

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

CYPRESS SEMICONDUCTOR CORP.,
Patent Owner.

Case IPR2014-01343
Patent 8,519,973 B1

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

CHERRY, *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 1–8, 11, 12, and 14–20 of U.S. Patent No. 8,519,973 B1 (Ex. 1001, “the ’973 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 1–8, 11, 12, and 14–20 of the ’973 patent.

A. Related Proceedings

According to Petitioner, the ’973 patent is involved in, at least, the following lawsuit: *Cypress Semiconductor Corp. v. LG Electronics, Inc.*, No. 4:13-cv-04034-SBA (N.D. Cal.). Pet. 3.

B. The ’973 Patent

The ’973 patent relates to an apparatus and method for detecting the presence of a conductive object on a sensing device, and recognizing three or more button operations performed by the conductive object using two sensing areas of the sensing device. Ex. 1001, 2:55–59, Fig. 6B. Figure 6B is reproduced below.

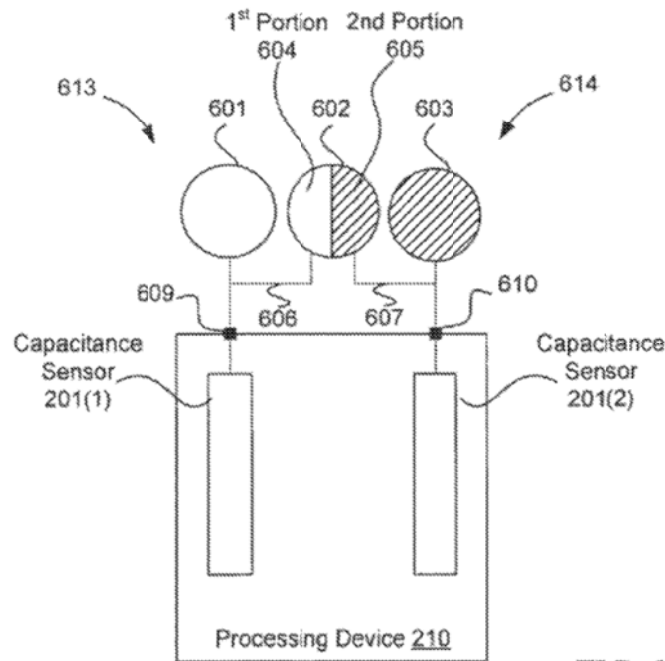


FIG. 6B

Figure 6B illustrates a configuration where there is one more button than the number of sensors, as described and claimed in the '973 patent.

In Figure 6B, processing device 210 is used to detect whether a conductive object is present on either, or none, of touch-sensor buttons 601–603. Ex. 1001, 17:52–53. Processing device 210 uses capacitance sensors 201(1) and 201(2) to measure capacitance on the three buttons. *Id.* at 18:12–38. In Figure 6B, button 601 is coupled to capacitance sensor 201(1), button 603 is coupled to capacitance sensor 201(2), and button 602 is coupled to both capacitance sensors 201(1) and 201(2). *Id.* at 17:30–40. Based on the capacitance variation measured at pins 609 and 610, processing device 210 can determine which of the three touch-sensor buttons have been pressed, while using only two capacitance sensors. *Id.* at 18:39–48.

C. Illustrative Claim

Claims 1, 7, and 17 are independent claims. Claim 1 is a method claim and claims 7 and 17 are apparatus and system claims, respectively. Claims 2–6 depend, either directly or indirectly, from claim 1. Claims 8–16 depend, either directly or indirectly, from claim 7. Claims 18–20 depend directly from Claim 17. Claim 1 is illustrative of subject matter in this proceeding, and is reproduced below.

1. A method comprising:

determining capacitance variations of a first number of two or more sense elements of a touch screen device using a processing device to detect a presence of a conductive object on any one of a second number of three or more button areas of the touch screen device, wherein the first number of sense elements is less than the second number of button areas; and

recognizing an activation of one of the three or more button areas using the determined capacitance variations of the first number of two or more sense elements.

Id. at 23:39–49.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–8, 11, 12, and 14–20 are unpatentable based on the following grounds:

References	Basis	Challenged Claim(s)
Boie ¹ and Bisset ²	§ 103(a)	1–8, 11, 12, and 14–20
Hristov ³ , Piguet ⁴ , and art described in the '973 patent	§ 103(a)	1–8, 11, 12, and 14–20

¹ U.S. Patent No. 5,463,388, issued Oct. 31, 1995 (Ex. 1002) (“Boie”).

² U.S. Patent No. 5,543,588, issued Aug. 6, 1996 (Ex. 1008) (“Bisset”).

³ U.S. Patent No. 7,821,502 B2, issued Oct. 26, 2010 (Ex. 1004) (“Hristov”).

⁴ U.S. Patent No. 4,242,676, issued Dec. 30, 1980 (Ex. 1003) (“Piguet”).

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. 6–7. 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 Bisset*

Petitioner contends that claims 1–8, 11, 12, and 14–20 are unpatentable under 35 U.S.C. § 103 as obvious over Boie and Bisset. To support its contention, Petitioner provides a detailed showing mapping limitations of claims 1–8, 11, 12, and 14–20 to structures described by Boie and Bisset. Pet. 10–37. Petitioner also cites the Declaration of Dr. Phillip Wright for support. *See* Ex. 1010 ¶¶ 51–59, 67–207.

Boie (Ex. 1002)

Boie describes a keyboard input device with an insulating surface covering an array of electrodes arranged in a grid and connected in columns

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