1, 2, 4, and 6
Hristov	§ 103	5, 7, 13, 15, 17–19, 21, and 22

<sup>1</sup> U.S. Patent No. 7,821,502, issued Oct. 26, 2010 (Ex. 1004) (“Hristov”).

References	Basis	Challenged Claim(s)
Boie <sup>2</sup> and Andre <sup>3</sup>	§ 103	1, 2, 4–7, 13, 17–19, 21, and 22
Boie, Andre, and Hristov	§ 103	15

## II. ANALYSIS

### A. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioner does not contend any specific claim terms need construction, and submits that the challenged claims should be given their plain and ordinary meaning. Pet. 6. Patent Owner also does not contend that any terms need construction. For purposes of this decision, we need not construe any limitations of the challenged claims.

### B. Obviousness over Boie and Andre

Petitioner contends that claims 1, 2, 4–7, 13, 17–19, 21, and 22 are unpatentable under 35 U.S.C. § 103 based on Boie and Andre. To support

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<sup>2</sup> U.S. Patent No. 5,463,388, issued Oct. 31, 1995 (Ex. 1002) (“Boie”).

<sup>3</sup> U.S. Patent No. 7,844,914, issued Nov. 30, 2010 (Ex. 1012) (“Andre”).

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